APPENDIX K

HUMAN HEALTH RISK ASSESSMENT

Human Health Risk Assessment

Page Trowbridge Ranch Landfill
Oracle, Arizona

Submitted to:

University of Arizona
Tucson, Arizona

Submitted by:

AMEC Earth & Environmental
Boston, Massachusetts
and
Tempe, Arizona

November 18, 2009

774330000

Human Health Risk Assessment

Page Trowbridge Ranch Landfill
Oracle, Arizona

Submitted to:

University of Arizona
Tucson, Arizona

Submitted by:

AMEC Earth & Environmental
Boston, Massachusetts
and
Tempe, Arizona

November 18, 2009

774330000

Prepared by:

Barbara Pugh, Risk Assessment Specialist — Date 11/18/09

John Samuelian, PhD., Senior Environmental Scientist — Date 11/18/2009

TABLE OF CONTENTS

Page

1.0 INTRODUCTION 1
1.1 SITE DESCRIPTION 2

2.0 HAZARD IDENTIFICATION 5
2.1 SOIL DATA 6
2.2 SOIL VAPOR DATA 7
2.3 GROUNDWATER DATA 14
2.4 RADIONUCLIDE DATA 16

3.0 TOXICITY ASSESSMENT 21
3.1 NON-CARCINOGENIC DOSE-RESPONSE 22
3.2 CARCINOGENIC DOSE-RESPONSE 22
3.3 ABSORPTION ADJUSTMENT FACTORS 23

4.0 EXPOSURE ASSESSMENT 23
4.1 POTENTIAL EXPOSURE SCENARIOS 24
4.2 IDENTIFICATION OF POTENTIAL EXPOSURE PATHWAYS 26
4.2.1 Non-Radiological Exposure 26
4.2.2 Radiological Exposure 27
4.2.3 Potential Current and Future Receptors 29
4.2.4 Estimates of Exposure (Dose) for Identified Receptors 30
4.3 EXPOSURE AREAS AND EXPOSURE POINT CONCENTRATIONS 32

5.0 RISK CHARACTERIZATION 34
5.1 POTENTIAL CARCINOGENIC RISK CHARACTERIZATION 34
5.2 POTENTIAL NONCARCINOGENIC HAZARD CHARACTERIZATION 36

6.0 UNCERTAINTY ASSESSMENT 37
6.1 HAZARD IDENTIFICATION UNCERTAINTY 38
6.2 TOXICITY ASSESSMENT UNCERTAINTY 40
6.3 EXPOSURE ASSESSMENT UNCERTAINTY 40
6.4 RISK CHARACTERIZATION UNCERTAINTY 42

7.0 SUMMARY AND CONCLUSIONS 44

REFERENCES 45

TABLE OF CONTENTS CONTINUED…

LIST OF FIGURES

Figure 1 Vicinity Map
Figure 2 Groundwater and Soil Vapor Sampling Locations
Figure 3 Chloroform Soil Vapor Concentrations in Select Vapor Monitoring Wells
Figure 4 Freon 11 Soil Vapor Concentrations in Select Vapor Monitoring Wells
Figure 5 Trichloroethylene (TCE) Soil Vapor Concentrations in Select Vapor Monitoring Wells
Figure 6 Conceptual Site Model for Human Exposures

LIST OF TABLES

Table 1 Summary of Soil Data from EEC 1989 Subsurface Soil Investigation
Table 2 Summary of Subsurface Soil Data from Weston 2003
Table 3 Summary of Soil Vapor Data from Terra Tech (1994)
Table 4 Summary of Surface Soil Gas Data from Perimeter Sampling Event (Weston 2003)
Table 5 Summary of Soil-Gas Data Subsurface Borings
Table 6 Summary of Soil Vapor Monitoring Data (2004 to 2008)
Table 7 Shallow Soil Vapor Survey December 2007
Table 8 Summary of Analytical Methods for All Groundwater Sampling Events
Table 9 Summary of Groundwater Data with Detections Prior to 2001
Table 10 RADCON Radionuclide Inventory
Table 11 Summary of Radiologic Data for Groundwater from On- and Off-Site Monitoring Wells
Table 12 Summary of Groundwater Exposure Point Concentrations
Table 13 Summary of Estimate Indoor Air Risks and Hazards to Hypothetical Residents
Table 14 Summary of Hazard Indices and Estimated Cancer Risks

LIST OF APPENDICES

Appendix A CD of Available Historical Reports
Appendix B Validation Report for December 2007 Soil Vapor Sampling Event
Appendix C Summary of All Groundwater Data
Appendix D RAGS Part D Standard Tables
Appendix E Derivation of Exposure Point Concentrations for Soil Vapor
Appendix F Output from Vapor Intrusion Model
Appendix G Memorandum dated March 11, 2009: Response to Jeneane Hanley/ADEQ Comments on the Draft Human Health Risk Assessment Page Trowbridge Ranch Landfill (dated September 25, 2008)
Appendix H Memorandum dated September 30, 2009: Response to Anthony Leverock/ ADEQ Comments (dated May 22, 2009) on Memorandum documenting Response to Jeneane Hanley/ADEQ Comments on the Draft Human Health Risk Assessment Page Trowbridge Ranch Landfill (dated March 11, 2009) and the Draft Human Health Risk Assessment Page Trowbridge Ranch Landfill (dated September 25, 2008)

LIST OF ACRONYMS AND ABBREVIATIONS

AAF	Absorption Adjustment Factor
ADD	Average Daily Dose
ADEQ	Arizona Department of Environmental Quality
AMEC	AMEC Earth and Environmental, Inc.
ARRA	Arizona Radiation Regulatory Agency
ATSDR	Agency for Toxic Substances and Disease Registry
Bgs	Below ground surface
BTEX	Benzene, Ethylbenzene, Toluene and Xylenes
BW	Body Weight
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CADD	Chronic Average Daily Dose
CADE	Chronic Average Daily Exposure
Ci	Curies
COPC	Compound of Potential Concern
CSF	Cancer Slope Factor
CSM	Conceptual Site Model
DCE	Dichloroethylene
DOE	Department of Energy
EEC	Environmental Engineering Consultants
ELCR	Excess Lifetime Cancer Risk
ELCD	Electrolytic Conductivity Detector
EPC	Exposure Point Concentration
EP	Extraction Procedure
GC	Gas Chromatograph
GM	Geiger-Mueller
HEAST	Health Effects Assessment Summary Tables
HGC	Hydro Geo Chem, Inc.
HHRA	Human Health Risk Assessment
HI	Hazard Index
HQ	Hazard Quotient
HWMA	Hazardous Waste Management Act
IRIS	Integrated Risk Information System
Kg	Kilogram
LADD	Lifetime Average Daily Dose
LLD	Lower Limit of Detection
LSC	Liquid Scintillation Counting
LOAEL	Lowest Observed Adverse Effect Level
MCL	Maximum Contaminant Level
mg/Kg	Milligrams per Kilogram
mg/L	Milligrams per Liter
mg/m^3	Milligrams per Cubic Meter
µg/Kg	Micrograms per Kilogram
$\mu g/m^3$	Micrograms per Cubic Meter
NAS	National Academy of Sciences
NCP	National Cancer Program
NOAEL	No Observed Adverse Effect Level

LIST OF ACRONYMS AND ABBREVIATIONS – cont'd

OSWER	Office of Solid Waste and Emergency Response
PCE	Tetrachloroethylene
pCi/L	picocuries/Liter
PELCR	Potential Excess Lifetime Cancer Risk
PID	Photoionization detector
PPRTV	Provisional Peer Reviewed Toxicity Value
PRG	Preliminary Remediation Goals
PTRL	Page Trowbridge Ranch Landfill
RADCON	Radiation Control Office
RAGS	Risk Assessment Guidance for Superfund
RCRA	Resource Conservation and Recovery Act
RfC	Reference Concentration
RfD	Reference Dose
RME	Reasonable Maximum Exposure
R-SRL	Residential Soil Remediation Level
SR	State Route
SRL	Soil Remediation Levels
SSL	Soil Screening Level
SVE	Soil Vapor Extraction
SVOC	Semi-Volatile Organic Compound
TCA	Tetrachloroethane
TCE	Trichloroethylene
TOC	Total Organic Carbon
TSD	Treatment, Storage or Disposal
UA	University of Arizona
UCL	Upper Confidence Limit
UR	Unit Risk
USEPA	U.S. Environmental Protection Agency
VOC	Volatile Organic Compound

1.0 INTRODUCTION

The Page Trowbridge Ranch Landfill (PTRL, also referred to as the "site" or "Landfill site") encompasses 3.25 acres in an area approximately seven miles west of Oracle, Pinal County, Arizona (T9S, R14E, Sections 27 and 34) (RUST, 1995). Between 1962 and February 1986, the landfill was used for disposal of low-level radioactive waste and chemical wastes generated by University of Arizona (UA), Northern Arizona University, Arizona State University, and Veterans Hospital in Tucson. The landfill was closed in August 1997 and is regulated by the provisions of a Post Closure Permit approved on November 6, 2001 (ADEQ, 2001), and administered by the Arizona Department of Environmental Quality (ADEQ), with additional regulatory oversight by the Arizona Radiation Regulatory Agency (ARRA). The Permit requires continued monitoring and maintenance of the site, with regular status reports to ADEQ and ARRA. This report documents the human health risk assessment for the PTRL as required by an Interim Measure of the Post-Closure Permit (Permit Part I Section H Number 5 and Permit Part VIII Section I Number 1c).

Information about the conditions at PTRL was obtained from the following sources[1]:

- * Hydro Geo Chem, Inc. (HGC) Soil Gas Survey of the Page Trowbridge Ranch Landfill, Final Report. September 14, 1988. Prepared on behalf of Environmental Engineering Consultants, Inc. (EEC). (Document included as Appendix to EEC 1989).
- * EEC. 1989. Subsurface Soil Investigation Report, Phase Two: Page-Trowbridge Ranch Landfill. Revised June 9, 1989. Prepared on behalf of UA Risk Management and Safety.
- * Terra Tech Labs. 1994. Soil Vapor Investigation UA Page-Trowbridge Ranch Landfill. Prepared under the direction of Rust Remedial Services, Inc. September 23, 1994.
- * RUST Environment and Infrastructure Inc. 1995. Closure Plan: Page Trowbridge Ranch Landfill. EPA ID Number AZD 980665814. Prepared for UA. March
- * Weston. 2003. Technical Memorandum: Interim Measure Task 1 Soil and Soil Gas Sampling Investigation Page Trowbridge Ranch Landfill Pinal County Arizona. March. Prepared on behalf of UA Risk Management and Safety.
- * HGC. 2004. Interim Measures Investigation Report. UA Page-Trowbridge Ranch Landfill, Pinal County, Arizona. June 8, 2004. Prepared on behalf of UA Risk Management and Safety.
- HGC. 2005. Preliminary Screening Risk Assessment. UA Page-Trowbridge Ranch Landfill, Pinal County, Arizona. January 20, 2005.
- * AMEC. 2008a. Soil Vapor Summary for the Page Trowbridge Ranch Landfill (December 2007 event). January.
- * AMEC. 2008b. Soil Vapor Summary for the Page Trowbridge Ranch Landfill (April 2008 event). May.

[1] Electronic (scanned) copies of the reports and datasets denoted with an asterisk (*) are included on a CD provided as Appendix A to this report.

- University of Arizona Risk Management and Safety. Analytical data from groundwater monitoring wells samples collected between November 1984 and November 2007 (in compliance with the Post Closure Permit; data is provided as a separate appendix in this report).
- * University of Arizona Radiation Control Office. Radionuclide data including:
    - nuclide waste disposal inventory 1962-1986;
    - nuclide monitoring results from dosimetry stations April 1989 thru September 1995, and
    - measured radionuclides in groundwater samples (1985 to April 2007).

The data considered in this risk assessment were deemed adequate for characterizing the nature and extent of potential landfill impacts and for evaluation in the human health risk assessment by ADEQ during a meeting held on September 21, 2007, at which time both the historical data and draft conceptual site model for human exposure were presented to ADEQ.

The purpose of the human health risk assessment is to estimate potential current and future risks to human health, if any, that may be posed by the Site, assuming existing landfill conditions. The approach to this risk assessment follows that defined for chemicals and radionuclides in the human health risk assessment guidance provided by United States Environmental Protection Agency (USEPA), including *Risk Assessment Guidance for Superfund (RAGS)*, *Volume I Part A - Human Health Evaluation Manual* (USEPA, 1989). Although the methodology used to evaluate health effects due to radiation exposures at contaminated sites is slightly different[2] than that used to evaluate chemical hazards, as described in Sections 2.4 and 4.2.2 below, there are no radionuclides disposed at PTRL impacting the surrounding environmental media (soil, groundwater) thereby negating the need for a risk characterization of environmental exposures to radionuclides.

Following the description of the PTRL, this report is organized to follow the four-step process defined by the National Academy of Sciences (NAS, 1983), which include:

- Hazard Identification,
- Toxicity Assessment,
- Exposure Assessment, and
- Risk Characterization

A qualitative uncertainty analysis is also included.

1.1 SITE DESCRIPTION

The PTRL site encompasses 3.25 acres in an area approximately one mile north of State Road (SR) 77, seven miles west of Oracle, Pinal County, Arizona (see Figure 1). The landfill site is surrounded on the west, north and east sides by approximately 640 acres of undeveloped state-owned land and privately owned, undeveloped land to the south. The landfill consists of two

[2] Depending upon the radionuclides, the risk characterization consists of a dose assessment and/or cancer slope factor assessment, the latter being similar to that used in evaluating chemical exposures.

units: 1) Unit A, the northern 200 feet wide by 200 feet long by 10 feet deep unit; and 2) Unit B the southern 200 feet wide by 500 feet long by 10 feet deep unit. Waste materials, which included low-level radioactive laboratory waste material and chemical laboratory waste material generated by the University of Arizona, Northern Arizona University, Arizona State University, and Veterans Administration Hospital in Tucson, were disposed in these two units of the PTRL. The Arizona Atomic Energy Commission [currently Arizona Radiation Regulatory Agency (ARRA)] oversaw and maintained the approval of disposed radioactive laboratory wastes.

As described in the *PTRL Revised Post Closure Contingency Plan* (November 2002; provided as Attachment L to the Post-Closure Permit [ADEQ, 2002]), low-level radioactive wastes were first disposed in Unit B in 1962 under the approval of the ARRA (formerly the Arizona Atomic Energy Commission). The low-level radioactive waste material was comprised of mixed laboratory waste material consisting of both liquid and dry waste (e.g. scintillation vials, animal carcasses, bedding, and laboratory research waste material [UA, 1999]). The low-level radioactive waste material was disposed into individual 10 foot by 10 foot by 10 foot cells (also referred to as “pits”) excavated in Unit B. At the time of each disposal, the cells containing the disposed low-level radioactive waste materials were backfilled with more than 4 feet of earth (UA, 2002a). From 1962 until early 1985, the low-level radioactive waste material was disposed in various containers collected from the individual research laboratories. In early 1985, the disposed low-level radioactive waste materials were contained in 55-gallon drums until the final burial in February 1986.

In 1976, chemical waste material that was not radioactive was disposed in open neutralization and burn pits within Unit B. These open neutralization and burn pits were separated by at least 10 feet from the pits used for disposal of low-level radioactive waste material. Between 1976 and 1979, flammable solvents were added to the burn pits and either self-ignited from mixing with non-radioactive chemical wastes containing oxidizers, or the material in the pits was ignited with a railroad flare. Acids and bases were similarly mixed in other open pits in the hope that some level of neutralization would occur (open neutralization pits). This practice ceased in 1979 and was never used in the cells containing disposed low-level radioactive wastes. It is also noted that Unit B was expanded in 1976 to a total area of 2.33 acres and that no liner exists in Unit B.

Unit A replaced Unit B for the disposal of chemical wastes in November 1982 under a RCRA interim status Treatment, Storage or Disposal (TSD) permit. From 1984 through the final burial in 1986, the disposal practice evolved to direct burial of chemical wastes packed in containers with absorbent material (including one- and five-gallon laboratory containers placed in 55-gallon drums containing additional absorbent material). Unit A was used until February 1986 when all disposal operations at PTRL ceased. Prior to disposal, the cells within Unit A were lined with a “chemically-resistant synthetic” (as noted in the Post Closure Permit page VIII-1; ADEQ, 2001) 20-mil polyvinyl chloride (PVC) liner, with the sealed 55-gallon drums placed in single layers within the cells. Following placement of the drums/waste containers in each cell within Unit A, the 20-mil PVC liner was folded over the top of containers to enclose the buried materials prior to backfilling the cell with the soil excavated to create the cell (Post Closure Permit page VIII-1; ADEQ, 2001).

It is estimated the landfill contains approximately 280 tons of documented waste containers based on record keeping that began in 1978. The documented chemical waste material consists of approximately 80 tons of waste in original containers and 200 tons of waste in laboratory packs within Unit A and in the hazardous waste portions of Unit B. The documented chemical wastes include organics, ignitables, acids, bases, heavy metals, pesticides, and photographic compounds. In addition to chemical waste material, the UA Office of Radiation Control (RADCON) (under the requirements of ARRA) maintained an inventory of all radioactive waste materials disposed at PTRL from 1962 to closure in 1986. The inventory includes the nuclide type, total activity, disposal date, and the pit or pits into which the waste material was placed (see Appendix A for inventory details). The total radioactivity of the low-level radioactive waste material disposed in Unit B is 29 curies (Ci)[3]. It is estimated that a total of approximately 0.5 acres of the 2.33 acre area of Unit B (representing 231 cell units total) contain low-level radioactive waste material. No radionuclides were disposed in Unit A.

During 1983, the quantity of materials disposed in the landfills was reduced as the result of the operation of a chemical waste incinerator and neutralization facilities at the UA (HGC, 2005). It is estimated that hazardous waste disposal occurred in approximately 0.7 acres of the total 3.25 acres landfill (representing the portion of Unit B where non-radioactive chemical wastes were disposed and a portion of the 0.92 acres of Unit A). It is possible that the entire landfill area was not filled to capacity prior to closing (RUST, 1995).

The PTRL was closed in August 1997 in accordance with ADEQ-approved closure plan (RUST, 1995 [as cited in HGC, 2005]) and modifications (SCS 1996a, 1996b, and 1996c [as cited in HGC, 2005]). The closure construction included separate caps covering each of the two units, consisting of the following (from top to bottom):

- 2 feet of vegetative soil cover,
- a 200-millimeter geonet which deters water infiltration by promoting lateral drainage,
- 2 feet of soil infiltration barrier, and
- 2 feet of subgrade with 2 layers of geogrid material.

A water drainage system, access roads, and fencing were also installed at the time of closure. The final approval of the Post-Closure Permit was granted on November 6, 2001. An Interim Measure requirement of the Post-Closure Permit is that a risk assessment be conducted to "*consider the proposed development of residential areas near the site and the threat of contamination of the downstream drinking water*."[4]

The results from a variety of environmental investigations of the landfill beginning as early as 1988 indicate sporadic and low concentrations of volatile organic compounds (VOCs) in groundwater, subsurface soil and surface soil vapor. Groundwater is 650 feet below ground surface. Based on evaluation of the landfill conditions, the landfill is not producing a significant amount of leachate, if any (HGC, 2005). Furthermore, low measured concentrations of typical

[3] A curie is a unit of measuring activity of radionuclides. One curie is defined as 37 billion disintegrations per second (USEPA, 1989).
[4] Post Closure Permit Part VIII page 9 (ADEQ, 2001).

landfill gases (e.g. methane, carbon dioxide, and oxygen) indicate the absence of readily biodegradable material within the landfill (HGC 2005). A soil vapor extraction (SVE) system was installed at the landfill and has been operating infrequently between June 20, 2006 and April 2007. The system is designed to extract vapor from two SVE wells [SGS-well (shallow) and SGD-well (deep)], and pass the extracted vapor over an activated carbon filtration system. Between April 2007 and November 2008, the system was not in operation.[5]

The State of Arizona Board of Regents is noted as owner of the landfill property (RUST, 1995; Pinal County Assessor, 2008). The landfill is located approximately 1 mile north of State Route (SR) 77. Based on information presented in the Screening Risk Assessment (HGC, 2005), the land immediately to the south, west and north of the landfill is also owned by the State of Arizona Board of Regents and is assigned a use code of non-profit vacant land. The 655 acres of State-owned land surrounding the landfill site is used primarily for research activities by UA, although recreational use is possible in some areas. The land located south of the state owned property boundary is privately owned with a Legal Land Class designation of vacant land with undetermined use (parcel number 305-03-005C6; representing 26.6 acres) and vacant land for use as grazing land (parcel number 305-03-005D4; representing 290.24 acres) (Pinal County Assessor, 2008). A former Titan II Missile site located along SR77 approximately 1 mile west and south of the landfill area (the United States Air Force Strategic Air Command 390th Strategic Missile Wing) was in operation between 1960s and the early 1980s.[6]

Currently, the two closest residential areas are located approximately 3 miles southeast and 3 mile southwest from the site, respectively (HGC, 2005). In accordance with Arizona State Law (A.R.S. § 11-806), the Pinal County Board of Supervisors has established an ongoing Comprehensive Plan, most recently amended in December 2005 (http://www.co.pinal.az.us/ PlanDev/PDCP/ CPInfo.asp). The plan includes a land use element that establishes a planning process for future development. Based on this information, the area to the south of the landfill and north of SR77, as well as land currently owned by the State of Arizona could be developed in accordance with the requirements of “Rural Community Area” zoning, which is defined by the Pinal County Comprehensive Plan to not exceed 3.5 residential dwelling units per acre.

According to information provided in the closure plan (RUST, 1995), the PTRL lies within Falcon Valley, which lies within the Santa Cruz drainage system. Regional surface water drainage is generally to the west and southwest and regional groundwater flow is towards the southwest. This information is also provided in a hydrogeologic report for the site (Hargis and Montgomery, 1983).

2.0 HAZARD IDENTIFICATION

In the Hazard Identification step, analytical data that describe current site conditions are evaluated to identify compounds of potential concern (COPC) for evaluation in the risk assessment. Based on information presented in documents reviewed for this report, multiple

[5] The SVE system became operational on November 25, 2008.
[6] Information obtained from http://www.390smw.org/missilemap.html and http://www.globalsecurity.org/ wmd/agency/390mw.htm; accessed October 2007

investigations have been conducted to evaluate the potential impacts from the landfill on subsurface soil, soil gas and groundwater conditions at and in the immediate vicinity of the landfill. The data presented in these reports were reviewed to determine their adequacy for completing the risk assessment. This section provides an overview of these data by first describing the chemical hazards present in the environmental media and then by presenting the data characterizing the radioactive hazards. The soil, groundwater, soil vapor, and radionuclide data are from the reports noted in Section 1.0 and included in a CD as Appendix A.

2.1 Soil Data

In January 1989, prior to closure activities, an investigation of the potential for hazardous waste materials to exist outside of the landfill units was conducted (EEC, 1989; see Appendix A). Based on the results of a soil vapor survey, 10 subsurface soil samples were each collected from areas with elevated vapor concentrations (see next section) from a depth of 15 feet (ft) below ground surface (bgs) at a distance of 12 ft from the perimeters of Unit A and Unit B. An additional four (4) soil samples were collected approximately 100 feet beyond the landfill perimeter. A background soil sample was also collected approximately 500 ft beyond the northeast corner of Unit A. All soil samples were analyzed for extraction procedure (EP) leaching test for metals (arsenic, barium, cadmium, chromium, lead, mercury, selenium, silver) and volatile organic compounds (VOCs) by EPA Method 8010 and 8020. At four locations, additional soil samples were collected from depths of 25 and 35 ft bgs and analyzed for VOCs only (see EEC 1989: Figures 1A and 1B in Appendix A and Table 1). Chloroform was detected at a depth of 15 ft bgs in 8 of the 10 perimeter samples and in 1 of the 4 samples collected 100 feet beyond the unit boundaries but was not detected in deeper soil intervals at any location or in the background soil samples. Other detected VOCs included:

- Toluene - detected in 1 sample at 15 ft bgs out of a total of 22 samples analyzed,
- Carbon tetrachloride - detected in 2 samples at 25 ft bgs and 2 samples at 35 ft bgs out of 22 total analyzed,
- 1,1-Dichloroethylene (1,1-DCE) - detected in 1 sample at 25 ft bgs and in 1 sample at 35 ft bgs of 22 total analyzed,
- cis-1,2-Dichloroethylene (cis 1,2-DCE) – detected in 2 samples at 25 ft bgs and in 2 samples at 35 ft bgs of 22 analyzed), and
- Methylene chloride - detected in 1 sample at 25 ft bgs and in 1 sample at 35 ft bgs of 22 analyzed.

No patterns of detection were observed. Although analytical laboratory reports were included as Appendices in the EEC report, no reporting limits were provided for the VOC results and verification could not be made of the analytical reporting limits provided in the report (EEC 1989). The inorganic metals arsenic, barium, cadmium, chromium, and lead were each detected at least once in the soil samples representing depth interval of 15 ft bgs (see Table 1). All detected concentrations of VOC and metals were below the lowest Arizona Soil Remediation Levels (SRLs), which are protective of residential exposures (R-SRLs) (A.A.C. Title 18, Chapter 7, Article 2). Based on the following considerations, these data were not included in the risk assessment for the following reasons:

- Data represent conditions prior to closure activities, which were completed in 2001;
- The report lacks important data validation information and reporting limits.
- The detected concentrations in soil from this sampling event, conducted prior to landfill closure activities, were below conservative risk-based concentrations protective of direct contact exposures.

In August 2002, Weston Solutions Inc. (Weston) conducted an investigation to determine the nature and extent of compounds in soil surrounding the landfill (Weston 2003). This investigation was conducted after the landfill was closed. Based on the results of a soil vapor survey conducted between July and August 2002 (summarized below), a total of 4 soil borings were installed to the west of the landfill (SB1 to SB4) extending from ground surface to approximately 200 feet below ground surface (ft bgs). Because of refusal at a depth of 111 ft bgs at soil boring SB-3, soil boring SB-4 was installed at a similar location to SB3 and to a depth of 201 feet. Soil samples from boring SB-3 extend from ground surface to 111 ft bgs and samples from SB4 represent depths from 111 to 201 ft bgs. A total of 57 soil samples (and soil gas samples, discussed below) were collected continuously every 10 feet and were submitted for laboratory analyses (VOCs by EPA Method 8260B, semi-volatile organic compounds (SVOCs) by EPA Method 8270, and organochlorine pesticides by EPA Method 8081). Appropriate quality control samples were also collected and data quality information is presented in the report. It is noted that all four soil borings were located along the western edge of the landfill with SB-1 representing an area south and west of Unit B, SB-2 located in an area between the two landfill units, and SB-3/4 west of Unit A (see Figure 2 in Weston 2003).

Table 2 presents the detected analytes from these soil borings. Tetrachloroethylene (PCE) was detected in a single soil sample from SB2 representing a shallow depth interval (0-10 feet bgs). Bis(2-ethylhexyl)phthalate was detected in three samples from SB-1 at concentrations of 0.05 mg/kg at 150 to 160 ft bgs, 3.90 mg/kg at 160 to 170 ft bgs, and 0.80 mg/kg at 180 to 190 ft bgs. Chloroform was detected in samples collected from all three soil borings (SB-1, SB-2, and SB-3) with concentrations ranging from 0.064 mg/kg at a depth interval of 20 to 30 ft bgs (SB-3) to 0.27 mg/kg representing a depth interval of 90 to 100 ft bgs (SB-1). No analyte was detected in any soil sample collected from a depth interval greater than 190 ft bgs and no volatile compound was detected in any soil sample collected from a depth interval greater than 140 ft bgs. Although these data represent current post-closure landfill conditions, all detected concentrations are below the lowest SRL (see Table 2).

The total organic carbon (TOC) concentration of the soil at the PTRL is characterized as low, ranging from 0.166 to 0.664% by weight (HGC 2004a). Based on the low TOC in soil, the potential for VOC adsorption to soil is characterized as limited (HGC 2004a). Furthermore, the landfill does not appear to be producing significant amounts of leachate, if any (Weston 2003).

2.2 Soil Vapor Data

In order to determine prior to landfill closure the potential for contaminants from the landfill to migrate to the area immediately surrounding the landfill, a near surface soil vapor survey was conducted by HGC in July 1988 (see Appendix A to EEC, 1989). A total of eight soil vapor samples were collected at the perimeter of Unit A (labeled A01 through A08) and twelve soil

vapor samples were collected at the perimeter of Unit B (labeled B01 through B12). An additional 9 samples were collected at approximately 100 feet beyond the two landfill units (Samples A09 through A12 and Samples B13 through B17) (see Figures 1 and 2 in EEC 1989). All samples were spaced approximately 100 feet in distance from each other and all were collected from a depth of approximately 5 ft bgs. The samples were collected into charcoal filter glass tubes and analyzed with a portable gas chromatograph for target VOCs as well as total hydrocarbons by PID/FID. While this field method is a useful screening tool for characterization activities and for a qualitative hazard assessment, it does not meet the identification and quantitative quality assurance/quality control requirements necessary for risk assessment or compliance sampling.

In general, the VOCs were detected at the highest concentrations near the landfill perimeter, with concentrations decreasing substantially with increased distance from the landfill units. Two Freon compounds, trichlorotrifluoroethane and fluorotrichloromethane were detected at the highest concentrations among all samples analyzed (536 mg/m^3 and 229 mg/m^3, respectively). The concentrations of both Freon compounds dropped by 2 orders of magnitude with increased distance from the landfill perimeter (e.g. trichlorotrifluoroethane was detected at maximum concentration of 536 mg/m^3 in perimeter sample A02 but was 3.26 mg/m^3 in sample A10 collected at 100 feet west of sample A02). These data indicate that while VOCs were present in the pore space in the soil immediately surrounding the landfill, concentrations diminish substantially with increasing distance. It is noted that these data reflect site conditions prior to closure of the landfill and are therefore not representative of current, post-closure site conditions. Furthermore, as previously stated, the data are not of suitable analytical quality to be used in the risk assessment. Therefore, these data are not evaluated further in this risk assessment.

In September 1994, a second soil vapor investigation was conducted prior to landfill closure to again assess potential soil gas migration from the landfill in the surrounding area (Terra Tech, 1994; provided as Appendix G to RUST, 1995). The investigation consisted of installing vapor probes in shallow subsurface soil within 5 feet from the three perimeter sides (north, west, and south) of each landfill unit, beginning at the upper northeast edge. Although a Figure 4 is cited in Rust 1995 as depicting soil vapor sampling locations, no figure noting sampling locations was provided in the report documenting this investigation. From the description in Terra Tech's report (1994), soil vapor samples were collected with a geoprobe sampler and spaced every 50 feet along the landfill perimeter and to a maximum depth of 10 ft bgs. The soil vapor samples were analyzed by Method 8010/8020 using a field gas chromatograph (GC) equipped with a photoionization detector (PID) and an electrolytic conductivity detector (ELCD). Although no validation information was provided in either report, the report indicated that analytical quality controls were conducted for every 20 samples and a three-point calibration curve was used in the analysis. If a soil vapor sample contained detectable levels of VOCs, a second sample was collected at a distance away (e.g. 15 feet) from the first sample. This was repeated for all samples with detectable concentrations resulting in additional sample collection up to a maximum distance of 150 feet beyond the landfill perimeter.

A total of 12 VOCs were detected in at least one soil vapor sample out of 109 samples analyzed, and included in order of detection frequency: chloroform (85%),

trichlorofluoromethane (69%), tetrahydrofuran (31%), carbon tetrachloride (18%), 1,3-dichlorobenzene and 1,2-dichlorobenzene (each at 12%), xylenes (11%), PCE and trichloroethylene (TCE) (each at 10%), 1,1,1-trichloroethane (8%), 1,1-dichloroethene (5%), and 1,2-dichloroethane (4%). Chloroform was detected at a maximum detected concentration of 270 mg/m^3 in a sample collected at a depth of 5 ft bgs on the north side of Unit A. Samples representing the northwest corner of Unit A (A5) and the northeast corner of Unit B (B1) contained the most number of detected VOCs. Concentrations of all VOCs decreased with distance from the landfill units. Based on this investigation, it was recommended that a perimeter extraction trench was to be included in the landfill closure plan to mitigate future gas migration (RUST 1995). Because these data were obtained prior to 2001 and do not represent current site conditions, they are not evaluated further in the risk characterization. However, they are presented to demonstrate that prior to closure, vapors from the landfill were present in shallow soil immediately surrounding the landfill units and decreased with increasing distance (e.g. chloroform concentrations decreased to non-detect at a distance of approximately 75 feet from the landfill units).

As part of an investigation conducted by Weston (2003) to determine nature and extent of landfill impacts (as discussed above in Section 2.1 with regard to soil samples), 44 shallow soil-vapor samples were collected between July 29, 2002 and August 1, 2002 from points evenly spaced approximately every 50 feet and from a distance of 10 to 15 feet from the perimeter edge of both landfill units. An additional 21 soil vapor samples were collected at a distance (100 feet) from the perimeter locations if an analyte was detected in the initial perimeter sample at a concentration greater than twice the method reporting limit (see Section 3 and Figure 3 in Weston 2003). Soil vapor samples were collected into a one-liter Tedlar bag and analyzed for target VOCs by EPA modified 8021B in an on-site mobile laboratory. The analytes were selected based on those with regulatory action levels in groundwater and included benzene, toluene, ethylbenzene, xylenes, and chlorinated compounds in the C_6 to C_{10} range (e.g. TCE and PCE). This investigation identified TCE in 21 of the 44 perimeter samples and PCE in 7 of the 44 perimeter surface soil vapor samples. The majority of the detections and highest concentrations of VOCs were identified in soil vapor samples collected along the western perimeters of both landfill units. There was no detection of any compound on the limited target analyte list in any soil vapor sample collected along the eastern perimeter of either unit. The maximum detected concentrations of PCE and TCE were associated with a perimeter sample (DP-3) collected from the western edge of Unit A. TCE concentrations ranged between 1 mg/m^3 and 75 mg/m^3 while PCE concentrations ranged between 1.3 mg/m^3 and 43 mg/m^3. Toluene was detected in 28 out of 58 samples, with the highest concentration of 21 mg/m^3.

In addition, five soil vapor samples were collected at each of five soil boring locations representing the area immediately adjacent to the landfill site, including a sample to the north (DP-16), to the east (DP-10 and DP-32), to the south (DP-23) and to the west (DP-17). The soil vapor samples were collected from a depth of 15 ft bgs and analyzed by EPA modified 8021B in an on-site mobile laboratory (as previously described). Among these samples, TCE and toluene were detected in all five samples and PCE was detected in three samples; the maximum detected concentrations of these three analytes were 7.6 mg/m^3, 6 mg/m^3, and 5.1 mg/m^3 respectively (see Table 4 in Weston 2003).

Based on these results, four deep soil borings were installed along the western side of the closed landfill (SB-1 through SB-4; see previous soil discussion). As previously noted, samples from boring SB-3 extend from ground surface to 111 ft bgs and samples from SB4 represent depths from 111 to 201 ft bgs. At all locations, soil vapor samples were collected into 1-liter Tedlar bags from each boring every 10 feet in depth to a final depth of 200 ft bgs and analyzed for VOCs by EPA Method 8260B. A total of five VOCs were detected—TCE, PCE, benzene, toluene, and xylenes (see Table 5). TCE was detected in 95% of the samples analyzed at SB-1 and SB-2 and in 85% of the samples analyzed from SB-3/4. PCE was also detected at a high frequency in samples from SB-2 (95%) and SB-3/4 (80%); PCE was detected in only 4 of 20 samples from SB-1. Both of these chlorinated VOCs were detected at higher concentrations in samples collected from depth intervals of 110 to 130 ft bgs and at 50 to 70 ft bgs (TCE concentration between 47 and 75 mg/m^3 and PCE concentrations ranging from 30 to 43 mg/m^3), relative to samples collected from intervening depth intervals (TCE <1 to 30 mg/m^3 and PCE <1 to 11 mg/m^3; see Table 5). During activities to install these soil borings, three apparently contiguous sand lenses were encountered at 3 depth intervals (101 to 126 ft bgs, 172 to 225 ft bgs, and 444 to 644 ft bgs) (HGC, 2004a), which likely accounts for the fluctuating vapor concentrations with depth. In general, the soil profiles from these borings indicate that subsurface soil surrounding the landfill consists of interbeded silts and sands, or mixtures of these materials (Weston 2003). These data are considered relevant for evaluation in the risk assessment.

Three borings (SGS, SGD-1, and SGD-2) were drilled at the site and completed as six soil vapor monitoring points, with two screened intervals within each of the borings (HGC, 2004a). Soil boring SGS corresponds with soil vapor monitoring well SGS-SP, soil boring SDG-1 corresponds with soil vapor monitoring well SGD-SP and soil vapor monitoring well SGD-MP, and soil boring SGD-2 corresponds with vapor monitoring well SGD-DP (see Figure 2). In general, the screened intervals for these soil vapor monitoring points reflect subsurface conditions at depths ranging from 73 to 83 ft bgs to a maximum depth interval of 433 to 605 ft bgs.

The conclusion of an interim measure investigation conducted in 2003 was that soil vapor concentrations from the landfill decrease rapidly with depth below the landfill and that soil vapor concentrations above the water table (approximately 610 feet below ground surface) are not likely to cause groundwater concentrations in excess of water quality standards (HGC 2004b). Since completion of the interim measure investigation in January 2004, a soil vapor extraction system has been installed at the site. An additional five soil vapor sampling events have occurred at the six vapor monitoring points, including three with the extraction system operational up to the time of sampling [May 2006 (by UA), November 2006 (by UA), April 2007 (by UA) and two after the system was turned on in April 2007 (December 2007 (by AMEC), and April 2008 (by AMEC)] (AMEC 2008a, 2008b). During the December 2007 sampling event, it was determined that the sampling points for three of the vapor monitoring wells (MW-2, MW-5, and SGS-SP) were not completely sealed, allowing for the infiltration of ambient air and thereby diluting the soil vapor sample. Prior to the April 2008 sampling round, the seals at all soil vapor monitoring wells were repaired where necessary. During all sampling rounds, the soil vapor samples were collected in 6-liter summa canisters and analyzed for VOCs by Method TO-15. A summary of the soil vapor data from the sampling events is presented in Table 6.

To evaluate the potential for downward migration of volatile compounds in soil vapor samples, the detected concentrations of chloroform, Freon 11 and TCE in the five biannual sampling events (from January 2004 through April 2008) in each of four soil vapor monitoring wells were graphed. Each of the monitoring well represents a different depth interval as follows, from shallowest to deepest:

- SGS-SP screened interval at 73 to 83 ft bgs,
- SGD-SP screened interval at 98 to 123 ft bgs,
- SGD-MP screened interval at 193 to 217 ft bgs,
- SGD-DP screened interval at 325 to 355 ft bgs, and
- MW-5 and MW-2 representing interval 640 ft bgs to above the static water level.

The detected concentrations of chloroform are presented in Figure 3, Freon 11 in Figure 4, and TCE in Figure 5. It is noted that the soil vapor extraction system was operable immediately before the Nov 2006 and April 2007 sampling events, which may have impacted the soil vapor results. Also, a leak detection compound (1,1-difluoroethane) was identified in samples from SGS-SP and MW-5 during the Nov 2007 sampling event but not during the April 2008 event.

In general, chloroform concentrations are the highest in the shallower depth intervals (less than 123 ft bgs;) and have fluctuated over time (see Figure 3). The lowest detected concentration is 0.004 mg/m^3 in a sample collected in April 2007 from MW-5, and the maximum detected concentration is 978 mg/m^3 in SGD-SP during November 2006 round. Among the two soil vapor wells representing the two shallowest soil depth intervals (SGS-SP and SGD-SP), the chloroform concentrations in the soil vapors samples collected in each of these two shallow wells between January 2004 and April 2008 is as follows.

- In soil vapor samples from SGS-SP (representing 73 to 83 ft bgs), the average chloroform concentration is 397 mg/m^3, representing a range of 112 mg/m^3 in April 2007 to 830 mg/m^3 in May 2006.
- In soil vapor samples from SGD-SP, representing 98 to 123 ft bgs, the average chloroform concentration is 681 mg/m^3, representing a range of 310 mg/m^3 in January 2004 to 978 mg/m^3 in November 2006.

The average concentration of chloroform in the soil vapors samples collected from soil depths approximating 73 to 123 ft bgs between January 2004 and April 2008 approximates 540 mg/m^3 $\pm$ 289 mg/m^3 (mean and standard deviation) (see Table 6). The chloroform concentrations are generally lower in the next deepest depth interval (SGD-MP 193 to 217 ft bgs) over the same time period, with an average detected chloroform concentration of 410 mg/m^3, representing a range of 210 mg/m^3 in January 2004 and April 2008 to 700 mg/m^3 in December 2007. It is noted that the detected concentrations of chloroform are within the same order of magnitude among all three wells while the detected concentration of chloroform in the soil vapor samples representing deeper depth intervals (SGD-DP representing 325 to 355 ft bgs, and MW-2/MW-5 representing depths of 640 ft bgs to above the static water level) are at least an order of magnitude below that detected in soil gas samples representing the shallower three depth

intervals, indicating that chloroform concentrations are not increasing with increasing depth in this time period. However, it is noted that the effects of the SVE system and the presence of leak detection compound in some samples may confound this interpretation.

For Freon 11 (also known as trichlorfluoromethane), the highest detected concentrations are identified in samples in the mid-depth intervals (SGD-MP 193 to 217 ft bgs and SGD-DP 325 to 355 ft bgs) while concentrations in deeper soil strata immediately above the water table (as represented by the highest detected concentration in the two representative monitoring locations: MW-2 and MW-5) are approximately 3 orders of magnitude less (see Figure 4 and Table 7). It is noted that the concentration of Freon 11 increased at MW-5 in the April 2008 sampling event over the previous event but it is not known if this concentration is truly an increase as the vapor sampling point for this well was not completely sealed during the November 2007 sampling event. Regardless, the detected concentration in soil vapor at MW-2/ MW-5 during the April 2008 event is still 2 orders of magnitude below that detected in the next depth interval (325-355 ft bgs). The highest detected surface soil vapor concentration of Freon 11 was 490 mg/m^3 in a sample collected 5 feet from the perimeter of landfill Unit B prior to closure activities (Terra Tech, 1994; see Table 3).

The highest detected concentrations of TCE in soil vapor (47 and 48 mg/m^3) were associated with samples collected in April 2007 from SGD-SP (screened interval of 98 to 123 ft bgs) and from SGD-MP (screened interval of 193 to 217 ft bgs). The detected concentrations of TCE at all soil vapor monitoring wells fluctuate over time (see Table 7). At SGD-MP, TCE was detected at an average concentration of 30 mg/m^3, ranging from a high of 47 mg/m^3 during Dec 2007 event to non-detect during the May 2006 event; detection limits were not identified. Relative to concentrations in SGD-MP at 193-217 ft bgs, the detected concentrations in the shallower well (SGS-SP 73 to 83 ft bgs) and next deepest well (SGD-DP 325 to 355 ft bgs) also fluctuate in concentrations over time. Again the impact of an operational SVE system and compromised wells may confound any interpretation of these data. The highest detected concentration of TCE among the surface soil vapor data was 25 mg/m^3, representing a sample collected at a distance of 15 feet from the landfill perimeter and prior to landfill closure (Terra Tech, 1994; see Table 3).

Shallow Soil Vapor Survey (AMEC 2008a)

In order to provide soil vapor data representative of conditions at potential off-site locations surrounding the landfill, 11 shallow soil vapor samples (and one field duplicate sample) were collected in December 2007 from temporary monitoring points spaced evenly along the southern perimeter (SV1 through SV8) and south western perimeter (SV9 through SV11) of the PTRL site boundary (see Figure 2 for sampling locations). Samples were collected into summa canisters and analyzed for VOC target analytes using TO-15 analytical method (see AMEC 2008a for detail regarding sampling procedures).

Table 7 presents the soil vapor data from this investigation. A validation report for these data is included as Appendix B.

The detected concentrations of the following analytes were highest among the shallow soil vapor samples closest to the landfill and dropped by an order of magnitude or more with increased distance from the landfill perimeter to the property boundary (see Figure 2 for sampling locations and Table 7 for sampling results):

- 1,1-Dichloroethene[7]
- Carbon Tetrachloride
- Chloroform
- Tetrachloroethene
- Trichloroethene
- Freon 11 (Fluorotrichloromethane)
- Freon 12 (Dichlorodifluoromethane)
- Freon 113 (1,1,2-Trichlorotrifluoroethane)

For example, chloroform was detected at a maximum concentration of 92,000 µg/m3 in soil vapor sample SV-10, representing a sampling location immediately along the southwest corner of Unit B. As one increases distance from the landfill periphery, the concentration of chloroform decreases to 400 µg/m^3 at SV-8 located at the far southwest corner of the PTRL property approximately 180 feet beyond sampling location SV-10 (see Figure 2).

The following analytes were detected at highest concentrations in the soil vapor samples from the furthest distance from the landfill perimeter:

- 2-Butanone (Methyl Ethyl Ketone)
- 4-Methyl-2-pentanone
- Acetone
- Benzene
- Carbon Disulfide
- Ethyl Benzene
- Xylenes
- Methylene Chloride
- Toluene

The highest concentrations of the analytes benzene, ethylbenzene, toluene, and xylenes (BTEX) were associated with shallow soil vapor samples from SV-1 and SV-2, collected from the extreme southeastern property boundary (see Figure 2). All detected compounds in the shallow soil vapor samples SV-1 through SV-8 from this sampling event, excluding the data from sample SV-4, were evaluated as COPCs in the risk assessment. The data associated with sample SV-4 was not evaluated quantitatively in the risk assessment because of the presence of a leak detection compound (1,1-difluoroethane) in the sample, indicating the sample was

[7] 1,1-Dichloroethene was detected in a single shallow soil sample (SV-13) located in the northeast corner of the landfill. 1,1-Dichloroethene was not detected in any shallow soil vapor sample along the southern property boundary (see Table 7 and Figure 2).

compromised and not representative of soil vapor conditions. The shallow soil vapor samples were collected along the fence line to approximate the southern boundary of the state-owned property (State of Arizona Board of Regents), which is approximately 50 feet further south than the fence. The soil vapor samples were collected north of the fence line because of difficulty accessing the roughly 50 feet of state-owned property south of the fence. The area south of the fence is in a wash area and consists of soft sands making access extremely difficult. The soil vapor sampling locations SV-1 through SV-8 were installed along the northern edge of the fence to provide conservative estimates of concentrations at the edge of the state-owned property, immediately adjacent to private property that could be developed for any future use, including residential use. Sampling locations SV-9 through SV-13 represent shallow soil vapor conditions on the State of Arizona Board of Regents property adjacent to the landfill periphery. These locations are within the 10-acre fenced area of the landfill. Currently, the private property located immediately south of the wash is not used for any purpose and consists of native vegetation for approximately 1 mile to State Highway 77. A new development, Saddlebrook Ranch golf course, lies approximately 1.3 miles west southwest of the landfill.

2.3 Groundwater Data

Groundwater exists at this site at approximately 645 ft bgs and occurs within three basin fill deposits with a thickness of at least 800 to 900 feet (HGC 2005). Regional flow of groundwater is to the south or southwest (HGC 2005). Based on hydraulic measurements at the site, groundwater is estimated to move one-mile downgradient (to the south/southwest) in 480 years (HGC 2005).

In 1984 and 1985, four monitoring wells (MW-1 through MW-4) were installed at PTRL as part of the landfill compliance requirements. The monitoring wells are approximately 800 feet deep with depths to water measured at 650 ft bgs (Weston 2003b *Draft Conceptual Design Work Plan,* April). In 1991, MW-5 was installed to replace MW-1 (EEC, 1991 presented as Appendix E to PTRL RCRA Post-Closure Permit). The groundwater monitoring wells are located inside a fenced enclosure surrounding the PTRL site and are individually equipped with locked wellhead covers. Given that regional groundwater flow is towards the south or southwest, wells MW-1 and MW-5 are thereby considered hydrologically upgradient of the landfill units (see Figure 2). MW-4 is located east and south of Unit B and considered lateral to groundwater flow. Monitoring wells MW-3 is located due west of Unit A and MW-2 is located southwest of Unit A and west of Unit B and downgradient to both Units A and B.

The UA Department of Risk Management and Safety has been collecting groundwater samples from this monitoring well network twice per year (beginning in 1984 at MW-1) and analyzing the samples for VOCs, SVOCs, pesticides, metals, and general water quality parameters (e.g. nitrate/nitrite, pH). The analytical suite for all sampling events and wells are presented in Table 8.

Groundwater is not currently used as a source of drinking water at the landfill property or in the surrounding properties. However, future use of groundwater as a potential drinking water source is considered. Therefore, for the purposes of evaluating future potential risks and hazards associated with potential exposures to groundwater used as a source of tap water, the

groundwater data considered in this risk assessment represents the data from November 2001 (the date of the final Post-Closure Permit) to the present. It is noted that several compounds were detected in groundwater samples collected prior to 2001. Overall, these detections have been sporadic in both time and by monitoring well location. A summary of the analytes that have been detected in earlier sampling events (prior to 2001) but not in any sampling events from 2001 to present, is provided in Table 9. Several VOCs (including 1,1,1- TCE, 1,1,2,2-TCA, and 1,1-DCE), pesticides (aldrin, dieldrin, chlordane, methoxychlor), and SVOCs were detected infrequently at low concentrations prior to 2001 but not in any groundwater sample collected since 2001 (see Table 9). Inorganic compounds were only analyzed in groundwater samples collected infrequently between 1985 and 1997 but have not been analyzed in any groundwater sample collected after 1997 (see Table 9). Although several inorganics were detected in groundwater samples collected prior to 1997 (e.g. arsenic, barium, nitrate/nitrites), they are not considered representative of impacts from the landfill and are not included in the groundwater dataset representing future site conditions. A summary of the groundwater data representing current site conditions is presented in Table 9. Groundwater data for all sampling events is provided in Appendix C.

Detected compounds include the VOCs benzene (detected at the detection limit in one sample from MW-5 from the April 2006 sampling event), chloroform (detected in one sample from MW-4 during October 2006 sampling event), chloromethane (detected in one sample from MW-2 during October 2005 sampling event), and toluene (detected in one sample from each of MW-1/ MW-5 and MW-2 during the November 2006 sampling event). Manganese was detected in all groundwater samples analyzed.

The inorganic anions sulfate, chloride and sodium were also detected in groundwater but are naturally occurring components of water, not considered contaminants but are metrics of general background chemistry of groundwater. There are no toxic effects associated with them. The analysis of these three compounds in groundwater considers the detected concentrations relative to other non-health-based benchmarks:

- Sodium—recommended daily dietary levels for adequate nutrition;
- Choride and Sulfate—Secondary drinking water standards.

The secondary drinking water standards are non-enforceable guidelines for compounds that may cause cosmetic effects (skin or tooth discoloration) or aesthetic effects (adverse taste, odor or color) in drinking water. The following table presents a comparison of the detected concentrations of these inorganics to each of these benchmarks.

Analyte	Maximum Concentration (mg/L)	Estimated Intake (Tap Water) (1)	Daily Recommended Intake (2)	Secondary Drinking Water Standard (3)
Sodium	39	78	500-2400	
Chloride	7.7			250
Sulfate	5.2			250

1. Based on ingesting 2 Liter/day drinking water for adults.
2. Whitney, 1999

3. *National Secondary Drinking Water Standards* (USEPA, 2006).

The maximum detected concentrations of these inorganic compounds are below these benchmarks for known affects associated with drinking water exposures and are therefore dismissed from further evaluation in this risk assessment.

The VOCs benzene, chloroform, chloromethane, and toluene and the inorganic compound manganese are evaluated further in the risk characterization as groundwater COPCs.

2.4 Radionuclide Data

Table 10 summarizes the amount of disposed radionuclides at PTRL, including information about the radionuclide half-life and type of ionizing radiation emitted by that radionuclide. The following passage is an overview of basic radiation physics from the Agency for Toxic Substances and Disease Registry (ATDSR, 1999).

> "Unstable nuclides undergo radioactive transformation, a process in which a neutron or proton converts into the other and a beta particle is emitted, or else an alpha particle is emitted. Each type of decay is typically accompanied by the emission of gamma rays. These unstable atoms are called radionuclides; their emissions are called ionizing radiation; and the whole property is called radioactivity. Transformation or decay results in the formation of new nuclides some of which may themselves be radionuclides, while others are stable nuclides. This series of transformations is called the decay chain of the radionuclide. The first radionuclide in the chain is called the parent; the subsequent products of the transformation are called progeny daughters, or decay products."

Based on inventory amounts and the decay rates of the disposed radionuclides at PTRL (Table 10), as of March 26, 2008, the total radionuclide activity remaining in the approximate 231 pits within Site B was 6.7 curies (Ci) [8], of which 4.5 Ci (or 65.9%) is tritium (^{3}H) and 2.29 Ci is 14-carbon (^{14}C). The remaining 0.02% of low-level activity is associated with 18 nuclides, although it is again noted that daughter progeny were not included in this inventory. The 18 nuclides with remaining activity (in order ranging from highest to lowest amount of remaining activity; see Table 10) include the following nuclides:

- Tritium (^{3}H)
- Carbon-14 (^{14}C)
- Chlorine-36
- Nickel-63
- Curium-244
- Cobalt-60
- Uranium-238 (depleted)
- Radium 226
- Uranium-238 (natural)
- Cesium-137

[8] A Curie (Ci) is defined as the amount of radioactive material in which 37 billion atoms transform every second (ATSDR, 1999).

- Strontium-90
- Lead-210
- Argon-39
- Barium-133
- Iron-55
- Americium-241
- Sodium-22
- Promethium-145

The nuclides disposed of at the PTRL whose activities are currently greater than one millicurie (mCi) (decay-corrected to 26 March 2008 as indicated in Table 10) are listed in the table below.

Nuclide	Total Current Activity (millicuries)
Hydrogen-3 (tritium; ^{3}H)	4464.71
Carbon-14 (^{14}C)	2297.86
Nickel-63	5.72
Curium-244	2.61

Tritium and ^{14}C are discussed later in this section. Nickel-63 is a low energy beta emitter and is measured using a liquid scintillation counter or Geiger Mueller counter. Potential exposure to millicurie levels of nickel-63 does not represent a significant external exposure hazard as the low energy beta particles cannot penetrate the outer layer of skin (http://www.brown.edu/Administration/EHS/public/Nickel63.pdf). Curium-244 is an alpha emitter that rapidly loses energy when passing through matter although alpha particles do not penetrate very far. Alpha particles can be stopped completely by a sheet of paper and if external exposure occurs, these particles are usually completely absorbed by the outer dead layer of the human skin. As a result, alpha emitting radioisotopes are not a hazard outside the body, although they can be very harmful if they are ingested or inhaled (http://www.ciwmb.ca.gov/safety/manual/Chapter6/AppendixII.doc).

As previously stated in Section 1.1, the radioactive waste materials disposed at the Page Trowbridge Ranch Landfill consisted of both liquid and dry waste (e.g. scintillation vials, animal carcasses, bedding, and laboratory research waste material, [UA, 1999]). Of the inventoried nuclides disposed in the landfill (Table 10), the following nuclides were likely disposed as a gas: argon-39[9] (with some remaining activity; see Table 10), xenon-122[9] and radon-222 (with no remaining activity of either xenon-122 or radon-122; see Table 10).

Radionuclides such as ^{3}H and ^{14}C are also naturally occurring. Tritium is naturally present as a very small percentage of ordinary hydrogen in water, both liquid and vapor, as a result of the interaction of cosmic radiation with gases in the upper atmosphere. It is noted that the majority of the amount of ^{3}H present in the atmosphere is attributed to past atmospheric nuclear weapons tests (approximately 80%). After being produced in the atmosphere, ^{3}H is readily

[9] Argon-39 and Xenon-122 were likely disposed as containerized gases as both are noble gases.

incorporated into water and falls to earth as rain, thus entering the natural hydrological cycle. Tritium is naturally present in surface waters at about 10 to 30 picocuries per liter (pCi/L). Carbon-14 is also naturally present in the atmosphere, oceans, and all organic material, and it behaves in the environment in the same manner as other carbon isotopes. The largest source is in the upper atmosphere where nitrogen interacts with neutrons from cosmic rays, with about 38,000 Ci of ^{14}C being produced by this process each year. Carbon-14 occurs in the ratio of 6 picocuries (pCi) ^{14}C per gram of total carbon, and it is assimilated into tissues of all plants and animals just like other carbon isotopes (Peterson, 2007).

Beta emitting radionuclides, such as ^{3}H and ^{14}C, are considered weak as the radiation emitted by the low-energy beta particle that is similar to an electron. Moreover, beta particles do not travel very far in air and cannot penetrate the skin (NRC, 2006; ATSDR, 1999). Beta emitters are detected in samples by a liquid scintillation detector and on surfaces by thin window GM detector (DOE, 1994, 2007). Generally, only the heavy nuclides can emit alpha particles, an example being uranium-238 (U-238), which was disposed at very low amounts at PTRL (see Table 10). As a result of their large size, alpha radiation can travel only a few centimeters in air, and possesses low penetration capability, which is blocked by a sheet of paper, the outer layer of skin, or the landfill cap as in the case of PTRL. These properties cause alpha emitters to be hazardous only if there is internal exposure (i.e., if the radionuclide is inside the body). Alpha radiation is detected in samples by a liquid scintillation detector, gas proportional counter, and on surfaces by thin window Geiger-Mueller (GM) detector. Proportional counters and GM detectors are also well suited for detecting beta and gamma radiation emitted by radioactive decay products (DOE, 2008).

External exposures occur when radiation enters the body directly from sources located outside the body, such as radiation emitters from radionuclides on ground surfaces, dissolved in water, or dispersed in the air. External exposures are generally from material emitting gamma radiation, which readily penetrate the skin and internal organs (ATSDR, 1999). However, as previously stated, *beta* and *alpha* radiation from external sources are far less penetrating and deposit their energy primarily on the skin's outer layer. *Gamma* emitters are monitored using surface dosimetry meters. Approximately one one-hundredth (0.01%) of the remaining activity buried at PTRL is associated with radionuclides that are *gamma* emitters.

It is noted that the calculations of current activities provided by UA RADCON based on decay rates of known radionuclides disposed at PTRL do not provide for the formation of other radionuclides as part of the normal decay process of many of these radionuclides. As previously noted, tritium and ^{14}C represent the primary radionuclides disposed at PTRL based on inventory records. As it undergoes radioactive decay, tritium (with a half-life of 12 years) transforms by emitting a very low energy beta particle to produce stable, nonradioactive helium (USEPA, 2008b). Although tritium also forms water when exposed to oxygen, it is likely that anaerobic conditions within the landfill do not support this degradation pathway.

Carbon-14 decays by emitting a *beta* particle with no attendant *gamma* radiation to produce stable nitrogen-14. The half-life for ^{14}C is 5,700 years (Peterson, 2007). Therefore, for the two radionuclides with the greatest amount of radioactivity disposed at PTRL, there are no decay products with greater potential radiotoxicity than the parent radionuclides. However, uranium,

reported as both U-NAT and U-DEP representing naturally occurring uranium and depleted uranium) was also disposed at PTRL. Natural uranium is a mixture of three isotopes of uranium: U-234, U-235, and U-238. By weight, natural uranium is about 0.01% U-234, 0.72% U-235, and 99.27% U-238. However, by radioactivity, about 48.9% of the radioactivity is associated with U-234, 2.2% is associated with U-235, and 48.9% is associated with U-238 (ATSDR, 1999). In depleted uranium, the portion of U-235 is decreased (to less than 0.72%) and U-234 has been removed, resulting in approximately half the radioactivity relative to natural uranium, both of which pose little radioactive danger because they give off very small amounts of radiation (ATSDR, 1999; Peterson, 2007). The alpha radiation ordinarily given off by uranium cannot pass through solid objects, such as paper or human skin (ATSDR, 1999) or the landfill cover at PTRL.

In a summary report published by the UA RADCON office (UA, 2002a), the UA compared the average environmental dose per calendar quarter over a 6-year period prior to landfill closure, (beginning in April 1989 through September 1995) from five environmental dosimetry stations located on Unit B of PTRL, to the average dose from an environmental comparison station on Page Ranch located some distance from the PTRL and also to data from a similar environmental comparison station located in Tucson, approximately 30 miles from the site. The reported average environmental dose per calendar quarter measured at each of the three locations over the period specified was:

- Page Ranch Unit B (average of 5 stations): 17 mrem/quarter;
- Page Ranch Station (Location away from Site B): 16 mrem/quarter; and
- Tucson Comparison Station (USEPA Station at UA): 15 mrem/quarter.

The UA RADCON office concluded these numbers are consistent with an average annual 'natural background' dose of approximately 55 mrem/year from cosmic radiation and radioactive material naturally present in the soil, noting that the actual value can vary significantly depending upon elevation and the nature of the local geology. However, at the measured environmental doses found at PTRL, there is no increase dose of penetrating radiation at PTRL relative to other areas at Page Ranch or in Tucson.

As part of the Post-Closure permit requirements, the UA RADCON office has been collecting groundwater samples on a regular basis since May 1985 from onsite and offsite locations and analyzing the groundwater samples for radioactivity. The data are summarized in Table 11 and presented in Appendix C. The data represent groundwater from monitoring wells located on the PTRL (onsite monitoring wells MW-1/MW-5, MW-2, MW-3, and MW-4), and from private wells, some of which are located in the general vicinity of the PTRL for which continued access has been allowed since 1985. The offsite wells include

- Falcon Valley Ranch Well (at the Falcon Valley Ranch headquarters located 2.75 miles southwest of PTRL);
- Catalina Well (serving a cattle trough owned by Falcon Valley Ranch, located 3 miles southwest of PTRL off Hwy 77 on east side, north of milepost 92);
- Oracle Junction Well (well owned by Arizona Water Company located 4.25 miles southwest of PTRL at Oracle Junction serving the Town of Oracle);

- Tucson Water Wells I-1 and I-2 located 7 miles south southwest of PTRL (well owned by the City of Tucson located in Catalina behind the 'Lariat Inn');
- Goodman Ranch Well (on Goodman Ranch, later known as Eagle Crest Ranch, 4.8 miles south southwest of PTRL) and subsequently replaced with the Saddlebrook Ranch Well (located 5 miles south of PTRL).

The analytical data represents liquid scintillation counting (LSC) of the well water samples, with the results reported primarily for ^{3}H, ^{14}C, with the activity for all other radionuclides combined. Based on the available instrumentation prior to August 1984, water samples analyzed prior to this date (which represented only samples from off-site monitoring wells) were able to detect ^{3}H and "all other radionuclide" activity.[10] Groundwater samples analyzed after August 1984 (which include samples from both on-site and off-site monitoring wells) were quantified by LSC for ^{3}H activity, ^{14}C activity, and activity from "all other radionuclides" including nickel-63, cesium-135, and strontium-90. The units for both "Value" and "Sigma" data are expressed in picocuries/liter (pCi/l) of water. The "Sigma" (σ) values represent one standard deviation and provide an indication of the statistical accuracy of its corresponding specific activity. The LSC provides either an estimate of the activity present or indicate that the potential activity is below a calculated lower limit of detection (LLD) for the counting system. When a sample activity greater than the LLD is detected, either the sample was recounted or another replicate groundwater sample was prepared and counted provided adequate groundwater sample was available (see Table 11). For comparison purposes, dose-based drinking water standards are provided. These values were derived by USEPA (1976) based on a dose-based drinking water standard of 4 mrem per year to avoid the undesirable future contamination of public water supplies as a result of controllable human activities. Based on a defined acceptable total radiologic dose of 4 mrem per year for all beta and photon emitters, the USEPA developed the federal maximum contaminant level (MCL) for ^{3}H at 20,000 picocuries per liter (pCi/L) and 2,000 pCi/L for ^{14}C (USEPA, 2000b), assuming the total exposure comes from either of these two radionuclides.

As previously noted, UA RADCON has estimated that more than 99% of the remaining radioactivity at PTRL represents ^{3}H (65.9%) and ^{14}C (33.92%) by applying decay rates (half lives) to the amount of radioactive materials disposed at PTRL from radionuclide disposal records maintained between 1962 to Feb 1986 (see Table 10). Therefore, while other radionuclides may be reflected in the LSC in Channels A and B, UA RADCON has determined that the predominance of ^{3}H and ^{14}C in the remaining radioactivity buried at the site make this analytical approach a very reliable one in determining potential impacts to groundwater from radioactive waste materials in PTRL.

Although both ^{3}H and ^{14}C, as well as unknown radionuclides, were detected in groundwater samples from both on-site and off-site locations, the detected activities are very low relative to the MCL values and have not been detected consistently over time or within a particular monitoring well. Based on these results, RADCON has concluded that the groundwater data

[10] Prior to 1984, a two-channel LSC system recorded Channel A as ^{3}H and Channel C as "all other radionuclides". After 1984, a 3-channel LSC was employed, with Channel A recording ^{3}H, Channel B recording ^{14}C, and Channel C recording "all other high energy radionuclides."

> *"indicate that no radioactivity appreciably above background has been detected.* [The detected results] *are consistent with the characteristics of the site and research regarding migration of chemical substances in arid environments* (UA, 2002b)."

Based on these data, the levels of radiation at PTRL at the ground surface and in groundwater are comparable to background levels, are not impacted by radioactive materials buried at PTRL, and are not evaluated quantitatively in the risk characterization (USEPA 1989).

3.0 TOXICITY ASSESSMENT

The purpose of the Toxicity Assessment is to identify both the types of adverse health effects a COPC may potentially cause, as well as the relationship between the amount of COPCs to which receptors may be exposed (dose) and the likelihood of an adverse health effect (response). Adverse health effects are characterized by USEPA as carcinogenic or noncarcinogenic. Dose-response relationships are defined by USEPA for oral and inhalation routes of exposure. The results of the toxicity assessment, when combined with the results of the exposure assessment (Section 4), provide an estimate of potential risk.

This section provides dose-response information for chemical COPCs evaluated in the risk assessment. Low-level exposure to radionuclides can result in noncarcinogenic risk as well as carcinogenic risk. However, in evaluating exposure to radioactive materials at contaminated sites, only carcinogenic risk is considered for most radionuclides (USEPA, 2000a, 1989). The noncarcinogenic health effects associated with exposure to ionizing radiation include mutagenic, teratogenic, and acute toxicity effects. However, these effects are generally less significant for doses associated with environmental exposures. Therefore, the USEPA has determined that carcinogenic risk is considered to be a sufficient basis for assessing radiation related to human health risk at CERCLA sites. However, given there is no exposure to any radionuclide at PTRL at levels greater than background (see Section 2.4), the risk characterization will not include an assessment of the carcinogenic risk.

Section 3.1 describes the USEPA approach for developing noncarcinogenic dose-response values. The carcinogenic dose-response relationships developed by USEPA are discussed in Section 3.2. Noncarcinogenic and carcinogenic dose-response values used in this risk assessment are presented in Appendix D, Standard Tables 5.1 and 5.2 (noncarcinogenic oral/dermal and inhalation values, respectively) and Standard Tables 6.1 and 6.2 (carcinogenic oral/dermal and inhalation values, respectively). Dose-response information used in this risk assessment was obtained from the following sources, in order of priority in accordance with USEPA guidance (USEPA, 2003):

- USEPA's Integrated Risk Information System (IRIS) (USEPA, 2008);
- USEPA' Provisional Peer Reviewed Toxicity Values (PPRTVs); and
- Other sources, such as California USEPA, ATSDR, and USEPA's Health Effects Assessment Summary Tables (HEAST) (USEPA, 1997a).

3.1 Non-Carcinogenic Dose-Response

Constituents with known or potential noncarcinogenic effects are assumed to have a dose below which no adverse effect occurs, or conversely, above which an effect may be seen. This dose is called the threshold dose. In laboratory experiments, this dose is known as the No Observed Adverse Effect Level (NOAEL). The lowest dose at which an adverse effect is seen is called the Lowest Observed Adverse Effect Level (LOAEL). By applying uncertainty factors to the NOAEL or the LOAEL, the USEPA has developed Reference Doses (RfDs) for chronic exposures to constituents with potential noncarcinogenic effects (USEPA, 2008).

The uncertainty factors account for uncertainties associated with the dose-response value, such as the effect of using an animal study to derive a human dose-response value, extrapolating from the high doses used in the laboratory experiment to the low doses typically encountered in environmental settings, and evaluating sensitive subpopulations. For constituents with potential noncarcinogenic effects, the RfD provides reasonable certainty that if the specified exposure dose is below the RfD, then no potential noncarcinogenic health effects are expected to occur even if daily exposure were to occur for a lifetime. RfDs are expressed in terms of milligrams of constituent per kilogram of body weight per day (mg/Kg-day).

Oral, dermal, and inhalation routes of exposure were evaluated in this risk assessment. Because dermal toxicity values are not generally available, oral dose-response information was used to estimate the potential risk associated with both oral and dermal exposures. For constituents for which no inhalation RfD has been developed by USEPA, RfDs from the oral route of exposure were extrapolated to use to evaluate inhalation of fugitive dust. All RfDs are presented in Appendix D, Standard Tables 5.1 and 5.2.

3.2 Carcinogenic Dose-Response

The underlying assumption used by USEPA for regulatory risk assessment for constituents with known or assumed potential carcinogenic effects is that no threshold dose exists. USEPA assumes that a finite level of potential risk is associated with any dose above zero. In March 2005, USEPA issued new cancer guidelines (USEPA, 2005a), the purpose of which was to recommend principles and procedures to guide USEPA scientists in assessing the cancer risks from chemicals or other agents in the environment when deriving toxicity values. For potential carcinogenic effects, USEPA has used a two-step evaluation in which the constituent is assigned a weight-of-evidence classification, and then a cancer slope factor (CSF) is calculated. The first step, the weight-of-evidence classification (USEPA, 2005a) summarizes the evidence about the likelihood of the constituent being a human carcinogen. Under the USEPA's more recent approach for carcinogen risk assessment (USEPA, 2005a), all scientific information is considered in a narrative approach in determining whether and under what conditions an agent may cause cancer in humans. However, many compounds have not been reevaluated and retain the earlier weight-of evidence classification approach as published in IRIS.

Under the 1986 guidelines, Group A constituents are classified as human carcinogens, Group B constituents are probable human carcinogens, Group C constituents are possible human carcinogens, Group D constituents are not classifiable as to human carcinogenicity, and for

Group E constituents there is evidence of noncarcinogenicity for humans. In the second step of the evaluation, CSFs are calculated for constituents that are known or probable human carcinogens. The USEPA has developed computerized models that extrapolate observed responses at high doses used in animal studies to predicted responses in humans at the low doses encountered in environmental situations. The models developed by the USEPA assume no threshold and usually use animal as well as human data to develop an estimate of the carcinogenic potency of a constituent. USEPA refers to this numerical estimate as the CSF. The computerized models used by USEPA assume that carcinogenic dose-response is linear at low doses. CSFs are expressed in terms of $(mg/kg\text{-}day)^{-1}$. For constituents for which no inhalation CSF or Unit Risk (UR) value has been developed by USEPA, CSF values from the oral route of exposure were extrapolated to use to evaluate inhalation of fugitive dust. CSFs are presented in Appendix D, Standard Table 6.1 and 6.2.

3.3 Absorption Adjustment Factors

To estimate the potential risk to human health that may be posed by the presence of COPCs in soil, it is necessary first to estimate the potential exposure dose of each COPC. The potential exposure dose is similar to the administered dose or applied dose in a laboratory experiment. The animal-derived CSFs and RfDs used in quantitative risk assessment are based on applied doses in most cases. However, the efficiency of COPC absorption via a particular route and from a particular matrix (e.g., water) at the Site may differ from the absorption efficiency for the exposure route and matrix used in the experimental study that serves as the basis for the CSF or RfD. Absorption adjustment factors (AAFs) are used to adjust the calculated exposure to a given COPC so that it is comparable to the toxicity information for that constituent.

AAFs allow risk assessors to make appropriate adjustments if the efficiency of absorption is known or expected to differ because of physiological effects and/or matrix or vehicle effects. AAFs can be less than one or greater than one, depending on the COPC and potential routes of exposure at a site. This HHRA considers AAFs based upon USEPA recommended or default values. The values used in this assessment are considered “default” because they do not consider “chemical-specific absorption efficiencies” but are based upon a review of limited scientific literature for compound classes when applied to adjust for dermal exposures from oral toxicity data (see Appendix D Standard Tables 5.1 and 6.1) (USEPA, 2004a).

4.0 EXPOSURE ASSESSMENT

The risk assessment process requires the identification of exposure scenarios to assess the potential for adverse health effects from constituents at or near the Site. While these scenarios represent hypothetical people and activities, they reflect the physical description of the Site and the surrounding industrial and residential areas, as well as the activities that may typically occur in these areas. Both current and reasonably foreseeable future potential exposures are evaluated. In addition to current and reasonably foreseeable future potential exposures, the risk assessment includes an evaluation of potential exposures to hypothetical future residents who may potentially contact on-site surface soil. This potential exposure is not a reasonably foreseeable future use of the Site but was included as an estimate of potential upper bound risk.

The exposure assessment at Page Trowbridge Ranch Landfill is presented in the following three subsections. Section 4.3.1 describes the potential receptors and exposure scenarios selected for evaluation in the risk assessment. Section 4.3.2 presents the potential exposure pathways evaluated for each potential receptor and describes the methods used to estimate potential exposure doses. Section 4.3.3 describes the methods used to estimate exposure point concentrations.

4.1 Potential Exposure Scenarios

The Page Trowbridge Ranch is located north of SR77 in Township 9 South, Range 14 East, Gila and Salt River Base and Meridian and includes the southern half of Section 27 and the northern half of Section 34 (RUST, 1995). The PTRL, which is located within the Page Trowbridge Ranch, is a permitted, closed hazardous waste landfill. The 3.25 acre landfill area is not to be used for any other purpose for a period of 30 years after the date of completing final closure (November 6, 2001) under the provisions noted in Part II of the RCRA Post-Closure Final Permit for this landfill. Any future use of the landfill property must be approved by ADEQ as documented in the final permit:

> *"Post closure use of the portion of the property on or in which hazardous wastes remains after closure shall never be allowed to disturb the integrity of the final cover, liner(s), or any containment system, or the function of the facility's monitoring system. New future uses must be reviewed and approved by ADEQ and must not adversely impact the integrity or function of the closure system"* (page II-1; AZ HWMA RCRA Post-Closure Permit [ADEQ, 2001]).

Another requirement of the Post-Closure Final Permit (page II-3; AZ HWMA RCRA Post-Closure Permit [ADEQ, 2001]) is that a notation be attached to the deed to the facility property (or other document associated with the title to the property) that will "in perpetuity" notify any potential purchaser that hazardous material were managed on the property and that the re-use of the property is restricted under regulations (A.A.C. R18-8-264-264.A, 40 CFS subpart G). In addition to the local zoning or land-use authority (i.e. Pinal County), ADEQ has jurisdiction over property use of the Page Ranch Landfill property (page II-4; AZ HWMA RCRA Post-Closure Permit [ADEQ, 2001]).

Accordingly, current access to the landfill area, which lies one mile within the state owned Page Ranch property, is restricted by means of the following controls:

- The entire 655-acre UA property defined as Page Trowbridge Ranch is enclosed by a 4-foot multi-stranded barbed wire fence, primarily for cattle control;
- Access to the PTRL property is through a locked gate on the east boundary
- An area of approximately 10 acres that includes both landfill units A and B, and buffer areas to the south and west is enclosed by a 6-foot high chain link fence. Locked gates for vehicle access exist at the southeast and northwest corners of the enclosure.
- Warning signs are posted along each side of the chain link fence to provide warning from all directions of approach to the site.

Access to the landfill area is only allowed to environmental professionals and UA health and safety and maintenance personnel for monitoring and maintaining landfill conditions (e.g. permit required collection of biannual soil vapor and groundwater samples, mowing vegetation).

The Page Trowbridge Ranch property is located in the semi-arid climate region of southern Arizona. The 10-acres landfill site is in the extreme southwest corner of the 655-acres UA owned property. The UA property outside of the landfill area is used on a limited basis for UA agricultural and arid lands research programs. State-owned land adjacent to the Page Trowbridge Ranch property is generally unfenced and is occasionally used for recreational purposes such as off-road vehicle use, hunting, and target shooting. Currently, the two closest residential areas are located approximately 3 miles southeast and 3 miles southwest from the site, respectively (HGC, 2005).

The land located immediately south of the state owned property boundary is privately owned with a current Legal Land Class designation of vacant land with undetermined use (parcel number 305-03-005C6 representing 26.6 acres) and vacant land for use as grazing land (parcel number 305-03-005D4 representing 290.24 acres) (Pinal County Assessor, 2008). A drainage wash lies between the Page Trowbridge Ranch and the private property located to the south and west. In accordance with Arizona State Law (A.R.S. § 11-806), the Pinal County Board of Supervisors have established an ongoing Comprehensive Plan, most recently amended in December 2005 (http://www.co.pinal.az.us/PlanDev/PDCP/ CPInfo.asp). The plan includes a land use element that establishes a planning process for future development. Based on this information, the area to the south and west of the landfill and north of State Route 77, as well as land currently owned by the State of Arizona could be developed in accordance with the requirements of “Rural Community Area” zoning, which is defined by the Pinal County Comprehensive Plan to not exceed 3.5 residential dwelling units per acre.

The closest off-site wells are located within a one-mile radius of the site on the private property immediately to the southwest of the site: Arizona Department of Water Resources (ADWR) Number 55-206038 and 55-595243 (Arizona Department of Water Resources Wells 55 database and GWSI database; accessed via http://www.sahra.arizona.edu/wells/ on 09/15/09). Both wells are used for industrial purposes and are screened at maximum depth intervals of 1500 and 1380 ft bgs, respectively. Based on the regional flow of groundwater, these wells are considered downgradient of the PTRL site.. The next closest well to the site is located approximately 2 miles west southwest of the site and is a municipal test well owned by the Arizona Water Company. The Arizona Water Company provides drinking water to customers in Oracle and Oracle Junction (HGC, 2005). A summary of all registered wells within a 4-mile radius of the PTRL site as listed in the two noted ADWR databases is presented in Appendix C. A total of 13 wells used for drinking water purposes (i.e., water use categorized as either “Domestic”, “Utility/Water Company”, or “Municipal”) are located within a 4-mile radius from the Page Trowbridge Ranch Landfill, with the number of wells within an increase in distance as follows:

# of Wells within 1 mile radius	# of Wells > 1 mile but within 2 mile radius	# of Wells > 2 miles but within 3 mile radius	# of Wells > 3 miles but within 4 mile radius
2	1	5	5

Under current and future conditions (at least 30 years under the requirements of the Post-Closure Permit), no activity or receptor group has been identified to exist at the Page Ranch Landfill Site. Users of the surrounding area of Page Trowbridge Ranch (e.g., recreational users, UA researchers) could potentially be exposed to volatile compounds that migrate from shallow soil vapor into the ambient air. Future redevelopment activities at the adjacent property located to the south of the landfill site could include residential homes conservatively assumed to exist within 500 feet of the landfill. Therefore, future residential use of the area surrounding the landfill property is considered.

4.2 Identification of Potential Exposure Pathways

As described in the *RAGS Human Health Evaluation Manual* (USEPA, 1989), three elements must be present for a potential human exposure pathway to be complete:

- a source or chemical release from a source,
- an exposure point where contact can occur, and
- an exposure route by which contact can occur.

If any of these elements in missing, the exposure pathway is incomplete.

The Conceptual Site Model (CSM) prepared for this site documents the mechanisms and pathways for potential exposures by human receptors to landfill materials (see Figure 6). Potential exposure pathways are the ways by which potential receptors may be exposed to constituents. The potential exposure pathways included in this assessment and noted in the CSM were selected based on the most likely mechanisms of exposure and observations at the Site. Direct exposure to chemical or radioactive waste material disposed at the PTRL landfill is not considered a complete exposure pathway as all hazardous waste within the landfill boundaries are at depth beneath the landfill cap with no defined or allowed activity that would allow for exposure to any receptor (see Figure 6). Furthermore, information from surface dosimetry indicates no measurable external radiation exposure at the landfill (above background levels); therefore external radiation is also considered incomplete at the PTRL.

The potential for exposure to non-radiological and radiological COPCs are discussed separately below.

4.2.1 Non-Radiological Exposure

Information reviewed for this assessment indicates that the landfill is not producing leachate. In addition, landfill closure activities included engineering controls to minimize/prevent water infiltration within the landfill, and any pooled water from precipitation would likely be transient since the site is located in arid desert with high evapotransportation potential. Nonetheless, for conservatism, the potential exposure to chemicals from the landfill in groundwater used as a source of drinking water was defined as a potential exposure scenario for the purposes of this risk characterization. The evaluation of this pathway is also based on a fate and transport

conceptual site model for PTRL, which indicates the potential for volatile compounds disposed within the landfill to migrate vertically through vadose zone soils and potentially impact the underlying groundwater located 650 ft bgs (HGC, 2004; AMEC 2008c).

Exposure to volatile compounds migrating laterally through soil pore spaces from the landfill to ambient air is identified as a potential exposure scenario. Future unrestricted use of adjacent property (private to the south; state owned in all other directions) is considered possible and hypothetical residential use represents the most conservative assumed future use for these areas. As a result, potential exposures to volatile compounds migrating from the landfill to the indoor air in future residential homes located at properties adjacent to PTRL property is also considered. No redevelopment of the PTRL site for any use other than use as a landfill is considered.

In summary, for the purpose of this risk assessment, the identified potential exposure pathways defined for the PTRL are:

- Use of groundwater as a source of potable water; the identified exposure routes include ingestion, dermal contact, and inhalation[11] of COPCs in groundwater used as a potable water supply by hypothetical residents; and

- Inhalation of volatile compounds in indoor air of hypothetical residence. Although inhalation of COPCs in ambient air is also possible, inhalation of indoor air represents a more conservative exposure due to the confined space and decreased dispersion.

4.2.2 Radiological Exposure

There are two types of exposure associated with radionuclides—internal and external. Internal exposure refers to an exposure that occurs when human tissues are subjected to radionuclides that have entered the body via inhalation, ingestion, injection, or other routes. External exposure refers to the radiations emitted by radionuclides located outside the body either dispersed in the air or water, or deposited on ground surfaces. The term exposure is also defined as the physical contact of the human body with radiation (USEPA, 1989). All types of radiation may contribute to internal exposure, whereas only gamma (X-ray) and neutron radiations contribute significantly to external exposure. Ionizing radiation can cause deleterious effects on biological tissues only when the energy released during radioactive decay is absorbed in tissue.

At PTRL, exposure to radionuclide waste is not considered complete for the following reasons. The predominant radionuclides disposed at PTRL are low-energy beta emitters and possess low-level radioactivity. Tritium, representing the majority of the radioactive material at the site, behaves chemically similar to hydrogen (being an isotope of H). When tritium interacts with water, it can fractionate and migrate via advection/volatilization in an aqueous and/or vapor phase. Fractionation is the preferential partitioning of an isotope between the gaseous and liquid phases. Tritium can also be present as hydrogen gas, which can become dissolved in

[11] The inhalation pathway considers inhalation of volatile COPCs during showering or bathing

liquid water and partition between the gaseous and liquid phases at equilibrium in accordance with Henry's Law. However, this is likely a minor outcome since the dimensionless Henry's law constant for tritium is on the order of $1x10^{-5}$ (as cited in LANL 2003), indicating a low potential for existing in the vapor phase. Furthermore, tritium fractionation between liquid water and water vapor is small due to the small amount of water vapor in the vapor phase. There is little potential for liquid water to infiltrate or exist in subsurface soil as PTRL lies in an extremely arid environment with very low soil water content (HGC, 2005), low humidity, little rainfall (averaging 11 inches of rainfall per year, with a maximum average of 2.8 inches during the month of August), and a high evaporation rate (RUST, 1995). Furthermore, the landfill is not generating leachate and the landfill closure included features to control any infiltration of water (ADEQ, 2001). Exposure to radioactive material could occur if:

- The radioactive landfill waste materials were found to exist at the surface representing a source of direct internal exposure (i.e., ingestion and dermal contact) and external exposure (i.e. radiation exposure from emitted energy). This is not a reasonable exposure scenario at PTRL due to the existence of a permitted landfill cover. Furthermore, given the extremely low range of penetration associated with the radionuclides disposed at the site and the surface dosimetry data (UA, 2002a) indicating no increase in total mrem dose at the site relative to other reference locations, radioactive materials are not present at the surface at PTRL and do not represent a complete exposure pathway.

- The disposed radiologic material could be entrained with soil as fugitive dust representing a potential exposure via inhalation. However this is also not a reasonable future scenario given the presence of the landfill cap and the conditions of the permit.

- The disposed radioactive waste materials were found to be migrating downward and impacting groundwater used as a potable source of water. However, based on the radiologic groundwater data collected at the site and surrounding area, groundwater is currently not impacted (see Table 11 and Section 2.4). Under the conditions of the post-closure permit, future monitoring of on-site groundwater for radioactivity by UA will provide information if such conditions change in the future.

- The disposed radioactive waste materials were found to be associated with vapors and migrating laterally from the landfill and into ambient air. As previously noted, this transport pathway is not likely for tritium. However, it is unknown if other radionuclides disposed at PTRL could exist as a vapor (co-mingled with VOC). While VOCs associated with landfill water material are present in soil vapor, the concentrations potentially present in ambient air are reduced by dispersion of prevailing winds. Based on the results of the shallow vapor survey conducted along the southern edge of the PTRL property boundary (see Figure 2) (AMEC 2008a), the soil vapor concentrations decrease several orders of magnitude with increased distance from the landfill. This indicates that any exposure to ambient air by receptors in adjacent properties would be reduced even further. Furthermore, given the low amounts of low-energy level radionuclides disposed in the landfill, it is unlikely any exposure would be significant. To

address the uncertainty regarding the potential presence of radioactive materials in vadose zone vapor, a sample of water from the SVE system's vapor/liquid separator (also referred to as the knock out tank) was collected in April 2009 and analyzed for potential radioactivity (including tritium and ^{14}C) by direct counting in an LSC (see Section 6.1). The SVE system, which is located between the two units of the landfill, became operational in November 2008. The SVE condensate water sample showed no detectable radionuclides, indicating that tritium and ^{14}C are unlikely to exist in the vapor/gaseous phase in vadose zone.

4.2.3 Potential Current and Future Receptors

As previously presented in Section 4.1, no receptors including trespassers are likely to be at the landfill property under current or future conditions. Currently, the entire 10 acre-landfill site is surrounded by a perimeter fence that restricts all access to the landfill and surrounding area. The fence is walked six times annually as part of the complete site inspection required by the permit. In addition, no receptor is likely to be at the landfill site under the foreseeable future, which in accordance with the permit requirements and detailed in Section 4.1, represents a period of 30 years beyond the date of the permit, or 2031. Furthermore, the permit also required that "a notation be attached to the deed to the facility property (or other document associated with the title to the property) that will "in perpetuity" notify any potential purchaser that hazardous material were managed on the property and that the re-use of the property is restricted under regulations " (see Section 4.1). Therefore, no current or future receptor has been identified at the 10-acres landfill site. Current receptors are possible in the land surrounding the 10-acres landfill site, and include recreational users and UA personnel. In addition to these current receptors, future residents are considered possible. A summary of the potential exposure scenarios for current and future site conditions, including the exposure areas and receptors, are presented in Standard Table 1 (see Appendix D). The exposure scenarios include:

<u>Current Receptors</u>:

- None at the landfill
- Recreational users of surrounding Page Trowbridge Ranch with potential exposures to volatile compounds migrating from shallow soil to ambient air.
- UA personnel conducting research activities in surrounding Page Trowbridge Ranch with potential exposures to volatile compounds migrating from shallow soil to ambient air.

<u>Future Receptors</u>:

- None at the landfill
- Recreational users of surrounding Page Trowbridge Ranch with potential exposures to volatile compounds migrating from shallow soil to ambient air.
- UA personnel conducting research activities in surrounding Page Trowbridge Ranch with potential exposures to volatile compounds migrating from shallow soil to ambient air.

- Hypothetical resident with potential exposures to volatile compounds migrating from shallow soil to ambient and indoor air and ingesting groundwater used as a source of potable drinking water.

4.2.4 Estimates of Exposure (Dose) for Identified Receptors

Reasonable maximum exposure (RME) scenarios are evaluated in this risk assessment. Conservative exposure assumptions are used to construct a reasonable maximum exposure scenario. Most individuals will not be subject to all the conditions that comprise the RME scenario. Individuals who do not meet all conditions in the RME scenario have lower potential exposures to constituents, and therefore, lower potential risks associated with those exposures.

The chronic Average Daily Dose (CADD) or Chronic Average Daily Exposure (CADE) is an estimate of a receptor's potential daily intake from oral, dermal and inhalation exposure to constituents with potential noncarcinogenic effects. Note that Average Daily Dose is a term-of-art used in risk assessment and does not represent a true average because the assumptions used to derive it do not represent “averages”. According to USEPA (1989), the exposure dose should be calculated by averaging over the period of time for which the receptor is assumed to be exposed. The CADD (or CADE) for each constituent via each route of exposure is compared to the RfD (or RfC) for that constituent to estimate the potential hazard index due to exposure to that constituent via that route of exposure. Hazard indices are presented and discussed in Section 4.1.

For constituents with potential carcinogenic effects, the Lifetime Average Daily Dose (LADD) is an estimate of potential daily intake over the course of a lifetime. In accordance with USEPA (1989), the LADD is calculated by averaging the assumed exposure over the receptor's entire lifetime (assumed to be 70 years). The LADD for each constituent via each route of exposure is combined with the cancer slope factor for that constituent in order to estimate the excess lifetime cancer risk due to exposure to that constituent via that route of exposure. Excess lifetime cancer risks are presented and discussed in Section 4.2.

The equations for estimating a receptor's potential average daily dose (both lifetime and chronic) are presented and the exposure parameters used in these algorithms are discussed in the following paragraphs. The calculations for all receptors evaluated in this risk assessment are presented in Appendix D (Standard Table 4.1).

<u>Ingestion of Groundwater as a Potable Water Supply</u>

$$A = \frac{B \times C \times D \times E}{F \times G}$$

where:

A = Average Daily Dose Due to Tap Water Ingestion (mg/kg-day)
B = Constituent Concentration in Groundwater (milligram per liter)
C = Groundwater Ingestion Rate (L/day)
D = Exposure Frequency (days/year)

E = Exposure Duration (years)
F = Body Weight (kg)
G = Averaging Time (days)

Dermal Contact with Groundwater

$$A = \frac{B \times C \times D \times E \times F}{G \times H}$$

where:

A = Average Daily Dose Due to Dermal Contact (mg/kg-day)
B = Absorbed Dermal Dose per Event (mg/cm^2-event)
C = Skin Surface Area Exposed (cm^2)
D = Event Frequency (event/day)
E = Exposure Frequency (day/year)
F = Exposure Duration (years)
G = Body Weight (kg)
H = Averaging Time (days)

For each groundwater COPC, the potential for significant exposures from dermal absorption was evaluated (USEPA, 2004a; see Appendix D Dermal Worksheet). This evaluation is based on the premise that exposure via dermal route is significant if it contributes at least 10% of the exposure derived from the oral pathway when considering groundwater used as a source for drinking and for showering or bathing. Based on this evaluation, dermal exposures to benzene and toluene were considered potentially significant relative to ingestion (USEPA 2004a) and are evaluated for the dermal exposure pathway. Dermal exposures to chloroform, chloromethane and manganese in groundwater are not considered to contribute significantly through the dermal exposure pathway. Therefore, dermal exposure to these compounds in groundwater is not considered in this risk characterization.

Inhalation Exposure to Volatile Compounds in Groundwater used as Tap Water

$$A = \frac{B \times C \times D \times E \times F \times G}{H \times I}$$

where:

A = Average Daily Dose Due to Inhalation of Vapors during Showering or Bathing (mg/Kg-day)
B = Constituent Concentration in Groundwater (mg/L)
C =Volatilization Factor (L/m^3)
D = Inhalation Rate (m^3/hr)
E = Exposure Time (hr/day)
F = Exposure Frequency (days/year)
G = Exposure Duration (years)
H = Body Weight (Kg)

I = Averaging Time (days)

Exposure parameter values used in the risk assessment are presented in Appendix D, Standard Table 4.1. Although UA researchers or recreational users of the adjacent state-owned property are identified as possible current receptors (with exposures possible via inhalation of ambient air), the hypothetical resident represents the maximally exposed receptor (via use of groundwater as a source of drinking water and inhalation of indoor air). Therefore, the exposures assumed for the hypothetical resident are considered conservative estimates of that possible for all other receptors at this site and is the only receptor evaluated in the quantitative risk characterization. A discussion of the exposure parameters for the hypothetical future resident is presented below.

Future Off-Property Resident (Hypothetical)

For the purposes of this assessment, it was assumed future development of state-owned or private property located south of the Page-Trowbridge Ranch Landfill site could occur. Furthermore, the hypothetical resident (adult and child) is considered the most exposed receptor group relative to other potential receptors at PTRL (e.g., recreational users, UA researchers). Therefore, potential exposures to this receptor group are considered protective of exposures to other potential receptors identified for this site.

The hypothetical residential scenario considers exposures to both a 15 Kg child resident and a 70 Kg adult resident with an exposure frequency of 350 days/year (USEPA, 2004b). A total exposure duration of 30 years (USEPA, 1997b) was assumed to represent 6 years as a child and 24 years as an adult (USEPA, 2004b). For the purposes of estimating hypothetical indoor air exposures, a resident was assumed to occupy a home located in close proximity to the shallow soil vapor sampling locations at the edge of the southern property boundary area (see Figure 2). Default assumptions in the indoor air model regarding characteristics of the building structure and ventilation were used (USEPA, 2004c).

Averaging times, which normalize exposures relative over a lifetime (for carcinogenic health effects) or part of a lifetime (for non-carcinogenic health effects) are 6 years for COPCs considered non-carcinogens (representing the cumulative exposures of a child up to 6 years of age) and 70 years (lifetime) for COPCs considered human carcinogens (see Appendix D, Standard Table 4.1).

4.3 Exposure Areas and Exposure Point Concentrations

Exposure points represent the sampling locations within an area of a site at which receptors may potentially contact COPCs and are defined for each media based on the media-specific data relevant for potential exposure(s). The exposure point concentration (EPC) is defined as the COPC concentration in the environmental medium representing the exposure point or area that a potential receptor may potentially encounter.

The USEPA has determined that the average concentration of a COPC represents a reasonable estimate of the concentration in an environmental medium that a receptor may potentially

contact when that contact occurs at random over an extended period of time (USEPA, 2002b). For estimating exposures to COPCs in environmental media, USEPA has proposed various ways of estimating the EPC to account for the uncertainty due to incomplete sampling and/or analytical data variability (USEPA, 2002b). These range from using the maximum concentration when few samples have been collected from a potential exposure area or medium, to various methods of deriving an upper bound estimate of the average concentration (e.g. 95% upper confidence limit (95% UCL) on the mean concentration).

For exposure to groundwater considered a source of drinking water, each groundwater monitoring well was considered representative of an off-property exposure point (i.e. drinking water well). For the purposes of this risk assessment and in accordance with USEPA guidance (USEPA, 2000c; 1994), the arithmetic average concentration among the groundwater data collected since 2001 were considered representative of future exposures via drinking water exposures. A summary of the groundwater EPCs is presented in Table 12 and in Appendix D, Standard Table 3.1.

For potential exposures to volatile compounds in indoor air for hypothetical off-site residents, the 95% UCL of the average concentration in the shallow soil vapor samples SV-1 through SV-8 obtained at the PTRL site boundary during November 2007 were derived using USEPA's ProUCL (version 4.00.04; USEPA 2009). In calculating EPCs for datasets with non-detect results, no substitution of any surrogate value for the limit of detection reported by the laboratory was made in accordance with ProUCL guidance (USEPA, 2007). The soil vapor EPCs are presented in Table 13. The derivation of the soil vapor and groundwater EPCs is presented in Appendix E.

To estimate indoor air concentrations from soil vapor EPCs, the USEPA Indoor Air Model was used (SG-SCREEN, Version 3.1; February, 2004). The model is based on the analytical solutions of Johnson and Ettinger for contaminant partitioning and subsurface vapor transport into buildings, with modifications by USEPA to incorporate the default values recommended in USEPA *OSWER Draft Guidance for Evaluating the Vapor Intrusion to Indoor Air Pathway* (USEPA, 2002c), and a model that estimates vapor intrusion into buildings from measured soil gas data (SGSCREEN; USEPA, 2004c). Based on soil boring logs (HGC, 2004), the vadose zone soil at PTRL were defined as "sandy loam" and assigned the corresponding default soil properties associated with sandy loam as defined within the model (e.g. mean grain size diameter 0.03 cm; bulk density 1.62 gm/cm^3). Although buildings in Arizona are typically constructed on a slab foundation, two residential scenarios were assumed for this risk assessment: 1) Slab scenario in which future residential building was assumed to be constructed without a basement; and 2) Basement scenario in which a future residence was assumed to be constructed with a basement. All other building parameters represent default values within the model. The soil temperature was determined to be 22º Celsius estimated from the average groundwater temperature reported by USEPA (USEPA, 2001). The model inputs parameters and model output are presented in Appendix F.

5.0 RISK CHARACTERIZATION

Risk characterization is the step in the risk assessment process that combines the results of the exposure assessment and the toxicity assessment for each COPC to estimate the potential for carcinogenic and noncarcinogenic human health effects from chronic exposure to that constituent. This section summarizes the results of the risk characterization. Table 14 summarizes potential cancer risk and non-carcinogenic health effects for the identified receptors.

5.1 Potential Carcinogenic Risk Characterization

The purpose of carcinogenic risk characterization is to estimate the potential likelihood, over and above the background cancer rate, that a receptor will develop cancer in his or her lifetime as a result of potential Site-related exposures to COPC in various environmental media. This likelihood is a function of the dose of a constituent and the CSF for that constituent. The relationship between the Potential Excess Lifetime Cancer Risk (PELCR) and the estimated Lifetime Average Daily Dose (LADD) of a constituent may be expressed as an exponential equation:

$$A = 1 - e^{-B \times C}$$

where:

A = Potential Excess Lifetime Cancer Risk (unitless);
B = Cancer Slope Factor (1/(mg/Kg-day)); and
C = Lifetime Average Daily Dose (mg/Kg-day).

This is the general form of the equation, and may be used in all cases to estimate potential risk, regardless of the magnitude of the potential estimated risk. In particular, this equation should be used when the product of the dose and potency slope is greater than 0.01. This practice prevents calculation of potential risks that are greater than one.

The exponential equation can be simplified to a linear equation, which closely approximates the results of the exponential equation when the product of the dose and potency slope is less than 0.01. The simplified linear form of the equation is expressed as:

$$A = B \times C$$

where:

A = Potential Excess Lifetime Cancer Risk (PELCR) (unitless);
B = Cancer Slope Factor (1/(mg/Kg-day)); and
C = Lifetime Average Daily Dose (mg/Kg-day).

For all potential excess lifetime cancer risks estimated at PTRL, the product of the dose and potency slope is less than 0.01. Therefore, the simplified linear equation was used in all risk calculations. The product of the CSF and the LADD is unitless, and provides an estimate of the potential carcinogenic risk associated with a receptor's exposure to that constituent via that pathway. Pathway PELCRs are calculated for each potentially carcinogenic constituent. The PELCRs for each pathway by which the receptor is assumed to be exposed are calculated by summing the potential risks derived for each constituent. A Total PELCR is then calculated for each exposure medium by summing the pathway-specific PELCRs. Total PELCRs for each receptor were compared to the National Cancer Program (NCP) cancer-risk limit range of one in one million ($1x10^{-6}$) to one in ten thousand ($1x10^{-4}$) (USEPA, 1991). COPCs that contribute to Total PELCRs in excess of this risk-limit range will be considered compounds of concern (COCs) for further evaluation. However, ADEQ has indicated that COPCs that contribute to Total PELCRs in excess of 1×10^{-5} may be evaluated for risk management options upon consideration of the types and extent of uncertainties, and certain sensitive receptor groups.

The Total PELCR associated with potential exposures to future residents to COPCs in groundwater used as tap water and in indoor air are summarized in Table 14. The calculations for tap water exposures are presented in Appendix D, Standard Tables 7.1 and 9.1. The indoor air model output from the two scenarios evaluating hypothetical indoor air exposures (from residence constructed on a slab base and from a residence constructed with a basement) is presented in Appendix F and summarized in Table 13. The PELCR for exposures resulting from use of groundwater as a source of drinking water is $2x10^{-6}$. For exposures to vapors potentially in indoor air in a future residence constructed with a basement, the PELCR is $5x10^{-5}$. For potential exposures to vapors in a residence constructed on a slab (with no basement) the PELCR is $3x10^{-5}$. Both indoor air cancer risk estimates are within the cancer risk limit range. The Total PELCR for the future resident assumed to be potentially exposed to landfill contaminants in groundwater and indoor air ranges from $4x10^{-5}$ (residence constructed with no basement) to $5x10^{-5}$ (residence constructed with basement) which are both within USEPA's allowable risk range. Potential exposure to COPCs in indoor air is the primary contributor to the total risk estimates. The indoor air risk estimates are based on the assumption that potential exposure to indoor air occurs at a hypothetical residence constructed at the southern edge of the landfill property (see Figure 2). As stated in Section 2.2, the soil vapor samples were collected 50 feet north of the fence while the state-owned property extends for another 50 feet south of the fence in a wash area consisting of soft sands. The results from the 2007 shallow soil vapor survey indicate that concentrations of the volatile COPCs decline with increased distance from the landfill. The highest detected concentrations of chloroform (92 mg/m^3), Freon 11 (110 mg/m^3), and TCE (3 mg/m^3) in subsurface soil samples collected in 2007 at the edge of the landfill property and used in the risk characterization are less than one-third the highest concentration detected in all subsurface soil vapor samples collected immediately adjacent to Units A and B (270 mg/m^3 chloroform, 450 mg/m^3 Freon 11, 25 mg/m^3 TCE). The observed decrease in soil vapor concentrations represents roughly a 65% to 88% decrease with an increase lateral distance of 200 feet from the southern edge of Unit B (see Figure 2). Based on the observed decrease in shallow soil vapor concentrations with increased lateral distance from the landfill, the cancer risk estimates associated with COPCs in indoor air at a hypothetical residence located to the south of the state property boundary are expected to be below the lower limit of the cancer risk range ($1x10^{-6}$).

Based on the evaluation of indoor air by hypothetical residents, potential exposures to carcinogenic COPCs in ambient air by recreational users and UA researchers in the area surrounding the PTRL site are expected to be insignificant for current and future site conditions.

5.2 Potential Noncarcinogenic Hazard Characterization

The potential for exposures to COPCs in soil at or near the Site to result in potential adverse noncarcinogenic health effects is estimated by comparing the Chronic Average Daily Dose (CADD) for each constituent (described in Section 4..2.1) with the Reference Dose for that constituent (presented in Section 3.3.1). The resulting ratio, which is unitless, is known as the Hazard Quotient (HQ) for that constituent. The HQ is calculated using the following formula:

$$A = \frac{B}{C}$$

where:

A = Hazard Quotient (unitless);
B = Chronic Average Daily Dose (mg/Kg-day); and
C = Reference Dose (mg/Kg-day).

When the Hazard Quotient for a given constituent and pathway does not exceed 1, the Reference Dose has not been exceeded, and no potential adverse noncarcinogenic health effects are expected to occur as a result of exposure to that constituent via that pathway. The HQs for each constituent are summed to yield the Hazard Index (HI) for that pathway. A Total HI is then calculated for each exposure medium by summing the pathway-specific HIs. A Total HI that does not exceed 1 indicates no potential adverse noncarcinogenic health effects are expected to occur as a result of that receptor's potential exposure to the environmental medium evaluated (USEPA, 1991).

The estimated hazard indices associated with potential exposures to COPCs in indoor air in each of the two indoor air exposure scenarios are presented in Table 13. The calculations for tap water exposures are presented in Appendix D, Standard Tables 7.1 and 9.1. The total hazard indices for cumulative exposures by hypothetical future residents to COPCs in indoor air and in groundwater used as a source of drinking water are summarized in Table 14.

The Total pathway HI for exposures resulting from use of groundwater as a source of drinking water is $1x10^{-1}$. For exposures to vapors potentially in indoor air in a hypothetical residence constructed with a basement, the Total pathway HI is $3x10^{-2}$. For exposures to vapors potentially in indoor air in a hypothetical residence constructed on a slab (without a basement), the Total pathway HI is $2x10^{-2}$. The HI for total potential noncarcinogenic hazards[12] for hypothetical future resident potentially exposed to landfill contaminants in groundwater used as

[12] Without segregation of HI by similar target organs or endpoints associated with the toxicity of the COPCs (USEPA 1989).

a source of drinking water and in indoor air does not exceed the HI limit of 1, indicating no potential adverse noncarcinogenic health effects are expected to occur for future site conditions.

Based on the evaluation of indoor air by hypothetical residents, potential exposures to COPCs in ambient air by recreational users and UA researchers in the area surrounding the PTRL site also indicate no potential adverse noncarcinogenic health effects are expected to occur for current and future site conditions. Furthermore, the compounds evaluated in groundwater used as a source of drinking water (volatiles and manganese) are at concentrations well below the drinking water standards (see Appendix D Table 2.1). Given that drinking water exposures evaluated in this assessment are not considered significant, any current or future use of groundwater as a source of irrigation to either crops or livestock is also not considered to be significant.

In summary, the human health risk assessment presented above indicates that no potential non-cancer effects are expected for the identified receptors (recreational users, UA personnel, and future residents). Similarly, the human health risk assessment also indicates that potential excess lifetime cancer risks are within USEPA's allowable risk range for the identified receptors. Thus, the risk assessment demonstrates that for the most likely current and potential future uses and exposures, the site does not pose an unacceptable cancer risk.

6.0 UNCERTAINTY ASSESSMENT

Within any of the four steps of the risk assessment process, assumptions must be made due to a lack of absolute scientific knowledge. Some of the assumptions are supported by considerable scientific evidence, while others have less support. Every assumption introduces some degree of uncertainty into the risk assessment process. Conservative assumptions are made throughout the risk assessment to ensure that public health is protected. Therefore, when all of the assumptions are combined, it is much more likely that actual risks, if any, are overestimated rather than underestimated.

Often, in risk assessment, two separate estimates of risk and hazard are developed for each receptor evaluated. These include a central tendency estimate of risk, which uses typical or average parameter values to derive exposure estimates, and the RME exposure, which includes a combination of conservative average and upper-bound estimates of exposure parameters to estimate potential risks and hazards. As discussed previously, this risk assessment considers only the potential RME exposures to each receptor. As a result, conservative assumptions have been made throughout the risk assessment to ensure that public health is protected and that risks and hazards are not underestimated. It is likely, therefore, that when all of the assumptions are combined, that actual risks, if any, are overestimated rather than underestimated. While all exposure and toxicity assumptions have some level of uncertainty associated with them, this uncertainty analysis focuses on those assumptions that are likely to introduce the greatest amount of uncertainty in this risk assessment.

6.1 Hazard Identification Uncertainty

During the Hazard Identification step, constituents are selected for inclusion in the quantitative risk assessment. All constituents detected in shallow soil vapor samples representing a recent sampling event were evaluated in the risk assessment. All detected groundwater analytes in samples collected since 2001, inclusive, were evaluated in the risk assessment. There are some uncertainties associated with this step of the risk assessment including: the possibility of other sources, temporal changes in the soil pore spaces, potential biases in the sampling approach, and the presence of background and or local concentrations of certain constituents.

All radionuclides, by definition, undergo radioactive decay. In this process, one unstable nucleus of an element transforms (decays) spontaneously to a nucleus of another element. As the unstable nucleus decays, energy is released as particulate or photon radiation, or both, and the radionuclide is transformed in atomic number and mass. The resulting decay products, or progeny, may also be radioactive and undergo further decay. As radioactive decay progresses, the concentration of the original radionuclides decreases, while the concentration of their decay products increases (referred to as “ingrowth”) and then decreases as they undergo transformation over time. Various decay products may have different physical and chemical characteristics that affect their fate and transport in the environment as well as their radiotoxicity. In general, there are three scenarios for decay:

- The original radionuclide and decay product half-lives are similar (i.e. radioactive equilibrium)
- The original radionuclide has a much longer half-life
- The decay product has a longer half-life

In cases where decay products have greater radiotoxicity than the original radionuclide, the potential radiation dose and health risk may increase over time. In such cases, one should consider the change in concentrations of all decay products over time, to determine the possible time of maximum potential impact. Uranium is recorded in the RADCON inventory as being disposed in both a depleted and natural state. As previously noted, natural uranium consists of three isotopes of uranium: U-234, U-235, and U-238. As U-238 begins to decay to thorium-234, the amount of thorium and its activity increase. Eventually the rate of thorium decay equals its production--its concentration then remains constant. As thorium decays to proactinium-234, the concentration of proactinium-234 and its activity rise until its production and decay rates are equal. Further along the decay chain, radon-222, another radioactive decay product is formed. However, the impact of this uncertainty is unlikely to change the outcome of this evaluation given there is minimal potential for exposure to any disposed radionuclides in PTRL. Furthermore, the quantities of the known nuclides disposed at PTRL are relatively small as the materials were generated from UA research laboratories and hospitals. It is unlikely that gross quantities of radionuclides with much greater activities were used in research efforts at these institutions.

An additional uncertainty is the potential for radionuclides to migrate as vapors through the subsurface soil pore spaces. The potential for current exposure to UA site workers and future

residential exposures to tritium as a vapor at this site has not been characterized but represents a potential underestimate of exposure given that:

1. Tritium is considered one of the two predominant radionuclides remaining within the landfill;
2. Tritium may exist as a vapor if it is associated with water (either as a hydrogen gas in water or by replacing one of the hydrogens found in the water molecule);
3. It is presumed liquids were disposed in the landfill; and
4. Exposures to vapors migrating from the landfill are considered a potentially important exposure pathway to current and future receptors at the site and in surrounding areas.

There are several different lines of evidence to address this potential uncertainty. Based on dosimetry surveys conducted by UA RADCON across the surface of the landfill, there was no increase in radiation levels at the PTRL site relative to background stations at two other Page Ranch locations and in Tucson, and ambient background. While the documented amounts of radionuclide activity disposed in the landfill are low, there is some level of uncertainty associated with ultimate fate of some radionuclides disposed at the landfill and the potential for radionuclides and/or decay progeny to exist as gas or vapors. The SVE system became operational on November 25, 2008 after being turned off in April 2007. To determine the potential of radionuclides to exist in vapors, a condensate sample was collected from the SVE system's vapor/liquid separator (also referred to as the knock out tank) during routine system maintenance on April 15, 2009 by UA RADCON personnel. The condensate collected in the knock out tank is drained during regular system maintenance, which should have occurred the prior Friday (April 10, 2009). The sample, which was collected directly into a glass container by opening the valve on the bottom of the knock out tank, was analyzed for potential radioactivity by direct counting in an LSC. This information provides some quantitative information regarding the potential for radionuclides to exist in subsurface soil vapor. The UA RADCON Office analyzed the condensate sample by total liquid scintillation counting, the method used to evaluate radionuclides in the groundwater samples (see Section 2.4). The results for the SVE condensate sample were reported as follows:

- less than the lower limits of detection (LLD) for tritium as measured by the low-energy window (<500 picocuries per liter),
- less than the LLD for ^{14}C as measured by the mid-energy window (<300 picocuries per liter); and
- less than the LLD for all other radionuclides as measured by the high-energy window (< 500 picocuries per liter).

Given the amount of radionuclides disposed in the landfill and the remaining activity of those radionuclides (primarily tritium and ^{14}C) in the landfill (see Section 2.4), these results indicate there is little potential for radionuclides to exist in the vapor phase in the subsurface vadose zone. These results, which are consistent with the groundwater results reported in Section 2.4 (also see Table 11), and the dosimetry surveys conducted by UA RADCON across the surface of the landfill (see Section 4.2.2), provide empirical evidence that radionuclides, including tritium

and ^{14}C, do not exist in subsurface soil vapor at levels that pose a source of exposure or concern for potential human receptors at the surface.

6.2 Toxicity Assessment Uncertainty

Dose-response values are usually based on limited toxicological data. For this reason, a margin of safety is built into estimates of both carcinogenic and noncarcinogenic risk, and actual risks are lower than those estimated. The two major areas of uncertainty introduced in the dose-response assessment are: (1) animal to human extrapolation; and (2) high to low dose extrapolation. These are discussed below.

Human dose-response values are often extrapolated, or estimated, using the results of animal studies. Extrapolation from animals to humans introduces a great deal of uncertainty in the risk assessment because in most instances, it is not known how differently a human may react to the constituent compared to the animal species used to test the constituent. The procedures used to extrapolate from animals to humans involve conservative assumptions and incorporate several uncertainty factors that overestimate the potential adverse effects associated with a specific dose. As a result, overestimation of the potential for adverse effects to humans is more likely than underestimation.

Predicting potential health effects from the exposure to media on-site requires extrapolation of the observed health effects from the high doses used in laboratory studies to the anticipated human health effects from low doses experienced in the environment. This process contains conservative assumptions to account for the large degree of uncertainty associated with this extrapolation (especially for potential carcinogens) and therefore, tends to be more likely to overestimate than underestimate the risks.

6.3 Exposure Assessment Uncertainty

The conceptual site model for the PTRL (as described in HGC, 2004) indicates that diffusion forces will drive vapors predominantly downward from the landfill over the next 1,000 years until equilibrium concentrations in groundwater located 650 ft bgs is reached. Current concentrations in groundwater and shallow soil vapor at the site were used to estimate future exposures to hypothetical residents in presumably redeveloped state- and privately owned properties located adjacent to PTRL. Current concentrations may underestimate or overestimate future indoor air and groundwater exposure point concentrations.

During the exposure assessment, average daily doses of COPC to which receptors are potentially exposed are estimated, which involves assumptions about how often exposure occurs. Such assumptions include the existence of the post-closure permit for the landfill and the associated requirements therein, and the location, accessibility, and current and potential future use of the state-owned and privately owned areas surrounding the landfill. With this in mind, the receptors, or person who may potentially be exposed, and the location of exposure, were conservatively defined for this risk assessment (e.g. hypothetical resident at the edge of the PTRL property boundary). The locations where certain activities were assumed to take

place have been purposely selected to be conservative and consistent with the current and potential future use of the area surrounding the landfill.

The indoor air exposure point concentrations were based on measured concentrations in seven shallow soil vapor samples collected during a single, recent sampling event at the edge of the PTRL property. The use of this single sampling event at the soil vapor sampling locations at the property boundary is considered representative because:

a. Multiple temporal sampling events typically conducted for municipal landfills were not needed at the Page Trowbridge Landfill because no landfill degradation gases are being generated to act as a carrier of vapor contaminants;

b. Proposed construction of residential properties on private land will likely occur at a substantial distance beyond the southern border of the landfill so other borders to the landfill (e.g., to the west, north or east) were not considered as representative;

c. Barometric influences are relatively insignificant at depths greater than 5 feet so sampling under different barometric conditions would not provide significant information regarding potential for vapor migration in shallow soils.

This approach likely overestimates potential actual indoor air exposures as soil vapor concentrations at off-property locations are likely much lower given the substantial decline in soil vapor concentrations at the property boundary relative to that measured at the landfill edge, located approximately 200 feet away. Finally, the use of the vapor intrusion model in this risk assessment is considered appropriately conservative given that no building currently exists at any location in the vicinity of the site. However, vapor intrusion is a particularly difficult pathway to assess, as challenges exist in delineating subsurface contributions to measured indoor-air concentrations as well as in adequate characterization of subsurface parameters necessary to calibrate a predictive flow and transport model (USEPA, 2005b). Although the model did incorporate some site-specific information such as soil type, the following default assumptions employed in the Johnson and Ettinger vapor intrusion model are considered conservative and at times may overestimate indoor air concentrations:

- Building parameters (such as enclosed space mixing height (8 feet for slab on grade), floor-wall crack width, indoor air to subsurface pressure differential, and air exchange rate.
- All soil properties beneath the building are homogeneous, which is not the case at PTRL where sand lenses have been identified underlying sandy loam deposits (Weston, 2003).
- The COPC is homogeneously distributed within the zone of contamination.
- The model assumes that all vapors from underlying soils will enter the building through cracks and openings in the walls, floor and foundation. This implies that a constant pressure field is generated between the interior spaces and the soil surface and that the vapors are intercepted within the pressure field and transported into the building. This

assumption is inherently conservative in that it neglects periods of near zero pressure differential (e.g., during mild weather when windows are left open) (USEPA, 2005b).

- The model does not account for transformation processes (e.g., biodegradation, hydrolysis, etc.).
- Both the building ventilation rate and the difference in dynamic pressure between the interior of the structure and the soil surface are constant values.

6.4 Risk Characterization Uncertainty

The risk of potential adverse human health effects depends on estimated levels of exposure and on dose-response relationships. Once exposure to, and risk from, each of the selected constituents is calculated, the total risk posed by exposure to Site-related COPC is determined by combining the health risk contributed by each constituent. Where COPCs do not interact, do not affect the same target organ, or do not have the same mechanism of action, summing the risks for multiple COPC results in an overestimate of risk posed by the site. However, it was initially assumed that the potential effects of different constituents are additive.

Based on information regarding amounts and types of radionuclides disposed at PRTL, the remaining radionuclides in the landfill are predominantly ^{3}H and ^{14}C, which have very little penetration energy and are readily blocked from external exposures by the skin's outer layer. In general, studies on low-level radiation doses from environmental radiation sources or exposures from other types of radiation sources have conclusively demonstrated no adverse health effects from residual exposures.

Although there is uncertainty regarding the potential for radionuclides disposed in the landfill to migrate through the pore space in association with chemical vapors, site dosimetry prior to landfill closure indicated no increase in external radiation relative to background. The presence of the landfill cover minimizes direct exposure and the potential for migration by reducing the potential for infiltrating water, which is an important condition for ^{3}H to exist as a vapor. Furthermore, as discussed in Section 6.1, empirical evidence indicates that radionuclides do not exist in subsurface soil vapor at levels that pose a source of exposure or concern for potential human receptors. Therefore, there is no current or expected future exposure to radionuclides at the landfill surface or ambient air attributable to radioactive waste migrating from beneath the landfill cap. Continued monitoring of on-site groundwater for radionuclides as required by the post-closure permit, will provide information for any changes in site conditions.

The potential risks and hazards estimated for hypothetical future residents living in parcels of land adjacent to the PTRL site were based on current measured concentrations in shallow soil vapor and in groundwater samples. There is uncertainty regarding the actual risks and hazard estimates under future site conditions. Future development of the adjacent privately owned parcel of land will include the operation of large-volume groundwater production wells (Steve Holland, UA Director Risk Management and Safety, personal communication, January 30, 2008). Although the impact from operating these production wells may result in localized increases in groundwater flow rates, the effect on the mass transfer from the vadose zone to the groundwater is less uncertain as the effects of mechanical dispersion, aqueous phase molecular

diffusion and varying water saturation profiles play important roles in this potential migration pathway. Although the effects of a declining water table on downward diffusion of volatile compounds have not been well-documented, it is unlikely to result in an increase in mass transfer from the vadose zone to the groundwater for the following reason. The impact on groundwater from operating high-volume production wells is to increase the flow rate, which results in a depression of the water table in the vicinity of the well. The depressed water table increases the required zone for vapor diffusion. The net result is that vapors will need to migrate further along the vertical pathway in the vadose zone before reaching groundwater. Therefore, while there is uncertainty regarding future groundwater concentrations, future development and use of groundwater will not result in increased potential for impacts from PTRL from vapor migration.

There is also uncertainty with regard to any historic impact to groundwater between 1962, when waste materials were first disposed into the landfill and 1984, when groundwater monitoring was initiated at the site. While the actual nature of any historic impact is unknown, if groundwater beneath the landfill had been historically impacted with landfill materials, it is unlikely that contaminants in groundwater would have been present at concentrations above health-based levels (e.g., MCLs) because of the likely dilution and mixing effect of deep groundwater aquifers that occurs when vadose zone pore water mixes with groundwater, and the effects of additional dilution and attenuation resulting from the relatively large distance the groundwater would travel from the site to the nearest well. Based on current records, the nearest drinking water well is located 2 miles west-southwest of this site (test well #547316 owned by Arizona Water Company; HGC, 2005). Finally, if groundwater beneath the landfill had been historically impacted, it was not a large contaminant plume or a substantial impact because the groundwater monitoring data that does exist (22 years after hazardous waste was first disposed at the landfill) for on-site and off-site monitoring locations indicates no impacted groundwater. Continued monitoring of both surface and subsurface soil vapors and groundwater concentrations at PTRL will provide site information should conditions at the landfill change.

7.0 SUMMARY AND CONCLUSIONS

Potential human health risks and hazards were estimated for exposures to current and future potential receptors at Page Trowbridge Ranch Landfill. Current and future receptors include UA researchers and recreational users of the state-owned or private properties abutting the landfill site. Future receptors also include hypothetical residents as all the property surrounding the landfill is considered unrestricted in future use. Under the provisions of the RCRA Post-Closure Final Permit for this landfill, the landfill property will remain as it currently exists until 2029, at which time the Permit will be evaluated for renewal or elimination. Any future use of the landfill property cannot adversely impact the integrity or function of the closure system, and that the re-use of the property is restricted under regulations (A.A.C. R18-8-264-264.A, 40 CFS subpart G) and must be approved by ADEQ.

The human health risk assessment considered potential exposures to hypothetical future residents as the most exposed receptor group at this site. Exposure pathways evaluated included use of groundwater as a potable water supply and inhalation of vapors in indoor air. A future hypothetical resident was considered to be exposed at the edge of the PTRL property. Based on surface and groundwater dosimetry information, there is no increase in external radiation relative to background. Therefore, there is no environmental exposure to radionuclides attributable to waste material disposed at PTRL. Based on the quantitative risk characterization, potential noncarcinogenic effects are not expected for hypothetical future residents. Similarly, the quantitative risk characterization indicates that potential excess lifetime cancer risks are within USEPA's allowable risk range of $1x10^{-6}$ to $1x10^{-4}$ for future hypothetical residents. These results are considered protective of exposures to current receptors (researchers and recreational users) whose exposure is considered to be less than that of a hypothetical resident. The risk assessment demonstrates that for the most likely and expected future uses, Page Trowbridge Ranch Landfill does not pose an unacceptable cancer risk or hazard.

An analysis of uncertainties indicates that the risk and hazard estimates in this evaluation are highly conservative, owing primarily to conservative assumptions used to describe the potential migration of hazardous materials from the landfill, the parameters and assumptions used in defining the exposure scenarios, and toxicological thresholds. Further, the exposure estimates represent a low potential for risks and hazards that may be incurred by a maximally exposed and highly sensitive individual within the population. However, continued monitoring of soil vapor and groundwater at PTRL for chemical contaminants and continued on-site monitoring of groundwater for radioactive contaminants is recommended due to the uncertainty regarding the nature of the hazardous waste materials disposed in the landfill and the potential for future environmental impact(s).

REFERENCES

Agency for Toxic Substances and Disease Registry (ATSDR). 1999 Toxicological profile for Uranium. U.S. Department of Health and Human Services.(http://www.atsdr.cdc.gov)

AMEC Earth and Environmental. 2008a. *Soil Vapor Summary for the Page Trowbridge Ranch Landfill*. December 2007 sampling event. January

AMEC Earth and Environmental. 2008b. *Soil Vapor Summary for the Page Trowbridge Ranch Landfill.* April 2008 sampling event. May

AMEC Earth and Environmental. 2008c. Memorandum to Arizona Department of Administration –Risk Management Section: *Evaluation of Existing Vapor Migration Model for Page Trowbridge Ranch Landfill.* April.

Arizona Department of Environmental Quality (ADEQ). 2001. *Arizona Hazardous Waste Management Act (AZ HWMA) RCRA Post-Closure Final Permit. University of Arizona Page Trowbridge Ranch Landfill*. November 6.

Arizona Department of Environmental Quality (ADEQ). 2002. *PTRL Revised Post Closure Contingency Plan*. November. Provided as Attachment L to the Post-Closure Permit (ADEQ 2001).

Arizona Department of Environmental Quality (ADEQ). 2007. Notice of Final Rulemaking Title 18. Environmental Quality Chapter 7, Department of Environmental Quality Remedial Action. January 19, 2007.

Environmental Engineering Consultants, Inc. (EEC). 1989. *Subsurface Soil Investigation Report, Phase Two: Page-Trowbridge Rand Landfill*. Revised June 9, 1989. Prepared on behalf of UA Risk Management and Safety.

Hargis and Montgomery. *Memorandum Report—Hydrogeologic Conditions Page-Trowbridge Ranch Disposal Facility Pinal County, Arizona*. June 29, 1983. Prepared on behalf of UA Risk Management and Safety.

Hydro Geo Chem, Inc. (HGC). 2004a. *Interim Measures Investigation Report. UA Page-Trowbridge Ranch Landfill, Pinal County, Arizona.* June 8, 2004. Prepared on behalf of UA Risk Management and Safety.

Hydro Geo Chem, Inc. (HGC). 2004b. *Expanded Groundwater Detection Monitoring Plan*. *UA Page-Trowbridge Ranch Landfill, Pinal County, Arizona.* October 13.

Hydro Geo Chem, Inc. (HGC). 2005. *Preliminary Screening Risk Assessment. UA Page-Trowbridge Ranch Landfill, Pinal County, Arizona*. January 20, 2005.

Los Alamos National Laboratory (LANL), 2003. "Corrective Measures Study Report for Material Disposal Area H, Solid Waste Management Unit 54-004, at Technical Area 54," Los Alamos National Laboratory document LA-UR-03-3354, Los Alamos, New Mexico. May.

National Academy of Sciences (NAS). 1983. *Risk Assessment in the Federal Government. Managing the Process.* National Academy Press, Washington, D.C. March.

Peterson, J., M. MacDonell, L. Haroun, and F. Monette. 2007. *Radiological and Chemical Fact Sheets to Support Health Risk Analyses for Contaminated Areas*. Argonne National Lab and U.S. Department of Energy. March.

Pinal County Property Assessor, Arizona. 2008. Information about land use and zoning. Accessed via http://pinalcountyaz.gov/Departments/ Assessor/Pages/ParcelInfoSearch.aspx. March 19, 2008.

RUST Environment and Infrastructure Inc. (RUST). 1995. *Closure Plan: Page Trowbridge Ranch Landfill*. EPA ID Number AZD 980665814. Prepared for UA. March.

Terra Tech Labs. 1994. *Soil Vapor Investigation UA Page-Trowbridge Ranch Landfill*. Prepared under the direction of Rust Remedial Services, Inc. September 23, 1994.

Weston. 2003. *Technical Memorandum: Interim Measure Task 1 Soil and Soil Gas Sampling Investigation Page Trowbridge Ranch Landfill Pinal County Arizona*. March. Prepared on behalf of UA Risk Management and Safety.

Whitney E.N., Rolfes S.R. 1999. *Understanding Nutrition*, 8th Edition. Wadsworth Publishers.

United States Department of Energy (DOE). 1994. Primer on Tritium Safe Handling Practices. DOE-HDBK-1079-94. December. accessed via hss.energy.gov/NuclearSafety/techstds/ standard/html.

United States Department of Energy (DOE). 2007. DOE Handbook—Tritium Handling and Safety Storage. DOE-HDBK-1129-2007. March. accessed via hss.energy.gov/ NuclearSafety/techstds/standard/html.

United States Department of Energy (DOE). 2008. Radiological Safety Training at Uranium Facilities. DOE HDBK-1113-2008. April. accessed via hss.energy.gov/NuclearSafety/techstds/ standard.html.

United States Environmental Protection Agency (USEPA). 1976. *National Interim Primary Drinking Water Regulations*. Office of Water Supply. EPA-570/9-76-003. September.

USEPA. 1986. Guidelines for carcinogen risk assessment. EPA/600/8-87/045. Risk Assessment Forum, Washington, DC.

USEPA. 1989. *Risk Assessment Guidance for Superfund Volume I. Human Health Evaluation Manual (Part A)*. EPA 540/1-89/002. December.

USEPA. 1991. *Risk Assessment Guidance for Superfund Volume I. Development of Risk-Based Preliminary Remediation Goals (Part B).* EPA 540/R-92/003. December.

USEPA. 1994. Region I Risk Updates. "*A Change in the Approach for Estimating the Average and Reasonable Maximum Exposure Scenarios for Human Health Risk Assessments*." Number 2. August.

USEPA. 1997a. *Health Effects Assessment Summary Tables. FY 1997 Update*. U.S. Environmental Protection Agency. Office of Solid Waste and Emergency Response. EPA-540-R-97-036. July.

USEPA. 1997b. *Exposure Factors Handbook. Volumes I through III.* EPA\600\P-95\002Fa,b,c. August. (cd version 1999. EPA/600/C-99/001).

USEPA. 2000a. *Soil Screening Guidance for Radionuclides: User's Guide and Technical Background Document*. Final Guidance. October. OSWER 9355.6-16/16A.

USEPA 2000b. *National Primary Drinking Water Regulations*. Notice of Data Availability. Proposed Rule. 40 CFR Parts 141, and 142. Federal Register Vol 65, No. 78:76707-76753. Friday, April 21, 2000.

USEPA. 2000c. Region IV. Supplemental Guidance to RAGS: Region 4 Bulletins, Human Health Risk Assessment Bulletins. EPA Region 4, originally published November 1995, Website version last updated May 2000. accessed July 2009 via http://www.epa.gov/region4/waste/ots/healtbul.htm#hhexp.

USEPA 2001. *Fact Sheet: Correcting the Henry's Law Constant for Soil Temperature*. June. (accessed via http://www.scribd.com/doc/1857814/Environmental-Protection-Agency-factsheet).

USEPA. 2002a. *Calculating Upper Confidence Limits for Exposure Point Concentrations at Hazardous Waste Sites*. OSWER 9285.6-10. December.

USEPA. 2002b. *EPA Facts About Tritium.* July. Accessed via http://www.epa.gov/superfund/resources/radiation/index.htm.

USEPA. 2002c. *Draft Guidance for Evaluating the Vapor Intrusion to Indoor Air Pathway*. *OSWER.* November. Accessed from http://www.epa.gov/oswer/riskassessment/airmodel/johnson_ettinger.htm.

USEPA. 2003. *Human Health Toxicity Values in Superfund Risk Assessments.* OSWER Directive 9285.7-53. December.

USEPA. 2004a. *Risk Assessment Guidance for Superfund Volume I: Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment)*. Final. Office of Emergency and Remedial Response, U.S. Environmental Protection Agency, Washington, D.C. 20460.

USEPA. 2004b. *Region 9 Preliminary Remediation Goals (PRGs) Table Users Guide/Technical Background Document*. October 1, 2004.

USEPA 2004c. Indoor Air Model SG-SCREEN, Version 3.1. February, 2004. accessed from http://www.epa.gov/oswer/riskassessment/ airmodel/johnson_ettinger.htm.

USEPA 2005a. *Revised Cancer Guidelines and the Supplemental Guidance*. EPA/630/P-03/001B. March.

USEPA. 2005b. *Uncertainty and the Johnson-Ettinger Model for Vapor Intrusion Calculations.* Office of Research and Development. EPA/600/R-05/110. September.

USEPA. 2006. National Primary Drinking Water Standards (August 2006; EPA 822-R-06-013; accessed via http://www.epa.gov/waterscience/criteria/drinking/dwstandards.html).

USEPA. 2007. ProUCL Version 4.0. User Guide. April.

USEPA. 2008a. Integrated Risk Information System (IRIS). Environmental Criteria and Assessment Office, Cincinnati, OH. (accessed via http://cfpub.epa.gov/ncea/iris/index.cfm).

USEPA. 2008b. Radiation Protection: Tritium.
Accessed via http://www.epa.gov/radiation/radionuclides/tritium.html#properties.

USEPA. 2009. ProUCL Version 4.00.04. November Software downloaded from http://www.epa.gov/esd/tsc/software.htm.

United States Nuclear Regulatory Commission (NRC). 2006. *Fact Sheet on Tritium, Radiation Protection Limits, and Drinking Water Standards*. July. Accessed via http://www.nrc.gov/reading-rm/doc-collections/fact-sheets/tritium-radiation-fs.html.

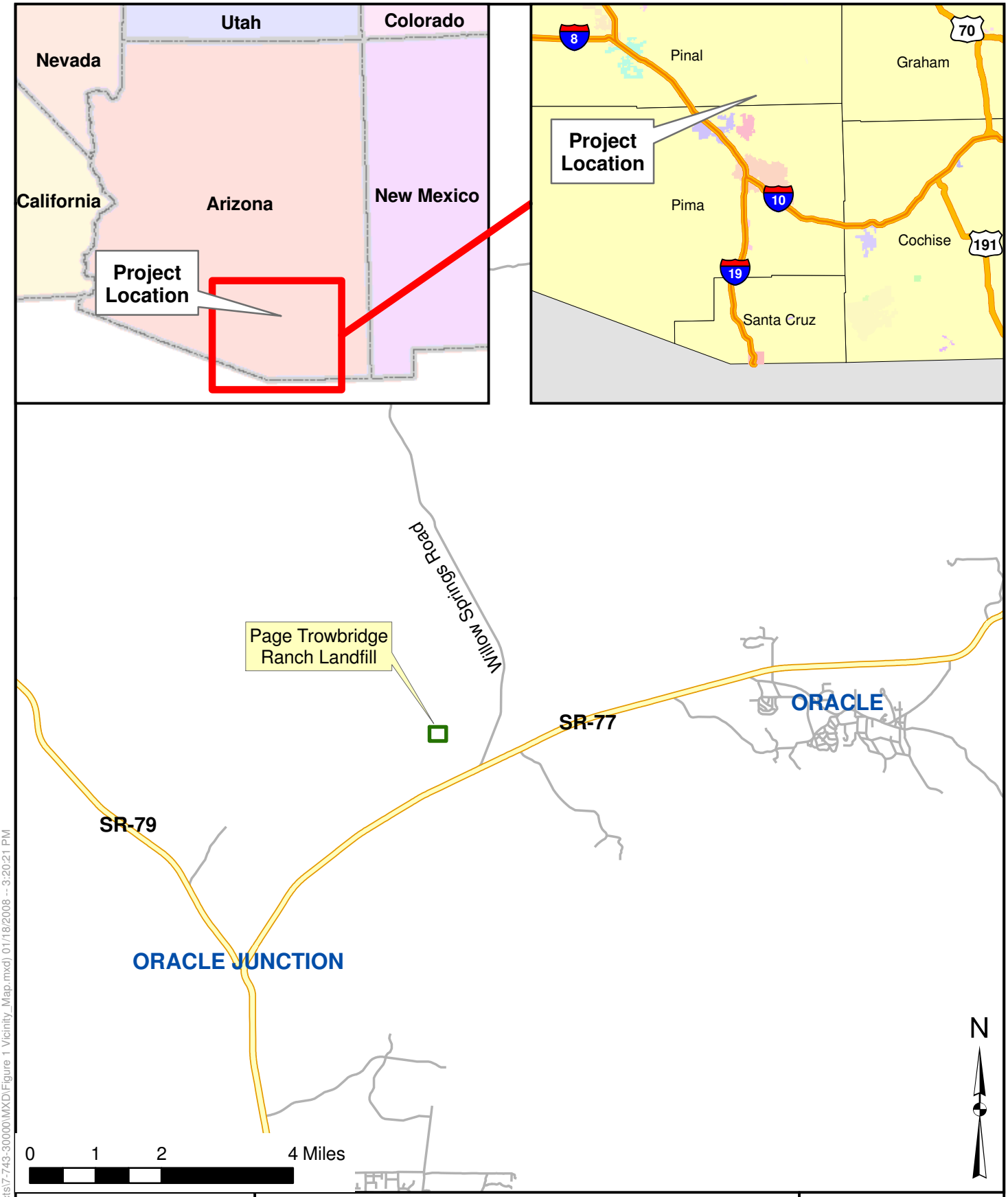
University of Arizona (UA). 1999. Responses to Questions From the Oracle Town Hall Meeting of 11/15/99. Subject: Page Trowbridge Ranch Landfill (PTRL). (accessed via http://radcon.arizona.edu/Oracle_Response.htm).

University of Arizona (UA). 2002a. Radiation Control Office. External Radiation Summary, Page Ranch Landfill Oracle Agricultural Center. August. accessed http://www.radcon.arizona.edu.

University of Arizona (UA). 2002b. Radiation Control Office. Environmental Surveillance Report Analysis of Well-Water for Radioactivity. Oracle Agricultural Center. August 20. accessed http://www.radcon.arizona.edu.

University of Arizona (UA). 2007. Biannual Groundwater Monitoring Data for Page Trowbridge Ranch Landfill: November 1984 through October 2007. Department of Risk Management and Safety.

FIGURES



JOB NO:	7-7433-0000
DESIGN:	JH
DRAWN:	BK
DATE:	1/18/2008
SCALE:	1" = 2 miles

Risk Assesment
Page Trowbridge Ranch Landfill
Oracle, AZ

Vicinity Map

FIGURE
1

amec

Map Document: (X:\Projects\7-743-30000\MXD\Figure 1 Vicinity_Map.mxd) 01/18/2008 -- 3:20:21 PM

JOB NO.:	7-743-30000
DESIGN:	JH
DRAWN:	ECT
DATE:	1/11/2008
SCALE:	1" = 125'

Groundwater and Soil Vapor Monitoring Locations

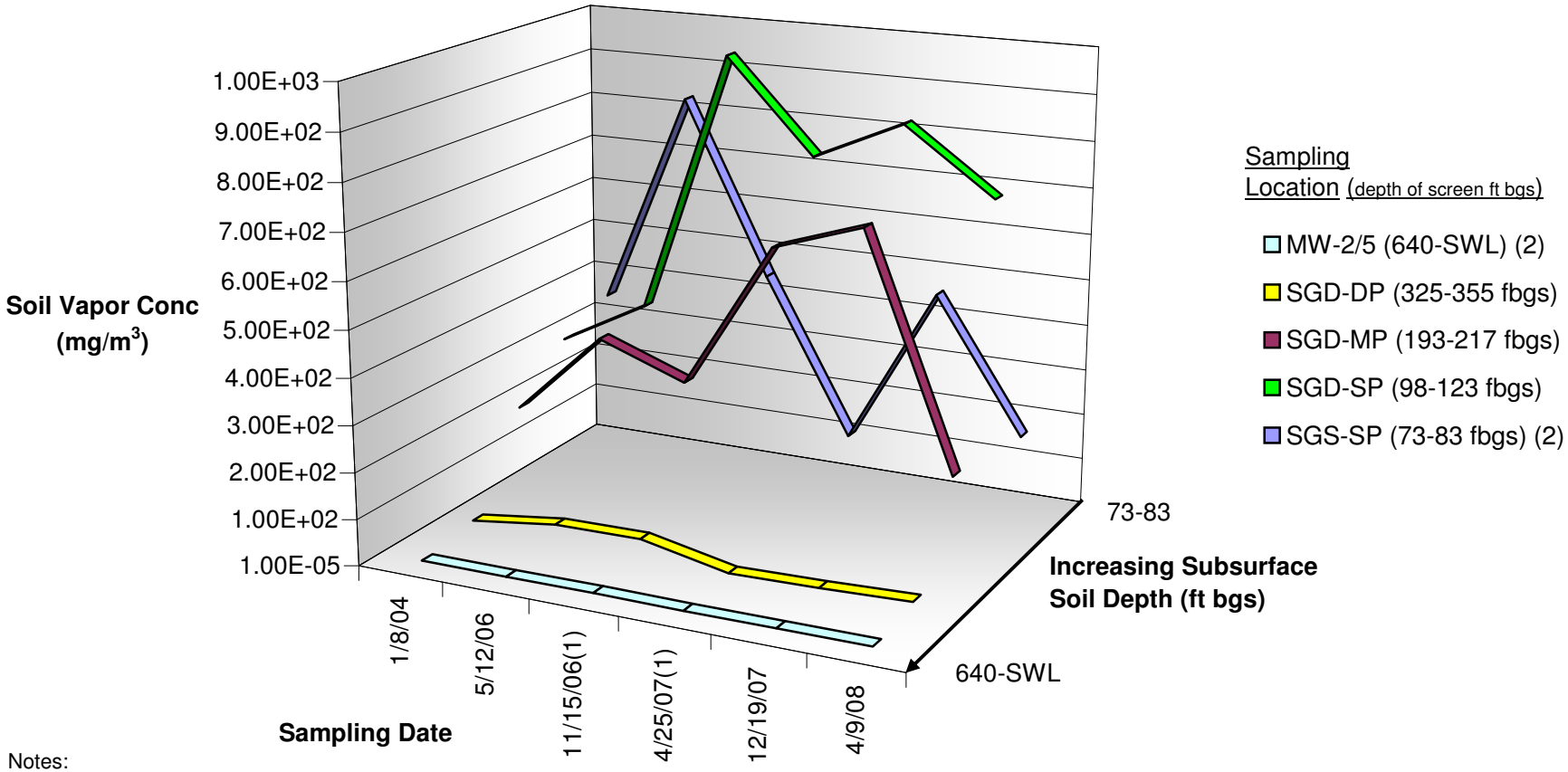
Site Map
Page Trowbridge Ranch Landfill Oracle, AZ

FIGURE
2

amec

Map Document: (X:\Projects\7-743-30000\MXD\Figure1_Site_Map.mxd) 1/11/2008 -- 10:10:01 AM

Figure 3
Chloroform Soil Vapor Concentration in Select Vapor Monitoring Wells
Page Trowbridge Ranch Landfill



Notes:

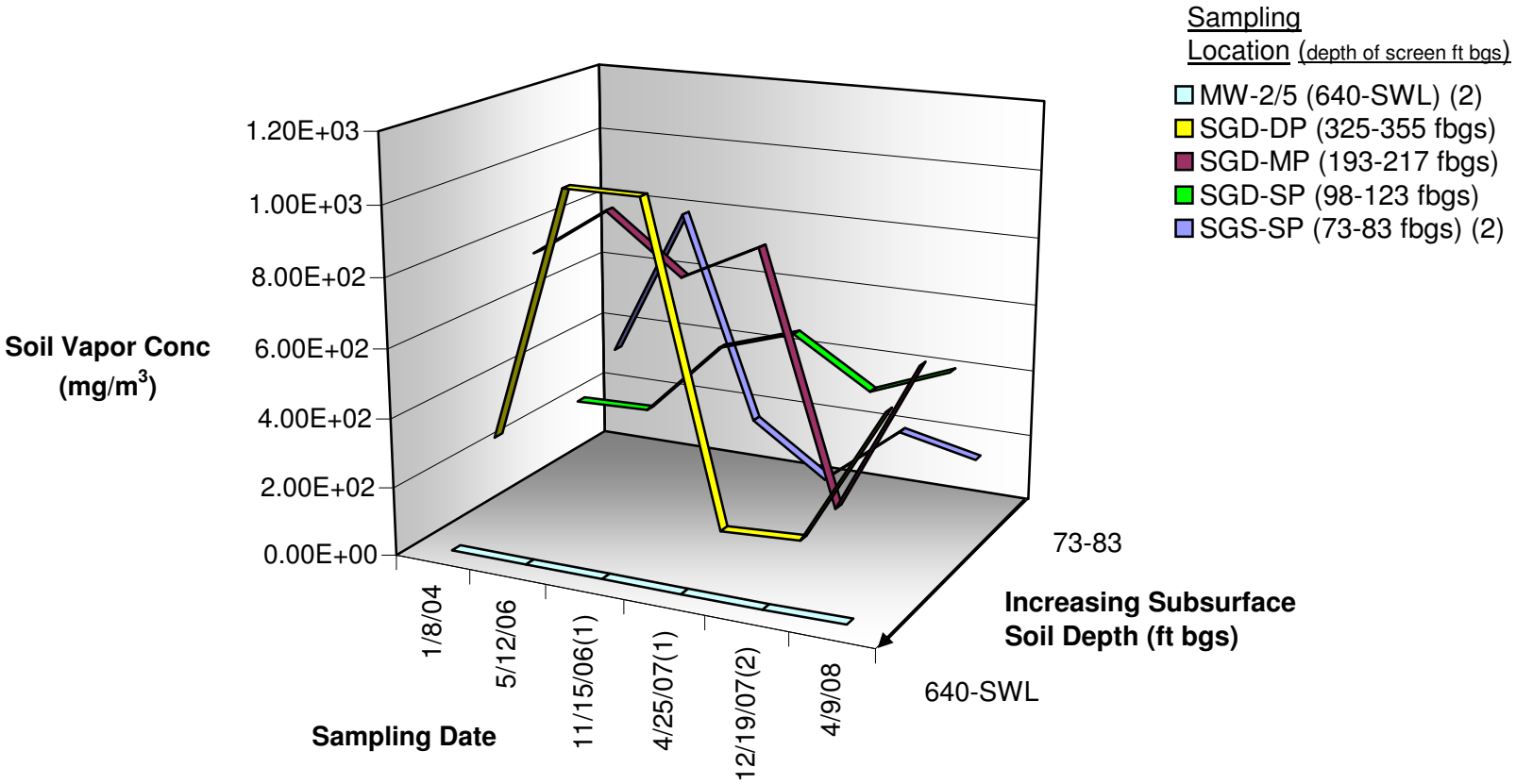
Maximum chloroform concentration was 270 mg/m^3 in soil vapor samples collected prior to landfill closure (Terra Tech 1994). Maximum chloroform concentration in most recent soil vapor sampling event is is 92 mg/m^3 (AMEC 2008).

(1) Soil Vapor Extraction on immediately before sampling event.

(2) Data for MW-2/5 represents highest detected concentration among MW-2 and MW-5. Leak detection compound was identified in both samples collected on 12/19/07 indicating samples from MW-2 and MW-5 may be comprised. It is not known if leak detection analysis was performed on any previous samples.

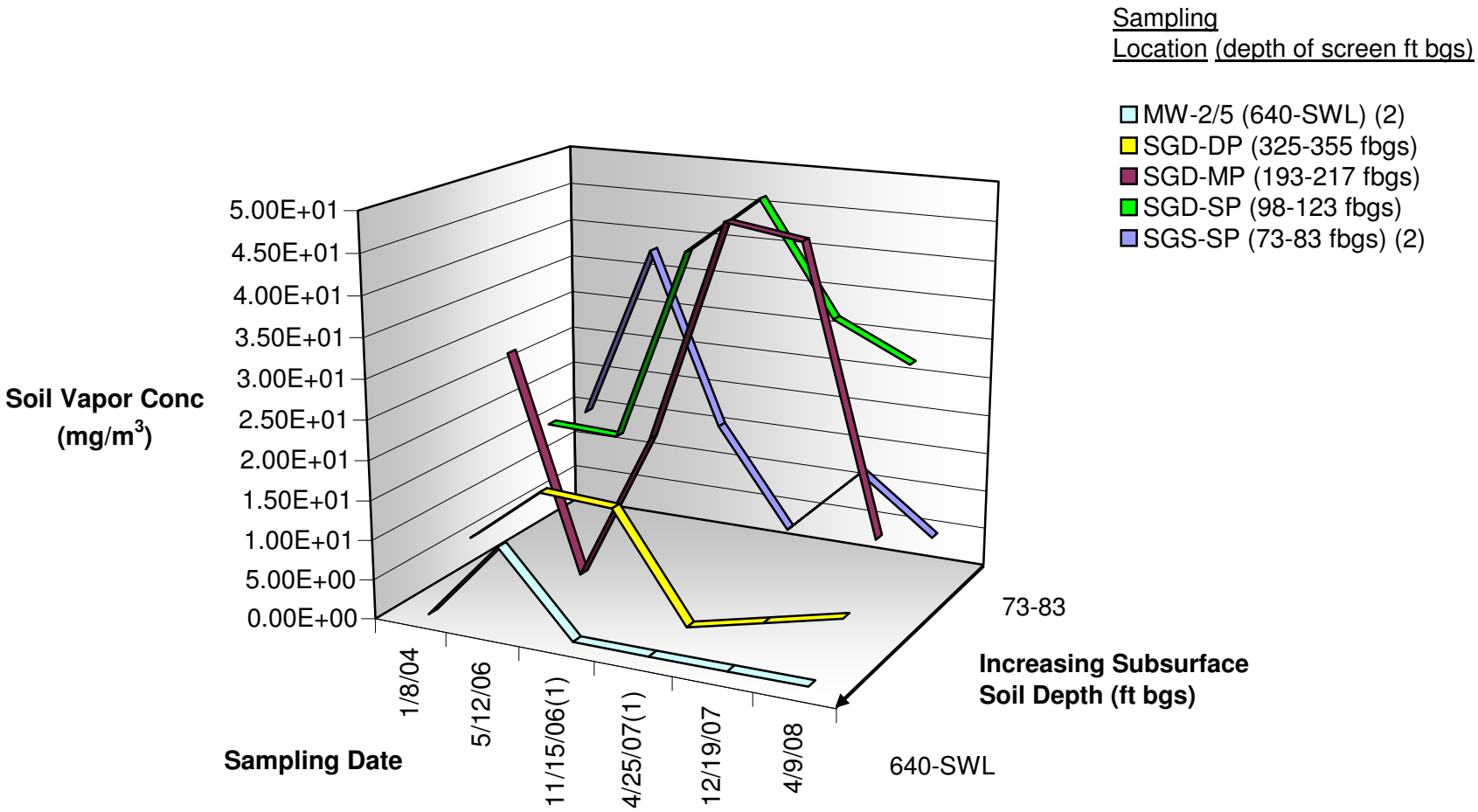
SWL = Static Water Level NA = Not Analyzed ft bgs = feet below ground surface

Figure 4
Freon 11 Soil Vapor Concentrations in Select Vapor Monitoring Wells
Page Trowbridge Ranch Landfill



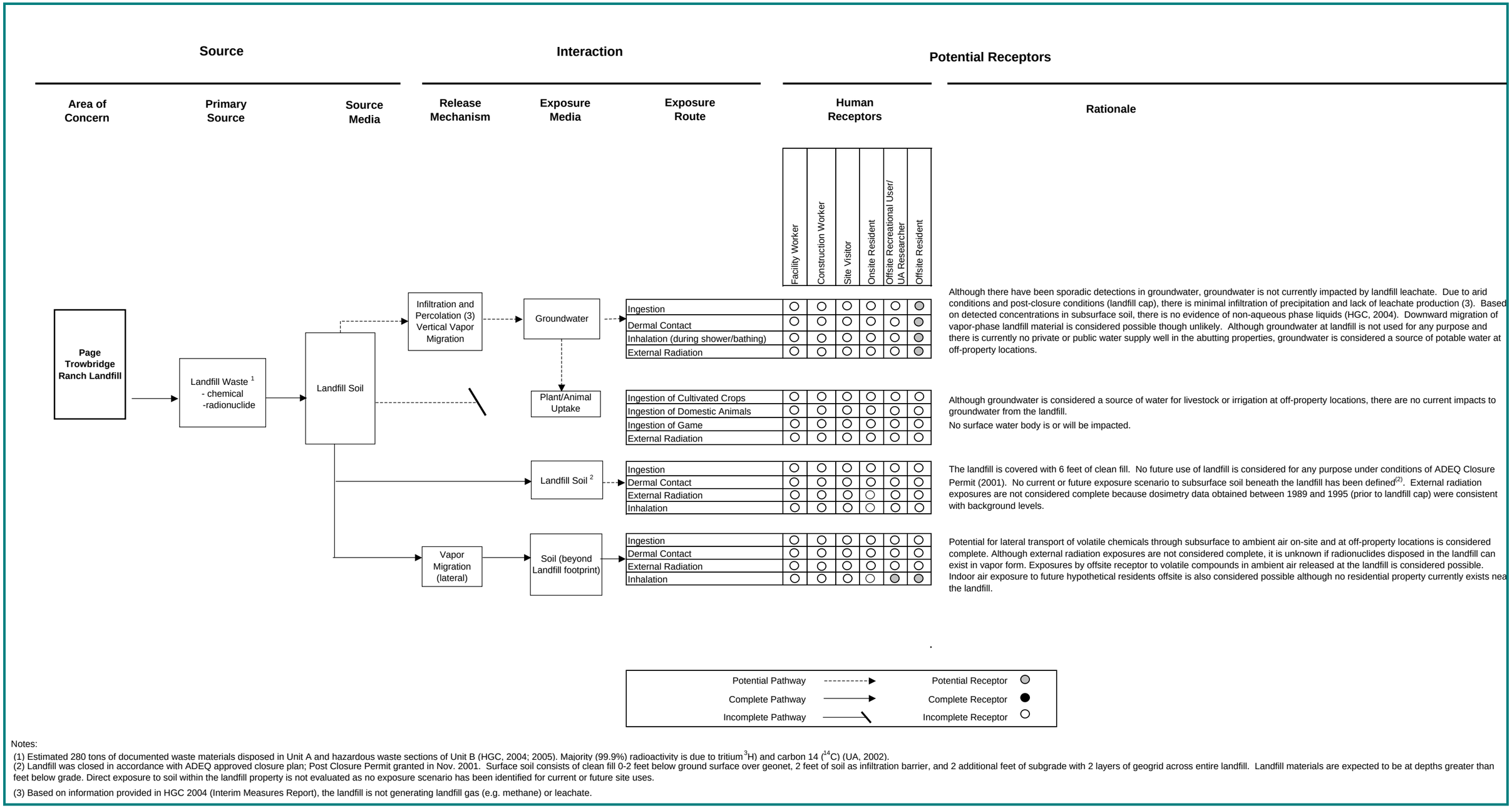
Notes:
Maximum Freon 11 concentration was 450 mg/m^3 in soil vapor samples collected prior to landfill closure (Terra Tech 1994). Maximum Freon 11 concentration in most recent soil vapor sampling event is 110 mg/m^3 (AMEC 2008).
(1) Soil Vapor Extraction on immediately before sampling event.
(2) Data for MW-2/5 represents highest detected concentration among MW-2 and MW-5. Leak detection compound was identified in both samples collected on 12/19/07 indicating samples from MW-2 and MW-5 may be comprised. It is not known if leak detection analysis was performed on any previous samples.
SWL = Static Water Level NA = Not Analyzed ft bgs = feet below ground surface

Figure 5
Trichloroethylene (TCE) Soil Vapor Concentrations in Select Vapor Monitoring Wells
Page Trowbridge Ranch Landfill



Notes:
Maximum TCE concentration was 25 mg/m^3 in soil vapor samples collected prior to landfill closure (Terra Tech 1994). Maximum TCE concentration in most recent soil vapor sampling event is 3 mg/m^3 (AMEC, 2008).
(1) Soil Vapor Extraction on immediately before sampling event.
(2) Data for MW-2/5 represents highest detected concentration among MW-2 and MW-5. Leak detection compound was identified in both samples collected on 12/19/07 indicating samples from MW-2 and MW-5 may be comprised. It is not known if leak detection analysis was performed on any previous samples.
SWL = Static Water Level NA = Not Analyzed

Figure 6. Conceptual Site Model for Human Exposures



Notes:

(1) Estimated 280 tons of documented waste materials disposed in Unit A and hazardous waste sections of Unit B (HGC, 2004; 2005). Majority (99.9%) radioactivity is due to tritium ^{3}H) and carbon 14 (^{14}C) (UA, 2002).

(2) Landfill was closed in accordance with ADEQ approved closure plan; Post Closure Permit granted in Nov. 2001. Surface soil consists of clean fill 0-2 feet below ground surface over geonet, 2 feet of soil as infiltration barrier, and 2 additional feet of subgrade with 2 layers of geogrid across entire landfill. Landfill materials are expected to be at depths greater than feet below grade. Direct exposure to soil within the landfill property is not evaluated as no exposure scenario has been identified for current or future site uses.

(3) Based on information provided in HGC 2004 (Interim Measures Report), the landfill is not generating landfill gas (e.g. methane) or leachate.

TABLES

Table 1
Summary of Soil Data from EEC 1989 Subsurface Soil Sampling
Page-Trowbridge Ranch Landfill, Pinal County, Arizona

Location and Sample Id	Sampling Location	Sampling Depth Interval (fbgs)	Chloroform (mg/Kg)	Toluene (mg/Kg)	Carbon Tetrachloride (mg/Kg)	1,1-DCE (mg/Kg)	Cis 1,2-DCE (mg/Kg)	Methylene Chloride (mg/Kg)
Unit A								
C1/ C40(dup)	Unit A West perimeter	15	**0.058**/ < 0.0005	< 0.017	<0.0012	<0.0013	ND	<0.0025
		25	< 0.0005	< 0.017	**0.05**/ <0.0012	<0.0013	**0.008**/ ND	<0.0025
		35	< 0.0005	< 0.017	**0.066/ 0.033**	<0.0013/ **0.012**	**0.011**/ ND	**0.016/ 0.022**
C2	Unit A North perimeter	15	**0.011**	< 0.017	<0.0012	<0.0013	ND	<0.0025
		25	< 0.0005	< 0.017	<0.0012	**0.02**	ND	**0.008**
		35	< 0.0005	< 0.017	<0.0012	<0.0013	ND	<0.0025
C3/ C50 (dup)	Unit A East perimeter	15	**0.003**/ <0.0005	< 0.017	<0.0012	<0.0013	ND	<0.0025
C 10	Unit A SW 100 feet	15	< 0.0005	< 0.017	<0.0012	<0.0013	ND	<0.0025
C 11	Unit A West 100 feet	15	< 0.0005	< 0.017	<0.0012	<0.0013	ND	<0.0025
Unit B								
C4	Unit B NW perimeter	15	**0.04**	**0.03**	<0.0012	<0.0013	ND	<0.0025
C5	Unit B North perimeter	15	**0.003**	< 0.017	<0.0012	<0.0013	ND	<0.0025
		25	<0.0005	< 0.017	**0.018**	<0.0013	**0.012**	<0.0025
		35	<0.0005	< 0.017	**0.001**	<0.0013	**0.007**	<0.0025
C6	Unit B East perimeter	15	< 0.0005	< 0.017	<0.0012	<0.0013	ND	<0.0025
C7	Unit B South perimeter	15	< 0.0005	< 0.017	<0.0012	<0.0013	ND	<0.0025
C8	Unit B SW perimeter	15	**0.025**	< 0.017	<0.0012	<0.0013	ND	<0.0025
		25	< 0.0005	< 0.017	<0.0012	<0.0013	ND	<0.0025
		35	< 0.0005	< 0.017	<0.0012	<0.0013	ND	<0.0025
C9/ C30 (dup)	Unit B W perimeter	15	**0.08/ 0.02**	< 0.017	<0.0012	<0.0013	ND	<0.0025
C12	Unit B NE corner perimeter	15	**0.003**	< 0.017	<0.0012	<0.0013	ND	<0.0025
C13	Unit B NE corner 100 feet	15	< 0.0005	< 0.017	<0.0012	<0.0013	ND	<0.0025
C14	Unit B SW 100 feet	15	**0.01**	< 0.017	<0.0012	<0.0013	ND	<0.0025
Background Sample		15	<0.0005	< 0.017	<0.0012	<0.0013	ND	<0.0025
R-SRL			**0.94**	**650**	**0.25**	**120**	**43**	**9.3**

Analytical detection limits were provide in ECC Table 3 (ECC, 1989). Values could not be verified in laboratory analytical reports presented as ECC Appendix B (ECC, 1989). No value was provided for cis-1,2-DCE but reported as Not Detected (ND).
R-SRL = Residential Soil Remediation Level (A.A.C. Title 18, Chapter 7, Article 2)

Table 1 (continued)
Summary of Soil Data from ECC 1989 Subsurface Soil Investigation
Page-Trowbridge Ranch Landfill, Pinal County, Arizona

Landfill Unit	Unit A perimeter				Unit A 100 ft		Unit B Perimeter							Unit B 100 ft			Back-ground Sample	Detection Limit	R-SRL (mg/Kg)
Soil Sample Id	**C1**	**C2**	**C3**	**C50 (C3 Dup)**	**C 10**	**C 11**	**C4**	**C 5**	**C 6**	**C 7**	**C 8**	**C 9**	**C30 (C9 Dup)**	**C 12**	**C 13**	**C 14**			
Sample depth interval (fbgs)	**15**	**15**	**15**	**15**	**15**	**15**	**15**	**15**	**15**	**15**	**15**	**15**	**15**	**15**	**15**	**15**	**15**		
Analyte (1)																			
Arsenic	0.011	0.012	0.006	0.009	0.012	0.019	0.007	0.007	0.005	0.007	0.006	0.012	0.015	0.026	0.012	0.007	0.007	0.005	10
Barium	1.15	0.936	1.65	1.19	1.54	1.05	1.89	0.954	0.642	1.83	0.586	0.093	0.551	0.712	0.654	0.929	0.629	0.06	15,000
Cadmium	0.013	0.015	0.017			0.007		0.008	0.007	0.011	0.033		0.007	0.007		0.011		0.007	39
Chromium	0.118	0.151	0.077		0.044	0.084	0.124		0.061	0.098	0.122	0.046	0.115			0.09		0.027	30
Lead	0.201	0.277	0.113						0.091	0.235	0.366		0.151			0.277		0.08	400

Notes
(1) Represents analytes that were detected in at least one soil sample analyzed. Concentration units are in mg/Kg
Blank cells indicate analyte not detected at concentration above laboratory reporting limit.
fbgs = feet below ground surface
ft = feet
R-SRL = Residential Soil Remediation Level (A.A.C. Title 18, Chapter 7, Article 2)

Table 2
Summary of Subsurface Soil Data from Weston 2003 (mg/Kg) (1)
Page-Trowbridge Ranch Landfill, Pinal County, Arizona

Soil Boring Location	Field Sample Identification	Sample Date	Soil Sampling Depth Interval (fbgs)	Tetrachloroethene (mg/kg)	Bis(2-ethylhexyl) phthalate (mg/kg)	Chloroform (mg/kg)
SB-1	SB-SS-001-011	8/5/2002	0-10	<0.050	<0.33	<0.050
	SB-SS-001-021	8/5/2002	10-20	<0.050	<0.33	<0.050
	SB-SS-001-031	8/5/2002	20-30	<0.050	<0.33	<0.050
	SB-SS-001-041	8/5/2002	30-40	<0.050	<0.33	<0.050
	SB-SS-001-051	8/5/2002	40-50	<0.050	<0.33	<0.050
	SB-SS-001-061	8/5/2002	50-60	<0.050	<0.33	<0.050
	SB-SS-001-071	8/5/2002	60-70	<0.050	<0.33	<0.050
	SB-SS-001-081	8/5/2002	70-80	<0.050	<0.33	<0.050
	SB-SS-001-091	8/6/2002	80-90	<0.050	<0.33	<0.050
	SB-SS-001-101	8/6/2002	90-100	<0.050	<0.33	0.27
	SB-SS-101-101 (du	8/6/2002	90-100	<0.050	<0.33	0.24
	SB-SS-001-111	8/6/2002	100-110	<0.050	<0.33	<0.050
	SB-SS-001-121	8/7/2002	110-120	<0.050	<0.33	<0.050
	SB-SS-001-131	8/7/2002	120-130	<0.050	<0.33	<0.050
	SB-SS-001-141	8/7/2002	130-140	<0.050	<0.33	0.12
	SB-SS-001-151	8/7/2002	140-150	<0.050	<0.33	<0.050
	SB-SS-101-161	8/7/2002	150-160	<0.050	0.50	<0.050
	SB-SS-001-171	8/8/2002	160-170	<0.050	3.90	<0.050
	SB-SS-001-191	8/8/2002	180-190	<0.050	0.80	<0.050
SB-2	SB-SS-002-011	8/12/2002	0-10	0.09	<0.33	<0.050
	SB-SS-002-021	8/12/2002	10-20	<0.050	<0.33	<0.050
	SB-SS-002-031	8/12/2002	20-30	<0.050	<0.33	<0.050
	SB-SS-002-041	8/12/2002	30-40	<0.050	<0.33	<0.050
	SB-SS-002-051	8/12/2002	40-50	<0.050	<0.33	<0.050
	SB-SS-002-061	8/12/2002	50-60	<0.050	<0.33	<0.050
	SB-SS-002-071	8/12/2002	60-70	<0.050	<0.33	<0.050
	SB-SS-002-081	8/13/2002	70-80	<0.050	<0.33	<0.050
	SB-SS-002-091	8/13/2002	80-90	<0.050	<0.33	<0.050
	SB-SS-002-101	8/613/2002	90-100	<0.050	<0.33	0.09
	SB-SS-002-111	8/13/2002	100-110	<0.050	<0.33	<0.050
	SB-SS-002-121	8/13/2002	110-120	<0.050	<0.33	<0.050
	SB-SS-002-131	8/13/2002	120-130	<0.050	<0.91	<0.050
	SB-SS-002-141	8/13/2002	130-140	<0.050	<0.33	0.25
	SB-SS-002-151	8/14/2002	140-150	<0.050	<0.33	<0.050
	SB-SS-002-161	8/14/2002	150-160	<0.050	<0.33	<0.050
	SB-SS-002-171	8/14/2002	160-170	<0.050	<0.33	<0.050
	SB-SS-002-181	8/14/2002	170-180	<0.050	<0.33	<0.050
	SB-SS-002-191	8/14/2002	180-190	<0.050	<0.33	<0.050
	SB-SS-002-201	8/14/2002	190-200	<0.050	<0.33	<0.050
SB-3	SB-SS-003-011	8/6/2002	0-10	<0.050	<0.33	<0.050
	SB-SS-003-021	8/6/2002	10-20	<0.050	<0.33	<0.050
	SB-SS-003-031	8/6/2002	20-30	<0.050	NA	0.06
	SB-SS-003-041	8/6/2002	30-40	<0.050	<0.33	<0.050
	SB-SS-003-051	8/9/2002	40-50	<0.050	<0.33	<0.050
	SB-SS-003-061	8/9/2002	50-60	<0.050	<0.33	<0.050
	SB-SS-003-071	8/9/2002	60-70	NA	NA	NA
	SB-SS-003-081	8/9/2002	70-80	<0.050	NA	0.07
	SB-SS-003-091	8/9/2002	80-90	<0.050	<0.33	<0.050
	SB-SS-003-101	8/9/2002	90-100	<0.050	<0.33	<0.050
	SB-SS-003-111	8/9/2002	100-110	<0.050	<0.33	<0.050
SB-4	SB-SS-004-121	8/15/2002	110-120	<0.050	<0.33	<0.050
	SB-SS-004-131	8/15/2002	120-130	<0.050	<0.33	<0.050
	SB-SS-004-141[4]	8/15/2002	130-140	<0.050	<0.33	<0.050
	SB-SS-004-151	8/15/2002	140-150	<0.050	<0.33	<0.050
	SB-SS-004-161	8/15/2002	150-160	<0.050	<0.33	<0.050
	SB-SS-004-171	8/16/2002	160-170	NA	NA	NA
	SB-SS-004-181	8/16/2002	170-180	<0.050	<0.33	<0.050
	SB-SS-004-191	8/16/2002	180-190	NA	NA	NA
	SB-SS-004-201	8/16/2002	190-200	<0.050	<0.33	<0.050
		Risk - Based Criteria	**Residential SRL**	**5.1**	**390**	**9.4**
			Non-Residential SRL	**13 [2]**	**1200 mg/kg [2]**	**20 [2]**
			Migration to Groundwater	**GPL = 1.3 [3]**	**NA**	**NA**

From Table 5 in Weston 2003. *Technical Memorandum Interim Measures Task 1 Soil and Soil Gas Sampling Investigation*

[1] Table presents soil samples with contaminants detected above the practical quantitation limit only. Appendix C in Weston 2003 contains all analytical laboratory data.

"<" indicates contaminant not detected above the practical quantitation limit.

[2] Soil Remediation Level for Non-Residential Soils, Arizona Administrative Code, Title 18, Chapter 7.

[3] Minimum Groundwater Protection Limit

[4] Assumed this sample is represents sample from SB-3/SB-4 from 140 fbgs (see Appendix B)

NA = Not available

Table 3
Summary of Soil Vapor Data from Terra Tech (1994)
Page Trowbridge Ranch Landfill

Unit A

Sample ID:	A1	A1 Dup	A1 Re-run	A2	A2A	A2B	A2C	A2E	A2E R	A2G	A2i	A2K	A3	A3A	A3B	A3C	A 3-55	A 3-55	A3K	A4	A4A
ance from landfill perimeter (ft):	5'	5'	5'	5'	15'	25'	35'	55'	55'	75'	95'	115'	7'	15'	25'	35'	55'	55'	125'	7'	15'
Date Sampled:	9/7/94	9/7/94	9/7/94	9/7/94	9/7/94	9/8/94	9/8/94	9/9/94	9/9/94	9/9/94	9/9/94	9/9/94	9/7/94	9/7/94	9/8/94	9/8/94	9/10/94	9/10/94	9/9/94	9/7/94	9/7/94
Time Sampled:	13:30	18:55	18:32	14:15	16:15	14:00	17:40	8:10	8:59	9:40	10:30	11:15	14:55	16:55	14:40	18:20	15:05	15:30	12:30	15:35	17:30
Date Analyzed:	9/7/94	9/7/94	9/7/94	9/7/94	9/7/94	9/8/94	9/8/94	9/9/94	9/9/94	9/9/94	9/9/94	9/9/94	9/7/94	9/7/94	9/8/94	9/8/94	9/10/94	9/10/94	9/9/94	9/7/94	9/7/94
	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.
Analytes	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)
Trichlorofluoromethane	56 E	< 1.0	< 1.0	31 E	32 E	39 E	13	69 E	33 E	31 E	30 E	1.6	37 E	38 E	45 E	11	130	160 E	24 E	33 E	35 E
1,1-Dichloroethene	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	1.1	1.1	< 20	< 5.0	< 1.0	< 1.0	< 1.0
Methylene Chloride	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 10.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 100	< 25	< 5.0	< 5.0	< 5.0
trans-1,2-Dichloroethene	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 20	< 5.0	< 1.0	< 1.0	< 1.0
1,1 Dichloroethane	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 20	< 5.0	< 1.0	< 1.0	< 1.0
cis-1,2-Dichloroethene	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 20	< 20	< 1.0	< 1.0	< 1.0
Chloroform	< 1.0	< 1.0	< 1.0	16	11	22	22	13	12	3.6	< 1.0	< 1.0	20	20	24 E	24 E	28	21	< 1.0	4.7	16
1,1,1-Trichloroethane	< 1.0	< 1.0	< 1.0	4.4	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 20	< 5.0	< 1.0	< 1.0	< 1.0
Carbon Tetrachloride	< 1.0	< 1.0	< 1.0	1.4	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	1.1	< 20	< 5.0	< 1.0	< 1.0	< 1.0
1,2-Dichloroethane	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	1.5	< 1.0	< 1.0	< 1.0	< 20	< 5.0	< 1.0	< 1.0	< 1.0
Trichloroethene	< 1.0	< 1.0	< 1.0	2.8	< 1.0	< 1.0	2.6	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	4.6	25	1.1	1.8	< 20	< 5.0	< 1.0	< 1.0	< 1.0
Bromodichloromethane	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 20	< 5.0	< 1.0	< 1.0	< 1.0
cis-1,3-Dichloropropene	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 20	< 5.0	< 1.0	< 1.0	< 1.0
trans-1,3-Dichloropropene	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 20	< 5.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloroethane	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 20	< 5.0	< 1.0	< 1.0	< 1.0
Tetrachloroethene	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 20	< 5.0	< 1.0	< 1.0	< 1.0
Dibromochloromethane	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 20	< 5.0	< 1.0	< 1.0	< 1.0
Bromoform	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 20	< 5.0	< 1.0	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 20	< 5.0	< 1.0	< 1.0	< 1.0
1,3-Dichlorobenzene	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	52	< 5.0	< 1.0	< 1.0	< 1.0
1,2-Dichlorobenzene	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	65	< 5.0	< 1.0	< 1.0	< 1.0
Benzene	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 4.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 40	< 10	< 2.0	< 2.0	< 2.0
Tetrahydrofuran √	< 20	< 20	< 20	< 20	< 20	28	27	< 40	< 20	< 20	< 20	< 20	< 20	< 20	30	27	< 400	< 100	< 20	< 20	< 20
Toluene	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 4.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 40	< 10	< 2.0	< 2.0	< 2.0
Methyl ethyl ketone	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 20	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 200	< 50	< 10	< 10	< 10
Methyl iso-butyl ketone	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 20	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 200	< 50	< 10	< 10	< 10
1,2-Dibromocthane	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 20	< 5.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 4.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 40	< 10	< 2.0	< 2.0	< 2.0
Total Xylenes	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 4.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	42	< 10	< 2.0	< 2.0	< 2.0

Table 3
Summary of Soil Vapor Data from Terra Tech (1994)
Page Trowbridge Ranch Landfill

Sample ID:	A4B	A 4-E	A 4-E	A4-E	A4K	A5	A5A	A5B	A5K	A5M	A5M	A5	A6	A-6	A6B	A 6-E	A 6-G	A6	A7	A8	A9
ance from landfill perimeter (ft):	25'	55'	55'	55'	115'	5'	15'	25'	110'	130'	130' Dup	150'	5'	5'	25'	55'	75'	150'	5'	5'	5'
Date Sampled:	9/8/94	9/10/94	9/10/94	9/10/94	9/9/94	9/8/94	9/8/94	9/8/94	9/9/94	9/9/94	9/9/94	9/9/94	9/8/94	9/10/94	9/8/94	9/10/94	9/10/94	9/9/94	9/8/94	9/8/94	9/8/94
Time Sampled:	15:20	11:45	12:45	13:25	13:20	7:15	11:00	16:30	14:45	15:50	16:30	17:05	7:47	14:25	17:05	16:45	17:05	17:50	8:13	8:48	9:20
Date Analyzed:	9/8/94	9/10/94	9/10/94	9/10/94	9/9/94	9/8/94	9/8/94	9/8/94	9/9/94	9/9/94	9/9/94	9/9/94	9/8/94	9/10/94	9/8/94	9/10/94	9/10/94	9/9/94	9/8/94	9/8/94	9/8/94
	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.
Analytes	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)
Trichlorofluoromethane	45 E	110	73	51	30 E	11	32 E	47 E	29 E	32 E	33 E	35 E	< 1.0	13	61 E	230 E	180 E	35 E	< 1.0	< 1.0	< 1.0
1,1-Dichloroethene	2	< 20	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0
Methylene Chloride	< 5.0	< 100	< 25	< 25	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 25	< 5.0	< 25	< 25	< 5.0	< 5.0	< 5.0	< 5.0
trans-1,2-Dichloroethene	< 1.0	< 20	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1 Dichloroethane	< 1.0	< 20	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0
cis-1,2-Dichloroethene	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 20	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroform	23 E	37	59	< 5.0	< 1.0	24 E	22	5.7	10	4.1	1.7	1.0	5.1	< 5.0	94 E	72	39	1.6	< 1.0	< 1.0	< 1.0
1,1,1-Trichloroethane	< 1.0	< 20	< 5.0	< 5.0	< 1.0	5.2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	7.0	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0
Carbon Tetrachloride	< 1.0	< 20	< 5.0	< 5.0	< 1.0	5.9	< 1.0	4.9	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	5.3	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloroethane	< 1.0	< 20	< 5.0	< 5.0	< 1.0	8.2	< 1.0	4.1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethene	3.2	< 20	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0	9.6	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	6.1	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromodichloromethane	< 1.0	< 20	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0
cis-1,3-Dichloropropene	< 1.0	< 20	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0
trans-1,3-Dichloropropene	< 1.0	< 20	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloroethane	< 1.0	< 20	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloroethene	< 1.0	< 20	< 5.0	< 5.0	< 1.0	3.9	< 1.0	3.4	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	5.5	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromochloromethane	< 1.0	< 20	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromoform	< 1.0	< 20	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane	< 1.0	< 20	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichlorobenzene	< 1.0	52	12	13	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	12	< 1.0	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichlorobenzene	< 1.0	66	15	15	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	15	< 1.0	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0
Benzene	< 2.0	< 40	< 10	< 10	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 10	< 2.0	< 10	< 10	< 2.0	< 2.0	< 2.0	< 2.0
Tetrahydrofuran √	< 20	< 400	< 100	< 100	< 20	32	30	< 20	< 20	< 20	< 20	< 20	< 20	< 100	< 20	< 100	< 100	< 20	< 20	< 20	< 20
Toluene	< 2.0	< 40	< 10	< 10	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 10	< 2.0	< 10	< 10	< 2.0	< 2.0	< 2.0	< 2.0
Methyl ethyl ketone	< 10	< 200	< 50	< 50	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 50	< 10	< 50	< 50	< 10	< 10	< 10	< 10
Methyl iso-butyl ketone	< 10	< 200	< 50	< 50	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 50	< 10	< 50	< 50	< 10	< 10	< 10	< 10
1,2-Dibromocthane	< 1.0	< 20	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	< 2.0	< 40	< 10	< 10	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 10	< 2.0	< 10	< 10	< 2.0	< 2.0	< 2.0	< 2.0
Total Xylenes	< 2.0	41	< 10	< 10	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 10	< 2.0	< 10	< 10	< 2.0	< 2.0	< 2.0	< 2.0

Table 3
Summary of Soil Vapor Data from Terra Tech (1994)
Page Trowbridge Ranch Landfill
Unit B

Sample ID:	A10	A11	A 2-5	A 2-5	A 4-5	A 4-5	A 4-5	A 4-5	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	B11-Dup
nce from landfill perimeter (ft):	5'	5'	5'	5' Dup	5'	5'	5'	5'	5'	5'	5'	5'	5'	5'	5'	5'	5'	7'	7'	7'
Date Sampled:	9/8/94	9/8/94	9/10/94	9/10/94	9/10/94	9/10/94	9/10/94	9/10/94	9/11/94	9/11/94	9/11/94	9/11/94	9/11/94	9/11/94	9/11/94	9/11/94	9/11/94	9/11/94	9/11/94	9/11/94
Time Sampled:	9:50	10:30	6:45	8:20	8:55	9:25	10:22	11:05	8:20	8:50	9:50	10:20	11:20	12:10	12:40	13:45	14:15	15:45	16:20	16:45
Date Analyzed:	9/8/94	9/8/94	9/10/94	9/10/94	9/10/94	9/10/94	9/10/94	9/10/94	9/11/94	9/11/94	9/11/94	9/11/94	9/11/94	9/11/94	9/11/94	9/11/94	9/11/94	9/11/94	9/11/94	9/11/94
	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.
Analytes	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)
Trichlorofluoromethane	< 1.0	< 1.0	200	130	120	8.9	230 E	490 E	50 E	39	28	15	11	14	< 2.0	< 1.0	28 E	< 1.0	18	21
1,1-Dichloroethene	< 1.0	< 1.0	< 20	< 20	< 20	< 5.0	< 5.0	< 10	7.0	< 5.0	< 5.0	< 1.0	< 5.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methylene Chloride	< 5.0	< 5.0	< 100	< 100	< 100	< 25	< 25	< 50	< 5.0	< 25	< 25	< 5.0	< 25	< 10	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
trans-1,2-Dichloroethene	< 1.0	< 1.0	< 20	< 20	< 20	< 5.0	< 5.0	< 10	< 1.0	< 5.0	< 5.0	< 1.0	< 50	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1 Dichloroethane	< 1.0	< 1.0	< 20	< 20	< 20	< 5.0	< 5.0	< 10	< 1.0	< 5.0	< 5.0	< 1.0	< 50	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
cis-1,2-Dichloroethene	< 1.0	< 1.0	< 20	< 20	< 20	< 5.0	< 5.0	< 1.0	< 1.0	< 5.0	< 5.0	< 1.0	< 50	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroform	< 1.0	< 1.0	190	120	76	15	110	270 E	29 E	110	150 E	24 E	16.0	21	2.4	< 1.0	13	< 1.0	15	15
1,1,1-Trichloroethane	< 1.0	< 1.0	< 20	< 20	< 20	< 5.0	< 5.0	< 10	7.3	33	18	< 1.0	< 5.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Carbon Tetrachloride	< 1.0	< 1.0	< 20	< 20	< 20	< 5.0	< 5.0	< 10	7.7	< 5.0	21	< 1.0	< 5.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloroethane	< 1.0	< 1.0	< 20	< 20	< 20	< 5.0	< 5.0	< 10	< 1.0	< 5.0	< 5.0	2.0	< 5.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethene	< 1.0	< 1.0	< 20	< 20	< 20	< 5.0	< 5.0	< 10	1.2	< 5.0	< 5.0	< 1.0	< 5.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromodichloromethane	< 1.0	< 1.0	< 20	< 20	< 20	< 5.0	< 5.0	< 10	< 1.0	< 5.0	< 5.0	< 1.0	< 5.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
cis-1,3-Dichloropropene	< 1.0	< 1.0	< 20	< 20	< 20	< 5.0	< 5.0	< 10	< 1.0	< 5.0	< 5.0	< 1.0	< 5.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
trans-1,3-Dichloropropene	< 1.0	< 1.0	< 20	< 20	< 20	< 5.0	< 5.0	< 10	< 1.0	< 5.0	< 5.0	< 1.0	< 5.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloroethane	< 1.0	< 1.0	< 20	< 20	< 20	< 5.0	< 5.0	< 10	< 1.0	< 5.0	< 5.0	< 1.0	< 5.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloroethene	< 1.0	< 1.0	< 20	< 20	< 20	< 5.0	< 5.0	< 10	9.2	24	19	1.5	< 5.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromochloromethane	< 1.0	< 1.0	< 20	< 20	< 20	< 5.0	< 5.0	< 10	< 1.0	< 5.0	< 5.0	< 1.0	< 5.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromoform	< 1.0	< 1.0	< 20	< 20	< 20	< 5.0	< 5.0	< 10	< 1.0	< 5.0	< 5.0	< 1.0	< 5.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane	< 1.0	< 1.0	< 20	< 20	< 20	< 5.0	< 5.0	< 10	< 1.0	< 5.0	< 5.0	< 1.0	< 5.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichlorobenzene	< 1.0	< 1.0	54	48	46	12	12	24	< 1.0	< 5.0	< 5.0	< 1.0	< 5.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichlorobenzene	< 1.0	< 1.0	63	58	56	15	15	30	< 1.0	< 5.0	< 5.0	< 1.0	< 5.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Benzene	< 2.0	< 2.0	< 40	< 40	< 40	< 10	< 10	< 20	< 2.0	< 10	< 10	< 2.0	< 4.0	< 4.0	< 4.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Tetrahydrofuran √	< 20	< 20	< 400	< 400	< 400	< 100	130	310	37	130	170	34	< 100	< 40	< 40	< 20	< 20	< 20	< 20	< 20
Toluene	< 2.0	< 2.0	< 40	< 40	< 40	< 10	< 10	< 20	< 2.0	< 10	< 10	< 2.0	< 4.0	< 4.0	< 4.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Methyl ethyl ketone	< 10	< 10	< 200	< 200	< 200	< 50	< 50	< 100	< 10	< 50	< 50	< 10	< 20	< 20	< 20	< 10	< 10	< 10	< 10	< 10
Methyl iso-butyl ketone	< 10	< 10	< 200	< 200	< 200	< 50	< 50	< 100	< 10	< 50	< 50	< 10	< 20	< 20	< 20	< 10	< 10	< 10	< 10	< 10
1,2-Dibromocthane	< 1.0	< 1.0	< 20	< 20	< 20	< 5.0	< 5.0	< 10	< 10	< 5.0	< 5.0	< 1.0	< 2.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	< 2.0	< 2.0	< 40	< 40	< 40	< 10	< 10	< 20	< 2.0	< 10	< 10	< 2.0	< 4.0	< 4.0	< 4.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Total Xylenes	< 2.0	< 2.0	42	40	< 40	9.9	10	< 20	< 2.0	< 10	< 10	< 2.0	< 4.0	< 4.0	< 4.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0

Table 3
Summary of Soil Vapor Data from Terra Tech (1994)
Page Trowbridge Ranch Landfill

Sample ID:	B12	B13	B14	B15	B16	B17	B18	B19	B19-Dup	B20	B1-B	B1-B	B2-B	B2-100	B3-D	B4-B	B4-100	B5-B	B6-B	B6-100	B7-B
ance from landfill perimeter (ft):	7'	7'	10'	9'	5'	5'	5'	5'	5'	5'	25'	25'	25'	100'	45'	25'	100'	25'	25'	100'	25'
Date Sampled:	9/11/94	9/12/94	9/12/94	9/12/94	9/12/94	9/12/94	9/12/94	9/12/94	9/12/94	9/12/94	9/13/94	9/13/94	9/13/94	9/15/94	9/13/94	9/13/94	9/15/94	9/13/94	9/13/94	9/15/94	9/13/94
Time Sampled:	17:30	7:50	8:40	9:20	9:40	10:25	11:05	11:35	12:15	12:45	7:15	7:45	8:30	7:20	9:00	9:30	7:53	10:05	10:40	8:25	11:15
Date Analyzed:	9/11/94	9/12/94	9/12/94	9/12/94	9/12/94	9/12/94	9/12/94	9/12/94	9/12/94	9/12/94	9/13/94	9/13/94	9/13/94	9/15/94	9/13/94	9/13/94	9/15/94	9/13/94	9/13/94	9/15/94	9/13/94
	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.
Analytes	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)
Trichlorofluoromethane	21	5.3	< 2.0	< 2.0	< 2.0	< 4.0	< 4.0	9.6	< 20	< 4.0	86 E	76	55	59 E	50	33	110 E	41	43	110 E	61E
1,1-Dichloroethene	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 4.0	< 4.0	< 4.0	< 20	< 4.0	< 2.0	< 5.0	< 5.0	4.1	< 5.0	< 5.0	< 2.0	< 5.0	< 5.0	< 2.0	< 2.0
Methylene Chloride	< 5.0	< 25	< 25	< 25	< 25	< 20	< 20	< 20	< 100	< 20	< 10	< 25	< 25	< 5.0	< 25	< 25	< 10	< 25	< 25	< 10	< 10
trans-1,2-Dichloroethene	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 4.0	< 4.0	< 4.0	< 20	< 4.0	< 2.0	< 5.0	< 5.0	< 1.0	< 5.0	< 5.0	< 2.0	< 5.0	< 5.0	< 2.0	< 2.0
1,1 Dichloroethane	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 4.0	< 4.0	< 4.0	< 20	< 4.0	< 2.0	< 5.0	< 5.0	< 1.0	< 5.0	< 5.0	< 2.0	< 5.0	< 5.0	< 2.0	< 2.0
cis-1,2-Dichloroethene	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 4.0	< 4.0	< 4.0	< 20	< 4.0	< 2.0	< 5.0	< 5.0	< 1.0	< 5.0	< 5.0	< 2.0	< 5.0	< 5.0	< 2.0	< 2.0
Chloroform	37 E	54 E	59 E	63 E	>60*	110 E	72	120 E	52	93 E	59 E	77	120 E	26 E	41	38	16	26	19	19	24
1,1,1-Trichloroethane	< 1.0	< 2.0	< 2.0	< 2.0	**	< 4.0	< 4.0	< 4.0	< 20	< 4.0	4.5	< 5.0	13	1.2	< 5.0	< 5.0	< 2.0	< 5.0	< 5.0	< 2.0	< 1.0
Carbon Tetrachloride	6.2	< 2.0	3.7	< 2.0	3.4	< 4.0	< 4.0	< 4.0	< 20	< 4.0	6.2	< 5.0	5.3	5.0	< 5.0	< 5.0	< 2.0	< 5.0	< 5.0	< 2.0	< 1.0
1,2-Dichloroethane	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 4.0	< 4.0	< 4.0	< 20	< 4.0	< 2.0	< 5.0	< 5.0	< 1.0	< 5.0	< 5.0	< 2.0	< 5.0	< 5.0	< 2.0	< 2.0
Trichloroethene	4.0	< 2.0	< 2.0	< 2.0	< 2.0	< 4.0	< 4.0	< 4.0	< 20	< 4.0	< 2.0	< 5.0	< 5.0	< 1.0	< 5.0	< 5.0	< 2.0	< 5.0	< 5.0	< 2.0	< 2.0
Bromodichloromethane	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 4.0	< 4.0	< 4.0	< 20	< 4.0	< 2.0	< 5.0	< 5.0	< 1.0	< 5.0	< 5.0	< 2.0	< 5.0	< 5.0	< 2.0	< 2.0
cis-1,3-Dichloropropene	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 4.0	< 4.0	< 4.0	< 20	< 4.0	< 2.0	< 5.0	< 5.0	< 1.0	< 5.0	< 5.0	< 2.0	< 5.0	< 5.0	< 2.0	< 2.0
trans-1,3-Dichloropropene	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 4.0	< 4.0	< 4.0	< 20	< 4.0	< 2.0	< 5.0	< 5.0	< 1.0	< 5.0	< 5.0	< 2.0	< 5.0	< 5.0	< 2.0	< 2.0
1,1,2-Trichloroethane	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 4.0	< 4.0	< 4.0	< 20	< 4.0	< 2.0	< 5.0	< 5.0	< 1.0	< 5.0	< 5.0	< 2.0	< 5.0	< 5.0	< 2.0	< 2.0
Tetrachloroethene	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 4.0	< 4.0	< 4.0	< 20	< 4.0	9.2	5.4	23	1.4	< 5.0	< 5.0	< 2.0	< 5.0	< 5.0	< 2.0	< 2.0
Dibromochloromethane	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 4.0	< 4.0	< 4.0	< 20	< 4.0	< 2.0	< 5.0	< 5.0	< 1.0	< 5.0	< 5.0	< 2.0	< 5.0	< 5.0	< 2.0	< 2.0
Bromoform	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 4.0	< 4.0	< 4.0	< 20	< 4.0	< 2.0	< 5.0	< 5.0	< 1.0	< 5.0	< 5.0	< 2.0	< 5.0	< 5.0	< 2.0	< 2.0
1,1,2,2-Tetrachloroethane	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 4.0	< 4.0	< 4.0	< 20	< 4.0	< 2.0	< 5.0	< 5.0	< 1.0	< 5.0	< 5.0	< 2.0	< 5.0	< 5.0	< 2.0	< 2.0
1,3-Dichlorobenzene	< 1.0	5.1	4.9	5.4	4.6	9.8	11	11	55	12	< 2.0	< 5.0	< 5.0	< 1.0	< 5.0	< 5.0	< 2.0	< 5.0	< 5.0	< 2.0	< 2.0
1,2-Dichlorobenzene	< 1.0	5.8	5.7	6.1	5.7	12	11	11	60	13	< 2.0	< 5.0	< 5.0	< 1.0	< 5.0	< 5.0	< 2.0	< 5.0	< 5.0	< 2.0	< 2.0
Benzene	< 2.0	< 4.0	< 4.0	< 4.0	< 4.0	< 8.0	< 8.0	< 8.0	< 40	< 8.0	< 4.0	< 10	< 10	< 2.0	< 10	< 10	< 4.0	< 10	< 10	< 4.0	< 4.0
Tetrahydrofuran √	35	67	71	< 40	40	140	94	140	< 400	90	79	< 100	160	27	< 100	< 100	< 40	< 100	< 100	< 40	< 80
Toluene	< 2.0	< 4.0	< 4.0	< 4.0	< 4.0	< 8.0	< 8.0	< 8.0	< 40	< 8.0	< 4.0	< 10	< 10	< 2.0	< 10	< 10	< 4.0	< 10	< 10	< 4.0	< 4.0
Methyl ethyl ketone	< 10	< 50	< 50	< 50	< 50	< 40	< 40	< 40	< 200	< 40	< 20	< 50	< 50	< 10	< 50	< 50	< 20	< 50	< 50	< 20	< 20
Methyl iso-butyl ketone	< 10	< 50	< 50	< 50	< 50	< 40	< 40	< 40	< 200	< 40	< 20	< 50	< 50	< 10	< 50	< 50	< 20	< 50	< 50	< 20	< 20
1,2-Dibromocthane	< 1.0	< 5.0	< 5.0	< 5.0	< 5.0	< 4.0	< 4.0	< 4.0	< 20	< 4.0	< 2.0	< 5.0	< 5.0	< 1.0	< 5.0	< 5.0	< 2.0	< 5.0	< 5.0	< 2.0	< 2.0
Ethylbenzene	< 2.0	< 4.0	< 4.0	< 4.0	< 4.0	< 8.0	< 8.0	< 8.0	< 40	< 8.0	< 4.0	< 10	< 10	< 2.0	< 10	< 10	< 4.0	< 10	< 10	< 4.0	< 4.0
Total Xylenes	< 2.0	4.3	4.2	4.3	4.2	8.3	8.2	8.3	41	8.3	< 4.0	< 10	< 10	< 2.0	< 10	< 10	< 4.0	< 10	< 10	< 4.0	< 4.0

Table 3
Summary of Soil Vapor Data from Terra Tech (1994)
Page Trowbridge Ranch Landfill

Sample ID:	B8-B	B8-100	B9-B	B10-B	B10-70	B11-B	B12-B	B12-100	B13-B	B14-B	B14-110	B15-B	B15-B	B16-B	B16-100	B17-B	B18-B	B18-100	B19-B	B19-Dup	B20-B
ance from landfill perimeter (ft):	25'	100'	25'	25'	70'	25'	25'	100'	25'	25'	110'	25'	25' Dup	25'	100'	25'	25'	100'	25'	5'	25'
Date Sampled:	9/13/94	9/15/94	9/13/94	9/13/94	9/15/94	9/13/94	9/13/94	9/15/94	9/13/94	9/13/94	9/15/94	9/14/94	9/14/94	9/14/94	9/15/94	9/14/94	9/14/94	9/15/94	9/14/94	9/12/94	9/14/94
Time Sampled:	11:50	9:00	12:15	13:00	9:37	13:30	14:00	10:07	14:30	15:00	10:45	11:15	11:45	10:35	11:20	9:53	9:23	11:50	8:50	17:15	8:20
Date Analyzed:	9/13/94	9/15/94	9/13/94	9/13/94	9/15/94	9/13/94	9/13/94	9/15/94	9/13/94	9/13/94	9/15/94	9/14/94	9/14/94	9/14/94	9/15/94	9/14/94	9/14/94	9/15/94	9/14/94	9/12/94	9/14/94
	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.
Analytes	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)
Trichlorofluoromethane	22	100 E	49 E	9.3	60 E	32 E	18	8.4	11	< 5.0	< 2.0	< 5.0	< 5.0	< 5.0	< 2.0	< 1.0	< 5.0	4.5	< 5.0	< 4.0	< 5.0
1,1-Dichloroethene	< 2.0	< 2.0	< 1.0	< 1.0	< 2.0	< 1.0	< 2.0	< 2.0	< 2.5	< 5.0	< 2.0	< 5.0	< 5.0	< 5.0	< 2.0	< 1.0	< 5.0	< 2.0	< 5.0	< 4.0	< 5.0
Methylene Chloride	< 10	< 10	< 5.0	< 5.0	< 10	< 5.0	< 10	< 10	< 12	< 25	< 10	< 25	< 25	< 25	< 10	< 5.0	< 25	< 10	< 25	< 20	< 25
trans-1,2-Dichloroethene	< 2.0	< 2.0	< 1.0	< 1.0	< 2.0	< 1.0	< 2.0	< 2.0	< 2.5	< 5.0	< 2.0	< 5.0	< 5.0	< 5.0	< 2.0	< 1.0	< 5.0	< 2.0	< 5.0	< 4.0	< 5.0
1,1 Dichloroethane	< 2.0	< 2.0	< 1.0	< 1.0	< 2.0	< 1.0	< 2.0	< 2.0	< 2.5	< 5.0	< 2.0	< 5.0	< 5.0	< 5.0	< 2.0	< 1.0	< 5.0	< 2.0	< 5.0	< 4.0	< 5.0
cis-1,2-Dichloroethene	< 2.0	< 2.0	< 1.0	< 1.0	< 2.0	< 1.0	< 2.0	< 2.0	< 2.5	< 5.0	< 2.0	< 5.0	< 5.0	< 5.0	< 2.0	< 1.0	< 5.0	< 2.0	< 5.0	< 4.0	< 5.0
Chloroform	6.2	12	14	2.7	2.4	23 E	53 E	21	77	46	23	67	180 E	67	45 E	66	111 E	31	41	73	80
1,1,1-Trichloroethane	< 5.0	< 2.0	< 2.0	< 2.0	< 2.0	< 1.0	< 2.0	< 2.0	< 2.5	< 5.0	< 2.0	< 5.0	< 5.0	< 5.0	< 2.0	< 1.0	< 5.0	< 2.0	< 5.0	< 1.0	< 5.0
Carbon Tetrachloride	< 5.0	< 2.0	< 2.0	< 2.0	< 2.0	< 1.0	3.8	< 2.0	8.4	< 5.0	< 2.0	< 5.0	< 5.0	< 5.0	< 2.0	< 1.0	< 5.0	< 2.0	< 5.0	< 1.0	< 5.0
1,2-Dichloroethane	< 2.0	< 2.0	< 1.0	< 1.0	< 2.0	< 1.0	< 2.0	< 2.0	< 2.5	< 5.0	< 2.0	< 5.0	< 5.0	< 5.0	< 2.0	< 1.0	< 5.0	< 2.0	< 5.0	< 1.0	< 5.0
Trichloroethene	< 2.0	< 2.0	< 1.0	< 1.0	< 2.0	< 1.0	< 2.0	< 2.0	< 2.5	< 5.0	< 2.0	< 5.0	< 5.0	< 5.0	< 2.0	< 1.0	< 5.0	< 2.0	< 5.0	< 1.0	< 5.0
Bromodichloromethane	< 2.0	< 2.0	< 1.0	< 1.0	< 2.0	< 1.0	< 2.0	< 2.0	< 2.5	< 5.0	< 2.0	< 5.0	< 5.0	< 5.0	< 2.0	< 1.0	< 5.0	< 2.0	< 5.0	< 1.0	< 5.0
cis-1,3-Dichloropropene	< 2.0	< 2.0	< 1.0	< 1.0	< 2.0	< 1.0	< 2.0	< 2.0	< 2.5	< 5.0	< 2.0	< 5.0	< 5.0	< 5.0	< 2.0	< 1.0	< 5.0	< 2.0	< 5.0	< 1.0	< 5.0
trans-1,3-Dichloropropene	< 2.0	< 2.0	< 1.0	< 1.0	< 2.0	< 1.0	< 2.0	< 2.0	< 2.5	< 5.0	< 2.0	< 5.0	< 5.0	< 5.0	< 2.0	< 1.0	< 5.0	< 2.0	< 5.0	< 1.0	< 5.0
1,1,2-Trichloroethane	< 2.0	< 2.0	< 1.0	< 1.0	< 2.0	< 1.0	< 2.0	< 2.0	< 2.5	< 5.0	< 2.0	< 5.0	< 5.0	< 5.0	< 2.0	< 1.0	< 5.0	< 2.0	< 5.0	< 1.0	< 5.0
Tetrachloroethene	< 2.0	< 2.0	< 1.0	< 1.0	< 2.0	< 1.0	< 2.0	< 2.0	< 2.5	< 5.0	< 2.0	< 5.0	< 5.0	< 5.0	< 2.0	< 1.0	< 5.0	< 2.0	< 5.0	< 1.0	< 5.0
Dibromochloromethane	< 2.0	< 2.0	< 1.0	< 1.0	< 2.0	< 1.0	< 2.0	< 2.0	< 2.5	< 5.0	< 2.0	< 5.0	< 5.0	< 5.0	< 2.0	< 1.0	< 5.0	< 2.0	< 5.0	< 1.0	< 5.0
Bromoform	< 2.0	< 2.0	< 1.0	< 1.0	< 2.0	< 1.0	< 2.0	< 2.0	< 2.5	< 5.0	< 2.0	< 5.0	< 5.0	< 5.0	< 2.0	< 1.0	< 5.0	< 2.0	< 5.0	< 1.0	< 5.0
1,1,2,2-Tetrachloroethane	< 2.0	< 2.0	< 1.0	< 1.0	< 2.0	< 1.0	< 2.0	< 2.0	< 2.5	< 5.0	< 2.0	< 5.0	< 5.0	< 5.0	< 2.0	< 1.0	< 5.0	< 2.0	< 5.0	< 1.0	< 5.0
1,3-Dichlorobenzene	< 2.0	< 2.0	< 1.0	< 1.0	< 2.0	< 1.0	< 2.0	< 2.0	< 2.5	< 5.0	< 2.0	< 5.0	< 5.0	< 5.0	< 2.0	< 1.0	< 5.0	< 2.0	< 5.0	< 1.0	< 5.0
1,2-Dichlorobenzene	< 2.0	< 2.0	< 1.0	< 1.0	< 2.0	< 1.0	< 2.0	< 2.0	< 2.5	< 5.0	< 2.0	< 5.0	< 5.0	< 5.0	< 2.0	< 1.0	< 5.0	< 2.0	< 5.0	< 1.0	< 5.0
Benzene	< 4.0	< 4.0	< 2.0	< 2.0	< 4.0	< 2.0	< 4.0	< 4.0	< 5.0	< 10	< 4.0	< 10	< 10	< 10	< 4.0	< 2.0	< 10	< 4.0	< 10	< 8.0	< 10
Tetrahydrofuran √	< 80	< 40	< 20	< 20	< 40	32	61	< 40	170	< 100	< 40	< 100	430 E	< 100	43	< 20	< 100	< 40	< 100	53	< 100
Toluene	< 4.0	< 4.0	< 2.0	< 2.0	< 4.0	< 2.0	< 4.0	< 4.0	< 5.0	< 10	< 4.0	< 10	< 10	< 10	< 4.0	< 2.0	< 10	< 4.0	< 10	< 8.0	< 10
Methyl ethyl ketone	< 20	< 20	< 10	< 10	< 20	< 10	< 20	< 20	< 25	< 50	< 20	< 50	< 50	< 50	< 20	< 10	< 50	< 20	< 50	< 40	< 50
Methyl iso-butyl ketone	< 20	< 20	< 10	< 10	< 20	< 10	< 20	< 20	< 25	< 50	< 20	< 50	< 50	< 50	< 20	< 10	< 50	< 20	< 50	< 40	< 50
1,2-Dibromocthane	< 2.0	< 2.0	< 1.0	< 1.0	< 2.0	< 1.0	< 2.0	< 2.0	< 2.5	< 5.0	< 2.0	< 5.0	< 5.0	< 5.0	< 2.0	< 1.0	< 5.0	< 2.0	< 5.0	< 1.0	< 5.0
Ethylbenzene	< 4.0	< 4.0	< 2.0	< 2.0	< 4.0	< 2.0	< 4.0	< 4.0	< 5.0	< 10	< 4.0	< 10	< 10	< 10	< 4.0	< 2.0	< 10	< 4.0	< 10	< 8.0	< 10
Total Xylenes	< 4.0	< 4.0	< 2.0	< 2.0	< 4.0	< 2.0	< 4.0	< 4.0	< 5.0	< 10	< 4.0	< 10	< 10	< 10	< 4.0	< 2.0	< 10	< 4.0	< 10	< 8.0	< 10

Table 3
Summary of Soil Vapor Data from Terra Tech (1994)
Page Trowbridge Ranch Landfill

Sample ID:	B20-100	B20-100	B21	B21-B	B21-B	B21-B	B22	B22-Dup	B22-B	B22-100	B22-100	B23-Trip	B23-Quad	B23-B	B-EAST	A-EAST
nce from landfill perimeter (ft):	100'	100'	5'	25'	25'	25' Dup	5'	5'	25'	100'	100'	5'	5'	25'	90'	100'
Date Sampled:	9/15/94	9/15/94	9/12/94	9/13/94	9/14/94	9/14/94	9/12/94	9/12/94	9/13/94	9/15/94	9/15/94	9/12/94	9/12/94	9/13/94	9/15/94	9/15/94
Time Sampled:	13:15	14:45	13:20	17:05	7:25	7:52	13:50	14:40	16:00	13:45	14:15	16:10	16:35	15:30	15:15	15:45
Date Analyzed:	9/15/94	9/15/94	9/12/94	9/13/94	9/14/94	9/14/94	9/12/94	9/12/94	9/13/94	9/15/94	9/15/94	9/12/94	9/12/94	9/13/94	9/15/94	9/15/94
Analytes	Conc. (mg/m^3)	Conc. (mg/m^3)	Conc. (mg/m^3)	Conc. (mg/m^3)	Conc. (mg/m^3)	Conc. (mg/m^3)	Conc. (mg/m^3)	Conc. (mg/m^3)	Conc. (mg/m^3)	Conc. (mg/m^3)	Conc. (mg/m^3)	Conc. (mg/m^3)	Conc. (mg/m^3)	Conc. (mg/m^3)	Conc. (mg/m^3)	Conc. (mg/m^3)
Trichlorofluoromethane	< 2.0	2.3	7.9	< 5.0	< 5.0	< 5.0	15	9.8	14	17	17	31	20	25	61 E	130 E
1,1-Dichloroethene	< 2.0	< 2.0	< 4.0	< 5.0	< 5.0	< 5.0	< 4.0	< 4.0	< 5.0	< 2.0	< 2.0	< 4.0	< 4.0	< 5.0	< 1.0	< 2.0
Methylene Chloride	< 10	< 10	< 20	< 25	< 25	< 25	< 20	< 20	< 25	< 10	< 10	< 20	< 20	< 25	< 5.0	< 10
trans-1,2-Dichloroethene	< 2.0	< 2.0	< 4.0	< 5.0	< 5.0	< 5.0	< 4.0	< 4.0	< 5.0	< 2.0	< 2.0	< 4.0	< 4.0	< 5.0	< 1.0	< 2.0
1,1 Dichloroethane	< 2.0	< 2.0	< 4.0	< 5.0	< 5.0	< 5.0	< 4.0	< 4.0	< 5.0	< 2.0	< 2.0	< 4.0	< 4.0	< 5.0	< 1.0	< 2.0
cis-1,2-Dichloroethene	< 2.0	< 2.0	< 4.0	< 5.0	< 5.0	< 5.0	< 4.0	< 4.0	< 5.0	< 2.0	< 2.0	< 4.0	< 4.0	< 5.0	< 1.0	< 2.0
Chloroform	< 2.0	6.6	120 E	16	46	80	120 E	45.0	96	31	23	55	31	61	21	< 2.0
1,1,1-Trichloroethane	< 2.0	< 2.0	< 4.0	< 5.0	< 5.0	< 5.0	< 4.0	< 4.0	< 5.0	< 2.0	< 2.0	< 4.0	< 4.0	< 5.0	< 1.0	< 2.0
Carbon Tetrachloride	< 2.0	< 2.0	13	< 5.0	< 5.0	< 5.0	15	< 4.0	5.1	< 2.0	< 2.0	< 4.0	< 4.0	< 5.0	5.8	< 2.0
1,2-Dichloroethane	< 2.0	< 2.0	< 4.0	< 5.0	< 5.0	< 5.0	< 4.0	< 4.0	< 5.0	< 2.0	< 2.0	< 4.0	< 4.0	< 5.0	< 1.0	< 2.0
Trichloroethene	< 2.0	< 2.0	< 4.0	< 5.0	< 5.0	< 5.0	< 4.0	< 4.0	< 5.0	< 2.0	< 2.0	< 4.0	< 4.0	< 5.0	< 1.0	< 2.0
Bromodichloromethane	< 2.0	< 2.0	< 4.0	< 5.0	< 5.0	< 5.0	< 4.0	< 4.0	< 5.0	< 2.0	< 2.0	< 4.0	< 4.0	< 5.0	< 1.0	< 2.0
cis-1,3-Dichloropropene	< 2.0	< 2.0	< 4.0	< 5.0	< 5.0	< 5.0	< 4.0	< 4.0	< 5.0	< 2.0	< 2.0	< 4.0	< 4.0	< 5.0	< 1.0	< 2.0
trans-1,3-Dichloropropene	< 2.0	< 2.0	< 4.0	< 5.0	< 5.0	< 5.0	< 4.0	< 4.0	< 5.0	< 2.0	< 2.0	< 4.0	< 4.0	< 5.0	< 1.0	< 2.0
1,1,2-Trichloroethane	< 2.0	< 2.0	< 4.0	< 5.0	< 5.0	< 5.0	< 4.0	< 4.0	< 5.0	< 2.0	< 2.0	< 4.0	< 4.0	< 5.0	< 1.0	< 2.0
Tetrachloroethene	< 2.0	< 2.0	< 4.0	< 5.0	< 5.0	< 5.0	< 4.0	< 4.0	< 5.0	< 2.0	< 2.0	< 4.0	< 4.0	< 5.0	< 1.0	< 2.0
Dibromochloromethane	< 2.0	< 2.0	< 4.0	< 5.0	< 5.0	< 5.0	< 4.0	< 4.0	< 5.0	< 2.0	< 2.0	< 4.0	< 4.0	< 5.0	< 1.0	< 2.0
Bromoform	< 2.0	< 2.0	< 4.0	< 5.0	< 5.0	< 5.0	< 4.0	< 4.0	< 5.0	< 2.0	< 2.0	< 4.0	< 4.0	< 5.0	< 1.0	< 2.0
1,1,2,2-Tetrachloroethane	< 2.0	< 2.0	< 4.0	< 5.0	< 5.0	< 5.0	< 4.0	< 4.0	< 5.0	< 2.0	< 2.0	< 4.0	< 4.0	< 5.0	< 1.0	< 2.0
1,3-Dichlorobenzene	< 2.0	< 2.0	< 4.0	< 5.0	< 5.0	< 5.0	< 4.0	< 4.0	< 5.0	< 2.0	< 2.0	< 4.0	< 4.0	< 5.0	< 1.0	< 2.0
1,2-Dichlorobenzene	< 2.0	< 2.0	< 4.0	< 5.0	< 5.0	< 5.0	< 4.0	< 4.0	< 5.0	< 2.0	< 2.0	< 4.0	< 4.0	< 5.0	< 1.0	< 2.0
Benzene	< 4.0	< 4.0	< 8.0	< 10	< 10	< 10	< 8.0	< 8.0	< 10	< 4.0	< 4.0	< 8.0	< 8.0	< 10	< 2.0	< 4.0
Tetrahydrofuran √	< 40	< 40	110	< 100	< 100	< 100	110	< 80	< 100	< 40	< 40	< 80	< 80	< 100	21	< 40
Toluene	< 4.0	< 4.0	< 8.0	< 10	< 10	< 10	< 8.0	< 8.0	< 10	< 4.0	< 4.0	< 8.0	< 8.0	< 10	< 2.0	< 4.0
Methyl ethyl ketone	< 20	< 20	< 40	< 50	< 50	< 50	< 40	< 40	< 50	< 20	< 20	< 40	< 40	< 50	< 10	< 20
Methyl iso-butyl ketone	< 20	< 20	< 40	< 50	< 50	< 50	< 40	< 40	< 50	< 20	< 20	< 40	< 40	< 50	< 10	< 20
1,2-Dibromocthane	< 2.0	< 2.0	< 4.0	< 5.0	< 5.0	< 5.0	< 4.0	< 4.0	< 5.0	< 2.0	< 2.0	< 4.0	< 4.0	< 5.0	< 1.0	< 2.0
Ethylbenzene	< 4.0	< 4.0	< 8.0	< 10	< 10	< 10	< 8.0	< 8.0	< 10	< 4.0	< 4.0	< 8.0	< 8.0	< 10	< 2.0	< 4.0
Total Xylenes	< 4.0	< 4.0	< 8.0	< 10	< 10	< 10	< 8.0	< 8.0	< 10	< 4.0	< 4.0	< 8.0	< 8.0	< 10	< 2.0	< 4.0

Notes:
E = Estimated concentration; sample exceeded calibration range.
< - Not detected at the specified quantitation limit.
All samples collected at 10' unless otherwise noted. Sample A4-5 @ 10:22 is 25' deep;
Sample A4-5 @ 11:05 is 5' deep. Sample A4-E @ 11:45 is 5' deep; @ 12:45 is 10' deep;
@ 13:25 is 15' deep. Sample a3-55 @ 15:05 is 10' deep; @ 15:30 is 18' deep.
Sample A6-E @ 16:45 is 9' deep. Sample A6-G @ 17:05 is 9' deep.
√ - Estimated quantitation limit for this compound.

Table 4
Summary of Surface Soil Gas Data from Perimeter Sampling Event (Weston 2003)
Page-Trowbridge Ranch Landfill, Pinal County, Arizona
(mg/m^3)

Sample ID	Depth of Sample (ft bgs)	Sample Date	TCE	PCE
DP-SG-003-005	5	7/29/2002	6.3	3.9
DP-SG-004-005	5	7/29/2002	5.0	3.2
DP-SG-005-005	5	7/29/2002	3.4	2.1
DP-SG-006-005	5	7/29/2002	5.4	4.1
DP-SG-007-005	5	7/29/2002	1.4	1.4
DP-SG-009-005	5	7/29/2002	1.4	1.8
DP-SG-010-005	5	7/29/2002	1.8	2.2
DP-SG-015-005	5	7/30/2002	1.9	<1
DP-SG-016-005	5	7/30/2002	1.5	<1
DP-SG-017-005	5	7/30/2002	1.7	<1
DP-SG-019-005	5	7/30/2002	2.5	<1
DP-SG-021-005	5	7/30/2002	2.1	<1
DP-SG-022-005	5	7/30/2002	1.7	<1
DP-SG-023-005	5	7/30/2002	2.1	<1
DP-SG-027-005	5	7/30/2002	1.0	<1
DP-SG-028-005	5	7/30/2002	1.5	<1
DP-SG-031-005	5	7/30/2002	1.0	<1
DP-SG-038-005	5	7/31/2002	<1	1.5
DP-SG-042-005	5	7/31/2002	1.3	<1
DP-SG-043-005	5	7/31/2002	2.3	<1
DP-SG-044-005	5	7/31/2002	1.5	<1
DP-SG-045-005	5	7/31/2002	1.7	1.2
DP-SG-045-009	9	7/31/2002	3.9	2.8
DP-SG-046-004	4	7/31/2002	2.1	1.6
DP-SG-047-005	5	7/31/2002	1.3	<1
DP-SG-048-005	5	7/31/2002	2.3	<1
DP-SG-048-008	8	7/31/2002	3.5	<1
DP-SG-050-005	5	7/31/2002	1.2	<1
DP-SG-050-010	10	7/31/2002	4.7	<1
DP-SG-052-005	5	8/1/2002	1.0	1.2
DP-SG-053-005	5	8/1/2002	1.2	<1
DP-SG-056-005	5	8/1/2002	1.4	<1
DP-SG-057-005	5	8/1/2002	1.6	<1
DP-SG-058-005	5	8/1/2002	2.2	<1
DP-SG-059-005	5	8/1/2002	2.0	<1
DP-SG-060-005	5	8/1/2002	2.9	1.7
DP-SG-061-005	5	8/1/2002	1.5	<1
DP-SG-063-005	5	8/1/2002	1.6	<1
DP-SG-064-005	5	8/1/2002	1.5	<1
DP-SG-065-005	5	8/1/2002	1.5	<1
DP-SG-066-005	5	8/1/2002	1.0	<1

< = indicates contaminant not detected above the practical quantitation limit

(1) Table represents data for PCE/TCE only. The following compounds were detected below the detection limit (detection limits in parentheses, mg/kg): trans 1,2-DCE (2), cis 1,2-DCE (2), Benzene (0.5), TCE (1), Toluene (1), PCE (1), Ethylbenzene (1), Total Xylenes (1.5)
See Figure 3 in Weston 2003 for sampling locations.

Table 5
Summary of Soil-Gas Data Subsurface Borings (mg/m^3)[(1)]
Page-Trowbridge Ranch Landfill, Pinal County, Arizona

Soil Boring Location	Soil Vapor Sample Identifier	Sample Date	Benzene	TCE	Toluene	PCE	Total Xylenes	Depth of Sample[(2)] (fbgs)	% Moisture [(2)]	Results for Soil Sample[(2)] (mg/Kg)
SB-1	SB-SG-001-011	8/5/2002	<0.5	4.3	<1	<1	<1.5	10	2	ND
	SB-SG-001-021	8/5/2002	<0.5	3.3	1.3	<1	<1.5	20	3	ND
	SB-SG-001-031	8/5/2002	<0.5	17	<1	<1	<1.5	30	3	ND
	SB-SG-001-041	8/5/2002	<0.5	12	<1	<1	<1.5	40	6	ND
	SB-SG-001-051	8/5/2002	<0.5	12	<1	<1	<1.5	50	10	ND
	SB-SG-001-061	8/5/2002	<0.5	22	<1	<1	<1.5	60	5	ND
	SB-SG-001-071	8/5/2002	<0.5	43	<1	2	<1.5	70	3	ND
	SB-SG-001-081	8/5/2002	<0.5	41	<1	1.8	<1.5	80	10	ND
	SB-SG-001-091	8/6/2002	<0.5	6.2	<1	<1	<1.5	90	5	ND
	SB-SG-001-101	8/6/2002	<0.5	6.4	<1	<1	<1.5	100	14	Chloroform 0.27/0.24
	SB-SG-001-111	8/6/2002	<0.5	4.9	7.9	<1	<1.5	110	7	ND
	SB-SG-001-121	8/7/2002	<0.5	1.2	2.2	<1	<1.5	120	2	ND
	SB-SG-001-131	8/7/2002	<0.5	<1	1.7	<1	<1.5	130	3	ND
	SB-SG-001-141	8/7/2002	<0.5	22	<1	<1	<1.5	140	14	Chloroform 0.12
	SB-SG-001-151	8/7/2002	<0.5	47	<1	2.2	<1.5	150	3	ND
	SB-SG-001-161	8/7/2002	0.53	26	1.8	1.3	<1.5	160	3	BEHP 0.5/<0.33
	SB-SG-001-171	8/8/2002	<0.5	6.1	1.1	<1	<1.5	170	3	BEHP 3.9
	SB-SG-001-191	8/8/2002	<0.5	3.4	<1	<1	<1.5	190	2	BEHP 0.8
SB-2	SB-SG-002-011	8/12/2002	<0.5	3.1	<1	1.8	<1.5	10	10	PCE 0.09
	SB-SG-002-021	8/12/2002	<0.5	6.3	2.7	3.4	<1.5	20	5	ND
	SB-SG-002-031	8/12/2002	<0.5	6.9	3.4	3.6	<1.5	30	6	ND
	SB-SG-002-041	8/12/2002	<0.5	13	3.4	7.3	<1.5	40	8	ND
	SB-SG-002-051	8/12/2002	0.69	58	<1	39	<1.5	50	3	ND
	SB-SG-002-061	8/12/2002	0.64	47	<1	30	<1.5	60	7	ND
	SB-SG-002-071	8/12/2002	0.84	66	<1	**43**	<1.5	70	4	ND
	SB-SG-002-081	8/13/2002	<0.5	3.1	1.6	1.4	<1.5	80	6	ND
	SB-SG-002-091	8/13/2002	0.71	20	1.4	11	<1.5	90	5	ND
	SB-SG-002-101	8/13/2002	<0.5	<1	3.4	<1	<1.5	100	5	Chloroform 0.09
	SB-SG-002-111	8/13/2002	1.3	63	8.9	39	<1.5	110	2	ND
	SB-SG-002-121	8/13/2002	1	57	<1	30	<1.5	120	3	ND
	SB-SG-002-131	8/13/2002	1.3	**75**	<1	40	<1.5	130	5	ND
	SB-SG-002-141	8/13/2002	0.56	17	<1	10	<1.5	140	11	Chloroform 0.25
	SB-SG-002-151	8/14/2002	<0.5	4	<1	2.6	<1.5	150	3	ND
	SB-SG-002-161	8/14/2002	<0.5	4.9	2.5	1.8	<1.5	160	5	ND
	SB-SG-002-171	8/14/2002	**1.7**	7.6	12	2.9	<1.5	170	12/6	ND
	SB-SG-002-181	8/14/2002	0.89	4.2	6.8	1.6	<1.5	180	3	ND
	SB-SG-002-191	8/14/2002	1	34	2.5	11	<1.5	190	5	ND
	SB-SG-002-201	8/14/2002	1.2	32	2.3	9.7	<1.5	200	6	ND

Table 5
Summary of Soil-Gas Data Subsurface Borings (mg/m^3)[1]
Page-Trowbridge Ranch Landfill, Pinal County, Arizona

Soil Boring Location	Soil Vapor Sample Identifier	Sample Date	Benzene	TCE	Toluene	PCE	Total Xylenes	Depth of Sample[2] (fbgs)	% Moisture [2]	Results for Soil Sample[2] (mg/Kg)
SB-3	SB-SG-003-011	8/6/2002	<0.5	1	<1	<1	<1.5	10	8	ND
	SB-SG-003-021	8/6/2002	<0.5	3.4	2.3	1.9	<1.5	20	6	ND
	SB-SG-003-031	8/6/2002	<0.5	11	<1	6.8	<1.5	30	8	Chloroform 0.064
	SB-SG-003-041	8/6/2002	<0.5	8.2	1.5	4.9	<1.5	40	10	ND
	SB-SG-003-051	8/9/2002	<0.5	12	<1	6.8	<1.5	50	8	ND
	SB-SG-003-061	8/9/2002	<0.5	11	<1	6.4	<1.5	60	6	ND
	SB-SG-003-071	8/9/2002	1	25	3.6	17	**2.5**	70	6	ND
	SB-SG-003-081	8/9/2002	<0.5	4.1	<1	2.7	<1.5	80	5	Chloroform 0.072
	SB-SG-003-091	8/9/2002	<0.5	4.4	2.2	2.8	<1.5	90	7	ND
	SB-SG-003-101	8/9/2002	1	28	<1	19	<1.5	100	6	ND
	SB-SG-003-111	8/9/2002	1.3	49	<1	37	<1.5	110	3/5	ND
SB-4	SB-SG-004-121	8/15/2002	<0.5	<1	2.2	<1	<1.5	120	3	ND
	SB-SG-004-131	8/15/2002	1.3	40	<1	27	<1.5	130	3	ND
	SB-SG-004-1 [3]	8/15/2002	1.6	43	<1	29	<1.5	140	5	ND
	SB-SG-004-151	8/15/2002	0.81	7.2	2.2	4.6	<1.5	150	2	ND
	SB-SG-004-161	8/15/2002	1	32	<1	21	<1.5	160	9	ND
	SB-SG-004-171	8/16/2002	0.96	27	1.3	17	<1.5	170	5/6	ND
	SB-SG-004-181	8/16/2002	0.8	5.5	**21**	3.1	<1.5	180	14	ND
	SB-SG-004-191	8/16/2002	0.59	<1	3.5	<1	<1.5	190	4/6	ND
	SB-SG-004-201	8/16/2002	<0.5	<1	2.2	<1	<1.5	200	10/5	ND
	Maximum Detected Concentration		1.7E+00	7.5E+01	2.1E+01	4.3E+01	2.5E+00			
	California Shallow Soil Gas Screening Levels--Res		3.6E-02	5.3E-01	1.4E+02	1.8E-01	3.2E+02			
	California Shallow Soil Gas Screening Levels--Ind		1.2E-01	1.8E+00	3.8E+02	6.0E-01	8.8E+02			
	Region 9 Ambient Air PRG		2.5E-04	1.7E-05	4.0E-01	3.3E-04	1.1E-03			

[1] Table presents soil-gas samples with concentrations of contaminants above the practical quantitation limit only. See Appendix C for laboratory data of all samples.
From Table 4 in Weston 2003. *Technical Memorandum Interim Measures Task 1 Soil and Soil Gas Sampling Investigatior*
(2) From Soil Boring Logs in Appendix B of Weston 2003.
(3) Assumed this sample is represents sample from SB-3/SB-4 from 140 fbgs (see Appendix B in Weston 2003)
Note in Appendix B (Weston 2003): Soil Boring SB-3 terminated at 111 fbgs due to refusal; SB-4 contined lithologic description but located 12 feet southwest of SB-3.
< or ND = Not detected above Practical Quantitation Limit

Table 6
Summary of Soil Vapor Monitoring Data (2004 to 2008) (mg/m^3)
Page Trowbridge Ranch Landfill

Soil Vapor Monitoring Location	SGS-SP					SGS-SP-Dup				SGS-SP & Dup						SGS-Well				
Screen Interval	73 to 83 ft bls					73 to 83 ft bls				73 to 83 ft bls						96 to 255 ft bls				
Date of Sample	5/12/06	11/15/06	5/2/07	12/18/07[2]	4/9/08	5/12/06	11/15/06	4/25/07	12/18/07	1/08/04 [2]	5/12/06	11/15/06[1]	4/25/07[1]	12/18/07	4/9/08	1/8/04	5/12/06	11/15/06[1]	4/25/07[1]	12/18/07
Analyte																				
Acetone	ND	ND	ND	ND	ND	ND	ND	NA	ND		ND	ND	ND	ND	ND		ND	ND	ND	NA
Benzene	4.2E-01	ND	ND	ND	ND	3.5E-01	ND	NA	NA		3.8E-01	ND	ND	ND	ND		3.8E-01	ND	ND	NA
Carbon Disulfide	NA	ND	ND	ND	ND	NA	ND	NA	NA	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	NA
Carbon Tetrachloride	5.5E+01	1.3E+01	ND	1.7E+01	6.1E+00	5.5E+01	1.7E+01	NA	NA	1.8E+01	5.5E+01	1.5E+01	ND	1.7E+01	6.1E+00	2.4E+01	5.2E+01	4.0E+01	2.7E+00	NA
Chloroform	8.8E+02	4.2E+02	1.1E+02	4.6E+02	1.7E+02	7.8E+02	4.9E+02	NA	NA	3.6E+02	8.3E+02	4.5E+02	1.1E+02	4.6E+02	1.7E+02	3.7E+02	5.9E+02	7.3E+02	5.9E+01	NA
Cyclohexane	1.4E+00	ND	ND	NA	ND	2.2E+00	ND	NA	NA		1.8E+00	ND	ND	ND	ND		2.2E+00	ND	ND	NA
Cyclohexanone	4.4E-01	NA	NA	NA	NA	ND	NA	NA	NA		4.4E-01	ND	ND	ND	NA		ND	NA	NA	NA
Cyclopentane	2.2E-01	NA	NA	NA	NA	3.7E-01	NA	NA	NA		2.9E-01	ND	ND	ND	NA		3.4E-01	NA	NA	NA
1,1-Dichloroethane (1,1-DCA)	1.1E+00	ND	ND	ND	ND	1.3E+00	ND	NA	NA		1.2E+00	ND	ND	ND	ND		1.3E+00	ND	ND	NA
1,2-Dichloroethane(1,2-DCA)	4.0E-01	ND	ND	ND	ND	4.1E-01	ND	NA	NA		4.0E-01	ND	ND	ND	ND		4.5E-01	ND	ND	NA
1,1-Dichloroethene(1,1-DCE)	1.3E+01	3.4E+00	ND	2.6E+00	1.7E+00	1.4E+01	4.4E+00	NA	NA	6.0E+00	1.4E+01	3.9E+00	ND	2.6E+00	1.7E+00	7.3E+00	1.5E+01	ND	ND	NA
cis-1,2 Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND	ND	ND	ND	ND		ND	ND	ND	ND
1,2-Dichloropropane	1.1E+00	ND	ND	ND	ND	1.2E+00	ND	NA	NA		1.2E+00	ND	ND	ND	ND		1.1E+00	ND	ND	NA
2,3-Dimethylbutane	8.1E-01	NA	NA	NA	NA	1.1E+00	NA	NA	NA		9.5E-01	ND	ND	ND	NA		1.3E+00	NA	NA	NA
Ethyl Acetate	NA	ND	ND	NA	ND	NA	ND	NA	NA		ND	ND	ND	ND	ND		NA	ND	ND	NA
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	NA	NA		ND	ND	ND	ND	ND		ND	ND	ND	NA
Freon 11 (Fluorotrichloromethane)	7.9E+02	1.4E+02	1.2E+01	2.0E+02	1.5E+02	7.9E+02	1.9E+02	NA	NA	3.3E+02	7.9E+02	1.7E+02	1.2E+01	2.0E+02	1.5E+02	4.3E+02	6.8E+02	6.2E+02	3.3E+01	NA
Freon 12 (Dichlorodifluoromethane)	8.9E+00	ND	ND	2.9E+00	2.6E+00	1.0E+01	ND	NA	NA		9.7E+00	ND	ND	2.9E+00	2.6E+00		1.1E+01	ND	ND	NA
Freon 113 (1,1,2-Trichlorotrifluoroethane)	8.4E+01	1.5E+01	ND	1.9E+01	1.4E+01	9.2E+01	2.1E+01	NA	NA	3.5E+01	8.8E+01	1.8E+01	ND	1.9E+01	1.4E+01	4.3E+01	9.2E+01	7.1E+01	3.7E+00	NA
Heptane	ND	ND	ND	NA	ND	ND	ND	NA	NA		ND	ND	ND	ND	ND		ND	ND	ND	NA
Hexane	ND	ND	ND	NA	ND	ND	ND	NA	NA		ND	ND	ND	ND	ND		ND	ND	ND	NA
Isobutane	ND	NA	NA	NA	NA	2.6E-01	NA	NA	NA		2.6E-01	ND	ND	ND	NA		ND	NA	NA	NA
Isopentane (2-Methylbutane)	2.5E-01	NA	NA	NA	NA	ND	NA	NA	NA		2.5E-01	ND	ND	ND	NA		3.2E-01	NA	NA	NA
Methylene Chloride (Dichloromethane)	1.7E-01	ND	ND	ND	ND	2.0E-01	ND	NA	NA	ND	1.9E-01	ND	ND	ND	ND	ND	2.4E-01	ND	ND	NA
Methyl Ethyl Ketone (2-Butanone)	8.6E-01	ND	ND	ND	ND	ND	ND	NA	NA		8.6E-01	ND	ND	ND	ND		ND	ND	ND	NA
2-Methylpentane	4.2E-01	NA	NA	NA	NA	3.9E-01	NA	NA	NA		4.1E-01	ND	ND	ND	NA		6.0E-01	NA	NA	NA
3-Methylpentane	6.0E-01	NA	NA	NA	NA	9.2E-01	NA	NA	NA		7.6E-01	ND	ND	ND	NA		9.9E-01	NA	NA	NA
Perchloroethylene (PCE)	8.8E+01	1.2E+01	3.7E+00	1.8E+01	4.1E+00	8.8E+01	1.4E+01	NA	NA	3.3E+01	8.8E+01	1.3E+01	3.7E+00	1.8E+01	4.1E+00	3.5E+01	8.2E+01	2.9E+01	3.3E+00	NA
Propene	ND	ND	ND	NA	ND	ND	ND	NA	NA		ND	ND	ND	ND	ND		ND	ND	ND	NA
Styrene	ND	ND	ND	ND	ND	ND	ND	NA	NA		ND	ND	ND	ND	ND		ND	ND	ND	NA
Sulfur Dioxide	1.1E-01	NA	NA	NA	NA	8.4E-02	NA	NA	NA		9.8E-02	ND	ND	ND	NA		1.0E-01	NA	NA	NA
Tetrahydrofuran	4.4E+00	ND	ND	NA	ND	ND	ND	NA	NA		4.4E+00	ND	ND	ND	ND		ND	ND	ND	NA
Toluene	ND	ND	ND	ND	ND	ND	ND	NA	NA		ND	ND	ND	ND	ND		ND	ND	ND	NA
1,1,1-Trichloroethane (1,1,1-TCA)	8.2E-01	ND	ND	ND	ND	7.7E-01	ND	NA	NA		7.9E-01	ND	ND	ND	ND		7.7E-01	ND	ND	NA
Trichloroethylene (TCE)	3.8E+01	1.3E+01	2.8E+00	1.2E+01	4.8E+00	3.8E+01	1.8E+01	NA	NA	1.5E+01	3.8E+01	1.6E+01	2.8E+00	1.2E+01	4.8E+00	1.7E+01	3.4E+01	2.9E+01	2.2E+00	NA
Xylenes	ND	ND	ND	ND	ND	ND	ND	NA	ND		ND	ND	ND	ND	ND		ND	ND	ND	NA

Table 6
Summary of Soil Vapor Monitoring Data (2004 to 2008) (mg/m^3)
Page Trowbridge Ranch Landfill

Soil Vapor Monitoring Location	SGD-SP										SGD-MP					
Screen Interval	98 to 123 ft bls										193 to 217 ft bls					
Date of Sample	1/8/04	5/12/06	11/15/06[1]	4/25/07[1]	12/19/07	12/19/07 (Field Dup)	12/19/07 (Avg)	4/9/08	4/9/08 (Field Dup)	4/9/08 (Avg)	1/8/04	5/12/06	11/15/06[1]	4/25/07[1]	12/19/07	4/9/08
Analyte																
Acetone		ND	ND	ND	ND	ND	ND	ND	ND	ND		ND	ND	ND	ND	ND
Benzene		9.6E-02	ND	ND	ND	ND	ND	ND	ND	ND		1.8E-01	ND	ND	ND	ND
Carbon Disulfide	ND	NA	ND	ND	ND	ND	ND	1.3E+00	<2.5	1.3E+00	ND	NA	ND	ND	ND	ND
Carbon Tetrachloride	8.0E+00	1.0E+01	2.5E+01	3.0E+01	2.4E+01	2.4E+01	2.4E+01	1.9E+01	2.5E+01	2.2E+01	3.3E+01	3.4E+01	2.5E+01	5.3E+01	6.4E+01	1.6E+01
Chloroform	3.1E+02	4.1E+02	9.8E+02	7.8E+02	8.9E+02	8.5E+02	8.7E+02	6.0E+02	8.7E+02	7.4E+02	2.1E+02	3.9E+02	3.2E+02	6.4E+02	7.0E+02	2.1E+02
Cyclohexane		2.6E-01	ND	ND	NA	NA	NA	ND	ND	ND		9.3E-01	ND	ND	NA	ND
Cyclohexanone		ND	NA	NA	NA	NA	NA	NA	NA	NA		ND	NA	NA	NA	NA
Cyclopentane		ND	NA	NA	NA	NA	NA	NA	NA	NA		1.4E-01	NA	NA	NA	NA
1,1-Dichloroethane (1,1-DCA)		3.2E-01	ND	ND	ND	ND	ND	ND	ND	ND		1.7E-01	ND	ND	ND	ND
1,2-Dichloroethane(1,2-DCA)		7.3E-01	ND	ND	ND	ND	ND	1.8E+00	<3.2	1.7E+00		ND	ND	ND	ND	ND
1,1-Dichloroethene(1,1-DCE)		1.9E+00	ND	ND	ND	ND	ND	2.1E+00	3.7E+00	2.9E+00	3.9E+00	4.8E+00	ND	ND	6.4E+00	2.4E+00
cis-1,2 Dichloroethene		ND	ND	ND	ND	ND	ND	ND	ND	ND		ND	ND	ND	ND	ND
1,2-Dichloropropane		ND	ND	ND	ND	ND	ND	ND	ND	ND		ND	ND	ND	ND	ND
2,3-Dimethylbutane		2.0E-01	NA	NA	NA	NA	NA	NA	NA	NA		6.7E-01	NA	NA	NA	NA
Ethyl Acetate		NA	ND	ND	NA	NA	NA	ND	ND	ND		NA	ND	ND	NA	ND
Ethylbenzene		ND	ND	ND	ND	ND	ND	ND	ND	ND		ND	ND	ND	ND	ND
Freon 11 (Fluorotrichloromethane)	2.3E+02	2.4E+02	4.6E+02	5.4E+02	3.9E+02	4.0E+02	4.0E+02	4.0E+02	5.7E+02	4.9E+02	7.5E+02	9.0E+02	7.3E+02	8.4E+02	1.2E+02	5.7E+02
Freon 12 (Dichlorodifluoromethane)		5.9E+00	1.5E+01	1.9E+01	1.4E+01	1.4E+01	1.4E+01	1.5E+01	2.2E+01	1.9E+01		1.9E+01	1.7E+01	3.4E+01	3.4E+01	1.6E+01
Freon 113 (1,1,2-Trichlorotrifluoroethane)	1.4E+01	1.5E+01	3.1E+01	3.0E+01	2.3E+01	2.2E+01	2.3E+01	2.2E+01	3.1E+01	2.7E+01	4.4E+01	4.8E+01	4.1E+01	6.8E+01	6.6E+01	3.0E+01
Heptane		ND	ND	ND	NA	NA	NA	ND	ND	ND		ND	ND	ND	NA	ND
Hexane		ND	ND	ND	NA	NA	NA	ND	ND	ND		ND	ND	ND	NA	ND
Isobutane		ND	NA	NA	NA	NA	NA	NA	NA	NA		ND	NA	NA	NA	NA
Isopentane (2-Methylbutane)		ND	NA	NA	NA	NA	NA	NA	NA	NA		1.9E-01	NA	NA	NA	NA
Methylene Chloride (Dichloromethane)	2.8E+00	1.3E+00	ND	ND	ND	ND	ND	2.1E+00	<2.8	1.8E+00	5.8E+00	4.2E+00	ND	ND	5.6E+00	2.0E+00
Methyl Ethyl Ketone (2-Butanone)		ND	ND	ND	NA	NA	NA	ND	ND	ND		ND	ND	ND	ND	ND
2-Methylpentane		ND	NA	NA	NA	NA	NA	NA	NA	NA		2.3E-01	NA	NA	NA	NA
3-Methylpentane		1.2E-01	NA	NA	NA	NA	NA	NA	NA	NA		4.6E-01	NA	NA	NA	NA
Perchloroethylene (PCE)	1.1E+01	1.5E+01	9.5E+00	2.3E+01	1.8E+01	1.9E+01	1.9E+01	1.1E+01	1.8E+01	1.5E+01	1.4E+01	1.9E+01	1.2E+01	2.2E+01	2.2E+01	3.2E+00
Propene		ND	ND	ND	NA	NA	NA	ND	ND	ND		ND	ND	ND	NA	ND
Styrene		2.3E-01	ND	ND	ND	ND	ND	ND	ND	ND		ND	ND	ND	ND	ND
Sulfur Dioxide		9.2E-02	NA	NA	NA	NA	NA	NA	NA	NA		1.1E-01	NA	NA	NA	NA
Tetrahydrofuran		3.8E-01	ND	ND	NA	NA	NA	ND	ND	ND		ND	ND	ND	NA	ND
Toluene		ND	ND	ND	ND	ND	ND	2.4E+00	<3	2.0E+00		ND	ND	ND	ND	ND
1,1,1-Trichloroethane (1,1,1-TCA)		ND	ND	ND	ND	ND	ND	ND	ND	ND		ND	ND	ND	ND	ND
Trichloroethylene (TCE)	1.6E+01	1.6E+01	4.1E+01	4.8E+01	3.5E+01	3.4E+01	3.5E+01	2.2E+01	3.8E+01	3.0E+01	2.8E+01	ND	1.9E+01	4.7E+01	4.6E+01	1.1E+01
Xylenes		ND	ND	ND	ND	ND	ND	ND	ND	ND		ND	ND	ND	ND	ND

Table 6
Summary of Soil Vapor Monitoring Data (2004 to 2008) (mg/m^3)
Page Trowbridge Ranch Landfill

Soil Vapor Monitoring Location	SGD-DP						SGD-Well				
Screen Interval	325 to 355 ft bls						433 to 605 ft bls				
Date of Sample	1/8/04	5/12/06	11/15/06[1]	4/25/07[1]	12/19/07	4/9/08	1/8/04	5/12/06	11/15/06[1]	4/25/07[1]	12/19/07
Analyte											
Acetone		ND	ND	ND	ND	ND		3.3E-01	NA	NA	NA
Benzene		7.0E-02	ND	ND	ND	ND		ND	NA	NA	NA
Carbon Disulfide	ND	NA	ND	ND	ND	ND	4.1E-03	NA	NA	NA	NA
Carbon Tetrachloride	1.4E+01	3.0E+01	2.8E+01	3.7E+00	6.2E+00	1.0E+01	1.3E-01	ND	NA	NA	NA
Chloroform	1.9E+01	4.3E+01	4.5E+01	5.9E+00	1.0E+01	1.7E+01	2.5E-01	ND	NA	NA	NA
Cyclohexane		6.6E-01	ND	ND	NA	ND		ND	NA	NA	NA
Cyclohexanone		ND	NA	NA	NA	NA		ND	NA	NA	NA
Cyclopentane		1.3E-01	NA	NA	NA	NA		ND	NA	NA	NA
1,1-Dichloroethane (1,1-DCA)		ND	ND	ND	ND	ND		ND	NA	NA	NA
1,2-Dichloroethane(1,2-DCA)		ND	ND	ND	ND	ND		ND	NA	NA	NA
1,1-Dichloroethene(1,1-DCE)	1.0E+00	2.5E+00	2.6E+00	ND	5.2E-01	ND	1.1E-02	ND	NA	NA	NA
cis-1,2 Dichloroethene		ND	ND	ND	ND	ND		ND	NA	NA	ND
1,2-Dichloropropane		ND	ND	ND	ND	ND		ND	NA	NA	NA
2,3-Dimethylbutane		6.0E-01	NA	NA	NA	NA		ND	NA	NA	NA
Ethyl Acetate		NA	ND	ND	NA	ND		NA	NA	NA	NA
Ethylbenzene		ND	ND	ND	ND	ND		ND	NA	NA	NA
Freon 11 (Fluorotrichloromethane)	2.6E+02	1.0E+03	1.0E+03	9.6E+01	1.1E+02	5.1E+02	6.5E+00	2.8E+00	NA	NA	NA
Freon 12 (Dichlorodifluoromethane)		1.7E+01	1.8E+01	ND	3.4E+00	1.2E+01		ND	NA	NA	NA
Freon 113 (1,1,2-Trichlorotrifluoroethane)	1.3E+01	3.9E+01	4.1E+01	5.0E+00	6.8E+00	1.9E+01	1.2E-01	ND	NA	NA	NA
Heptane		ND	ND	ND	NA	ND		ND	NA	NA	NA
Hexane		ND	ND	ND	NA	ND		ND	NA	NA	NA
Isobutane		ND	NA	NA	NA	NA		ND	NA	NA	NA
Isopentane (2-Methylbutane)		ND	NA	NA	NA	NA		ND	NA	NA	NA
Methylene Chloride (Dichloromethane)	4.7E-01	6.3E-01	ND	ND	1.3E-01	ND	3.6E-03	ND	NA	NA	NA
Methyl Ethyl Ketone (2-Butanone)		ND	ND	ND	ND	ND		8.3E-01	NA	NA	NA
2-Methylpentane		1.3E-01	NA	NA	NA	NA		ND	NA	NA	NA
3-Methylpentane		2.6E-01	NA	NA	NA	NA		ND	NA	NA	NA
Perchloroethylene (PCE)	1.7E+00	5.1E+00	5.2E+00	ND	7.7E-01	ND	1.1E-02	ND	NA	NA	NA
Propene		ND	ND	ND	NA	ND		ND	NA	NA	NA
Styrene		ND	ND	ND	ND	ND		ND	NA	NA	NA
Sulfur Dioxide		9.4E-02	NA	NA	NA	NA		1.7E-01	NA	NA	NA
Tetrahydrofuran		ND	ND	ND	NA	ND		ND	NA	NA	NA
Toluene		ND	ND	ND	ND	ND		ND	NA	NA	NA
1,1,1-Trichloroethane (1,1,1-TCA)		ND	ND	ND	ND	ND		ND	NA	NA	NA
Trichloroethylene (TCE)	6.6E+00	1.4E+01	1.3E+01	ND	2.3E+00	4.6E+00	2.7E-02	ND	NA	NA	NA
Xylenes		ND	ND	ND	ND	ND		ND	NA	NA	NA

Table 6
Summary of Soil Vapor Monitoring Data (2004 to 2008) (mg/m^3)
Page Trowbridge Ranch Landfill

Soil Vapor Monitoring Location	MW-2						MW-5					
Screen Interval	632 to SWL						640 to SWL					
Date of Sample	1/8/04	5/12/06	11/15/06(1)	4/25/07(1)	12/19/07(2)	4/9/08	1/8/04	5/12/06	11/15/06(1)	4/25/07(1)	12/19/07(2)	4/9/08
Analyte												
Acetone	NA	4.5E+01	ND	ND	ND	9.3E-02		ND	ND	4.8E-02	3.4E-02	3.3E-02
Benzene	NA	ND	ND	ND	ND	ND		ND	ND	8.3E-03	1.1E-02	ND
Carbon Disulfide	NA	NA	ND	ND	ND	9.4E-03		NA	ND	4.1E-03	4.1E-03	ND
Carbon Tetrachloride	NA	ND	ND	ND	ND	9.6E-03		ND	ND	ND	ND	1.0E-01
Chloroform	NA	ND	1.0E+00	ND	7.5E-01	ND		ND	1.0E+00	4.1E-03	9.9E-03	1.2E+00
Cyclohexane	NA	ND	ND	1.3E-02	NA	ND		ND	ND	4.1E-02	NA	1.6E-02
Cyclohexanone	NA	ND	NA	NA	NA	NA		ND	NA	NA	NA	NA
Cyclopentane	NA	ND	NA	NA	NA	NA		ND	NA	NA	NA	NA
1,1-Dichloroethane (1,1-DCA)	NA	ND	ND	ND	ND	ND		ND	ND	ND	ND	ND
1,2-Dichloroethane(1,2-DCA)	NA	ND	ND	ND	ND	ND		ND	ND	ND	ND	ND
1,1-Dichloroethene(1,1-DCE)	NA	ND	ND	ND	ND	ND		ND	ND	ND	ND	2.3E-02
cis-1,2 Dichloroethene	NA	ND	ND	ND	2.1E-02	ND		ND	ND	ND	ND	8.1E-03
1,2-Dichloropropane	NA	ND	ND	ND	ND	ND		ND	ND	ND	ND	ND
2,3-Dimethylbutane	NA	ND	NA	NA	NA	NA		ND	NA	NA	NA	NA
Ethyl Acetate	NA	NA	ND	ND		ND		NA	ND	6.5E-02	NA	ND
Ethylbenzene	NA	ND	ND	ND	ND	ND		ND	ND	2.7E-03	ND	ND
Freon 11 (Fluorotrichloromethane)	NA	ND	2.9E-01	ND	4.2E-01	1.1E-01		ND	3.9E-01	1.1E-01	7.8E-03	4.3E+00
Freon 12 (Dichlorodifluoromethane)	NA	ND	ND	ND	1.8E-02	2.5E-02		ND	ND	ND	ND	1.4E-01
Freon 113 (1,1,2-Trichlorotrifluoroethane)	NA	ND	ND	ND	2.7E-02	ND		ND	ND	4.5E-03	ND	2.2E-01
Heptane	NA	1.7E+01	3.9E-01	ND	NA	ND		1.8E+01	2.3E-01	3.0E-02	NA	ND
Hexane	NA	ND	ND	ND	NA	ND		ND	3.5E-01	ND	NA	1.3E-02
Isobutane	NA	ND	NA	NA	NA	NA		ND	NA	NA	NA	NA
Isopentane (2-Methylbutane)	NA	ND	NA	NA	NA	NA		ND	NA	NA	NA	NA
Methylene Chloride (Dichloromethane)	NA	ND	ND	ND	ND	ND		ND	ND	9.8E-03	ND	1.3E-02
Methyl Ethyl Ketone (2-Butanone)	NA	ND	ND	ND	ND	2.1E-02		ND	ND	ND	8.1E-03	9.1E-03
2-Methylpentane	NA	ND	NA	NA	NA	NA		ND	NA	NA	NA	NA
3-Methylpentane	NA	ND	NA	NA	NA	NA		ND	NA	NA	NA	NA
Perchloroethylene (PCE)	NA	ND	ND	ND	ND	ND		ND	ND	8.2E-03	NA	1.6E-02
Propene	NA	ND	ND	ND	NA	ND		ND	ND	3.3E-03		2.5E-02
Styrene	NA	ND	ND	ND	ND	ND		ND	ND	6.0E-03	ND	ND
Sulfur Dioxide	NA	ND	NA	NA	NA	NA		ND	NA	NA	NA	NA
Tetrahydrofuran	NA	1.8E+01	ND	ND	NA	1.2E-02		5.9E+00	ND	ND	NA	ND
Toluene	NA	1.7E+02	1.3E+01	3.6E-01	1.0E-01	5.3E-01		1.3E+02	1.4E+01	1.6E-01	1.2E-01	4.4E-02
1,1,1-Trichloroethane (1,1,1-TCA)	NA	ND	ND	ND	ND	ND		ND	ND	ND	ND	1.4E-02
Trichloroethylene (TCE)	NA	4.6E+00	ND	ND	2.9E-02	ND		1.0E+01	ND	ND	NA	6.3E-02
Xylenes	NA	ND	ND	ND	ND	ND		ND	ND	2.1E-02	ND	ND

Notes

All samples represent TO-15 analysis; Summa cannister
1/8/04 data from Table 11 HGC, June 8, 2004. No information was obtained for blank cells
ND = Not detected above laboratory reporting limit
NA = Not Analyzed
< = Less than laboratory reporting limit. Value equal to one-half reporting limit is used in deriving average.
Primary and duplicate samples were combined as an arithmetic average where both were detected. Value of one-half reporting limit was used if one sample was detected and other reported as non-detect.
(1) SVE System turned off immediately before sampling event
(2) Leak detection compound detected in sample.

Table 7
Shallow Soil Vapor Survey December 2007
Page-Trowbridge Ranch Landfill

	Sample ID	SV-1		SV-2		SV-2 (Lab dup)	SV-3		SV-4 (1)		SV-5		SV-6		SV-7		SV-8		SV-14 Dup to SV-8	
	Sample Date	12/18/07		12/18/07		12/18/07	12/18/07		12/18/07		12/18/07		12/18/07		12/18/07		12/18/07		12/18/07	
	Units	ug/m3		ug/m3		ug/m3	ug/m3		ug/m3		ug/m3		ug/m3		ug/m3		ug/m3		ug/m3	
	Depth Screen Interval (fbgs)	10		10		10	10		10		10		10		10		10		10	
CAS NUMBER	ANALYTE NAME																			
75-35-4	1,1-Dichloroethene	9.6	U	4.8	U		10	U	4.7	UJ	5	U	4.7	U	5.7	U	5.1	U	5.2	U
78-93-3	2-Butanone (Methyl Ethyl Ketone)	39		40		45	9.1		3.5	UJ	20		48		35		4.9	J	8.5	J
108-10-1	4-Methyl-2-pentanone	13		11		11	10	U	4.9	UJ	10		47		12		5.3	U	5.4	U
67-64-1	Acetone	2200		240		230	89		29	J	210		240		220		86	J	120	J
71-43-2	Benzene	13		38		**40**	8.1	U	3.8	UJ	14		8.4		14		10		8.5	
75-15-0	Carbon Disulfide	7.5	U	17		16	7.9	U	3.7	UJ	11		9.4		24		5.1		4.7	
56-23-5	Carbon Tetrachloride	120		210		200	610		14	J	160		220		450		340		330	
67-66-3	Chloroform	81		800		780	3000		66	J	1200		1900		2000		400		390	
100-41-4	Ethyl Benzene	**34**		6.1		6.2	11	U	5.2	UJ	6.8		5.2	U	6.3	U	5.6	U	5.7	U
108-38-3/106-42-3	m,p-Xylene	99		15		17	25		5.2	UJ	17		12		17		11		11	
95-47-6	o-Xylene	28		7.2		7.4	11	U	5.2	UJ	5.6		5.2	U	6.3	U	5.6	U	5.7	U
1330-20-7	Total Xylenes	**127**		22.2		24.4	30.5		5.2	UJ	22.6		14.6		20.15		13.8		13.85	
75-09-2	Methylene Chloride	8.4	U	4.2	U		8.8	U	4.1	UJ	6.4		4.1	U	5	U	4.6		4.6	U
127-18-4	Tetrachloroethene	16	U	17		15	49		8.1	UJ	8.6	U	8.1	U	9.8	U	8.8	U	9	U
108-88-3	Toluene	**70**		57		52	26		7.2	J	44		22		46		30		26	
79-01-6	Trichloroethene	13	U	31		27	88		6.4	UJ	25		43		75		35		35	
75-69-4	Freon 11 (Fluorotrichloromethane)	930		640		610	1400		38	J	270		220		240		180		180	
75-71-8	Freon 12 (Dichlorodifluoromethane)	50		80		70	370		25	J	340		350		650		480		490	
76-13-1	Freon 113 (1,1,2-Trichlorotrifluoroethane)	160		150		140	360		11	J	70		55		57		36		38	
156-59-2	cis-1,2-Dichloroethene	9.6	U	4.8	U		10	U	4.7	UJ	5	U	4.7	U	5.7	U	5.1	U	5.2	U
71-55-6	1,1,1-Trichloroethane	13	U	6.6	U		14	U	6.5	UJ	6.9	U	6.5	U	7.9	U	7	U	7.2	U
79-34-5	1,1,2,2-Tetrachloroethane	17	U	8.3	U		17	U	8.2	UJ	8.7	U	8.2	U	9.9	U	8.8	U	9.1	U
75-34-3	1,1-Dichloroethane	9.8	U	4.9	U		10	U	4.8	UJ	5.1	U	4.8	U	5.8	U	5.2	U	5.3	U
75-37-6	1,1-Difluoroethane (1)	26	U	13	U		27	U	11000	J	14	U	13	U	16	U	14	U	14	U
107-06-2	1,2-Dichloroethane	9.8	U	4.9	U		10	U	4.8	UJ	5.1	U	4.8	U	5.8	U	5.2	U	5.3	U
78-87-5	1,2-Dichloropropane	11	U	5.6	U		12	U	5.5	UJ	5.8	U	5.5	U	6.7	U	6	U	6.1	U
142-28-9	1,3-Dichloropropane	45	U	22	U		47	U	22	UJ	23	U	22	U	27	U	24	U	24	U
591-78-6	2-Hexanone	40	U	20	U		41	U	19	UJ	21	U	19	U	24	U	21	U	22	U
75-27-4	Bromodichloromethane	16	U	8.1	U		17	U	8	UJ	8.5	U	8	U	9.7	U	8.6	U	8.8	U
75-25-2	Bromoform	25	U	12	U		26	U	12	UJ	13	U	12	U	15	U	13	U	14	U
74-83-9	Bromomethane	9.4	U	4.7	U		9.8	U	4.6	UJ	4.9	U	4.6	U	5.6	U	5	U	5.1	U
108-90-7	Chlorobenzene	11	U	5.6	U		12	U	5.5	UJ	5.8	U	5.5	U	6.6	U	5.9	U	6.1	U
75-00-3	Chloroethane	6.4	U	3.2	U		6.7	U	3.1	UJ	3.3	U	3.1	U	3.8	U	3.4	U	3.5	U
124-48-1	Dibromochloromethane	21	U	10	U		22	U	10	UJ	11	U	10	U	12	U	11	U	11	U
1634-04-4	Methyl tert-butyl ether	8.7	U	4.4	U		9.1	U	4.3	UJ	4.6	U	4.3	U	5.2	U	4.6	U	4.8	U
100-42-5	Styrene	10	U	5.2	U		11	U	5.1	UJ	5.4	U	5.1	U	6.2	U	5.5	U	5.6	U
156-60-5	trans-1,2-Dichloroethene	9.6	U	4.8	U		10	U	4.7	UJ	5	U	4.7	U	5.7	U	5.1	U	5.2	U
75-01-4	Vinyl Chloride	6.2	U	3.1	U		6.5	U	3	UJ	3.2	U	3	U	3.7	U	3.3	U	3.4	U

Table 7
Shallow Soil Vapor Survey December 2007
Page-Trowbridge Ranch Landfill

	Sample ID **Sample Date** **Units** **Depth Screen Interval (fbgs)**	SV-9 12/18/07 ug/m3 10		SV-10 12/18/07 ug/m3 10		SV-11-10 12/18/07 ug/m3 10		SV-13 12/18/07 ug/m3 10		No. Detected	No. analyzed	FOD %	Maximum Detect (All Samples)	Maximum Detect (shallow samples--along property boundary SV-1 to SV8)
CAS NUMBER	ANALYTE NAME													
75-35-4	1,1-Dichloroethene	96	U	250	U	39	U	190		1	13	8%	190	0
78-93-3	2-Butanone (Methyl Ethyl Ketone)	71	U	180	U	29	U	9.5		10	14	71%	48	48
108-10-1	4-Methyl-2-pentanone	99	U	260	U	40	U	8.1		7	14	50%	47	47
67-64-1	Acetone	260		600	U	160		64		13	14	93%	2200	2200
71-43-2	Benzene	77	U	200	U	32	U	8.9		9	14	64%	40	40
75-15-0	Carbon Disulfide	75	U	200	U	31	U	4.9		8	14	57%	24	24
56-23-5	Carbon Tetrachloride	2600		4400		2400		650		14	14	100%	4400	610
67-66-3	Chloroform	35000		92000		16000		650		14	14	100%	92000	3000
100-41-4	Ethyl Benzene	100	U	270	U	43	U	5.2	U	4	14	29%	34	34
108-38-3/106-42-3	m,p-Xylene	100	U	270	U	43	U	13		10	14	71%	99	99
95-47-6	o-Xylene	100	U	270	U	43	U	5.2	U	4	14	29%	28	28
1330-20-7	Total Xylenes	100	U	270	U	43	U	15.6		10	14	71%	127	127
75-09-2	Methylene Chloride	84	U	220	U	34	U	4.2	U	2	13	15%	6.4	6.4
127-18-4	Tetrachloroethene	160	U	430	U	67	U	320		4	14	29%	320	49
108-88-3	Toluene	91	U	240	U	37	U	25		11	14	79%	70	70
79-01-6	Trichloroethene	1200		3000		1400		130		12	14	86%	3000	88
75-69-4	Freon 11 (Fluorotrichloromethane)	2500		7800		7800		11000	J	14	14	100%	11000	1400
75-71-8	Freon 12 (Dichlorodifluoromethane)	2700		3600		1800		36		14	14	100%	3600	650
76-13-1	Freon 113 (1,1,2-Trichlorotrifluoroethane)	260		620		310		1300		14	14	100%	1300	360
156-59-2	cis-1,2-Dichloroethene	96	U	250	U	39	U	4.8	U	0	13			
71-55-6	1,1,1-Trichloroethane	130	U	340	U	54	U	6.6	U	0	13			
79-34-5	1,1,2,2-Tetrachloroethane	170	U	430	U	68	U	8.3	U	0	13			
75-34-3	1,1-Dichloroethane	98	U	260	U	40	U	4.9	U	0	13			
75-37-6	1,1-Difluoroethane (1)	260	U	680	U	110	U	13	U	1	13	8%	11000	11000 (1)
107-06-2	1,2-Dichloroethane	98	U	250	U	40	U	4.9	U	0	13			
78-87-5	1,2-Dichloropropane	110	U	290	U	46	U	5.6	U	0	13			
142-28-9	1,3-Dichloropropane	450	U	1200	U	180	U	22	U	0	13			
591-78-6	2-Hexanone	400	U	1000	U	160	U	20	U	0	13			
75-27-4	Bromodichloromethane	160	U	420	U	66	U	8.1	U	0	13			
75-25-2	Bromoform	250	U	650	U	100	U	12	U	0	13			
74-83-9	Bromomethane	94	U	240	U	38	U	4.7	U	0	13			
108-90-7	Chlorobenzene	110	U	290	U	46	U	5.6	U	0	13			
75-00-3	Chloroethane	64	U	170	U	26	U	3.2	U	0	13			
124-48-1	Dibromochloromethane	210	U	540	U	84	U	10	U	0	13			
1634-04-4	Methyl tert-butyl ether	87	U	230	U	36	U	4.4	U	0	13			
100-42-5	Styrene	100	U	270	U	42	U	5.2	U	0	13			
156-60-5	trans-1,2-Dichloroethene	96	U	250	U	39	U	4.8	U	0	13			
75-01-4	Vinyl Chloride	62	U	160	U	25	U	3.1	U	0	13			

Notes:
TO-15 analysis; Summa cannister
ND = Not detected above laboratory reporting limit
NA = Not Analyzed
U or UJ = Non Detect above laboratory reporting limit.
J = Estimated Concentration
FOD = Frequency of Detection
(1) Leak detection compound, 1,1-difluoroethane, detected in sample indicating compromised sample results for SV-4

Table 8
Summary of Analytical Methods for All Groundwater Sampling Events
Page Trowbridge Ranch Landfill

Monitoring Well	Sampling Date	E524.2 (VOC)	8270C (SVOC)	SW8081A (Organochlorine Pesticides and PCBs as Aroclors)	Inorganics (Metals)	MISC (Fluoride, Nitrate, Nitrite)	E300 (Chloride, Sulfate)	E200.7 (Manganese, Sodium)	Results Used in Risk Assessment?
MW-1	11/26/1984	X	X		X				no
MW-1	1/31/1985	X	X		X	X			no
MW-1	4/10/1985	X	X		X	X			no
MW-1	5/23/1985	X	X	X	X	X			no
MW-1	6/6/1985	X	X	X	X	X			no
MW-1	9/19/1985	X	X		X	X			no
MW-1	7/23/1986	X	X	X	X	X			no
MW-1	10/29/1986	X							no
MW-1	3/5/1987	X	X	X	X				no
MW-1	4/23/1987			X					no
MW-1	7/9/1987	X	X	X	X	X			no
MW-1	4/21/1988	X	X	X	X	X			no
MW-1	10/21/1988	X	X	X	X	X			no
MW-1	4/18/1989	X	X	X	X	X			no
MW-1	10/31/1989	X	X	X	X	X			no
MW-1	4/18/1990	X	X	X			X	X	no
MW-5	4/18/1990	X	X	X			X	X	no
MW-1	11/16/1990	X	X	X			X	X	no
MW-1	5/6/1991	X		X			X	X	no
MW-5	5/6/1991	X	X	X			X	X	no
MW-1	5/10/1991		X						no
MW-5	5/10/1991		X						no
MW-1	10/28/1991			X					no
MW-5	10/28/1991			X					no
MW-1	10/29/1991	X	X				X	X	no
MW-5	10/29/1991	X	X	X			X	X	no
MW-5	11/12/1991	X							no
MW-1	4/21/1992	X	X	X					no
MW-5	4/21/1992	X	X	X	X	X			no
MW-1	10/13/1992	X	X	X			X	X	no
MW-5	10/13/1992	X	X	X			X	X	no
MW-1	4/20/1993	X	X	X			X	X	no
MW-5	4/20/1993	X	X	X			X	X	no
MW-1	10/12/1993	X	X	X			X	X	no
MW-5	10/12/1993	X	X	X			X	X	no
MW-1	4/12/1994	X	X	X			X	X	no
MW-5	4/12/1994	X	X	X			X	X	no
MW-1	10/11/1994	X	X	X			X	X	no
MW-5	10/11/1994	X	X	X			X	X	no
MW-1	4/26/1995	X	X	X			X	X	no
MW-5	4/26/1995	X	X	X			X	X	no
MW-1	10/25/1995	X	X	X			X	X	no
MW-5	10/25/1995	X	X	X			X	X	no
MW-1	2/21/1996	X	X	X			X	X	no
MW-5	2/21/1996	X	X	X	X	X	X		no
MW-1	10/9/1996	X	X	X			X	X	no
MW-5	10/9/1996	X	X	X			X	X	no
MW-5	3/26/1997	X	X	X	X	X			no
MW-1	11/5/1997	X	X	X			X	X	no
MW-5	11/5/1997	X	X	X			X	X	no
MW-5	8/23/2000	X	X	X					no
MW-1	10/26/2001	X					X	X	yes
MW-5	10/26/2001	X					X	X	yes
MW-1	4/23/2003	X	X	X			X	X	yes
MW-5	4/23/2003	X	X	X			X	X	yes
MW-1	10/22/2003	X	X	X			X	X	yes
MW-5	10/22/2003	X	X	X			X	X	yes
MW-1	4/21/2004	X	X	X			X	X	yes
MW-5	4/21/2004	X	X	X			X	X	yes
MW-1	5/5/2004	X							yes
MW-5	5/5/2004	X							yes

Table 8
Summary of Analytical Methods for All Groundwater Sampling Events
Page Trowbridge Ranch Landfill

Monitoring Well	Sampling Date	E524.2 (VOC)	8270C (SVOC)	SW8081A (Organochlorine Pesticides and PCBs as Aroclors)	Inorganics (Metals)	MISC (Fluoride, Nitrate, Nitrite)	E300 (Chloride, Sulfate)	E200.7 (Manganese, Sodium)	Results Used in Risk Assessment?
MW-1	10/13/2004	X	X	X			X	X	yes
MW-5	10/13/2004	X	X	X			X	X	yes
MW-1	4/13/2005	X	X	X			X	X	yes
MW-5	4/13/2005	X	X	X			X	X	yes
MW-1	10/12/2005	X	X	X			X	X	yes
MW-1	4/12/2006	X	X	X			X	X	yes
MW-5	4/12/2006	X	X	X			X	X	yes
MW-5	11/7/2006	X	X	X			X	X	yes
MW-1	11/7/2006	X	X	X			X	X	yes
MW-1	4/11/2007	X	X	X			X	X	yes
MW-5	4/11/2007	X	X	X			X	X	yes
MW-5	10/24/2007	X	X	X			X	X	yes
MW-2	1/23/1985	X	X		X	X			no
MW-2	4/10/1985	X	X		X	X			no
MW-2	5/24/1985	X	X	X	X	X			no
MW-2	6/7/1985	X	X	X	X	X			no
MW-2	9/20/1985	X	X		X	X			no
MW-2	7/24/1986	X	X	X	X	X			no
MW-2	3/6/1987	X	X	X	X				no
MW-2	4/23/1987			X					no
MW-2	7/9/1987	X	X	X	X	X			no
MW-2	4/22/1988	X	X	X	X	X			no
MW-2	10/21/1988	X	X	X	X	X			no
MW-2	4/18/1989	X	X	X	X	X			no
MW-2	10/31/1989	X	X	X	X	X			no
MW-2	4/18/1990	X	X	X			X	X	no
MW-2	11/16/1990	X	X	X			X	X	no
MW-2	5/6/1991	X	X	X			X	X	no
MW-2	5/10/1991		X						no
MW-2	10/28/1991			X					no
MW-2	10/29/1991	X	X	X			X	X	no
MW-2	11/12/1991	X							no
MW-2	4/21/1992	X	X	X	X	X			no
MW-2	10/13/1992	X	X	X			X	X	no
MW-2	4/20/1993	X	X	X			X	X	no
MW-2	10/12/1993	X	X	X			X	X	no
MW-2	4/12/1994	X	X	X			X	X	no
MW-2	10/11/1994	X	X	X			X	X	no
MW-2	4/26/1995	X	X	X			X	X	no
MW-2	10/25/1995	X	X	X			X	X	no
MW-2	2/21/1996	X	X	X	X	X			no
MW-2	10/9/1996	X	X	X			X	X	no
MW-2	11/5/1997	X	X	X			X	X	no
MW-2	8/23/2000	X	X	X					no
MW-2	10/26/2001	X					X	X	yes
MW-2	4/23/2003	X	X	X			X	X	yes
MW-2	10/22/2003	X	X	X			X	X	yes
MW-2	4/21/2004	X	X	X			X	X	yes
MW-2	5/5/2004	X							yes
MW-2	10/13/2004	X	X	X			X	X	yes
MW-2	4/13/2005	X	X	X			X	X	yes
MW-2	10/12/2005	X	X	X			X	X	yes
MW-2	4/12/2006	X	X	X			X	X	yes
MW-2	11/7/2006	X	X	X			X	X	yes
MW-2	4/11/2007	X	X	X			X	X	yes
MW-2	10/24/2007	X	X	X			X	X	yes
MW-2	11/6/2007	X							yes

Table 8
Summary of Analytical Methods for All Groundwater Sampling Events
Page Trowbridge Ranch Landfill

Monitoring Well	Sampling Date	E524.2 (VOC)	8270C (SVOC)	SW8081A (Organochlorine Pesticides and PCBs as Aroclors)	Inorganics (Metals)	MISC (Fluoride, Nitrate, Nitrite)	E300 (Chloride, Sulfate)	E200.7 (Manganese, Sodium)	Results Used in Risk Assessment?
MW-3	1/31/1985	X	X		X	X			no
MW-3	4/10/1985	X	X		X	X			no
MW-3	5/24/1985	X	X	X	X	X			no
MW-3	6/7/1985	X	X	X	X	X			no
MW-3	9/20/1985	X	X		X	X			no
MW-3	7/24/1986	X	X	X	X	X			no
MW-3	3/5/1987	X	X	X	X				no
MW-3	4/23/1987			X					no
MW-3	7/10/1987	X	X	X	X	X			no
MW-3	4/21/1988	X	X	X	X	X			no
MW-3	10/21/1988	X	X	X	X	X			no
MW-3	4/18/1989	X	X	X	X	X			no
MW-3	10/31/1989	X	X	X	X	X			no
MW-3	4/18/1990	X	X	X			X	X	no
MW-3	5/6/1991	X	X	X			X	X	no
MW-3	5/10/1991		X						no
MW-3	10/28/1991			X					no
MW-3	10/29/1991	X	X	X			X	X	no
MW-3	11/12/1991	X							no
MW-3	4/21/1992	X	X	X	X	X			no
MW-3	10/13/1992	X	X	X			X	X	no
MW-3	4/20/1993	X	X	X			X	X	no
MW-3	10/12/1993	X	X	X			X	X	no
MW-3	4/12/1994	X	X	X			X	X	no
MW-3	10/11/1994	X	X	X			X	X	no
MW-3	4/26/1995	X	X	X			X	X	no
MW-3	10/25/1995	X	X	X			X	X	no
MW-3	2/21/1996	X	X	X		X		X	no
MW-3	10/9/1996	X	X	X			X	X	no
MW-3	3/26/1997	X	X	X	X	X			no
MW-3	11/5/1997	X	X	X			X	X	no
MW-3	8/23/2000	X	X	X					no
MW-3	10/26/2001	X					X	X	yes
MW-3	4/23/2003	X	X	X			X	X	yes
MW-3	10/22/2003	X	X	X			X	X	yes
MW-3	4/21/2004	X	X	X			X	X	yes
MW-3	5/5/2004	X							yes
MW-3	10/13/2004	X	X	X			X	X	yes
MW-3	4/13/2005	X	X	X			X	X	yes
MW-3	10/12/2005	X	X	X			X	X	yes
MW-3	4/12/2006	X	X	X			X	X	yes
MW-3	10/11/2006	X	X	X			X	X	yes
MW-3	4/11/2007	X	X	X			X	X	yes

Table 8
Summary of Analytical Methods for All Groundwater Sampling Events
Page Trowbridge Ranch Landfill

Monitoring Well	Sampling Date	E524.2 (VOC)	8270C (SVOC)	SW8081A (Organochlorine Pesticides and PCBs as Aroclors)	Inorganics (Metals)	MISC (Fluoride, Nitrate, Nitrite)	E300 (Chloride, Sulfate)	E200.7 (Manganese, Sodium)	Results Used in Risk Assessment?
MW-4	3/22/1985	X	X		X	X			no
MW-4	4/8/1985	X	X		X	X			no
MW-4	5/23/1985	X	X	X	X	X			no
MW-4	6/6/1985	X	X	X	X	X			no
MW-4	9/20/1985	X	X		X	X			no
MW-4	7/24/1986	X	X	X	X	X			no
MW-4	3/6/1987	X	X	X	X				no
MW-4	7/10/1987	X	X	X	X	X			no
MW-4	4/22/1988	X	X	X	X	X			no
MW-4	10/21/1988	X	X	X	X	X			no
MW-4	4/18/1989	X	X	X	X	X			no
MW-4	10/31/1989	X	X	X	X	X			no
MW-4	4/18/1990	X	X	X			X	X	no
MW-4	11/16/1990	X	X	X			X	X	no
MW-4	5/6/1991	X	X	X			X	X	no
MW-4	5/10/1991		X						no
MW-4	10/28/1991			X					no
MW-4	10/29/1991	X	X	X			X	X	no
MW-4	4/21/1992	X	X	X	X	X			no
MW-4	10/13/1992	X	X	X			X	X	no
MW-4	4/20/1993	X	X	X			X	X	no
MW-4	10/12/1993	X	X	X			X	X	no
MW-4	4/12/1994	X	X	X			X	X	no
MW-4	10/11/1994	X	X	X			X	X	no
MW-4	4/26/1995	X	X	X			X	X	no
MW-4	10/25/1995	X	X	X			X	X	no
MW-4	2/21/1996	X	X	X	X		X		no
MW-4	10/9/1996	X	X	X			X	X	no
MW-4	3/26/1997	X	X	X	X	X			no
MW-4	11/5/1997	X	X	X			X	X	no
MW-4	8/23/2000	X	X	X					no
MW-4	10/26/2001	X					X	X	yes
MW-4	4/23/2003	X	X	X			X	X	yes
MW-4	10/22/2003	X	X	X			X	X	yes
MW-4	4/21/2004	X	X	X			X	X	yes
MW-4	5/5/2004	X							yes
MW-4	10/13/2004	X	X	X			X	X	yes
MW-4	4/13/2005	X	X	X			X	X	yes
MW-4	10/12/2005	X	X	X			X	X	yes
MW-4	4/12/2006	X	X	X			X	X	yes
MW-4	10/11/2006	X	X	X			X	X	yes
MW-4	4/11/2007	X	X	X			X	X	yes
MW-4	10/24/2007	X	X	X			X	X	yes

Notes:
MW-5 was installed in 1991 as a replacement for MW-1.

See Appendix C for all groundwater sampling events November 1984 through October 2007.
Groundwater data from sampling dates January 2001 to October 2007 were considere to represent current site conditions and were evaluated in risk assessment.

Table 9
Summary of Groundwater Data with Detection Prior to 2001
Page Trowbridge Ranch Landfill

Monitoring Well Location	Analytes	Units	Range of Sampling Dates		Range of Detection Limits		Number of Detected Samples	Total Number of Samples Analyzed	Frequency of Detection	Range in Detected Concentrations		Date of Maximum Detection	Number of Detected Samples Since Jan 2001	Total Number of Samples Analyzed Since Jan 2001	Region 9 PRG Tap Water (mg/L) and basis		Does Maximum Detected Concentration Exceed Region 9 PRG?	Does Average Exceed Region 9 PRG?	Has Analyte been detected in Well since 2001?
MW-1	1,1,1-Trichloroethane	mg/L	11/26/1984	4/11/2007		2.0E-03	2	40	5.0%	1.1E-03	1.1E-03	4/21/1992	0	11	3.2E+00	nc	No	No	No
MW-1	1,1,2,2-Tetrachloroethane	mg/L	11/26/1984	4/11/2007		2.0E-03	1	40	2.5%	2.0E-06	2.0E-06	11/26/1984	0	11	5.5E-05	ca	No	Yes	No
MW-1	1,1-Dichloroethane	mg/L	11/26/1984	4/11/2007		2.0E-03	1	40	2.5%	4.0E-05	4.0E-05	6/6/1985	0	11	8.1E-01	nc	No	No	No
MW-1	2,4,6-Trichlorophenol	mg/L	11/26/1984	4/11/2007		2.5E-02	1	35	2.9%	1.0E-02	1.0E-02	11/16/1990	0	9	3.6E-03	nc	Yes	Yes	No
MW-1	Aldrin	mg/L	5/23/1985	4/11/2007	2.0E-06	1.0E-03	1	34	2.9%	1.0E-04	1.0E-04	5/23/1985	0	9	4.0E-06	ca	Yes	Yes	No
MW-1	Barium	mg/L	11/26/1984	4/18/1989	4.5E-04	7.0E-01	1	8	13%	8.5E-02	8.5E-02	5/23/1985	0	0	2.6E+00	nc	No	No	No
MW-1	Bromoform	mg/L	11/26/1984	4/11/2007		2.0E-03	2	40	5.0%	6.0E-06	2.1E-03	4/21/1992	0	11	8.5E-03	ca	No	No	No
MW-1	Chromium	mg/L	11/26/1984	4/18/1989	1.0E-05	9.0E-02	1	8	13%	6.0E-03	6.0E-03	6/6/1985	0	0	1.1E-01	nc	No	No	No
MW-1	Methylene chloride	mg/L	11/26/1984	4/11/2007	1.8E-04	1.0E-02	5	40	13%	5.5E-05	2.5E-02	4/21/1992	0	11	4.3E-03	ca	Yes	No	No
MW-1	Nitrate	mg/L	1/31/1985	9/19/1985			5	5	100%	6.6E-03	9.2E+00	1/31/1985	0	0	1.0E+01	nc	No	No	No
MW-1	Nitrite/Nitrate Total	mg/L	7/9/1987	4/18/1989			2	2	100%	1.2E+00	1.6E+00	7/9/1987	0	0	1.0E+00	nc	Yes	Yes	No
MW-1	Phenol	mg/L	11/26/1984	4/11/2007		2.5E-02	1	37	2.7%	8.0E-03	8.0E-03	4/21/1988	0	9	1.1E+01	nc	No	No	No
MW-1	Tetrachloroethene	mg/L	11/26/1984	4/11/2007		2.0E-03	1	38	2.6%	2.0E-06	2.0E-06	11/26/1984	0	11	1.0E-04	ca	No	Yes	No
MW-1	Trichlorofluoromethane	mg/L	11/26/1984	4/11/2007		2.0E-03	1	40	2.5%	3.0E-05	3.0E-05	6/6/1985	0	11	1.3E+00	nc	No	No	No
MW-1	Zinc	mg/L	11/26/1984	4/18/1989			7	7	100%	4.9E-04	7.3E-01	5/23/1985	0	0	1.1E+01	nc	No	No	No
MW-1	Zinc (Zn), Filtered	mg/L	7/9/1987	7/9/1987			1	1	100.0%	1.3E-01	1.3E-01	7/9/1987	0	0	1.1E+01	nc	No	No	No
MW-5	1,1,1-Trichloroethane	mg/L	4/18/1990	10/24/2007	2.0E-04	2.0E-03	1	28	3.6%	4.8E-03	4.8E-03	10/29/1991	0	11	3.2E+00	nc	No	No	No
MW-5	Bis(2-ethylhexyl)phthalate	mg/L	8/23/2000	10/24/2007	5.0E-03	1.0E-02	1	10	10%	1.7E-02	1.7E-02	8/23/2000	0	9	4.8E-03	ca	Yes	Yes	No
MW-5	Methylene chloride	mg/L	4/18/1990	10/24/2007	5.0E-04	1.0E-02	2	28	7.1%	3.5E-03	1.7E-02	4/21/1992	0	11	4.3E-03	ca	Yes	No	No
MW-2	Chromium	mg/L	1/23/1985	4/18/1989	1.0E-05	7.0E-02	1	7	14%	4.0E-03	4.0E-03	6/7/1985	0	0	1.1E-01	nc	No	No	No
MW-2	Methylene chloride	mg/L	1/23/1985	11/6/2007	1.0E-04	1.0E-02	5	42	12%	3.0E-05	2.7E-02	4/21/1992	0	13	4.3E-03	ca	Yes	No	No
MW-2	Nitrate	mg/L	1/23/1985	9/20/1985			5	5	100%	7.1E-03	1.1E+01	1/23/1985	0	0	1.0E+01	nc	Yes	No	No
MW-2	Nitrite/Nitrate Total	mg/L	7/9/1987	4/18/1989			2	2	100%	1.2E+00	1.5E+00	7/9/1987	0	0	1.0E+00	nc	Yes	Yes	No
MW-2	Phenol	mg/L	1/23/1985	10/24/2007		1.0E-02	1	39	2.6%	8.0E-03	8.0E-03	4/22/1988	0	10	1.1E+01	nc	No	No	No
MW-2	Trichlorofluoromethane	mg/L	1/23/1985	4/11/2007		2.0E-03	1	40	2.5%	3.4E-04	3.4E-04	6/7/1985	0	11	1.3E+00	nc	No	No	No
MW-2	Zinc	mg/L	1/23/1985	4/18/1989			6	6	100%	1.3E-03	7.2E-01	4/18/1989	0	0	1.1E+01	nc	No	No	No
MW-2	Zinc (Zn), Filtered	mg/L	7/9/1987	7/9/1987			1	1	100%	2.1E-01	2.1E-01	7/9/1987	0	0	1.1E+01	nc	No	No	No

Table 9
Summary of Groundwater Data with Detection Prior to 2001
Page Trowbridge Ranch Landfill

Monitoring Well Location	Analytes	Units	Range of Sampling Dates		Range of Detection Limits		Number of Detected Samples	Total Number of Samples Analyzed	Frequency of Detection	Range in Detected Concentrations		Date of Maximum Detection	Number of Detected Samples Since Jan 2001	Total Number of Samples Analyzed Since Jan 2001	Region 9 PRG Tap Water (mg/L) and basis		Does Maximum Detected Concentration Exceed Region 9 PRG?	Does Average Exceed Region 9 PRG?	Has Analyte been detected in Well since 2001?
MW-3	Chromium	mg/L	1/31/1985	4/18/1989	1.0E-05	7.0E-02	1	7	14%	5.0E-03	5.0E-03	6/7/1985	0	0	1.1E-01	nc	No	No	No
MW-3	Methoxychlor	mg/L	7/24/1986	4/11/2007	5.0E-05	1.0E-03	1	32	3.1%	2.5E-04	2.5E-04	10/31/1989	0	9	1.8E-01	nc	No	No	No
MW-3	Methylene chloride	mg/L	1/31/1985	4/11/2007	1.0E-04	1.0E-02	6	40	15%	1.0E-05	2.6E-02	4/21/1992	0	11	4.3E-03	ca	Yes	No	No
MW-3	Nitrate	mg/L	1/31/1985	9/20/1985			5	5	100%	6.8E-03	1.2E+01	1/31/1985	0	0	1.0E+01	nc	Yes	No	No
MW-3	Nitrite/Nitrate Total	mg/L	7/10/1987	4/18/1989			2	2	100%	1.1E+00	1.4E+00	7/10/1987	0	0	1.0E+00	nc	Yes	Yes	No
MW-3	Phenol	mg/L	1/31/1985	4/11/2007		1.0E-02	1	38	2.6%	5.0E-03	5.0E-03	4/21/1988	0	9	1.1E+01	nc	No	No	No
MW-3	Trichlorofluoromethane	mg/L	1/31/1985	4/11/2007		2.0E-03	1	40	2.5%	4.1E-04	4.1E-04	6/7/1985	0	11	1.3E+00	nc	No	No	No
MW-3	Zinc	mg/L	1/31/1985	4/18/1989			6	6	100%	6.2E-04	7.6E-01	4/18/1989	0	0	1.1E+01	nc	No	No	No
MW-3	Zinc (Zn), Filtered	mg/L	7/10/1987	7/10/1987			1	1	100%	1.6E-01	1.6E-01	7/10/1987	0	0	1.1E+01	nc	No	No	No
MW-4	1,1,1-Trichloroethane	mg/L	3/22/1985	10/24/2007		2.0E-03	1	41	2%	5.1E-03	5.1E-03	10/29/1991	0	11	3.2E+00	nc	No	No	No
MW-4	2,4,6-Trichlorophenol	mg/L	3/22/1985	10/24/2007		2.0E-02	1	38	2.6%	2.0E-02	2.0E-02	11/16/1990	0	9	3.6E-03	nc	Yes	Yes	No
MW-4	Aldrin	mg/L	5/23/1985	10/24/2007	2.0E-06	1.0E-03	1	37	2.7%	2.0E-04	2.0E-04	5/23/1985	0	9	4.0E-06	ca	Yes	Yes	No
MW-4	Arsenic	mg/L	3/22/1985	4/18/1989	3.0E-06	2.0E-02	1	7	14.3%	5.0E-06	5.0E-06	3/22/1985	0	0	4.5E-05	ca	No	Yes	No
MW-4	Barium	mg/L	3/22/1985	4/18/1989	4.5E-04	4.9E-01	2	7	28.6%	7.6E-02	1.2E-01	7/10/1987	0	0	2.6E+00	nc	No	No	No
MW-4	Bis(2-ethylhexyl)phthalate	mg/L	8/23/2000	10/24/2007	5.0E-03	1.0E-02	1	11	9.1%	1.2E-02	1.2E-02	8/23/2000	0	9	4.8E-03	ca	Yes	Yes	No
MW-4	Chlordane	mg/L	7/24/1986	10/24/2007	1.4E-05	1.0E-03	1	34	2.9%	5.0E-05	5.0E-05	3/6/1987	0	9	1.9E-04	ca	No	Yes	No
MW-4	Chromium	mg/L	3/22/1985	4/18/1989	1.0E-05	1.0E-02	3	7	42.9%	6.0E-03	3.6E-02	5/23/1985	0	0	1.1E-01	nc	No	No	No
MW-4	Dieldrin	mg/L	5/23/1985	10/24/2007	2.0E-06	1.0E-03	1	37	2.7%	1.5E-04	1.5E-04	5/23/1985	0	9	4.2E-06	ca	Yes	Yes	No
MW-4	Methoxychlor	mg/L	7/24/1986	10/24/2007	5.0E-05	1.0E-03	1	34	2.9%	3.0E-04	3.0E-04	10/31/1989	0	9	1.8E-01	nc	No	No	No
MW-4	Methylene chloride	mg/L	3/22/1985	10/24/2007	1.0E-04	1.0E-02	5	41	12.2%	9.0E-05	2.5E-02	4/21/1992	0	11	4.3E-03	ca	Yes	No	No
MW-4	Nitrate	mg/L	3/22/1985	9/20/1985			5	5	100.0%	6.8E-03	8.4E+00	5/23/1985	0	0	1.0E+01	nc	No	No	No
MW-4	Nitrite/Nitrate Total	mg/L	7/10/1987	4/18/1989			2	2	100.0%	8.5E-01	1.3E+00	4/18/1989	0	0	1.0E+00	nc	Yes	Yes	No
MW-4	Phenol	mg/L	3/22/1985	10/24/2007		1.0E-02	1	40	2.5%	1.2E-02	1.2E-02	4/22/1988	0	9	1.1E+01	nc	No	No	No
MW-4	Zinc	mg/L	3/22/1985	4/18/1989			6	6	100.0%	3.6E-04	6.6E+00	7/10/1987	0	0	1.1E+01	nc	No	No	No
MW-4	Zinc (Zn), Filtered	mg/L	7/10/1987	7/10/1987			1	1	100%	1.4E-01	1.4E-01	7/10/1987	0	0	1.1E+01	nc	No	No	No

Notes:
MW-5 was installed in 1991 as a replacement for MW-1.

Table 10
Summary of RADCON Radionuclides Inventory
Page Trowbridge Ranch Landfill

Nuclide [1]	Symbol	Radiological Half-life and Units	Total disposed activity [1] (mCi) 1962 to Feb 1986	% of Total Disposed Activity	Current Activity [2] (mCi)	% of Total Remaining Activity	Radiation Energy Type
Tritium	**H-3**	**1.2E+01 Yrs**	**2.4E+04**	83.2%	**4.5E+03**	**65.9%**	Beta
Carbon 14	**C-14**	**5.7E+03 Yrs**	**2.3E+03**	7.92%	**2.3E+03**	**33.93%**	Beta
Chlorine-36	Cl-36	3.1E+05 Yrs	5.7E+00	0.020%	5.7E+00	0.08%	Beta
Nickel-63	NI-63	9.2E+01 Yrs	3.1E+00	0.011%	2.6E+00	0.039%	Beta
Curium-244	CM-244+	1.8E+01 Yrs	9.8E+00	0.034%	1.9E+00	0.029%	Alpha
Cobalt-60	CO-60	5.3E+00 Yrs	2.9E+01	0.10%	3.9E-01	0.0058%	Beta/Gamma
Uranium-238 (depleted) [3]	U-DEP	4.5E+09 Yrs	3.8E-01	0.0013%	3.8E-01	0.00563%	Alpha, Beta
Radium 226	RA-226+	1.6E+03 Yrs	3.0E-01	0.0010%	2.9E-01	0.0044%	Alpha/Gamma
Uranium-238 (natural) [3]	U-NAT	4.5E+09 Yrs	2.3E-01	0.00077%	2.3E-01	0.00332%	Alpha
Cesium-137	CS-137	3.0E+01 Yrs	3.0E-01	0.0010%	1.4E-01	0.002%	Beta/Gamma
Strontium-90	SR-90+	2.8E+01 Yrs	1.4E-01	0.00048%	6.1E-02	0.00090%	Beta
Lead 210	PB-210+	2.0E+01 Yrs	3.6E-02	0.00012%	9.8E-03	0.00014%	Alpha
Argon-39	AR-39	2.7E+02 Yrs	4.0E-03	0.000014%	3.9E-03	0.00006%	Alpha/Beta
Barium-133	BA-133	7.2E+00 Yrs	6.7E-02	0.00023%	3.6E-03	0.00005%	Gamma (X-ray)
Iron-55	FE-55	2.6E+00 Yrs	1.3E+00	0.0046%	3.5E-03	0.00005%	Gamma (X-ray)
Americium-241	AM-241+	4.6E+02 Yrs	1.0E-03	0.0000034%	9.9E-04	0.00001%	Alpha/Gamma
Sodium-22	NA-22	2.6E+00 Yrs	3.1E+00	0.010%	8.8E-04	0.00001%	Gamma
Promethium-145	PM-145	1.8E+01 Yrs	2.0E-03	0.0000069%	7.2E-04	0.00001%	Beta
Silver-110M	AG-110M	2.6E+02 Days	5.8E+00	0.020%	0.0E+00	None	na
Arsenic-73	AS-73	8.0E+01 Days	8.9E-01	0.0031%	0.0E+00	None	na
Arsenic-74	AS-74	1.8E+01 Days	2.3E+00	0.0080%	0.0E+00	None	na
Gold-198	AU-198	2.7E+00 Days	2.8E+00	0.0096%	0.0E+00	None	na
Bismuth-210	BI-210+	5.0E+00 Days	6.0E-03	0.000021%	0.0E+00	None	na
BroMine-82	BR-82	3.5E+01 Hrs	4.6E-02	0.00016%	0.0E+00	None	na
Calcium-45	CA-45	1.7E+02 Days	7.6E+01	0.26%	0.0E+00	None	na
Cadmium-109	CD-109	4.5E+02 Days	1.2E-01	0.00042%	0.0E+00	None	na
Cadmium-115M	CD-115M+	4.3E+01 Days	2.4E-01	0.00083%	0.0E+00	None	na
Cerium 141	CE-141	3.3E+01 Days	2.7E+00	0.0094%	0.0E+00	None	na
Cesium 144	CE-144+	2.8E+02 Days	2.0E-03	0.0000069%	0.0E+00	None	na
Chlorine-38	CL-38	6.2E-01 Hrs	1.0E-02	0.000034%	0.0E+00	None	na
Cobalt 57	CO-57	2.7E+02 Days	1.7E+02	0.57%	0.0E+00	None	na
Cobalt 58	CO-58	7.1E+01 Days	4.0E-02	0.00014%	0.0E+00	None	na
Chromium-51	CR-51	2.8E+01 Days	5.6E+02	1.9%	0.0E+00	None	na
Cesium-134	CS-134	2.0E+00 Yrs	4.4E-02	0.00015%	0.0E+00	None	na
Copper 64	CU-64	1.3E+01 Hrs	2.8E-01	0.00097%	0.0E+00	None	na
Dysprosium-165	DY-165	1.4E+02 Min	1.0E-03	0.0000034%	0.0E+00	None	na
Iron-59	FE-59	4.6E+01 Days	1.4E+01	0.047%	0.0E+00	None	na
Gallium-67	GA-67	7.8E+01 Hrs	1.3E+00	0.0044%	0.0E+00	None	na
Mercury-203	HG-203	4.7E+01 Days	1.8E+00	0.00631%	0.0E+00	None	na

Table 10
Summary of RADCON Radionuclides Inventory
Page Trowbridge Ranch Landfill

Nuclide (1)	Symbol	Radiological Half-life and Units	Total disposed activity (1) (mCi) 1962 to Feb 1986	% of Total Disposed Activity	Current Activity (2) (mCi)	% of Total Remaining Activity	Radiation Energy Type
Iodine-125	I-125	6.0E+01 Days	3.0E+02	1.0%	0.0E+00	None	na
Iodine-131	I-131	8.1E+00 Days	4.7E+01	0.16%	0.0E+00	None	na
Indium-111	IN-111	2.8E+00 Days	5.0E-01	0.00170%	0.0E+00	None	na
Indium-113M	IN-113M	1.0E+02 Min	1.8E+01	0.062%	0.0E+00	None	na
Indium-114M	IN-114M	5.0E+01 Days	2.0E+00	0.0070%	0.0E+00	None	na
Manganese-54	MN-54	3.0E+02 Days	5.0E-03	0.000017%	0.0E+00	None	na
Molybdenum-99	MO-99+	6.7E+01 Hrs	1.7E-01	0.00059%	0.0E+00	None	na
Mixed Irradiation Products	MX IR PR	3.0E+01 Days	1.4E-01	0.00048%	0.0E+00	None	na
Sodium-24	NA-24	1.5E+01 Hrs	3.7E-01	0.0013%	0.0E+00	None	na
Phosphorus-32	P-32	1.4E+01 Days	6.0E+02	2.0%	0.0E+00	None	na
Phosphorus-33	P-33	2.4E+01 Days	1.0E-02	0.000034%	0.0E+00	None	na
Lead-203	PB-203	5.2E+01 Hrs	1.3E-01	0.00044%	0.0E+00	None	na
Polonium-210	PO-210	1.4E+02 Days	2.6E-01	0.00089%	0.0E+00	None	na
Platinum-195M	PT-195M	4.1E+00 Days	8.0E-03	0.000027%	0.0E+00	None	na
Rubidium-86	RB-86	1.9E+01 Days	8.4E+00	0.029%	0.0E+00	None	na
Radon-222	RN-222	3.8E+00 Days	3.0E-03	0.000010%	0.0E+00	None	na
Sulfur-35	S-35	8.8E+01 Days	4.9E+02	1.7%	0.0E+00	None	na
Antimony-124	SB-124	6.0E+01 Days	6.1E+00	0.021%	0.0E+00	None	na
Scandium-46	SC-46	8.4E+01 Days	3.7E-01	0.0013%	0.0E+00	None	na
Selenium-75	SE-75	1.2E+02 Days	2.3E+01	0.078%	0.0E+00	None	na
Samarium-153	SM-153	4.7E+01 Hrs	1.2E+00	0.0041%	0.0E+00	None	na
Tin-113	SN-113+	1.2E+02 Days	1.3E-02	0.000045%	0.0E+00	None	na
Strontium-85	SR-85	6.4E+01 Days	4.4E+01	0.15%	0.0E+00	None	na
Strontium-89	SR-89	5.3E+01 Days	2.7E+01	0.092%	0.0E+00	None	na
Technitium-99M	TC-99M	6.0E+00 Hrs	4.8E+01	0.16%	0.0E+00	None	na
Thallium-201	TL-201	7.4E+01 Hrs	6.5E-01	0.0022%	0.0E+00	None	na
Thallium-204	TL-204	3.8E+00 Yrs	3.0E-03	0.000010%	0.0E+00	None	na
Xenon-133	XE-133	5.3E+00 Days	5.4E-02	0.00019%	0.0E+00	None	na
Ytterbium-169	YB-169	3.2E+01 Days	1.0E+00	0.0035%	0.0E+00	None	na
Zinc-65	ZN-65	2.5E+02 Days	8.4E+01	0.29%	0.0E+00	None	na
		Total (mCi/Kg)	2.9E+04		6.8E+03		

Notes
(1) Inventory received from UA RADCON September 26, 2007

(2) Current activity (as of 26 March 2008) represents the total disposed activity adjusted for time elapsed since Feb 1986 using nuclide-specific radiological half life.

(3) The inventoried amounts of natural uranium and depleted uranium were converted from mass (kg) to activity (mCi) using the conversion factors of 0.67 mCi/kg and 0.4 mCi/kg, respectively.
Nuclides with decay chains are indicated with a plus (+) after their symbol.
mCi = millicuries Hrs = Hours Min = Minutes
na = not applicable; no activity remains Yrs = Years

Table 11
Radiologic Data for Groundwater from On and Off-Site Monitoring Wells [1]
Page Trowbridge Ranch Landfill

Well ID	Radionuclide [2]	Number of Detects	Number of Samples Analyzed	Frequency of Detection	Minimum Detection	Maximum Detection	Sample Date of Max Detect	MCL [3] (pCi/L)
Onsite Wells								
UA MW #1 & UA MW #5	14C	2	42	4.8%	217	334	27-Mar-02	2000
	3H	2	42	4.8%	348	535	26-Oct-87	20000
	Other Nuclides	5	39	12.8%	367	781	31-Jan-01	
UA MW #2	14C	2	39	5.1%	117	419	27-Mar-02	2000
	3H	1	40	2.5%	622	622	26-Oct-87	20000
	Other Nuclides	9	32	28.1%	189	951	23-Oct-02	
UA MW #3	14C	4	38	10.5%	105	298	23-Oct-02	2000
	3H	1	41	2.4%	732	732	18-Apr-90	20000
	Other Nuclides	8	34	23.5%	240	1031	23-Oct-02	
UA MW #4	14C	5	37	13.5%	197	777	12-Oct-05	2000
	3H	3	39	7.7%	458	6143	12-Oct-05	20000
	Other Nuclides	8	34	23.5%	248	834	23-Oct-02	
Offsite Wells								
Catalina Well (Cattle Trough)	14C	3	192	1.6%	129	1249	12-Oct-05	2000
	3H	5	220	2.3%	389	10481	12-Oct-05	20000
	Other Nuclides	2	223	0.9%	267	337	25-Oct-85	
City of Tucson Well I2-A	14C	4	48	8.3%	254	310	27-Aug-86	2000
	3H	1	79	1.3%	421	421	27-Aug-86	20000
	Other Nuclides	4	76	5.3%	141	279	1-Sep-88	
City of Tucson Well I2-B	14C	3	140	2.1%	152	349	12-Apr-06	2000
	3H	3	142	2.1%	351	3089	12-Apr-06	20000
	Other Nuclides	9	136	6.6%	183	1114	30-Jul-01	
Eagle Crest Ranch Well	14C	1	12	8.3%	212	212	27-Aug-86	2000
	3H	1	12	8.3%	413	413	29-Jan-86 27-Aug-86	20000
	Other Nuclides		13	0.0%				
Falcon Valley Ranch HQ Well	14C	1	194	0.5%	260	260	30-Apr-91 29-Jul-86	2000
	3H	3	222	1.4%	406	596	2-Oct-85	20000
	Other Nuclides	17	208	8.2%	134	937	30-Jul-01	
Goodman Ranch Well	14C	0	13	0.0%				2000
	3H	1	40	2.5%	395	395	2-Oct-85	20000
	Other Nuclides	0	41	0.0%				
Oracle Junction Well & Oracle Junction Well #2	14C	8	186	4.3%	153	2938	12-Oct-05	2000
	3H	3	216	1.4%	545	32387	12-Oct-05	20000
	Other Nuclides	30	189	15.9%	117	1339	30-Jul-01	
SaddleBrooke #17 Well & SaddleBrooke Well #17	14C	3	29	10.3%	109	354	23-Oct-02	2000
	3H	1	31	3.2%	1162	1162	23-Oct-02	20000
	Other Nuclides	3	29	10.3%	378	1131	30-Jul-01	

Notes:

(1) Data used to create this table obtained from UA RADCON and represents sampling events conducted between January 1985 and April 2007 for onsite wells and January 1981 and April 2007 for off-site wells.

(2) Data represents liquid scintillation counts, with Channel A results representing tritium (3H), Channel B results representing 14 carbon (14C) and Channel C representing other radionuclides (UA, 2002).

(3) MCL = Maximum Contaminant Level. The MCLs were derived by USEPA assuming a 2 liter of water/day ingestion rate and a 4 mrem/yr dose limit for total Beta Particle and Photon Radioactivity (in 40 CFR 141).

pCi/L = picocuries per liter

amec

Table 12
Summary of Groundwater Exposure Point Concentrations
Page Trowbridge Ranch Landfill

Contaminant of Potential Concern	Exposure Point Concentration	units	Basis	Exposure Point	# detected Samples	# Analyzed Samples (1)	# MW with detects	Range in Detected Concentrations		Date of Maximum Detect	Average All Samples (1)
Benzene	**2.76E-04**	**mg/L**	**Average**	**MW-5**	**1**	**58**	**1**	**5.4E-04**	**5.4E-04**	**4/12/2006**	**2.8E-04**
Chloroform	**2.76E-04**	**mg/L**	**Average**	**MW-4**	**1**	**58**	**1**	**5.6E-04**	**5.6E-04**	**10/11/2006**	**2.8E-04**
Chloromethane	**2.92E-04**	**mg/L**	**Average**	**MW-2**	**1**	**58**	**1**	**7.9E-04**	**7.9E-04**	**10/12/2005**	**2.9E-04**
Manganese (Mn)	**1.82E-01**	**mg/L**	**Average**	**MW-4**	**52**	**52**	**5**	**4.6E-02**	**3.0E-01**	**10/26/2001**	**1.8E-01**
Manganese (Mn)	1.82E-01	mg/L	Average	MW-4	11	11		7.1E-02	3.0E-01	10/26/2001	1.8E-01
Manganese (Mn)	1.51E-01	mg/L	Average	MW-1	10	10		8.9E-02	2.2E-01	4/21/2004	1.5E-01
Manganese (Mn)	1.65E-01	mg/L	Average	MW-2	11	11		1.1E-01	2.3E-01	10/26/2001	1.6E-01
Manganese (Mn)	1.75E-01	mg/L	Average	MW-3	10	10		9.7E-02	2.4E-01	4/21/2004	1.8E-01
Manganese (Mn)	1.55E-01	mg/L	Average	MW-5	10	10		4.6E-02	2.4E-01	10/22/2003	1.6E-01
Toluene	**1.31E-03**	**mg/L**	**Average**	**MW-2**	**3**	**58**	**3**	**4.0E-03**	**1.4E-02**	**11/7/2006**	**1.3E-03**
Toluene	1.31E-03	mg/L	Average	MW-2	3	58		1.4E-02	1.4E-02	11/7/2006	1.3E-03
Toluene	6.64E-04	mg/L	Average	MW-1	1	11		4.8E-03	4.8E-03	11/7/2006	6.6E-04
Toluene	5.91E-04	mg/L	Average	MW-5	1	11		4.0E-03	4.0E-03	11/7/2006	5.9E-04

Notes:
(1) Represents sampling dates from January 2001 to November 2007. See Appendix C for Groundwater data.

(2) Exposure Point evaluated in risk characterization is shaded and represents highest arithmetic average concentration among all monitoring well locations where analyte was detected.

Table 13
Summary of Estimated Indoor Air Risks and Hazards to Hypothetical Residents
Page Trowbridge Ranch Landfill

Compound	CAS Number	EPC (1)		Risk and Hazards Estimates for Hypothetical Residence with Basement				Risk and Hazards Estimates for Hypothetical Residence with Slab			
		ug/m^3	ppmv	Vapor Intrusion Model Output (2)		ELCR	HQ	Vapor Intrusion Model Output (2)		ELCR	HQ
				AF	Predicted Indoor Air Concentration (ug/m^3)			AF	Predicted Indoor Air Concentration (ug/m^3)		
1,1-Dichloroethene	75354	ND	ND	NA	NA			NA			
2-Butanone (Methyl Ethyl Ketone)	78933	40.8	1.4E-02	2.1E-03	8.3E-02	NC	1.6E-05	1.3E-03	5.3E-02	NC	1.0E-05
4-Methyl-2-pentanone	108101	27.14	6.5E-03	2.0E-03	5.4E-02	NC	1.7E-05	1.2E-03	3.3E-02	NC	1.1E-05
Acetone	67641	2200	9.1E-01	2.4E-03	5.2E+00	NC	1.4E-02	1.7E-03	3.8E+00	NC	1.0E-02
Benzene	71432	33.22	1.0E-02	2.1E-03	7.0E-02	2.2E-07	2.2E-03	1.4E-03	4.6E-02	1.5E-07	1.5E-03
Carbon Disulfide	75150	16.29	5.1E-03	2.2E-03	3.6E-02	NC	5.0E-05	1.6E-03	2.5E-02	NC	3.4E-05
Carbon Tetrachloride	56235	429.7	6.7E-02	2.0E-03	8.7E-01	5.4E-06	NA	1.3E-03	5.4E-01	3.3E-06	NA
Chloroform	67663	2091	4.2E-01	2.2E-03	4.7E+00	4.4E-05	NA	1.6E-03	3.2E+00	3.0E-05	NA
Ethyl Benzene	100414	18.97	4.3E-03	2.0E-03	3.8E-02	NC	3.6E-05	1.2E-03	2.3E-02	NC	2.2E-05
Freon 11 (Fluorotrichloromethane)	75694	893.1	1.6E-01	2.1E-03	1.9E+00	NC	2.6E-03	1.4E-03	1.2E+00	NC	1.7E-03
Freon 113 (1,1,2-Trichlorotrifluoroethane)	76131	251.3	3.2E-02	2.0E-03	5.1E-01	NC	1.6E-05	1.3E-03	3.2E-01	NC	1.0E-05
Freon 12 (Dichlorodifluoromethane)	75718	487.8	9.4E-02	1.9E-03	1.3E+00	NC	6.2E-03	1.1E-03	7.6E-01	NC	3.6E-03
m,p-Xylene	106423	80.16	1.8E-02	2.0E-03	1.6E-01	NC	2.2E-04	1.3E-03	1.0E-01	NC	1.4E-04
Methylene Chloride	75092	5.845	1.7E-03	2.2E-03	1.3E-02	2.5E-09	4.1E-06	1.5E-03	8.8E-03	1.7E-09	2.8E-06
o-Xylene	95476	15.97	3.6E-03	2.1E-03	3.4E-02	NC	4.6E-05	1.4E-03	2.2E-02	NC	3.0E-05
Tetrachloroethene	127184	32.71	4.7E-03	2.0E-03	6.4E-02	1.6E-07	1.0E-04	1.2E-03	3.9E-02	9.4E-08	6.2E-05
Toluene	108883	54.26	1.4E-02	2.1E-03	1.1E-01	NC	2.2E-05	1.4E-03	7.4E-02	NC	1.4E-05
Trichloroethene	79016	64.2	1.2E-02	2.0E-03	1.3E-01	1.1E-07	NA	1.3E-03	8.1E-02	6.7E-08	NA
					Total	5E-05	3E-02		Total	3E-05	2E-02

Notes:

(1) Soil Vapor Exposure Point Concentration (EPC) represented shallow soil vapor data collected in December 2007 at property boundary (see Figure 2 and Table 7). See Appendix E for derivation of EPC.
(2) See Appendix F for Output from USEPA Soil Gas Model (SG-ADV Version 3.1).
(3) See Appendix F for Risk and Hazard calculations from USEPA Soil Gas Model (SG-ADV Version 3.1).
(4) m,p-xylene assumed to be 100% p-xylene (see Appendix F)

AF = calculated Attenuation Factor (see Appendix F)
ELCR = Estimated Lifetime Cancer Risk
HQ = Hazard Quotient
NA = Not Available
NC = Compound not considered human carcinogen
ND = Compound Not Detected in any sample representing the exposure point.

Table 14
Summary of Hazard Indices and Estimated Cancer Risks
Page Trowbridge Ranch Landfill

Receptor	Exposure Point:	Hazard Index	Cancer Risk
Future Resident (1) (Adult/Child) Residence with basement	Tap Water (2)	1E-01	2E-06
	Indoor Air (basement)(3)	3E-02	5E-05
	Total (basement)	1E-01	5E-05
Future Resident (1) (Adult/Child) Residence on slab	Tap Water (2)	1E-01	2E-06
	Indoor Air (slab)(3)	2E-02	3E-05
	Total (slab)	1E-01	4E-05

Notes:
bgs = below ground surface
For noncancer hazards, the Hazard Index Limit is 1. **BOLD** font indicates exceedance.

For carcinogenic risk, the range of acceptable risk is 1E-4 to 1E-6. **BOLD** font indicates estimated cancer risks greater than this risk range.
NA = Not Applicable

(1) No exposure currently exist. Future exposures to residents are considered possible at off-property locations. Two estimates are provided--one assuming future residence constructed with basement (the more conservative assumption) and second assuming future residence constructed over slab (no basement).

(2) See Appendix D for risk calculations for groundwater exposures. Groundwater exposure point concentration represents highest temporal average concentration for current data (2001 to present) among all monitoring well locations evaluated.

(3) See Appendix F for risk calculations for indoor air exposures. Indoor Air based on November 2007 shallow soil vapor data collected on-site, representing conservative upper estimate of potential indoor air exposures to a hypothetical residential home constructed at edge of property with a basement or with a slab on grade. Ambient air exposures are considered to be substantially lower than estimated potential indoor air exposures.

APPENDIX A

CD of Available Historical Reports

APPENDIX B

Validation Report for December 2007 Soil Vapor Sampling Event

amec

Memo

To	**Barbara Pugh**	File no	**774330000**
From	**Denise Ladebauche**	Cc	
Date	**January 30, 2008**		

Subject **Data Review for Page-Trowbridge Ranch Landfill, Pinal County, AZ**

Laboratory data for the analyses of twenty soil gas samples (including two field duplicates), plus one field blank and one Trip Blank collected on December 18th and 19th, 2007 from the Page-Trowbridge Ranch Landfill site in Pinal County, AZ have been reviewed. These samples were submitted to Air Toxics LTD in Folsom, CA for analyses for volatile organic compounds by USEPA method TO-15. Air Toxics reported data under their Work Order Numbers 0712465A and 071465B. Both reports were reissued under their Work Order Numbers 0712465AR1 and 0712465BR1 to include Freon 11, Freon 12 and Freon 113.

This review included the evaluation of quality assurance/quality control data that support the quality of the reported results. Elements of data review included canister pressures, holding times, method, trip and field blanks, spikes, surrogate recoveries, and field duplicates. All criteria were within method expectations for accuracy and precision.

Samples included in this review are listed below:

SV-1-10-121807	SV-8-10-121807	FB-1-121807	SGD-DP-121907
SV-2-10-121807	SV-14-10-121807	SV-6-10-121807	MW-5-121907
SV-3-10-121807	SV-9-10-121807	SGS-SP-121907	MW-2-121907
SV-4-10-121807	SV-10-10-121807	SGD-SP-121907	TRIP BLANK
SV-5-10-121807	SV-11-10-121807	SGD-B-122-121907	
SV-7-10-121807	SV-13-10-121807	SGD-MP-121907	

The following comments are provided for data where quality assurance measurements indicate potential bias or where anomalous results were noted.

Samples MW-2-121907, MW-5-121907, SGS-SP-121907 and SV-4-10-121807 had detections of the tracer gas 1,1-difluoroethane. A tracer gas serves as a quality assurance/quality control measure to verify the integrity of the soil vapor probe seal and ensure that a soil vapor sample has not been diluted by outdoor air. Since the initial concentration of 1,1-difluoethane is unknown it is difficult to determine the percentage of breakthrough of the tracer gas. All non-detect results were qualified with a UJ indicating that the reporting limit is an estimate and the results are biased low. All the detected results were J qualified indicating that the results are estimated and biased low.

Three compounds exceeded the range of calibration and/or had peak saturation in a number of samples and the qualifications are listed below.

- Chloroform was qualified as estimated (J) in sample SV-11-10-121807 Lab Duplicate since it exceeded the range of calibration.
- Freon 11 was qualified as estimated (J) in samples SV-13-10-121807 and SGD-MP-121907 since it exceeded the range of calibration.
- 1,1-Difluoroethane was qualified as estimated (J) in samples MW-5-121907, MW-2-121907 and SV-4-10-121807 since it exceeded the range of calibration.
- The Freon 11 peak for samples SGD-DP-121907 and SGD-DP-121907 Lab Duplicate was saturated and as such has been qualified as estimated (J).

The original reports were reissued to include Freon 11, Freon 12 and Freon 113. All three compounds are included in Air Toxics standard TO-15 calibration mix, so the compounds could be added by the laboratory without reanalyzing the samples. All applicable QA/QC were within acceptance criteria.

APPENDIX C

Summary of All Groundwater Data

Appendix C

Table of Contents

Table C-1	Radiologic Data for Groundwater from On-Site Monitoring Wells
Table C-2	Radiologic Data for Groundwater from Off-Site Monitoring Wells
Table C-3	Summary Statistics for All Groundwater Sampling Events (1984 through 2007)
Table C-4	Groundwater Data (1984 - 2007)
Table C-5	Registered Wells within Four-Mile Radius of Page Trowbridge Ranch Landfill

Appendix Table C1

Radiologic Data for Groundwater from On-Site Monitoring Wells (1)

Page Trowbridge Ranch Landfill

			Drinking Water Standard (MCL)-->	20000 pCi/L		2,000 pCi/L					
On-Site Well ID	**Sample Date**	**Analysis Date**	**Comment**	**^{3}H measurements and Sigma values (2)**		**^{14}C measurements and Sigma values (3)**		**All other Nuclides and Sigma Values (4)**			**Units**
UA MW #1	5/24/1985	5/28/1985		<	319	<	229	<	119		pCi/L
UA MW #1	6/28/1985	6/28/1985		<	321	<	225	<	108		pCi/L
UA MW #1	10/29/1986	10/31/1986		<	372	<	236	<	163		pCi/L
UA MW #1	3/5/1987	3/13/1987		<	350	<	239	<	155		pCi/L
UA MW #1	7/9/1987	7/23/1987		<	392	<	288	<	131		pCi/L
UA MW #1	10/26/1987	11/20/1987			535 138	<	201	<	367		pCi/L
UA MW #1	4/18/1988	4/29/1988		<	488	<	260	<	480		pCi/L
UA MW #1	10/27/1988	11/4/1988		<	356	<	354	<	199		pCi/L
UA MW #1	4/18/1989	12/6/1989		<	350	<	276	<	247		pCi/L
UA MW #1	10/31/1989	11/3/1989		<	351	<	245	<	228		pCi/L
UA MW #1	4/18/1990	5/4/1990		<	340	<	211	<	266		pCi/L
UA MW #5	11/16/1990	12/9/1990		<	357	<	245	<	263		pCi/L
UA MW #5	5/6/1991	5/24/1991		<	357	<	258	<	272		pCi/L
UA MW #5	10/29/1991	11/15/1991		<	409	<	281	<	264		pCi/L
UA MW #5	4/21/1992	4/24/1992		<	435	<	266	<	272		pCi/L
UA MW #5	10/13/1992	10/14/1992		<	360	<	258	<	278		pCi/L
UA MW #5	4/20/1993	4/28/1993		<	349	<	220	<	246		pCi/L
UA MW #5	10/12/1993	10/13/1993		<	517	<	361		537	114	pCi/L
UA MW #5	10/12/1993	10/26/1993	Repeat Analysis					<	227		pCi/L
UA MW #5	4/14/1994	4/17/1994		<	315	<	207	<	243		pCi/L
UA MW #5	10/11/1994	10/15/1994		<	217	<	170	<	221		pCi/L
UA MW #5	4/26/1995	5/6/1995		<	200	<	134	<	217		pCi/L
UA MW #5	10/25/1995	10/27/1995		<	235	<	187	<	255		pCi/L
UA MW #5	2/21/1996	3/1/1996		<	209	<	243	<	233		pCi/L
UA MW #5	10/9/1996	11/23/1996			348	<	132	<	212		pCi/L
UA MW #5	3/26/1997	3/27/1997		<	294	<	175	<	292		pCi/L
UA MW #5	11/6/1997	11/10/1997		<	250	<	525	<	261		pCi/L
UA MW #5	3/11/1998	3/13/1998		<	239	<	236	<	252		pCi/L
UA MW #5	3/10/1999	6/21/1999		<	265	<	108	<	234		pCi/L
UA MW #5	1/19/2000	Not availabl		<	246	<	141	<	166		pCi/L
UA MW #5	4/26/2000	5/1/2000		<	241	<	152	<	235		pCi/L
UA MW #5	11/17/2000	11/22/2000		<	304	<	123		589	74	pCi/L
UA MW #5	11/17/2000	12/7/2000	Re-count	<	288	<	175	<	297		pCi/L
UA MW #5	11/17/2000	11/27/2000	Repeat Analysis					<	167		pCi/L
UA MW #5	1/31/2001	2/4/2001		<	237		217 26		781	58	pCi/L
UA MW #5	1/31/2001	2/20/2001	Repeat Analysis	<	232	<	171	<	218		pCi/L
UA MW #5	10/10/2001	10/19/2001		<	220	<	202	<	247		pCi/L
UA MW #5	3/27/2002	3/29/2002		<	247		334 53		367	65	pCi/L
UA MW #5	3/27/2002	4/7/2002	Repeat Analysis			<	97	<	242		pCi/L
UA MW #5	10/23/2002	10/26/2002		<	238	<	184		563	71	pCi/L
UA MW #5	10/23/2002	11/12/2002	Repeat Analysis					<	250		pCi/L
UA MW #5	4/23/2003	5/1/2003		<	222	<	188	<	270		pCi/L
UA MW #5	10/22/2003	11/12/2003		<	320	<	222	<	282		pCi/L
UA MW #5	4/21/2004	4/30/2004		<	242	<	227	<	257		pCi/L
UA MW #5	10/13/2004	10/24/2004		<	280	<	225	<	256		pCi/L
UA MW #5	4/13/2005	4/28/2005		<	298	<	216	<	265		pCi/L
UA MW #5	10/12/2005	10/21/2005		<	291	<	222	<	257		pCi/L
UA MW #5	10/12/2005	12/1/2005	Repeat Analysis	<	241	<	200	<	234		pCi/L
UA MW #5	4/12/2006	4/24/2006		<	360	<	181	<	252		pCi/L
UA MW #5	10/22/2006	11/1/2006		<	481	<	260	<	358		pCi/L
UA MW #5	4/11/2007	5/2/2007		<	424	<	163	<	258		pCi/L

Appendix Table C1

Radiologic Data for Groundwater from On-Site Monitoring Wells [1]

Page Trowbridge Ranch Landfill

			Drinking Water Standard (MCL)-->	20000 pCi/L		2,000 pCi/L						
On-Site Well ID	Sample Date	Analysis Date	Comment	^{3}H measurements and Sigma values [2]		^{14}C measurements and Sigma values [3]			All other Nuclides and Sigma Values [4]			Units
UA MW #2	1/24/1985	1/25/1985		<	335	<	230			189	41	pCi/L
UA MW #2	5/24/1985	5/28/1985		<	321	<	236		<	118		pCi/L
UA MW #2	6/28/1985	6/28/1985		<	329	<	231		<	112		pCi/L
UA MW #2	3/6/1987	3/13/1987		<	351	<	241		<	156		pCi/L
UA MW #2	7/9/1987	7/23/1987		<	405	<	289		<	156		pCi/L
UA MW #2	10/26/1987	11/20/1987			622	<	201		<	378		pCi/L
UA MW #2	4/18/1988	4/29/1988		<	447	<	256		<	389		pCi/L
UA MW #2	10/27/1988	11/4/1988		<	354	<	232		<	191		pCi/L
UA MW #2	4/18/1989	12/6/1989		<	347	<	257		<	256		pCi/L
UA MW #2	10/31/1989	11/3/1989		<	351	<	244		<	241		pCi/L
UA MW #2	4/18/1990	5/4/1990		<	367	<	204		<	261		pCi/L
UA MW #2	11/16/1990	12/9/1990		<	362	<	248		<	271		pCi/L
UA MW #2	5/6/1991	5/24/1991		<	404	<	278		<	288		pCi/L
UA MW #2	10/29/1991	11/15/1991		<	436	<	303		<	291		pCi/L
UA MW #2	4/21/1992	4/24/1992		<	458	<	282		<	287		pCi/L
UA MW #2	10/13/1992	10/14/1992		<	385	<	271		<	286		pCi/L
UA MW #2	4/20/1993	4/28/1993		<	358	<	230		<	245		pCi/L
UA MW #2	10/12/1993	10/13/1993		<	510	<	357			643	111	pCi/L
UA MW #2	10/12/1993	10/26/1993	Repeat Analysis						<	235		pCi/L
UA MW #2	4/14/1994	4/17/1994		<	305	<	202			284	60	pCi/L
UA MW #2	4/14/1994	4/22/1994	Repeat Analysis						<	215		pCi/L
UA MW #2	10/11/1994	10/15/1994		<	207	<	167		<	217		pCi/L
UA MW #2	4/26/1995	5/6/1995		<	199	<	114		<	210		pCi/L
UA MW #2	10/25/1995	10/27/1995		<	226	<	174			657	66	pCi/L
UA MW #2	10/25/1995	11/2/1995	Repeat Analysis						<	235		pCi/L
UA MW #2	2/21/1996	3/1/1996		<	203	<	230		<	244		pCi/L
UA MW #2	10/9/1996		No Sample									pCi/L
UA MW #2	3/26/1997	3/27/1997		<	241	<	159		<	254		pCi/L
UA MW #2	11/6/1997	11/10/1997		<	237	<	481		<	245		pCi/L
UA MW #2	3/11/1998	3/13/1998		<	224	<	199			417	68	pCi/L
UA MW #2	3/11/1998	3/24/1998	Repeat Analysis						<	230		pCi/L
UA MW #2	3/10/1999		No Sample									pCi/L
UA MW #2	1/19/2000		No Sample									pCi/L
UA MW #2	4/26/2000	5/1/2000		<	260	<	133		<	242		pCi/L
UA MW #2	11/17/2000	11/22/2000		<	248	<	99			801	64	pCi/L
UA MW #2	11/17/2000	12/7/2000	Re-count	<	238	<	172		<	243		pCi/L
UA MW #2	11/17/2000	11/27/2000	Repeat Analysis						<	166		pCi/L
UA MW #2	1/31/2001	2/4/2001		<	237		117	24		780	57	pCi/L
UA MW #2	1/31/2001	2/13/2001	Re-count	<	231	<	125			242	62	pCi/L
UA MW #2	1/31/2001	2/20/2001	Repeat Analysis	<	221	<	165		<	212		pCi/L
UA MW #2	10/10/2001	10/19/2001		<	219	<	191		<	246		pCi/L
UA MW #2	3/27/2002	3/29/2002		<	257		419	48		793	68	pCi/L
UA MW #2	3/27/2002	4/7/2002	Repeat Analysis			<	96		<	250		pCi/L
UA MW #2	10/23/2002	10/26/2002		<	230	<	180			951	69	pCi/L
UA MW #2	10/23/2002	11/12/2002	Repeat Analysis						<	251		pCi/L
UA MW #2	4/23/2003	5/1/2003		<	222	<	182		<	267		pCi/L
UA MW #2	10/22/2003	11/12/2003		<	320	<	217		<	282		pCi/L
UA MW #2	4/21/2004	4/30/2004		<	236	<	205		<	257		pCi/L
UA MW #2	10/13/2004	10/24/2004		<	282	<	224		<	254		pCi/L
UA MW #2	4/13/2005	4/28/2005		<	291	<	210		<	265		pCi/L
UA MW #2	10/12/2005	10/21/2005		<	301	<	216		<	253		pCi/L
UA MW #2	10/12/2005	12/1/2005	Repeat Analysis	<	213	<	211		<	232		pCi/L
UA MW #2	4/12/2006	4/24/2006		<	339	<	179		<	245		pCi/L
UA MW #2	10/22/2006	11/1/2006		<	493	<	358		<	355		pCi/L
UA MW #2	4/11/2007	5/2/2007		<	373	<	158		<	250		pCi/L

Appendix Table C1

Radiologic Data for Groundwater from On-Site Monitoring Wells (1)

Page Trowbridge Ranch Landfill

			Drinking Water Standard (MCL)-->	20000 pCi/L		2,000 pCi/L						
On-Site Well ID	Sample Date	Analysis Date	Comment	^{3}H measurements and Sigma values (2)		^{14}C measurements and Sigma values (3)		All other Nuclides and Sigma Values (4)			Units
UA MW #3	5/24/1985	5/28/1985		<	321	<	239	<	124		pCi/L
UA MW #3	6/28/1985	6/28/1985		<	329	<	233	<	117		pCi/L
UA MW #3	3/5/1987	3/13/1987		<	355	<	242	<	155		pCi/L
UA MW #3	7/10/1987	7/23/1987		<	407	<	268	<	169		pCi/L
UA MW #3	10/26/1987	11/20/1987		<	509	<	201	<	355		pCi/L
UA MW #3	4/18/1988	4/29/1988		<	455	<	258	<	422		pCi/L
UA MW #3	10/27/1988	11/4/1988		<	349	<	224	<	188		pCi/L
UA MW #3	4/18/1989	12/6/1989		<	339	<	263	<	258		pCi/L
UA MW #3	10/31/1989	11/3/1989		<	357	<	237	<	226		pCi/L
UA MW #3	4/18/1990	5/4/1990			732	<	207	<	256		pCi/L
UA MW #3	4/18/1990	5/11/1990	Repeat Analysis	<	336	<	237	<	243		pCi/L
UA MW #3	5/6/1991	5/24/1991		<	389	<	266	<	284		pCi/L
UA MW #3	10/29/1991	11/15/1991		<	425	<	285	<	281		pCi/L
UA MW #3	4/21/1992	4/24/1992		<	440	<	269	<	291		pCi/L
UA MW #3	10/13/1992	10/14/1992		<	379	<	270	<	287		pCi/L
UA MW #3	4/20/1993	4/28/1993		<	362	<	227	<	246		pCi/L
UA MW #3	10/12/1993	10/13/1993		<	555	<	372		494	119	pCi/L
UA MW #3	10/12/1993	10/26/1993	Repeat Analysis					<	218		pCi/L
UA MW #3	4/14/1994	4/17/1994		<	311	<	200		240	62	pCi/L
UA MW #3	4/14/1994	4/22/1994	Repeat Analysis					<	224		pCi/L
UA MW #3	10/11/1994	10/15/1994		<	212	<	173	<	221		pCi/L
UA MW #3	4/26/1995	5/6/1995		<	201	<	118	<	215		pCi/L
UA MW #3	10/25/1995	10/27/1995		<	254	<	190		490	73	pCi/L
UA MW #3	10/25/1995	11/2/1995	Repeat Analysis					<	233		pCi/L
UA MW #3	2/21/1996	3/1/1996		<	209	<	233	<	242		pCi/L
UA MW #3	10/9/1996	11/23/1996		<	228		184	39	<	213	pCi/L
UA MW #3	3/26/1997	3/27/1997		<	248	<	161	<	263		pCi/L
UA MW #3	11/6/1997	11/10/1997		<	243	<	503	<	253		pCi/L
UA MW #3	3/11/1998	3/13/1998		<	234	<	213		362	68	pCi/L
UA MW #3	3/11/1998	3/24/1998	Repeat Analysis					<	232		pCi/L
UA MW #3	3/10/1999	6/21/1999		<	269	<	99	<	234		pCi/L
UA MW #3	1/19/2000	Not available		<	272	<	144	<	181		pCi/L
UA MW #3	4/26/2000	5/1/2000		<	239	<	132	<	234		pCi/L
UA MW #3	11/17/2000	11/22/2000		<	244	<	102		1013	65	pCi/L
UA MW #3	11/17/2000	12/7/2000	Re-count	<	232	<	169	<	239		pCi/L
UA MW #3	11/17/2000	11/27/2000	Repeat Analysis					<	166		pCi/L
UA MW #3	1/31/2001	2/4/2001		<	234		105	25	833	58	pCi/L
UA MW #3	1/31/2001	2/13/2001	Re-count	<	230	<	126		351	63	pCi/L
UA MW #3	1/31/2001	2/20/2001	Repeat Analysis	<	230	<	167	<	213		pCi/L
UA MW #3	10/10/2001	10/19/2001		<	218	<	194	<	247		pCi/L
UA MW #3	3/27/2002	3/29/2002		<	253		272	50	750	68	pCi/L
UA MW #3	3/27/2002	4/7/2002	Repeat Analysis			<	96	<	245		pCi/L
UA MW #3	10/23/2002	10/26/2002		<	236		237	47	1031	72	pCi/L
UA MW #3	10/23/2002	11/12/2002	Repeat Analysis				298	46	<	250	pCi/L
UA MW #3	10/23/2002	11/16/2002	Repeat Analysis			<	175				pCi/L
UA MW #3	4/23/2003	5/1/2003		<	223	<	185	<	270		pCi/L
UA MW #3	10/22/2003	11/12/2003		<	321	<	220	<	282		pCi/L
UA MW #3	4/21/2004	4/30/2004		<	244	<	218	<	253		pCi/L
UA MW #3	10/13/2004	10/24/2004		<	290	<	221	<	254		pCi/L
UA MW #3	4/13/2005	4/28/2005		<	298	<	219	<	264		pCi/L
UA MW #3	10/12/2005	10/21/2005		<	292	<	219	<	269		pCi/L
UA MW #3	10/12/2005	12/1/2005	Repeat Analysis	<	227	<	214	<	233		pCi/L
UA MW #3	4/12/2006	4/24/2006		<	355	<	181	<	248		pCi/L
UA MW #3	10/11/2006	11/1/2006		<	464	<	255	<	389		pCi/L
UA MW #3	4/11/2007	5/2/2007		<	383	<	158	<	245		pCi/L

Appendix Table C1

Radiologic Data for Groundwater from On-Site Monitoring Wells (1)

Page Trowbridge Ranch Landfill

			Drinking Water Standard (MCL)-->	20000 pCi/L		2,000 pCi/L						
On-Site Well ID	**Sample Date**	**Analysis Date**	**Comment**	**^{3}H measurements and Sigma values (2)**		**^{14}C measurements and Sigma values (3)**			**All other Nuclides and Sigma Values (4)**			**Units**
UA MW #4	5/24/1985	5/28/1985		<	329	<	256		<	132		pCi/L
UA MW #4	6/28/1985	6/28/1985		<	333	<	236		<	129		pCi/L
UA MW #4	3/6/1987	3/13/1987		<	347	<	240		<	160		pCi/L
UA MW #4	7/10/1987	7/23/1987		<	407	<	287		<	174		pCi/L
UA MW #4	10/26/1987	11/20/1987			998	<	201		<	392		pCi/L
UA MW #4	4/18/1988	4/29/1988		<	452		275	70	<	399		pCi/L
UA MW #4	10/27/1988	11/4/1988		<	353	<	226		<	190		pCi/L
UA MW #4	4/18/1989	12/6/1989		<	354	<	252		<	257		pCi/L
UA MW #4	10/31/1989	11/3/1989		<	346	<	236		<	224		pCi/L
UA MW #4	4/18/1990	5/4/1990		<	335	<	209		<	253		pCi/L
UA MW #4	11/16/1990	12/9/1990		<	357	<	247		<	276		pCi/L
UA MW #4	5/6/1991	5/24/1991		<	370	<	262		<	276		pCi/L
UA MW #4	10/29/1991	11/15/1991		<	411	<	282		<	270		pCi/L
UA MW #4	4/21/1992	4/24/1992		<	438	<	257		<	281		pCi/L
UA MW #4	10/13/1992	10/14/1992		<	346	<	250		<	267		pCi/L
UA MW #4	4/20/1993	4/28/1993		<	353	<	224		<	247		pCi/L
UA MW #4	10/12/1993	10/13/1993		<	516	<	361			452	113	pCi/L
UA MW #4	10/12/1993	10/26/1993	Repeat Analysis						<	220		pCi/L
UA MW #4	4/14/1994	4/17/1994		<	301	<	198			273	61	pCi/L
UA MW #4	4/14/1994	4/22/1994	Repeat Analysis						<	221		pCi/L
UA MW #4	10/11/1994	10/15/1994		<	215	<	169		<	220		pCi/L
UA MW #4	4/26/1995	5/6/1995		<	244	<	146		<	265		pCi/L
UA MW #4	10/25/1995	10/27/1995		<	218	<	181			364	65	pCi/L
UA MW #4	10/25/1995	11/2/1995	Repeat Analysis						<	230		pCi/L
UA MW #4	2/21/1996	3/1/1996		<	203	<	242		<	240		pCi/L
UA MW #4	10/9/1996	11/23/1996			458		250	40	<	213		pCi/L
UA MW #4	3/26/1997	3/27/1997		<	240	<	161		<	256		pCi/L
UA MW #4	11/6/1997	11/10/1997		<	248	<	508		<	259		pCi/L
UA MW #4	3/11/1998	3/13/1998		<	235	<	223			275	67	pCi/L
UA MW #4	3/11/1998	3/24/1998	Repeat Analysis						<	233		pCi/L
UA MW #4	3/10/1999	6/21/1999		<	249	<	101		<	226		pCi/L
UA MW #4	1/19/2000		No Sample									pCi/L
UA MW #4	4/26/2000	5/1/2000		<	238	<	144		<	235		pCi/L
UA MW #4	11/17/2000	11/22/2000		<	251	<	100			248	61	pCi/L
UA MW #4	11/17/2000	12/7/2000	Re-count	<	238	<	146		<	237		pCi/L
UA MW #4	11/17/2000	11/27/2000	Repeat Analysis						<	168		pCi/L
UA MW #4	1/31/2001	2/4/2001		<	230		197	26		799	58	pCi/L
UA MW #4	1/31/2001	Not available	for re-count									pCi/L
UA MW #4	1/31/2001	2/20/2001	Repeat Analysis	<	242	<	169		<	217		pCi/L
UA MW #4	10/10/2001	10/19/2001		<	220	<	199		<	247		pCi/L
UA MW #4	3/27/2002	3/29/2002		<	247		435	89		792	69	pCi/L
UA MW #4	3/27/2002	4/7/2002	Repeat Analysis			<	97		<	249		pCi/L
UA MW #4	10/23/2002	10/26/2002		<	226	<	181			834	70	pCi/L
UA MW #4	10/23/2002	11/12/2002	Repeat Analysis						<	273		pCi/L
UA MW #4	4/23/2003	5/1/2003		<	222	<	187		<	268		pCi/L
UA MW #4	10/22/2003	11/12/2003		<	317	<	220		<	284		pCi/L
UA MW #4	4/21/2004	4/30/2004		<	246	<	223		<	268		pCi/L
UA MW #4	10/13/2004	10/24/2004		<	295	<	223		<	264		pCi/L
UA MW #4	4/13/2005	4/28/2005		<	291	<	219		<	264		pCi/L
UA MW #4	10/12/2005	10/21/2005			6143		777	60	<	264		pCi/L
UA MW #4	10/12/2005	12/1/2005	Repeat Analysis		396	<	201		<	233		pCi/L
UA MW #4	4/12/2006	4/24/2006		<	365	<	180		<	254		pCi/L
UA MW #4	10/11/2006	11/1/2006		<	467	<	256		<	396		pCi/L
UA MW #4	4/11/2007	5/2/2007		<	389	<	164		<	279		pCi/L

Notes
< = Less than lower limit of detection
MCL = Maximum Contaminant Level
MW = Monitoring Well
UA = University of Arizona
(1) Results from Liquid Scintillation Counting
(2) Results from Channel A
(3) Results from Channel B
(4) Results from Channel C

Appendix Table C2

Radiologic Data for Groundwater from Off-Site Monitoring Wells [1]

Page Trowbridge Ranch Landfill

Drinking Water Standard (MCL)-->				20000 pCi/L		2,000 pCi/L				Units
Off-Site Well ID	Sample Date	Analysis Date	Comment	^{3}H measurements and Sigma values [2]		^{14}C measurements and Sigma values [3]		All other Nuclides and Sigma values [4]		
Falcon Valley Ranch HQ Well	1/12/1982	Not Available		< 404				< 280		pCi/L
Falcon Valley Ranch HQ Well	2/4/1982	Not Available		< 534				< 361		pCi/L
Falcon Valley Ranch HQ Well	3/8/1982	Not Available		< 381				< 253		pCi/L
Falcon Valley Ranch HQ Well	4/1/1982	Not Available		< 382				< 255		pCi/L
Falcon Valley Ranch HQ Well	4/29/1982	Not Available		< 366				< 223		pCi/L
Falcon Valley Ranch HQ Well	5/27/1982	Not Available		< 470				< 300		pCi/L
Falcon Valley Ranch HQ Well	6/24/1982	Not Available		< 415				< 257		pCi/L
Falcon Valley Ranch HQ Well	7/29/1982	Not Available		< 396				< 264		pCi/L
Falcon Valley Ranch HQ Well	8/26/1982	Not Available		< 403				< 266		pCi/L
Falcon Valley Ranch HQ Well	9/30/1982	Not Available		< 554				< 381		pCi/L
Falcon Valley Ranch HQ Well	10/28/1982	Not Available		< 605				< 370		pCi/L
Falcon Valley Ranch HQ Well	12/2/1982	Not Available		< 438				< 372		pCi/L
Falcon Valley Ranch HQ Well	1/20/1983	Not Available		< 413				< 234		pCi/L
Falcon Valley Ranch HQ Well	3/1/1983	Not Available		< 416				< 242		pCi/L
Falcon Valley Ranch HQ Well	4/14/1983	Not Available		< 454				< 246		pCi/L
Falcon Valley Ranch HQ Well	5/26/1983	Not Available		< 439				< 253		pCi/L
Falcon Valley Ranch HQ Well	7/14/1983	Not Available		< 421				< 248		pCi/L
Falcon Valley Ranch HQ Well	9/1/1983	Not Available		< 401				< 273		pCi/L
Falcon Valley Ranch HQ Well	9/29/1983	Not Available		< 438				< 255		pCi/L
Falcon Valley Ranch HQ Well	10/27/1983	Not Available		< 609				< 401		pCi/L
Falcon Valley Ranch HQ Well	12/1/1983	Not Available		< 409				< 250		pCi/L
Falcon Valley Ranch HQ Well	1/5/1984	1/20/1984		< 417				< 337		pCi/L
Falcon Valley Ranch HQ Well	2/2/1984	2/3/1984		< 406				< 243		pCi/L
Falcon Valley Ranch HQ Well	2/29/1984	3/16/1984		< 431				< 225		pCi/L
Falcon Valley Ranch HQ Well	3/29/1984	4/20/1984		< 622				< 336		pCi/L
Falcon Valley Ranch HQ Well	5/3/1984	5/23/1984		< 608				< 353		pCi/L
Falcon Valley Ranch HQ Well	5/31/1984	6/14/1984		< 443				< 265		pCi/L
Falcon Valley Ranch HQ Well	7/3/1984	7/13/1984		< 432				< 250		pCi/L
Falcon Valley Ranch HQ Well	8/2/1984	8/17/1984		< 376		< 329		< 168		pCi/L
Falcon Valley Ranch HQ Well	8/28/1984	9/7/1984		< 332		< 279		< 120		pCi/L
Falcon Valley Ranch HQ Well	10/16/1984	10/17/1984		< 343		< 238		< 136		pCi/L
Falcon Valley Ranch HQ Well	11/1/1984	11/6/1984		< 347		< 239		< 167		pCi/L
Falcon Valley Ranch HQ Well	1/16/1985	1/25/1985		< 335		< 242		< 132		pCi/L
Falcon Valley Ranch HQ Well	2/26/1985	3/8/1985		< 316		< 269		< 126		pCi/L
Falcon Valley Ranch HQ Well	3/12/1985	3/15/1985		< 324		< 225		< 122		pCi/L
Falcon Valley Ranch HQ Well	5/2/1985	5/24/1985		< 316		< 230		< 122		pCi/L
Falcon Valley Ranch HQ Well	8/14/1985	8/23/1985		< 327		< 236		< 99		pCi/L
Falcon Valley Ranch HQ Well	9/6/1985	9/13/1985		< 342		< 245		< 126		pCi/L
Falcon Valley Ranch HQ Well	10/2/1985	10/15/1985		596	94	< 237		< 141		pCi/L
Falcon Valley Ranch HQ Well	10/25/1985	10/25/1985		< 333		< 242		< 117		pCi/L
Falcon Valley Ranch HQ Well	11/20/1985	11/22/1985		< 327		< 235		< 115		pCi/L
Falcon Valley Ranch HQ Well	1/22/1986	1/24/1986		< 394		< 248		< 119		pCi/L
Falcon Valley Ranch HQ Well	1/29/1986	1/31/1986		< 405		< 244		< 130		pCi/L
Falcon Valley Ranch HQ Well	3/6/1986	3/14/1986		< 333		< 228		< 112		pCi/L
Falcon Valley Ranch HQ Well	3/31/1986	4/4/1986		< 332		< 246		< 115		pCi/L
Falcon Valley Ranch HQ Well	4/30/1986	5/1/1986		< 320		< 240		< 113		pCi/L
Falcon Valley Ranch HQ Well	5/29/1986	5/30/1986		< 332		< 242		308	28	pCi/L
Falcon Valley Ranch HQ Well	6/25/1986	6/27/1986		< 368		< 231		< 115		pCi/L
Falcon Valley Ranch HQ Well	7/29/1986	8/5/1986		< 325		260	64	< 111		pCi/L
Falcon Valley Ranch HQ Well	8/27/1986	8/29/1986		417	86	< 218		134	31	pCi/L
Falcon Valley Ranch HQ Well	9/25/1986	9/26/1986		< 367		< 245		< 122		pCi/L
Falcon Valley Ranch HQ Well	10/30/1986	10/31/1986		< 371		< 234		< 128		pCi/L
Falcon Valley Ranch HQ Well	11/21/1986	11/26/1986		< 369		< 224		< 109		pCi/L
Falcon Valley Ranch HQ Well	12/31/1986	1/16/1987		< 349		< 239		< 171		pCi/L

Appendix Table C2
Radiologic Data for Groundwater from Off-Site Monitoring Wells (1)
Page Trowbridge Ranch Landfill

Drinking Water Standard (MCL)-->				20000 pCi/L		2,000 pCi/L				Units
Off-Site Well ID	Sample Date	Analysis Date	Comment	^{3}H measurements and Sigma values (2)		^{14}C measurements and Sigma values (3)		All other Nuclides and Sigma values (4)		
Falcon Valley Ranch HQ Well	1/29/1987	1/30/1987		< 307		< 237		< 144		pCi/L
Falcon Valley Ranch HQ Well	2/25/1987	3/13/1987		< 350		< 235		< 129		pCi/L
Falcon Valley Ranch HQ Well	3/30/1987	4/3/1987		< 330		< 240		< 140		pCi/L
Falcon Valley Ranch HQ Well	4/29/1987	5/4/1987		< 333		< 238		< 149		pCi/L
Falcon Valley Ranch HQ Well	5/28/1987	6/5/1987		< 337		< 235		< 134		pCi/L
Falcon Valley Ranch HQ Well	6/26/1987	7/3/1987		< 321		< 228		< 126		pCi/L
Falcon Valley Ranch HQ Well	7/29/1987	7/31/1987		< 327		< 268		207	32	pCi/L
Falcon Valley Ranch HQ Well	8/31/1987	9/18/1987		< 357		< 247		< 243		pCi/L
Falcon Valley Ranch HQ Well	9/30/1987	10/2/1987		< 366		< 231		< 228		pCi/L
Falcon Valley Ranch HQ Well	10/29/1987	11/20/1987		< 353		< 201		< 266		pCi/L
Falcon Valley Ranch HQ Well	11/20/1987	11/25/1987		< 357		< 209		< 263		pCi/L
Falcon Valley Ranch HQ Well	12/31/1987	1/8/1988		< 329		< 203		< 167		pCi/L
Falcon Valley Ranch HQ Well	1/27/1988	1/29/1988		< 372		< 240		< 270		pCi/L
Falcon Valley Ranch HQ Well	2/29/1988	3/7/1988		< 344		< 227		< 290		pCi/L
Falcon Valley Ranch HQ Well	3/31/1988	4/8/1988		< 340		< 228		< 253		pCi/L
Falcon Valley Ranch HQ Well	4/27/1988	4/29/1988		< 491		< 253		< 326		pCi/L
Falcon Valley Ranch HQ Well	6/6/1988	6/10/1988		< 425		< 242		< 398		pCi/L
Falcon Valley Ranch HQ Well	6/6/1988	6/10/1988	Eval-Universol	< 377		< 237		< 253		pCi/L
Falcon Valley Ranch HQ Well	6/29/1988	7/16/1988		< 310		< 233		< 247		pCi/L
Falcon Valley Ranch HQ Well	7/28/1988	7/30/1988		< 338		< 233		< 233		pCi/L
Falcon Valley Ranch HQ Well	9/1/1988	9/2/1988		< 333		< 226		391	61	pCi/L
Falcon Valley Ranch HQ Well	9/29/1988	9/30/1988		< 331		< 230		< 230		pCi/L
Falcon Valley Ranch HQ Well	10/27/1988	11/4/1988		< 351		< 230		< 205		pCi/L
Falcon Valley Ranch HQ Well	11/17/1988	11/18/1988		< 337		< 231		< 247		pCi/L
Falcon Valley Ranch HQ Well	11/17/1988	11/18/1988	Eval-Universol-ES	< 358		< 234		< 251		pCi/L
Falcon Valley Ranch HQ Well	1/6/1989	1/12/1989		< 367		< 242		< 231		pCi/L
Falcon Valley Ranch HQ Well	1/31/1989	2/3/1989		< 319		< 219		< 207		pCi/L
Falcon Valley Ranch HQ Well	2/28/1989	3/3/1989		< 324		< 228		< 193		pCi/L
Falcon Valley Ranch HQ Well	3/31/1989	4/10/1989		< 322		< 224		< 269		pCi/L
Falcon Valley Ranch HQ Well	5/3/1989	5/12/1989		< 292		< 230		< 239		pCi/L
Falcon Valley Ranch HQ Well	6/1/1989	6/9/1989		< 280		< 234		< 225		pCi/L
Falcon Valley Ranch HQ Well	6/29/1989	7/7/1989		< 315		< 194		< 162		pCi/L
Falcon Valley Ranch HQ Well	7/28/1989	8/16/1989		< 347		< 245		< 232		pCi/L
Falcon Valley Ranch HQ Well	9/8/1989	10/4/1989		< 353		< 235		245	56	pCi/L
Falcon Valley Ranch HQ Well	10/4/1989	10/6/1989		< 364		< 219		304	70	pCi/L
Falcon Valley Ranch HQ Well	11/1/1989	11/3/1989		< 378		< 239		< 223		pCi/L
Falcon Valley Ranch HQ Well	12/6/1989	12/22/1989		< 323		< 239		< 237		pCi/L
Falcon Valley Ranch HQ Well	1/5/1990	1/8/1990		< 302		< 191		< 225		pCi/L
Falcon Valley Ranch HQ Well	2/7/1990	2/23/1990		< 321		< 225		< 164		pCi/L
Falcon Valley Ranch HQ Well	2/28/1990	3/12/1990		< 313		< 242		< 234		pCi/L
Falcon Valley Ranch HQ Well	3/29/1990	4/2/1990		< 302		< 200		303	50	pCi/L
Falcon Valley Ranch HQ Well	5/16/1990	5/18/1990		< 330		< 248		271	70	pCi/L
Falcon Valley Ranch HQ Well	6/6/1990	6/8/1990		< 307		< 205		< 222		pCi/L
Falcon Valley Ranch HQ Well	7/5/1990	7/6/1990		< 334		< 218		< 190		pCi/L
Falcon Valley Ranch HQ Well	8/2/1990	8/3/1990		< 343		< 243		488	72	pCi/L
Falcon Valley Ranch HQ Well	9/6/1990	9/14/1990		< 369		< 238		< 257		pCi/L
Falcon Valley Ranch HQ Well	10/3/1990	10/4/1990		< 338		< 239		< 217		pCi/L
Falcon Valley Ranch HQ Well	10/31/1990	11/8/1990		< 350		< 255		< 269		pCi/L
Falcon Valley Ranch HQ Well	12/3/1990	12/7/1990		< 350		< 238		< 267		pCi/L
Falcon Valley Ranch HQ Well	1/10/1991	1/14/1991		< 358		< 255		< 254		pCi/L
Falcon Valley Ranch HQ Well	2/5/1991	2/12/1991		< 459		< 275		< 270		pCi/L
Falcon Valley Ranch HQ Well	3/7/1991	3/14/1991		< 431		< 277		< 295		pCi/L
Falcon Valley Ranch HQ Well	3/26/1991	3/29/1991		< 379		< 272		< 268		pCi/L
Falcon Valley Ranch HQ Well	4/30/1991	5/4/1991		< 363		< 260		< 265		pCi/L

Appendix Table C2
Radiologic Data for Groundwater from Off-Site Monitoring Wells (1)
Page Trowbridge Ranch Landfill

Drinking Water Standard (MCL)-->				20000 pCi/L		2,000 pCi/L				Units
Off-Site Well ID	Sample Date	Analysis Date	Comment	^{3}H measurements and Sigma values (2)		^{14}C measurements and Sigma values (3)		All other Nuclides and Sigma values (4)		
Falcon Valley Ranch HQ Well	5/30/1991	6/1/1991		< 357		< 248		< 244		pCi/L
Falcon Valley Ranch HQ Well	7/2/1991	7/3/1991		< 426		< 268		< 275		pCi/L
Falcon Valley Ranch HQ Well	8/1/1991	8/6/1991		< 382		< 259		< 253		pCi/L
Falcon Valley Ranch HQ Well	8/29/1991	8/31/1991		< 414		< 268		< 259		pCi/L
Falcon Valley Ranch HQ Well	9/24/1991	9/27/1991		< 395		< 272		< 256		pCi/L
Falcon Valley Ranch HQ Well	10/31/1991	11/1/1991		< 387		< 264		< 215		pCi/L
Falcon Valley Ranch HQ Well	12/5/1991	Not available		< 361		< 252		< 233		pCi/L
Falcon Valley Ranch HQ Well	1/9/1992	1/10/1992		< 381		< 257		< 244		pCi/L
Falcon Valley Ranch HQ Well	1/30/1992	1/31/1992		< 388		< 255		< 239		pCi/L
Falcon Valley Ranch HQ Well	3/12/1992	3/13/1992		< 382				< 203		pCi/L
Falcon Valley Ranch HQ Well	4/7/1992	4/8/1992		< 396				< 184		pCi/L
Falcon Valley Ranch HQ Well	5/5/1992	5/5/1992		< 391		< 251		< 247		pCi/L
Falcon Valley Ranch HQ Well	6/2/1992	6/2/1992		< 386		< 245		< 214		pCi/L
Falcon Valley Ranch HQ Well	7/10/1992	7/10/1992		< 342		< 255		< 236		pCi/L
Falcon Valley Ranch HQ Well	7/30/1992	7/30/1992		< 389		< 238		< 256		pCi/L
Falcon Valley Ranch HQ Well	8/26/1992	8/27/1992		< 334		< 253		< 261		pCi/L
Falcon Valley Ranch HQ Well	10/8/1992	10/8/1992		< 338		< 245		< 271		pCi/L
Falcon Valley Ranch HQ Well	11/5/1992	11/13/1992		< 338		< 243		< 221		pCi/L
Falcon Valley Ranch HQ Well	12/15/1992	12/18/1992		< 328		< 220		< 264		pCi/L
Falcon Valley Ranch HQ Well	1/22/1993	1/29/1993		< 312		< 225		< 249		pCi/L
Falcon Valley Ranch HQ Well	2/5/1993	2/5/1993		< 326		< 226		< 228		pCi/L
Falcon Valley Ranch HQ Well	2/26/1993	2/26/1993		< 357		< 243		< 218		pCi/L
Falcon Valley Ranch HQ Well	4/5/1993	4/7/1993		< 345		< 201		< 175		pCi/L
Falcon Valley Ranch HQ Well	5/14/1993	5/16/1993		< 323		< 208		< 228		pCi/L
Falcon Valley Ranch HQ Well	6/10/1993	6/16/1993		< 334		< 219		< 222		pCi/L
Falcon Valley Ranch HQ Well	7/7/1993	7/9/1993		< 283		< 213		< 230		pCi/L
Falcon Valley Ranch HQ Well	7/30/1993	7/30/1993		< 287		< 218		< 200		pCi/L
Falcon Valley Ranch HQ Well	9/2/1993	9/10/1993		< 307		< 159		< 166		pCi/L
Falcon Valley Ranch HQ Well	10/15/1993	10/15/1993		< 505		< 350		< 404		pCi/L
Falcon Valley Ranch HQ Well	10/15/1993	11/17/1993	Repeat Analysis					< 217		pCi/L
Falcon Valley Ranch HQ Well	10/28/1993	10/31/1993		< 288		< 215		< 224		pCi/L
Falcon Valley Ranch HQ Well	11/23/1993	11/24/1993		< 298		< 210		< 209		pCi/L
Falcon Valley Ranch HQ Well	12/20/1993	12/23/1993		< 294		< 171		< 184		pCi/L
Falcon Valley Ranch HQ Well	1/18/1994	1/26/1994		< 293		< 207		< 154		pCi/L
Falcon Valley Ranch HQ Well	2/24/1994	2/24/1994		< 299		< 191		< 221		pCi/L
Falcon Valley Ranch HQ Well	3/22/1994	3/24/1994		< 302		< 202		< 230		pCi/L
Falcon Valley Ranch HQ Well	4/12/1994	4/15/1994		< 295		< 221		< 212		pCi/L
Falcon Valley Ranch HQ Well	5/31/1994	6/2/1994		< 197		< 120		< 174		pCi/L
Falcon Valley Ranch HQ Well	6/14/1994	6/15/1994		< 183		< 157		327	46	pCi/L
Falcon Valley Ranch HQ Well	6/14/1994	6/22/1994	Repeat Analysis					< 169		pCi/L
Falcon Valley Ranch HQ Well	7/7/1994	7/12/1994		< 369		< 290		< 351		pCi/L
Falcon Valley Ranch HQ Well	8/4/1994	8/10/1994		< 188		< 138		< 159		pCi/L
Falcon Valley Ranch HQ Well	9/8/1994	9/9/1994		< 212		< 134		278	46	pCi/L
Falcon Valley Ranch HQ Well	9/8/1994	9/13/1994	Repeat Analysis					< 151		pCi/L
Falcon Valley Ranch HQ Well	10/6/1994	10/8/1994		< 201		< 171		< 235		pCi/L
Falcon Valley Ranch HQ Well	11/3/1994	11/9/1994		< 223		< 163		< 255		pCi/L
Falcon Valley Ranch HQ Well	12/8/1994	12/10/1994		< 212		< 174		< 254		pCi/L
Falcon Valley Ranch HQ Well	1/10/1995	1/14/1995		< 257		< 181		< 206		pCi/L
Falcon Valley Ranch HQ Well	2/7/1995	2/14/1995		< 238		< 143		< 237		pCi/L
Falcon Valley Ranch HQ Well	3/7/1995	3/10/1995		< 198		< 127		< 225		pCi/L
Falcon Valley Ranch HQ Well	4/6/1995	4/14/1995		< 200		< 134		< 188		pCi/L
Falcon Valley Ranch HQ Well	5/11/1995	5/13/1995		< 207		< 117		< 241		pCi/L
Falcon Valley Ranch HQ Well	6/8/1995	6/14/1995		< 210		< 116		< 189		pCi/L
Falcon Valley Ranch HQ Well	7/6/1995	7/7/1995		< 212		< 122		< 232		pCi/L

Appendix Table C2
Radiologic Data for Groundwater from Off-Site Monitoring Wells (1)
Page Trowbridge Ranch Landfill

Drinking Water Standard (MCL)-->				20000 pCi/L		2,000 pCi/L				Units
Off-Site Well ID	**Sample Date**	**Analysis Date**	**Comment**	**^{3}H measurements and Sigma values (2)**		**^{14}C measurements and Sigma values (3)**		**All other Nuclides and Sigma values (4)**		
Falcon Valley Ranch HQ Well	8/11/1995	8/20/1995		< 208		< 380		< 229		pCi/L
Falcon Valley Ranch HQ Well	9/12/1995	9/15/1995		< 205		< 142		< 224		pCi/L
Falcon Valley Ranch HQ Well	10/13/1995	10/17/1995		< 215		< 165		< 238		pCi/L
Falcon Valley Ranch HQ Well	11/21/1995	11/22/1995		< 205		< 122		< 205		pCi/L
Falcon Valley Ranch HQ Well	12/15/1995	12/15/1995		< 230		< 150		< 233		pCi/L
Falcon Valley Ranch HQ Well	1/23/1996	1/25/1996		< 233		< 82		< 242		pCi/L
Falcon Valley Ranch HQ Well	2/7/1996	2/8/1996		< 209		< 97		< 191		pCi/L
Falcon Valley Ranch HQ Well	3/19/1996	3/21/1996		< 207		< 151		< 217		pCi/L
Falcon Valley Ranch HQ Well	4/30/1996	Not available		< 210		< 200		< 233		pCi/L
Falcon Valley Ranch HQ Well	6/6/1996	6/8/1996		< 222		< 106		< 255		pCi/L
Falcon Valley Ranch HQ Well	6/27/1996	7/3/1996		< 222		< 85		< 237		pCi/L
Falcon Valley Ranch HQ Well	11/13/1996	11/21/1996		< 220		< 114		< 207		pCi/L
Falcon Valley Ranch HQ Well	12/12/1996	12/17/1996		< 224		< 149		< 206		pCi/L
Falcon Valley Ranch HQ Well	1/2/1997	1/3/1997		< 230		< 90		< 205	< 205	pCi/L
Falcon Valley Ranch HQ Well	2/13/1997	2/14/1997		< 251		< 172		< 186		pCi/L
Falcon Valley Ranch HQ Well	3/13/1997	3/14/1997		< 235		< 146		< 186		pCi/L
Falcon Valley Ranch HQ Well	4/8/1997	4/10/1997		< 222		< 103		< 237		pCi/L
Falcon Valley Ranch HQ Well	5/29/1997	5/30/1997		< 217		< 83		< 219		pCi/L
Falcon Valley Ranch HQ Well	6/16/1997	6/19/1997		< 207		< 175		< 216		pCi/L
Falcon Valley Ranch HQ Well	7/15/1997	7/15/1997		< 218		< 156		< 612		pCi/L
Falcon Valley Ranch HQ Well	8/14/1997	8/14/1997		< 232		< 136		< 246		pCi/L
Falcon Valley Ranch HQ Well	9/16/1997	9/18/1997		< 237		< 181		< 239		pCi/L
Falcon Valley Ranch HQ Well	10/13/1997	10/14/1997		< 232		< 117		< 264		pCi/L
Falcon Valley Ranch HQ Well	11/18/1997	11/24/1997		< 244		< 150		< 223		pCi/L
Falcon Valley Ranch HQ Well	12/18/1997	12/19/1997		< 235		< 116		< 251		pCi/L
Falcon Valley Ranch HQ Well	1/16/1998	1/17/1998		< 225		< 202		< 242		pCi/L
Falcon Valley Ranch HQ Well	2/17/1998	2/19/1998		< 231		< 89		< 246		pCi/L
Falcon Valley Ranch HQ Well	3/20/1998	3/24/1998		< 217		< 110		< 215		pCi/L
Falcon Valley Ranch HQ Well	4/21/1998	4/23/1998		< 225		< 144		< 238		pCi/L
Falcon Valley Ranch HQ Well	5/26/1998	5/27/1998		< 223		< 129		875	68	pCi/L
Falcon Valley Ranch HQ Well	5/26/1998	5/30/1998	Repeat Analysis					< 240		pCi/L
Falcon Valley Ranch HQ Well	7/7/1998	7/10/1998		406	60	< 167		< 228		pCi/L
Falcon Valley Ranch HQ Well	7/7/1998	7/14/1998	Repeat Analysis	< 216						pCi/L
Falcon Valley Ranch HQ Well	10/1/1998	10/2/1998		< 208		< 91		< 210		pCi/L
Falcon Valley Ranch HQ Well	1/4/1999	1/5/1999		< 234		< 94		< 179		pCi/L
Falcon Valley Ranch HQ Well	4/5/1999	4/10/1999		< 214		< 104		< 211		pCi/L
Falcon Valley Ranch HQ Well	7/6/1999	7/8/1999		< 237		< 99		< 221		pCi/L
Falcon Valley Ranch HQ Well	10/5/1999	10/8/1999		< 247		< 141		232	55	pCi/L
Falcon Valley Ranch HQ Well	10/5/1999	10/12/1999	Repeat Analysis					< 185		pCi/L
Falcon Valley Ranch HQ Well	1/19/2000	Not available		< 236		< 145		< 162		pCi/L
Falcon Valley Ranch HQ Well	4/26/2000	5/1/2000		< 232		< 149		< 227		pCi/L
Falcon Valley Ranch HQ Well	7/13/2000	7/13/2000		< 225		< 95		860	63	pCi/L
Falcon Valley Ranch HQ Well	7/13/2000	8/21/2000	Re-count					< 284		pCi/L
Falcon Valley Ranch HQ Well	7/13/2000	7/18/2000	Repeat Analysis					< 225		pCi/L
Falcon Valley Ranch HQ Well	10/16/2000	10/20/2000		< 238		< 90		< 235		pCi/L
Falcon Valley Ranch HQ Well	11/17/2000	11/22/2000		< 291		< 131		< 286		pCi/L
Falcon Valley Ranch HQ Well	1/31/2001	2/4/2001		< 232		168	26	356	55	pCi/L
Falcon Valley Ranch HQ Well	1/31/2001	2/20/2001	Repeat Analysis	< 242		< 179		< 218		pCi/L
Falcon Valley Ranch HQ Well	4/9/2001	4/12/2001	Sample #1 (Full)	< 233		< 124		< 256		pCi/L
Falcon Valley Ranch HQ Well	4/9/2001	4/12/2001	Sample #2 (Half)	< 234		< 95		< 253		pCi/L
Falcon Valley Ranch HQ Well	7/30/2001	7/31/2001	Sample #1 (Full)	< 240		< 121		937	69	pCi/L
Falcon Valley Ranch HQ Well	7/30/2001	7/31/2001	Sample #2 (Half)	< 197		< 129		301	67	pCi/L
Falcon Valley Ranch HQ Well	7/30/2001	8/7/2001	Re-count					< 248		pCi/L
Falcon Valley Ranch HQ Well	7/30/2001	8/7/2001	Repeat Analysis					< 205		pCi/L

Appendix Table C2
Radiologic Data for Groundwater from Off-Site Monitoring Wells (1)
Page Trowbridge Ranch Landfill

Drinking Water Standard (MCL)-->				20000 pCi/L		2,000 pCi/L				Units
Off-Site Well ID	**Sample Date**	**Analysis Date**	**Comment**	**^{3}H measurements and Sigma values (2)**		**^{14}C measurements and Sigma values (3)**		**All other Nuclides and Sigma values (4)**		
Falcon Valley Ranch HQ Well	10/10/2001	10/19/2001		< 219		< 203		< 248		pCi/L
Falcon Valley Ranch HQ Well	1/28/2002	2/4/2002		< 255		< 118		< 252		pCi/L
Falcon Valley Ranch HQ Well	3/27/2002	3/29/2002		< 265		< 211		< 269		pCi/L
Falcon Valley Ranch HQ Well	6/26/2002	6/28/2002		< 232		< 188		< 264		pCi/L
Falcon Valley Ranch HQ Well	8/14/2002	8/16/2002	2 of 6 background	< 242		< 173		< 243		pCi/L
Falcon Valley Ranch HQ Well	8/14/2002	8/24/2002	Repeat Analysis	< 227		< 172		< 242		pCi/L
Falcon Valley Ranch HQ Well	10/23/2002	10/28/2002		< 221		< 180		404	68	pCi/L
Falcon Valley Ranch HQ Well	10/23/2002	11/12/2002	Repeat Analysis					< 256		pCi/L
Falcon Valley Ranch HQ Well	1/15/2003	1/26/2003		< 205		< 192		< 270		pCi/L
Falcon Valley Ranch HQ Well	4/23/2003	5/1/2003		< 224		< 187		< 269		pCi/L
Falcon Valley Ranch HQ Well	7/9/2003	7/18/2003		< 225		< 190		< 272		pCi/L
Falcon Valley Ranch HQ Well	10/22/2003	11/12/2003		< 314		< 218		< 282		pCi/L
Falcon Valley Ranch HQ Well	1/29/2004	2/20/2004		< 231		< 195		< 266		pCi/L
Falcon Valley Ranch HQ Well	4/21/2004	4/30/2004		< 242		< 216		< 257		pCi/L
Falcon Valley Ranch HQ Well	7/7/2004	7/18/2004		< 220		< 188		< 175		pCi/L
Falcon Valley Ranch HQ Well	10/13/2004	10/24/2004		< 295		< 253		< 252		pCi/L
Falcon Valley Ranch HQ Well	1/21/2005	2/6/2005		< 226		< 209		< 239		pCi/L
Falcon Valley Ranch HQ Well	4/13/2005	4/28/2005		<238		<204		<261		pCi/L
Falcon Valley Ranch HQ Well	7/25/2005	8/5/2005		< 223		< 208		< 261		pCi/L
Falcon Valley Ranch HQ Well	10/12/2005	10/21/2005		< 302		< 218		< 253		pCi/L
Falcon Valley Ranch HQ Well	10/12/2005	12/1/2005	Repeat Analysis	< 229		<202		< 233		pCi/L
Falcon Valley Ranch HQ Well	1/18/2006	2/24/2006		< 365		< 195		< 223		pCi/L
Falcon Valley Ranch HQ Well	4/12/2006	4/24/2006		< 360		< 179		< 253		pCi/L
Falcon Valley Ranch HQ Well	7/24/2006	8/3/2006		< 264		< 167		< 220		pCi/L
Falcon Valley Ranch HQ Well	10/11/2006	11/1/2006		< 492		< 259		< 341		pCi/L
Falcon Valley Ranch HQ Well	1/10/2007	1/16/2007		< 411		< 255		< 357		pCi/L
Falcon Valley Ranch HQ Well	4/11/2007	5/2/2007		< 403		< 164		< 256		pCi/L
Catalina Well (Cattle Trough)	1/12/1982	Not Available		< 400				< 280		pCi/L
Catalina Well (Cattle Trough)	2/4/1982	Not Available		< 534				< 342		pCi/L
Catalina Well (Cattle Trough)	3/8/1982	Not Available		< 383				< 255		pCi/L
Catalina Well (Cattle Trough)	4/1/1982	Not Available		< 380				< 255		pCi/L
Catalina Well (Cattle Trough)	4/29/1982	Not Available		< 363				< 220		pCi/L
Catalina Well (Cattle Trough)	5/27/1982	Not Available		< 489				< 303		pCi/L
Catalina Well (Cattle Trough)	6/24/1982	Not Available		< 408				< 256		pCi/L
Catalina Well (Cattle Trough)	7/29/1982	Not Available		< 409				< 226		pCi/L
Catalina Well (Cattle Trough)	8/26/1982	Not Available		< 406				< 264		pCi/L
Catalina Well (Cattle Trough)	9/30/1982	Not Available		< 572				< 377		pCi/L
Catalina Well (Cattle Trough)	10/28/1982	Not Available		< 608				< 360		pCi/L
Catalina Well (Cattle Trough)	12/2/1982	Not Available		< 438				< 310		pCi/L
Catalina Well (Cattle Trough)	1/20/1983	Not Available		< 434				< 233		pCi/L
Catalina Well (Cattle Trough)	3/1/1983	Not Available		< 425				< 234		pCi/L
Catalina Well (Cattle Trough)	4/14/1983	Not Available		< 487				< 249		pCi/L
Catalina Well (Cattle Trough)	5/26/1983	Not Available		< 438				< 251		pCi/L
Catalina Well (Cattle Trough)	7/14/1983	Not Available		< 431				< 258		pCi/L
Catalina Well (Cattle Trough)	9/1/1983	Not Available		< 432				< 254		pCi/L
Catalina Well (Cattle Trough)	9/29/1983	Not Available		< 427				< 273		pCi/L
Catalina Well (Cattle Trough)	10/27/1983	Not Available		< 599				< 351		pCi/L
Catalina Well (Cattle Trough)	12/1/1983	Not Available		< 413				< 297		pCi/L
Catalina Well (Cattle Trough)	1/5/1984	1/20/1984		< 423				< 240		pCi/L
Catalina Well (Cattle Trough)	2/2/1984	2/3/1984		889	118			< 239		pCi/L
Catalina Well (Cattle Trough)	2/2/1984	2/14/1984	Repeat Analysis	< 620				< 326		pCi/L
Catalina Well (Cattle Trough)	2/29/1984	3/16/1984		< 442				< 223		pCi/L
Catalina Well (Cattle Trough)	3/29/1984	4/20/1984		< 646				< 332		pCi/L
Catalina Well (Cattle Trough)	5/3/1984	5/23/1984		< 604				< 344		pCi/L

Appendix Table C2
Radiologic Data for Groundwater from Off-Site Monitoring Wells [1]
Page Trowbridge Ranch Landfill

Drinking Water Standard (MCL)-->				20000 pCi/L		2,000 pCi/L				Units
Off-Site Well ID	Sample Date	Analysis Date	Comment	^{3}H measurements and Sigma values [2]		^{14}C measurements and Sigma values [3]		All other Nuclides and Sigma values [4]		
Catalina Well (Cattle Trough)	5/31/1984	6/14/1984		< 432				< 244		pCi/L
Catalina Well (Cattle Trough)	7/3/1984	7/13/1984		< 436				< 247		pCi/L
Catalina Well (Cattle Trough)	8/2/1984	8/17/1984		< 361		< 319		< 166		pCi/L
Catalina Well (Cattle Trough)	8/28/1984	9/7/1984		< 351		< 237		< 122		pCi/L
Catalina Well (Cattle Trough)	10/16/1984	10/17/1984		< 375		< 234		< 139		pCi/L
Catalina Well (Cattle Trough)	11/1/1984	11/6/1984		< 340		< 242		< 158		pCi/L
Catalina Well (Cattle Trough)	1/16/1985	1/25/1985		< 328		< 253		< 124		pCi/L
Catalina Well (Cattle Trough)	2/26/1985	3/8/1985		< 324		< 224		< 118		pCi/L
Catalina Well (Cattle Trough)	3/12/1985	3/15/1985		< 328		< 234		< 117		pCi/L
Catalina Well (Cattle Trough)	5/2/1985	5/24/1985		< 321		< 223		< 117		pCi/L
Catalina Well (Cattle Trough)	8/14/1985	8/23/1985		< 332		< 232		< 105		pCi/L
Catalina Well (Cattle Trough)	9/6/1985	9/13/1985		< 342		< 233		< 137		pCi/L
Catalina Well (Cattle Trough)	10/2/1985	10/15/1985		< 340		< 284		< 147		pCi/L
Catalina Well (Cattle Trough)	10/25/1985	10/25/1985		< 342		< 248		337	39	pCi/L
Catalina Well (Cattle Trough)	11/20/1985	11/22/1985		< 320		< 232		< 110		pCi/L
Catalina Well (Cattle Trough)	1/22/1986	1/24/1986		< 405		< 228		< 115		pCi/L
Catalina Well (Cattle Trough)	1/29/1986	1/31/1986		< 393		< 236		< 121		pCi/L
Catalina Well (Cattle Trough)	3/6/1986	3/14/1986		< 333		< 223		< 110		pCi/L
Catalina Well (Cattle Trough)	3/31/1986	4/4/1986		< 323		< 237		< 110		pCi/L
Catalina Well (Cattle Trough)	4/30/1986	5/1/1986		< 322		< 234		< 116		pCi/L
Catalina Well (Cattle Trough)	5/29/1986	5/30/1986		< 318		< 228		< 97		pCi/L
Catalina Well (Cattle Trough)	6/25/1986	6/27/1986		< 362		< 223		< 116		pCi/L
Catalina Well (Cattle Trough)	7/29/1986	8/5/1986		603	87	< 231		< 120		pCi/L
Catalina Well (Cattle Trough)	8/27/1986	8/29/1986		< 279		< 216		< 110		pCi/L
Catalina Well (Cattle Trough)	9/25/1986	9/26/1986		< 380		< 242		< 136		pCi/L
Catalina Well (Cattle Trough)	10/30/1986	10/31/1986		< 371		< 228		< 137		pCi/L
Catalina Well (Cattle Trough)	11/21/1986	11/26/1986		< 355		< 216		< 98		pCi/L
Catalina Well (Cattle Trough)	12/31/1986	1/16/1987		< 344		< 251		< 149		pCi/L
Catalina Well (Cattle Trough)	1/29/1987	1/30/1987		< 313		< 239		< 137		pCi/L
Catalina Well (Cattle Trough)	2/25/1987	3/13/1987		< 332		< 226		< 107		pCi/L
Catalina Well (Cattle Trough)	3/30/1987	4/3/1987		< 339		< 248		< 135		pCi/L
Catalina Well (Cattle Trough)	4/29/1987	5/4/1987		< 346		< 232		< 142		pCi/L
Catalina Well (Cattle Trough)	5/28/1987	6/5/1987		< 345		< 234		< 119		pCi/L
Catalina Well (Cattle Trough)	6/26/1987	7/3/1987		< 328		< 228		< 123		pCi/L
Catalina Well (Cattle Trough)	7/29/1987	7/31/1987		< 327		< 241		< 114		pCi/L
Catalina Well (Cattle Trough)	8/31/1987	9/18/1987		< 365		< 242		< 259		pCi/L
Catalina Well (Cattle Trough)	9/30/1987	10/2/1987		< 358		< 229		< 233		pCi/L
Catalina Well (Cattle Trough)	10/29/1987	11/20/1987		< 354		< 201		< 268		pCi/L
Catalina Well (Cattle Trough)	11/20/1987	11/25/1987		< 349		< 209		< 239		pCi/L
Catalina Well (Cattle Trough)	12/31/1987	1/8/1988		< 347		< 203		< 152		pCi/L
Catalina Well (Cattle Trough)	1/27/1988	1/29/1988		< 369		< 259		< 326		pCi/L
Catalina Well (Cattle Trough)	2/29/1988	3/7/1988		< 338		< 220		< 269		pCi/L
Catalina Well (Cattle Trough)	3/31/1988	4/8/1988		< 339		< 232		< 258		pCi/L
Catalina Well (Cattle Trough)	4/27/1988	4/29/1988		< 455		< 256		< 303		pCi/L
Catalina Well (Cattle Trough)	6/6/1988	6/10/1988		< 420		< 244		< 382		pCi/L
Catalina Well (Cattle Trough)	6/6/1988	6/10/1988	Eval-Universol	< 378		< 240		< 258		pCi/L
Catalina Well (Cattle Trough)	6/29/1988	7/16/1988		< 305		< 233		< 246		pCi/L
Catalina Well (Cattle Trough)	7/28/1988	7/30/1988		< 345		< 233		< 231		pCi/L
Catalina Well (Cattle Trough)	9/1/1988	9/2/1988		< 353		< 244		< 234		pCi/L
Catalina Well (Cattle Trough)	9/29/1988	9/30/1988		< 331		< 231		< 229		pCi/L
Catalina Well (Cattle Trough)	10/27/1988	11/4/1988		< 360		< 237		< 189		pCi/L
Catalina Well (Cattle Trough)	11/17/1988	11/18/1988		< 339		< 230		< 247		pCi/L
Catalina Well (Cattle Trough)	11/17/1988	11/18/1988	Eval-Universol-ES	< 361		< 239		< 248		pCi/L
Catalina Well (Cattle Trough)	1/6/1989	1/12/1989		< 348		< 246		< 214		pCi/L

Appendix Table C2
Radiologic Data for Groundwater from Off-Site Monitoring Wells [1]
Page Trowbridge Ranch Landfill

Drinking Water Standard (MCL)-->				20000 pCi/L		2,000 pCi/L				Units
Off-Site Well ID	Sample Date	Analysis Date	Comment	^{3}H measurements and Sigma values [2]		^{14}C measurements and Sigma values [3]		All other Nuclides and Sigma values [4]		
Catalina Well (Cattle Trough)	1/31/1989	2/3/1989		< 308		< 216		< 205		pCi/L
Catalina Well (Cattle Trough)	2/28/1989	3/3/1989		< 329		< 226		< 193		pCi/L
Catalina Well (Cattle Trough)	3/31/1989	4/10/1989		< 311		< 227		< 268		pCi/L
Catalina Well (Cattle Trough)	5/3/1989	5/12/1989		< 295		< 240		< 236		pCi/L
Catalina Well (Cattle Trough)	6/1/1989	6/9/1989		< 285		< 233		< 214		pCi/L
Catalina Well (Cattle Trough)	6/29/1989	7/7/1989		< 336		< 210		< 166		pCi/L
Catalina Well (Cattle Trough)	7/28/1989	8/16/1989		< 342		< 239		< 239		pCi/L
Catalina Well (Cattle Trough)	9/8/1989	10/4/1989		< 396		< 264		< 229		pCi/L
Catalina Well (Cattle Trough)	10/4/1989	10/6/1989		< 377		< 218		< 262		pCi/L
Catalina Well (Cattle Trough)	11/1/1989	11/3/1989		< 389		< 252		< 224		pCi/L
Catalina Well (Cattle Trough)	12/6/1989	12/22/1989		< 326		< 245		< 252		pCi/L
Catalina Well (Cattle Trough)	1/5/1990	1/8/1990		< 310		< 201		< 233		pCi/L
Catalina Well (Cattle Trough)	2/7/1990	2/23/1990		< 309		< 229		< 165		pCi/L
Catalina Well (Cattle Trough)	2/28/1990	3/12/1990		< 331		< 255		< 237		pCi/L
Catalina Well (Cattle Trough)	3/29/1990	4/2/1990		< 301		< 220		< 204		pCi/L
Catalina Well (Cattle Trough)	5/16/1990	5/18/1990		< 353		< 255		< 271		pCi/L
Catalina Well (Cattle Trough)	6/6/1990	6/8/1990		< 330		< 211		< 236		pCi/L
Catalina Well (Cattle Trough)	7/5/1990	7/6/1990		< 332		< 224		< 200		pCi/L
Catalina Well (Cattle Trough)	8/2/1990	8/3/1990		389	95	< 237		< 260		pCi/L
Catalina Well (Cattle Trough)	9/6/1990	9/14/1990		< 373		< 239		< 260		pCi/L
Catalina Well (Cattle Trough)	10/3/1990	10/4/1990		< 346		< 235		< 221		pCi/L
Catalina Well (Cattle Trough)	10/31/1990	11/8/1990		< 383		< 251		< 276		pCi/L
Catalina Well (Cattle Trough)	12/3/1990	12/7/1990		< 349		< 240		< 273		pCi/L
Catalina Well (Cattle Trough)	1/10/1991	1/14/1991		< 389		< 253		< 270		pCi/L
Catalina Well (Cattle Trough)	2/5/1991	2/12/1991		< 397		< 280		< 267		pCi/L
Catalina Well (Cattle Trough)	3/7/1991	3/14/1991		< 405		< 270		< 295		pCi/L
Catalina Well (Cattle Trough)	3/26/1991	3/29/1991		< 379		< 358		< 261		pCi/L
Catalina Well (Cattle Trough)	4/30/1991	5/4/1991		< 372		< 259		< 272		pCi/L
Catalina Well (Cattle Trough)	5/30/1991	6/1/1991		< 366		< 255		< 247		pCi/L
Catalina Well (Cattle Trough)	7/2/1991	7/3/1991		< 424		< 266		< 274		pCi/L
Catalina Well (Cattle Trough)	8/1/1991	8/6/1991		< 401		< 293		< 259		pCi/L
Catalina Well (Cattle Trough)	8/29/1991	8/31/1991		< 419		< 280		< 268		pCi/L
Catalina Well (Cattle Trough)	9/24/1991	9/27/1991		< 418		< 296		< 265		pCi/L
Catalina Well (Cattle Trough)	10/31/1991	11/1/1991		< 420		< 290		< 237		pCi/L
Catalina Well (Cattle Trough)	12/5/1991	Not available		< 359		< 252		< 222		pCi/L
Catalina Well (Cattle Trough)	1/9/1992	1/10/1992		< 393		< 264		< 254		pCi/L
Catalina Well (Cattle Trough)	1/30/1992	1/31/1992		< 385		< 258		< 234		pCi/L
Catalina Well (Cattle Trough)	3/12/1992	3/13/1992		< 387		NA		< 208		pCi/L
Catalina Well (Cattle Trough)	4/7/1992	4/8/1992		< 409		NA		< 187		pCi/L
Catalina Well (Cattle Trough)	5/5/1992	5/5/1992		< 407		< 265		< 254		pCi/L
Catalina Well (Cattle Trough)	6/2/1992	6/2/1992		< 390		< 265		< 219		pCi/L
Catalina Well (Cattle Trough)	7/10/1992	7/10/1992		< 359		< 261		< 243		pCi/L
Catalina Well (Cattle Trough)	7/30/1992	7/30/1992		800	116	< 245		< 267		pCi/L
Catalina Well (Cattle Trough)	7/30/1992	8/5/1992	Repeat Analysis	< 366						pCi/L
Catalina Well (Cattle Trough)	8/26/1992	8/27/1992		< 324		< 243		< 251		pCi/L
Catalina Well (Cattle Trough)	10/8/1992	10/8/1992		< 350		< 250		< 265		pCi/L
Catalina Well (Cattle Trough)	11/5/1992	11/13/1992		< 352		< 250		< 226		pCi/L
Catalina Well (Cattle Trough)	12/15/1992	12/18/1992		< 336		< 225		< 269		pCi/L
Catalina Well (Cattle Trough)	1/22/1993	1/29/1993		< 315		< 205		< 249		pCi/L
Catalina Well (Cattle Trough)	2/5/1993	2/5/1993		< 345		< 230		< 244		pCi/L
Catalina Well (Cattle Trough)	2/26/1993	2/26/1993		< 373		< 253		< 221		pCi/L
Catalina Well (Cattle Trough)	4/5/1993	4/7/1993		< 362		< 203		< 179		pCi/L
Catalina Well (Cattle Trough)	5/14/1993	5/16/1993		< 325		< 211		< 222		pCi/L
Catalina Well (Cattle Trough)	6/10/1993	6/16/1993		< 344		< 223		< 228		pCi/L

Appendix Table C2
Radiologic Data for Groundwater from Off-Site Monitoring Wells [1]
Page Trowbridge Ranch Landfill

Drinking Water Standard (MCL)-->				20000 pCi/L		2,000 pCi/L				Units
Off-Site Well ID	Sample Date	Analysis Date	Comment	^{3}H measurements and Sigma values [2]		^{14}C measurements and Sigma values [3]		All other Nuclides and Sigma values [4]		
Catalina Well (Cattle Trough)	7/7/1993	7/9/1993		< 296		< 209		< 235		pCi/L
Catalina Well (Cattle Trough)	7/30/1993	7/30/1993		< 292		< 220		< 201		pCi/L
Catalina Well (Cattle Trough)	9/2/1993	9/10/1993		< 314		< 163		< 169		pCi/L
Catalina Well (Cattle Trough)	10/15/1993	10/15/1993		< 503		< 341		< 400		pCi/L
Catalina Well (Cattle Trough)	10/15/1993	11/17/1993	Repeat Analysis					< 216		pCi/L
Catalina Well (Cattle Trough)	10/28/1993	10/31/1993		< 311		< 221		< 232		pCi/L
Catalina Well (Cattle Trough)	11/23/1993	11/24/1993		< 305		< 209		< 207		pCi/L
Catalina Well (Cattle Trough)	12/20/1993	12/23/1993		< 301		< 170		< 183		pCi/L
Catalina Well (Cattle Trough)	1/18/1994	1/26/1994		< 293		< 212		< 166		pCi/L
Catalina Well (Cattle Trough)	2/24/1994	2/24/1994		< 300		< 195		< 229		pCi/L
Catalina Well (Cattle Trough)	3/22/1994	3/24/1994		< 314		< 201		< 233		pCi/L
Catalina Well (Cattle Trough)	4/12/1994	4/15/1994		< 302		< 201		< 213		pCi/L
Catalina Well (Cattle Trough)	5/31/1994	6/2/1994		< 198		< 118		< 170		pCi/L
Catalina Well (Cattle Trough)	6/14/1994	6/15/1994		< 183		< 135		< 168		pCi/L
Catalina Well (Cattle Trough)	7/7/1994	7/12/1994		< 375		< 287		< 351		pCi/L
Catalina Well (Cattle Trough)	8/4/1994	8/10/1994		< 192		< 138		< 158		pCi/L
Catalina Well (Cattle Trough)	9/8/1994	9/9/1994		< 212		< 132		< 170		pCi/L
Catalina Well (Cattle Trough)	10/6/1994	10/8/1994		< 214		< 171		< 233		pCi/L
Catalina Well (Cattle Trough)	11/3/1994	11/9/1994		< 234		< 164		< 257		pCi/L
Catalina Well (Cattle Trough)	12/8/1994	12/10/1994		< 210		< 169		< 252		pCi/L
Catalina Well (Cattle Trough)	1/10/1995	1/14/1995		< 214		< 144		< 200		pCi/L
Catalina Well (Cattle Trough)	2/7/1995	2/14/1995		< 234		< 141		< 241		pCi/L
Catalina Well (Cattle Trough)	3/7/1995	3/10/1995		< 197		< 125		< 212		pCi/L
Catalina Well (Cattle Trough)	4/6/1995	4/14/1995		< 203		< 126		< 190		pCi/L
Catalina Well (Cattle Trough)	5/11/1995	5/13/1995		< 211		< 114		< 236		pCi/L
Catalina Well (Cattle Trough)	6/8/1995	6/14/1995		< 210		< 109		< 185		pCi/L
Catalina Well (Cattle Trough)	7/6/1995	7/7/1995		< 215		< 120		< 231		pCi/L
Catalina Well (Cattle Trough)	8/11/1995	8/20/1995		< 210		< 299		< 235		pCi/L
Catalina Well (Cattle Trough)	9/12/1995	9/15/1995		< 212		< 137		< 212		pCi/L
Catalina Well (Cattle Trough)	10/13/1995	10/17/1995		< 218		< 156		< 243		pCi/L
Catalina Well (Cattle Trough)	11/21/1995	11/22/1995		< 213		< 118		< 215		pCi/L
Catalina Well (Cattle Trough)	12/15/1995	12/15/1995		< 237		< 149		< 235		pCi/L
Catalina Well (Cattle Trough)	1/23/1996	1/25/1996		< 228		< 81		< 245		pCi/L
Catalina Well (Cattle Trough)	2/7/1996	2/8/1996		< 212		< 91		< 193		pCi/L
Catalina Well (Cattle Trough)	3/19/1996	3/21/1996		< 206		< 144		< 220		pCi/L
Catalina Well (Cattle Trough)	4/30/1996	Not available		< 206		< 191		< 230		pCi/L
Catalina Well (Cattle Trough)	6/6/1996	6/8/1996		< 217		< 105		< 246		pCi/L
Catalina Well (Cattle Trough)	6/27/1996	7/3/1996		< 228		< 81		< 232		pCi/L
Catalina Well (Cattle Trough)	11/13/1996	11/21/1996		< 221		< 106		< 198		pCi/L
Catalina Well (Cattle Trough)	12/12/1996	12/17/1996		< 220		< 142		< 204		pCi/L
Catalina Well (Cattle Trough)	1/2/1997	1/3/1997		< 234		< 85		< 203	< 203	pCi/L
Catalina Well (Cattle Trough)	2/13/1997	2/14/1997		< 260		< 165		< 189		pCi/L
Catalina Well (Cattle Trough)	3/13/1997	3/14/1997		< 237		< 139		< 184		pCi/L
Catalina Well (Cattle Trough)	4/8/1997	4/10/1997		< 236		< 99		< 242		pCi/L
Catalina Well (Cattle Trough)	5/29/1997	5/30/1997		< 214		< 81		< 219		pCi/L
Catalina Well (Cattle Trough)	6/16/1997	6/19/1997		< 206		< 170		< 210		pCi/L
Catalina Well (Cattle Trough)	7/15/1997	7/15/1997		< 222		< 187		< 631		pCi/L
Catalina Well (Cattle Trough)	8/14/1997	8/14/1997		< 221		< 133		< 241		pCi/L
Catalina Well (Cattle Trough)	9/16/1997	9/18/1997		< 233		< 174		< 237		pCi/L
Catalina Well (Cattle Trough)	10/13/1997	10/14/1997		< 229		< 115		< 264		pCi/L
Catalina Well (Cattle Trough)	11/18/1997	11/24/1997		< 240		< 140		< 217		pCi/L
Catalina Well (Cattle Trough)	12/18/1997	12/19/1997		< 233		< 108		< 253		pCi/L
Catalina Well (Cattle Trough)	1/16/1998	1/17/1998		< 223		< 197		< 237		pCi/L
Catalina Well (Cattle Trough)	2/17/1998	2/19/1998		< 231		< 90		< 243		pCi/L

Appendix Table C2
Radiologic Data for Groundwater from Off-Site Monitoring Wells (1)
Page Trowbridge Ranch Landfill

Drinking Water Standard (MCL)-->				20000 pCi/L		2,000 pCi/L				Units
Off-Site Well ID	Sample Date	Analysis Date	Comment	^{3}H measurements and Sigma values (2)		^{14}C measurements and Sigma values (3)		All other Nuclides and Sigma values (4)		
Catalina Well (Cattle Trough)	3/20/1998	3/24/1998		< 212		< 106		< 212		pCi/L
Catalina Well (Cattle Trough)	4/21/1998	4/23/1998		< 221		< 139		< 213		pCi/L
Catalina Well (Cattle Trough)	5/26/1998	5/27/1998		< 227		< 127		< 243		pCi/L
Catalina Well (Cattle Trough)	7/7/1998	7/10/1998		< 227		< 166		< 233		pCi/L
Catalina Well (Cattle Trough)	10/1/1998	10/2/1998		< 212		< 87		< 212		pCi/L
Catalina Well (Cattle Trough)	1/4/1999	1/5/1999		< 222		< 89		< 175		pCi/L
Catalina Well (Cattle Trough)	4/5/1999	4/10/1999		< 214		< 100		< 214		pCi/L
Catalina Well (Cattle Trough)	7/6/1999	7/8/1999		< 243		< 98		< 223		pCi/L
Catalina Well (Cattle Trough)	10/5/1999	10/8/1999		< 249		< 138		< 210		pCi/L
Catalina Well (Cattle Trough)	1/19/2000	Not available		< 249		< 136		< 168		pCi/L
Catalina Well (Cattle Trough)	4/26/2000	5/1/2000		< 239		< 129		< 234		pCi/L
Catalina Well (Cattle Trough)	7/13/2000	7/13/2000		< 233		< 94		< 229		pCi/L
Catalina Well (Cattle Trough)	10/16/2000	10/20/2000		< 242		< 86		< 230		pCi/L
Catalina Well (Cattle Trough)	11/17/2000	11/22/2000		< 302		< 125		< 297		pCi/L
Catalina Well (Cattle Trough)	1/31/2001	2/4/2001		< 235		143	25	267	55	pCi/L
Catalina Well (Cattle Trough)	1/31/2001	2/20/2001	Repeat Analysis	< 240		< 171		< 220		pCi/L
Catalina Well (Cattle Trough)	4/9/2001	4/12/2001	Sample #1 (Full)	< 240		< 182		< 258		pCi/L
Catalina Well (Cattle Trough)	4/9/2001	4/12/2001	Sample #2 (Half)	< 241		< 95		< 257		pCi/L
Catalina Well (Cattle Trough)	7/30/2001	7/31/2001	Sample #1 (Full)	< 246		< 97		< 256		pCi/L
Catalina Well (Cattle Trough)	7/30/2001	7/31/2001	Sample #2 (Half)	< 177		129	24	< 258		pCi/L
Catalina Well (Cattle Trough)	10/10/2001	10/19/2001		< 226		< 198		< 250		pCi/L
Catalina Well (Cattle Trough)	1/28/2002	2/4/2002		< 261		< 114		< 233		pCi/L
Catalina Well (Cattle Trough)	3/27/2002	3/29/2002		< 253		276	51	< 257		pCi/L
Catalina Well (Cattle Trough)	3/27/2002	4/7/2002	Repeat Analysis			< 91				pCi/L
Catalina Well (Cattle Trough)	6/26/2002	6/28/2002		< 229		< 178		< 241		pCi/L
Catalina Well (Cattle Trough)	8/14/2002	8/16/2002	**	< 250		< 177		< 249		pCi/L
Catalina Well (Cattle Trough)	8/14/2002	8/24/2002	Repeat Analysis	< 236		< 175		< 248		pCi/L
Catalina Well (Cattle Trough)	10/23/2002	10/28/2002		< 236		< 183		< 272		pCi/L
Catalina Well (Cattle Trough)	1/15/2003	1/26/2003		< 207		< 187		< 278		pCi/L
Catalina Well (Cattle Trough)	4/23/2003	5/1/2003		< 225		< 187		< 273		pCi/L
Catalina Well (Cattle Trough)	7/9/2003	7/18/2003		< 242		< 196		< 288		pCi/L
Catalina Well (Cattle Trough)	10/22/2003	11/12/2003		< 330		< 224		< 289		pCi/L
Catalina Well (Cattle Trough)	1/29/2004	2/20/2004		< 237		< 199		< 290		pCi/L
Catalina Well (Cattle Trough)	4/21/2004	4/30/2004		< 250		< 219		< 260		pCi/L
Catalina Well (Cattle Trough)	7/7/2004	7/18/2004		< 229		< 189		< 172		pCi/L
Catalina Well (Cattle Trough)	10/13/2004	10/24/2004		< 314		< 235		< 272		pCi/L
Catalina Well (Cattle Trough)	1/21/2005	2/6/2005		< 230		< 204		< 233		pCi/L
Catalina Well (Cattle Trough)	4/13/2005	4/28/2005		<255		<206		<270		pCi/L
Catalina Well (Cattle Trough)	7/25/2005	8/5/2005		< 292		< 202		< 260		pCi/L
Catalina Well (Cattle Trough)	10/12/2005	10/21/2005		10481	124	1249	64	< 262		pCi/L
Catalina Well (Cattle Trough)	10/12/2005	12/1/2005	Repeat Analysis	774	65	< 201		< 234		pCi/L
Catalina Well (Cattle Trough)	1/18/2006	2/24/2006		< 352		< 196		< 224		pCi/L
Catalina Well (Cattle Trough)	4/12/2006	4/24/2006		< 366		< 182		< 257		pCi/L
Catalina Well (Cattle Trough)	7/24/2006	8/3/2006		< 232		< 160		< 203		pCi/L
Catalina Well (Cattle Trough)	10/11/2006	11/1/2006		< 475		< 258		< 364		pCi/L
Catalina Well (Cattle Trough)	1/10/2007	1/16/2007		< 413		< 233		< 345		pCi/L
Catalina Well (Cattle Trough)	4/11/2007	5/2/2007		< 383		< 161		< 245		pCi/L
Oracle Junction Well	1/12/1982	Not Available		< 405				< 288		pCi/L
Oracle Junction Well	2/4/1982	Not Available		< 528				< 352		pCi/L
Oracle Junction Well	3/8/1982	Not Available		< 390				< 251		pCi/L
Oracle Junction Well	4/1/1982	Not Available		< 381				< 255		pCi/L
Oracle Junction Well	4/29/1982		No Sample							pCi/L
Oracle Junction Well	5/27/1982		No Sample							pCi/L
Oracle Junction Well	6/24/1982		No Sample							pCi/L

Appendix Table C2
Radiologic Data for Groundwater from Off-Site Monitoring Wells [1]
Page Trowbridge Ranch Landfill

Drinking Water Standard (MCL)-->				20000 pCi/L		2,000 pCi/L				Units
Off-Site Well ID	**Sample Date**	**Analysis Date**	**Comment**	**^{3}H measurements and Sigma values [2]**		**^{14}C measurements and Sigma values [3]**		**All other Nuclides and Sigma values [4]**		
Oracle Junction Well	7/29/1982		No Sample							pCi/L
Oracle Junction Well	8/26/1982		No Sample							pCi/L
Oracle Junction Well	9/30/1982	Not Available		< 550				< 396		pCi/L
Oracle Junction Well	10/28/1982	Not Available		< 606				< 369		pCi/L
Oracle Junction Well	12/2/1982	Not Available		< 434				< 300		pCi/L
Oracle Junction Well	1/20/1983	Not Available		< 421				< 235		pCi/L
Oracle Junction Well	3/1/1983	Not Available		< 421				< 243		pCi/L
Oracle Junction Well	4/14/1983	Not Available		< 459				< 245		pCi/L
Oracle Junction Well	5/26/1983	Not Available		< 433				< 257		pCi/L
Oracle Junction Well	7/14/1983	Not Available		< 432				< 276		pCi/L
Oracle Junction Well	9/1/1983	Not Available		< 407				< 269		pCi/L
Oracle Junction Well	9/29/1983	Not Available		< 438				< 278		pCi/L
Oracle Junction Well	10/27/1983	Not Available		< 606				< 355		pCi/L
Oracle Junction Well	12/1/1983	Not Available		< 408				< 236		pCi/L
Oracle Junction Well	1/5/1984	1/20/1984		< 418				< 243		pCi/L
Oracle Junction Well	2/2/1984	2/3/1984		937	113			< 236		pCi/L
Oracle Junction Well	2/2/1984	2/14/1984	Repeat Analysis	< 629				< 325		pCi/L
Oracle Junction Well	2/29/1984	3/16/1984		545				< 225		pCi/L
Oracle Junction Well	3/29/1984	4/20/1984		< 624				< 340		pCi/L
Oracle Junction Well	5/3/1984	5/23/1984		< 633				< 405		pCi/L
Oracle Junction Well	5/31/1984	6/14/1984		< 427				< 290		pCi/L
Oracle Junction Well	7/3/1984	7/13/1984		< 441				< 250		pCi/L
Oracle Junction Well	8/2/1984	8/17/1984		< 373		< 346		< 166		pCi/L
Oracle Junction Well	8/28/1984	9/7/1984		< 346		< 283		< 119		pCi/L
Oracle Junction Well	10/16/1984	10/17/1984		< 356		< 238		< 148		pCi/L
Oracle Junction Well	11/1/1984	11/6/1984		< 347		< 238		< 167		pCi/L
Oracle Junction Well	1/16/1985	1/25/1985		< 326		< 247		< 127		pCi/L
Oracle Junction Well	2/26/1985	3/8/1985		< 326		< 259		< 122		pCi/L
Oracle Junction Well	3/12/1985	3/15/1985		< 325		< 228		< 114		pCi/L
Oracle Junction Well	5/2/1985	5/24/1985		< 315		< 232		< 121		pCi/L
Oracle Junction Well	8/14/1985	8/23/1985		< 331		< 229		< 100		pCi/L
Oracle Junction Well	9/6/1985	9/13/1985		< 342		< 240		< 127		pCi/L
Oracle Junction Well	10/2/1985	10/15/1985		< 341		< 243		< 157		pCi/L
Oracle Junction Well	10/25/1985	10/25/1985		< 335		< 268		240	32	pCi/L
Oracle Junction Well	11/20/1985	11/22/1985		< 330		< 234		< 117		pCi/L
Oracle Junction Well	1/22/1986	1/24/1986		< 395		< 239		278	33	pCi/L
Oracle Junction Well	1/29/1986	1/31/1986		< 411		< 246		< 131		pCi/L
Oracle Junction Well	3/6/1986	3/14/1986		< 337		< 229		< 117		pCi/L
Oracle Junction Well	3/31/1986	4/4/1986		< 338		< 243		< 118		pCi/L
Oracle Junction Well	4/30/1986	5/1/1986		< 322		< 235		< 117		pCi/L
Oracle Junction Well	5/29/1986	5/30/1986		< 329		< 241		141	26	pCi/L
Oracle Junction Well	6/25/1986	6/27/1986		< 374		< 235		117	31	pCi/L
Oracle Junction Well	7/29/1986	8/5/1986		< 331		< 237		< 115		pCi/L
Oracle Junction Well	8/27/1986	8/29/1986		< 317		217	59	< 124		pCi/L
Oracle Junction Well	9/25/1986	9/26/1986		< 380		< 245		< 129		pCi/L
Oracle Junction Well	10/30/1986	10/31/1986		< 369		< 233		< 132		pCi/L
Oracle Junction Well	11/21/1986	11/26/1986		< 369		< 230		119	29	pCi/L
Oracle Junction Well	12/31/1986	1/16/1987		< 340		< 259		< 178		pCi/L
Oracle Junction Well	1/29/1987	1/30/1987		< 308		< 240		< 147		pCi/L
Oracle Junction Well	2/25/1987	3/13/1987		< 335		< 237		< 127		pCi/L
Oracle Junction Well	3/30/1987	4/3/1987		< 332		< 244		< 158		pCi/L
Oracle Junction Well	4/29/1987	5/4/1987		< 336		< 238		< 145		pCi/L
Oracle Junction Well	5/28/1987	6/5/1987		< 330		< 233		< 115		pCi/L
Oracle Junction Well	6/26/1987	7/3/1987		< 334		< 227		< 125		pCi/L

Appendix Table C2
Radiologic Data for Groundwater from Off-Site Monitoring Wells (1)
Page Trowbridge Ranch Landfill

Drinking Water Standard (MCL)-->				20000 pCi/L		2,000 pCi/L				Units
Off-Site Well ID	Sample Date	Analysis Date	Comment	^{3}H measurements and Sigma values (2)		^{14}C measurements and Sigma values (3)		All other Nuclides and Sigma values (4)		
Oracle Junction Well	7/29/1987	7/31/1987		< 330		< 238		265	33	pCi/L
Oracle Junction Well	8/31/1987	9/18/1987		< 359		< 243		< 238		pCi/L
Oracle Junction Well	9/30/1987	10/2/1987		< 366		< 256		< 221		pCi/L
Oracle Junction Well	10/29/1987	11/20/1987		< 347		< 201		< 236		pCi/L
Oracle Junction Well	11/20/1987	11/25/1987		< 369		< 209		< 260		pCi/L
Oracle Junction Well	12/31/1987	1/8/1988		< 337		< 203		< 169		pCi/L
Oracle Junction Well	1/27/1988	1/29/1988		< 385		325	65	< 265		pCi/L
Oracle Junction Well	2/29/1988	3/7/1988		< 345		< 230		< 283		pCi/L
Oracle Junction Well	3/31/1988	4/8/1988		< 347		< 231		< 264		pCi/L
Oracle Junction Well	4/27/1988	4/29/1988		< 456		274	70	< 313		pCi/L
Oracle Junction Well	6/6/1988	6/10/1988		< 434		< 250		< 420		pCi/L
Oracle Junction Well	6/6/1988	6/10/1988	Eval-Universol	< 373		< 233		< 258		pCi/L
Oracle Junction Well	6/29/1988	7/16/1988		< 319		< 241		< 246		pCi/L
Oracle Junction Well	7/28/1988	7/30/1988		< 344		< 233		< 233		pCi/L
Oracle Junction Well	9/1/1988	9/2/1988		< 325		< 228		368	62	pCi/L
Oracle Junction Well	9/29/1988	9/30/1988		< 332		< 232		< 230		pCi/L
Oracle Junction Well	10/27/1988	11/4/1988		< 356		< 242		< 191		pCi/L
Oracle Junction Well	11/17/1988	11/18/1988		< 340		< 235		< 250		pCi/L
Oracle Junction Well	11/17/1988	11/18/1988	Eval-Universol-ES	< 359		< 234		320	66	pCi/L
Oracle Junction Well	1/6/1989	1/12/1989		< 344		< 244		< 232		pCi/L
Oracle Junction Well	1/31/1989	2/3/1989		< 319		< 224		< 210		pCi/L
Oracle Junction Well	2/28/1989	3/3/1989		< 324		< 226		< 191		pCi/L
Oracle Junction Well	3/31/1989	4/10/1989		< 298		< 229		< 252		pCi/L
Oracle Junction Well	5/3/1989	5/12/1989		< 288		< 237		< 260		pCi/L
Oracle Junction Well	6/1/1989	6/9/1989		< 296		< 233		< 199		pCi/L
Oracle Junction Well	6/29/1989	7/7/1989		< 314		< 239		< 159		pCi/L
Oracle Junction Well	7/28/1989	8/16/1989		< 358		< 244		< 247		pCi/L
Oracle Junction Well	9/8/1989	10/4/1989		< 348		< 235		564	57	pCi/L
Oracle Junction Well	9/8/1989	10/4/1989	Repeat Analysis	< 342		< 220		< 237		pCi/L
Oracle Junction Well	10/4/1989	10/6/1989		< 341		< 218		< 258		pCi/L
Oracle Junction Well	11/1/1989	11/3/1989		< 362		< 247		< 235		pCi/L
Oracle Junction Well	12/6/1989	12/22/1989		< 308		< 240		719	66	pCi/L
Oracle Junction Well	12/6/1989	12/22/1989	Repeat Analysis	< 311		< 251		< 244		pCi/L
Oracle Junction Well	1/5/1990	1/8/1990		< 291		< 192		< 227		pCi/L
Oracle Junction Well	2/7/1990	2/23/1990		< 315		< 204		< 165		pCi/L
Oracle Junction Well	2/28/1990	3/12/1990		< 327		< 249		< 225		pCi/L
Oracle Junction Well	3/29/1990	4/2/1990		< 311		< 200		332	49	pCi/L
Oracle Junction Well	5/16/1990	5/18/1990		< 338		< 245		588	69	pCi/L
Oracle Junction Well	6/6/1990	6/8/1990		< 328		< 205		549	61	pCi/L
Oracle Junction Well	7/5/1990	7/6/1990		< 190		< 123		242	39	pCi/L
Oracle Junction Well	8/2/1990	8/3/1990		< 326		234	62	290	73	pCi/L
Oracle Junction Well	9/6/1990	9/14/1990		< 359		< 228		< 243		pCi/L
Oracle Junction Well	10/3/1990	10/4/1990		< 340		< 222		< 218		pCi/L
Oracle Junction Well	10/31/1990	11/8/1990		< 360		< 243		< 281		pCi/L
Oracle Junction Well	12/3/1990	12/7/1990		< 344		< 236		< 275		pCi/L
Oracle Junction Well	1/10/1991		No Sample							pCi/L
Oracle Junction Well	2/5/1991	2/12/1991		< 411		< 276		< 270		pCi/L
Oracle Junction Well	3/7/1991	3/14/1991		< 339		< 249		< 279		pCi/L
Oracle Junction Well	3/26/1991	3/29/1991		< 368		< 253		< 240		pCi/L
Oracle Junction Well	4/30/1991	5/4/1991		< 370		< 265		< 266		pCi/L
Oracle Junction Well	5/30/1991	6/1/1991		< 347		< 235		< 238		pCi/L
Oracle Junction Well	7/2/1991	7/3/1991		< 413		< 255		< 267		pCi/L
Oracle Junction Well	8/1/1991	8/6/1991		< 382		< 260		< 253		pCi/L
Oracle Junction Well	8/29/1991	8/31/1991		< 411		< 269		< 259		pCi/L

Appendix Table C2
Radiologic Data for Groundwater from Off-Site Monitoring Wells [1]
Page Trowbridge Ranch Landfill

Drinking Water Standard (MCL)-->				20000 pCi/L		2,000 pCi/L				Units
Off-Site Well ID	Sample Date	Analysis Date	Comment	^{3}H measurements and Sigma values [2]		^{14}C measurements and Sigma values [3]		All other Nuclides and Sigma values [4]		
Oracle Junction Well	9/24/1991	9/27/1991		< 377		< 262		< 249		pCi/L
Oracle Junction Well	10/31/1991	11/1/1991		< 378		< 258		< 211		pCi/L
Oracle Junction Well	12/5/1991	Not available		< 360		< 247		< 231		pCi/L
Oracle Junction Well	1/9/1992	1/10/1992		< 378		< 252		427	65	pCi/L
Oracle Junction Well	1/9/1992	1/15/1992	Repeat Analysis	< 378		< 251		< 246		pCi/L
Oracle Junction Well	1/30/1992	1/31/1992		< 478		< 314		< 290		pCi/L
Oracle Junction Well	3/12/1992	3/13/1992		< 369		NA		339	53	pCi/L
Oracle Junction Well	4/7/1992	4/8/1992		< 388		NA		< 184		pCi/L
Oracle Junction Well	5/5/1992	5/5/1992		< 384		< 256		< 246		pCi/L
Oracle Junction Well	6/2/1992	6/2/1992		< 379		< 239		< 207		pCi/L
Oracle Junction Well	7/10/1992	7/10/1992		< 338		< 255		< 234		pCi/L
Oracle Junction Well	7/30/1992	7/30/1992		< 354		< 234		< 257		pCi/L
Oracle Junction Well	8/26/1992	8/27/1992		< 331		< 247		< 259		pCi/L
Oracle Junction Well	10/8/1992	10/8/1992		< 332		< 237		< 262		pCi/L
Oracle Junction Well	11/5/1992	11/13/1992		< 329		< 236		< 216		pCi/L
Oracle Junction Well	12/15/1992	12/18/1992		< 321		< 226		< 261		pCi/L
Oracle Junction Well	1/22/1993	1/29/1993		< 312		< 230		< 250		pCi/L
Oracle Junction Well	2/5/1993	2/5/1993		< 317		< 221		< 234		pCi/L
Oracle Junction Well	2/26/1993	2/26/1993		< 355		< 243		< 215		pCi/L
Oracle Junction Well	4/5/1993	4/7/1993		< 344		< 201		< 171		pCi/L
Oracle Junction Well	5/14/1993	5/16/1993		< 320		< 208		< 230		pCi/L
Oracle Junction Well	6/10/1993	6/16/1993		< 333		< 219		< 217		pCi/L
Oracle Junction Well	7/7/1993	7/9/1993		< 277		< 204		< 228		pCi/L
Oracle Junction Well	7/30/1993	7/30/1993		< 290		< 219		< 199		pCi/L
Oracle Junction Well	9/2/1993	9/10/1993		< 301		< 154		< 165		pCi/L
Oracle Junction Well	10/15/1993	10/15/1993		< 512		< 356		459	109	pCi/L
Oracle Junction Well	10/15/1993	11/17/1993	Repeat Analysis					< 217		pCi/L
Oracle Junction Well	10/28/1993	10/31/1993		< 300		< 216		< 223		pCi/L
Oracle Junction Well	11/23/1993	11/24/1993		< 299		< 211		< 209		pCi/L
Oracle Junction Well	12/20/1993	12/23/1993		< 284		< 168		193	48	pCi/L
Oracle Junction Well	12/20/1993	1/5/1994	Repeat Analysis					< 167		pCi/L
Oracle Junction Well	1/18/1994	1/26/1994		< 297		< 208		< 169		pCi/L
Oracle Junction Well	2/24/1994	2/24/1994		< 291		< 186		< 214		pCi/L
Oracle Junction Well	3/22/1994	3/24/1994		< 290		< 201		< 234		pCi/L
Oracle Junction Well	4/12/1994	4/15/1994		< 296		< 196		< 210		pCi/L
Oracle Junction Well	5/31/1994	6/2/1994		< 203		< 121		< 174		pCi/L
Oracle Junction Well	6/14/1994	6/15/1994		< 185		< 137		371	46	pCi/L
Oracle Junction Well	6/14/1994	6/22/1994	Repeat Analysis					< 171		pCi/L
Oracle Junction Well	7/7/1994	7/12/1994		< 372		< 286		< 357		pCi/L
Oracle Junction Well	8/4/1994	8/10/1994		< 190		< 138		< 158		pCi/L
Oracle Junction Well	9/8/1994	9/9/1994		< 208		< 136		382	47	pCi/L
Oracle Junction Well	9/8/1994	9/13/1994	Repeat Analysis					< 149		pCi/L
Oracle Junction Well	10/6/1994	10/8/1994		< 211		< 172		< 240		pCi/L
Oracle Junction Well	11/3/1994	11/9/1994		< 217		< 163		< 258		pCi/L
Oracle Junction Well	12/8/1994	12/10/1994		< 207		< 173		< 257		pCi/L
Oracle Junction Well	1/10/1995	1/14/1995		< 217		< 148		< 209		pCi/L
Oracle Junction Well	2/7/1995	2/14/1995		< 229		< 144		< 240		pCi/L
Oracle Junction Well	3/7/1995	3/10/1995		< 197		< 131		< 205		pCi/L
Oracle Junction Well	4/6/1995	4/14/1995		< 196		< 137		< 185		pCi/L
Oracle Junction Well	5/11/1995	5/13/1995		< 209		< 118		< 246		pCi/L
Oracle Junction Well	6/8/1995	6/14/1995		< 213		< 115		< 192		pCi/L
Oracle Junction Well	7/6/1995	7/7/1995		< 210		< 124		< 233		pCi/L
Oracle Junction Well	8/11/1995	8/20/1995		< 205		< 316		< 238		pCi/L
Oracle Junction Well	9/12/1995	9/15/1995		< 206		< 144		< 214		pCi/L

Appendix Table C2
Radiologic Data for Groundwater from Off-Site Monitoring Wells (1)
Page Trowbridge Ranch Landfill

Drinking Water Standard (MCL)-->				20000 pCi/L		2,000 pCi/L				Units
Off-Site Well ID	**Sample Date**	**Analysis Date**	**Comment**	**^{3}H measurements and Sigma values (2)**		**^{14}C measurements and Sigma values (3)**		**All other Nuclides and Sigma values (4)**		
Oracle Junction Well	10/13/1995	10/17/1995		< 218		< 170		< 236		pCi/L
Oracle Junction Well	11/21/1995	11/22/1995		< 206		< 126		< 211		pCi/L
Oracle Junction Well	12/15/1995	12/15/1995		< 238		< 152		< 230		pCi/L
Oracle Junction Well	1/23/1996	1/25/1996		< 232		< 85		< 239		pCi/L
Oracle Junction Well	2/7/1996	2/8/1996		< 209		< 98		< 190		pCi/L
Oracle Junction Well	3/19/1996	3/21/1996		< 203		< 152		< 214		pCi/L
Oracle Junction Well	4/30/1996	Not available		< 213		< 206		479	64	pCi/L
Oracle Junction Well	4/30/1996	Not available	Repeat Analysis					< 233		pCi/L
Oracle Junction Well	6/6/1996	6/8/1996		< 221		< 106		< 257		pCi/L
Oracle Junction Well	6/27/1996	7/3/1996		< 220		< 87		< 238		pCi/L
Oracle Junction Well	11/13/1996	11/21/1996		< 235		< 126		< 211		pCi/L
Oracle Junction Well	12/12/1996	12/17/1996		< 223		< 152		< 209		pCi/L
Oracle Junction Well	1/2/1997	1/3/1997		< 229		< 90		< 206	< 206	pCi/L
Oracle Junction Well	2/13/1997	2/14/1997		< 240		< 174		< 187		pCi/L
Oracle Junction Well	3/13/1997	3/14/1997		< 232		< 158		< 185		pCi/L
Oracle Junction Well	4/8/1997	4/10/1997		< 222		< 105		< 240		pCi/L
Oracle Junction Well	5/29/1997	5/30/1997		< 216		< 85		< 219		pCi/L
Oracle Junction Well	6/16/1997	6/19/1997		< 207		< 176		< 218		pCi/L
Oracle Junction Well	7/15/1997	7/15/1997		< 216		< 174		< 617		pCi/L
Oracle Junction Well	8/14/1997	8/14/1997		< 233		< 137		< 247		pCi/L
Oracle Junction Well	9/16/1997	9/18/1997		< 238		< 180		< 242		pCi/L
Oracle Junction Well	10/13/1997	10/14/1997		< 245		< 119		< 262		pCi/L
Oracle Junction Well	11/18/1997	11/24/1997		< 246		< 157		< 225		pCi/L
Oracle Junction Well	12/18/1997	12/19/1997		< 234		< 118		< 250		pCi/L
Oracle Junction Well	1/16/1998	1/17/1998		< 225		< 206		< 245		pCi/L
Oracle Junction Well	2/17/1998	2/19/1998		< 227		< 100		< 260		pCi/L
Oracle Junction Well	3/20/1998	3/24/1998		< 220		< 113		< 214		pCi/L
Oracle Junction Well	4/21/1998	4/23/1998		< 227		< 147		443	59	pCi/L
Oracle Junction Well	4/21/1998	4/29/1998	Repeat Analysis					< 242		pCi/L
Oracle Junction Well	5/26/1998	5/27/1998		< 223		153	35	1010	68	pCi/L
Oracle Junction Well	5/26/1998	5/30/1998	Repeat Analysis			< 240		< 123		pCi/L
Oracle Junction Well	7/7/1998	7/10/1998		< 215		< 173		255	61	pCi/L
Oracle Junction Well	7/7/1998	7/14/1998	Repeat Analysis					< 206		pCi/L
Oracle Junction Well	10/1/1998	10/2/1998		< 210		< 95		496	58	pCi/L
Oracle Junction Well	10/1/1998	10/5/1998	Repeat Analysis					< 212		pCi/L
Oracle Junction Well	1/4/1999	1/5/1999		< 224		< 96		346	46	pCi/L
Oracle Junction Well	1/4/1999	1/8/1999	Repeat Analysis					< 231		pCi/L
Oracle Junction Well	4/5/1999	4/10/1999		< 210		< 106		< 210		pCi/L
Oracle Junction Well	7/6/1999	7/8/1999		< 240		< 107		< 220		pCi/L
Oracle Junction Well	10/5/1999	10/8/1999		< 241		< 153		< 206		pCi/L
Oracle Junction Well #2	1/19/2000	Not available		< 237		< 146		< 162		pCi/L
Oracle Junction Well #2	4/26/2000	5/1/2000		< 235		< 146		< 227		pCi/L
Oracle Junction Well #2	7/13/2000	7/13/2000		< 224		< 97		959	64	pCi/L
Oracle Junction Well #2	7/13/2000	8/21/2000	Re-count					< 284		pCi/L
Oracle Junction Well #2	7/13/2000	7/18/2000	Repeat Analysis					< 224		pCi/L
Oracle Junction Well #2	10/16/2000	10/20/2000		< 239		< 94		< 240		pCi/L
Oracle Junction Well #2	11/17/2000	11/22/2000		< 247		< 112		< 239		pCi/L
Oracle Junction Well #2	1/31/2001	2/4/2001		< 208		173	26	548	56	pCi/L

Appendix Table C2
Radiologic Data for Groundwater from Off-Site Monitoring Wells [1]
Page Trowbridge Ranch Landfill

Drinking Water Standard (MCL)-->				20000 pCi/L		2,000 pCi/L				Units
Off-Site Well ID	**Sample Date**	**Analysis Date**	**Comment**	**^{3}H measurements and Sigma values [2]**		**^{14}C measurements and Sigma values [3]**		**All other Nuclides and Sigma values [4]**		
Oracle Junction Well #2	1/31/2001	2/20/2001	Repeat Analysis	< 236		< 179		< 218		pCi/L
Oracle Junction Well #2	4/9/2001	4/12/2001	Sample #1 (Full)	< 236		< 112		< 254		pCi/L
Oracle Junction Well #2	4/9/2001	4/12/2001	Sample #2 (Half)	< 233		< 106		< 253		pCi/L
Oracle Junction Well #2	7/30/2001	7/31/2001	Sample #1 (Full)	< 238		194	33	1339	71	pCi/L
Oracle Junction Well #2	7/30/2001	7/31/2001	Sample #2 (Half)	< 197		140	35	< 249		pCi/L
Oracle Junction Well #2	7/30/2001	8/7/2001	Re-count			< 149				pCi/L
Oracle Junction Well #2	7/30/2001	8/7/2001	Repeat Analysis			< 226				pCi/L
Oracle Junction Well #2	10/10/2001	10/19/2001		< 221		< 211		< 245		pCi/L
Oracle Junction Well #2	1/28/2002	2/4/2002		< 255		< 120		< 236		pCi/L
Oracle Junction Well #2	3/27/2002	3/29/2002		< 245		< 214		< 254		pCi/L
Oracle Junction Well #2	6/26/2002	6/28/2002		< 236		< 186		< 255		pCi/L
Oracle Junction Well #2	8/14/2002	8/16/2002	samples were higher	< 240		< 173		< 243		pCi/L
Oracle Junction Well #2	8/14/2002	8/24/2002	Repeat Analysis	< 229		< 210		< 239		pCi/L
Oracle Junction Well #2	10/23/2002	10/28/2002		< 221		< 182		< 262		pCi/L
Oracle Junction Well #2	1/15/2003	1/26/2003		< 209		< 193		< 269		pCi/L
Oracle Junction Well #2	4/23/2003	5/1/2003		< 222		< 185		< 269		pCi/L
Oracle Junction Well #2	7/9/2003	7/18/2003		< 227		< 173		< 273		pCi/L
Oracle Junction Well #2	10/22/2003	11/12/2003		< 317		< 222		< 282		pCi/L
Oracle Junction Well #2	1/29/2004	2/20/2004		< 231		< 198		< 264		pCi/L
Oracle Junction Well #2	4/21/2004	4/30/2004		< 241		< 215		< 252		pCi/L
Oracle Junction Well #2	7/7/2004	7/18/2004		< 218		< 197		< 168		pCi/L
Oracle Junction Well #2	10/13/2004	10/24/2004		< 285		< 230		< 252		pCi/L
Oracle Junction Well #2	1/21/2005	2/6/2005		< 230		< 200		< 242		pCi/L
Oracle Junction Well #2	4/13/2005	4/28/2005		<239		<201		<259		pCi/L
Oracle Junction Well #2	7/25/2005	8/5/2005		< 227		< 204		< 269		pCi/L
Oracle Junction Well #2	10/12/2005	10/21/2005		32387	242	2938	71	< 253		pCi/L
Oracle Junction Well #2	10/12/2005	12/1/2005	Repeat Analysis	262	61	< 202		< 233		pCi/L
Oracle Junction Well #2	1/18/2006	2/24/2006		< 368		< 197		< 222		pCi/L
Oracle Junction Well #2	4/12/2006	4/24/2006		< 366		< 183		< 251		pCi/L
Oracle Junction Well #2	7/24/2006	8/3/2006		No Spike		< 167		< 209		pCi/L
Oracle Junction Well #2	7/24/2006	8/8/2006	Repeat Analysis	< 237		< 169		< 209		pCi/L
Oracle Junction Well #2	10/11/2006	11/1/2006		< 473		< 260		< 309		pCi/L
Oracle Junction Well #2	1/10/2007	1/16/2007		< 408		< 242		< 393		pCi/L
Oracle Junction Well #2	4/11/2007	5/2/2007		< 373		< 162		< 242		pCi/L
Eagle Crest Ranch Well	1/22/1986	1/24/1986		< 396		< 301		< 131		pCi/L
Eagle Crest Ranch Well	1/29/1986	1/31/1986		< 413		< 246		< 133		pCi/L
Eagle Crest Ranch Well	3/6/1986	3/14/1986		< 338		< 230		< 117		pCi/L
Eagle Crest Ranch Well	3/31/1986	4/4/1986		< 347		< 248		< 120		pCi/L
Eagle Crest Ranch Well	4/30/1986	5/1/1986		< 329		< 240		< 120		pCi/L
Eagle Crest Ranch Well	5/29/1986	5/30/1986		< 340		< 243		< 105		pCi/L
Eagle Crest Ranch Well	6/25/1986	6/27/1986		< 379		< 235		< 124		pCi/L
Eagle Crest Ranch Well	7/29/1986	8/5/1986		< 331		< 234		< 129		pCi/L
Eagle Crest Ranch Well	8/27/1986	8/29/1986		413	85	212	58	< 124		pCi/L
Eagle Crest Ranch Well	9/25/1986	9/26/1986		< 388		< 248		< 147		pCi/L
Eagle Crest Ranch Well	10/30/1986	10/31/1986		< 373		< 235		< 156		pCi/L
Eagle Crest Ranch Well	11/21/1986	11/26/1986		< 375		< 232		< 115		pCi/L
Eagle Crest Ranch Well	12/31/1986	1/16/1987		< 319		< 259		< 192		pCi/L
City of Tucson Well I2-A	1/12/1982	Not Available		< 411				< 285		pCi/L

Appendix Table C2
Radiologic Data for Groundwater from Off-Site Monitoring Wells (1)
Page Trowbridge Ranch Landfill

Drinking Water Standard (MCL)-->				20000 pCi/L		2,000 pCi/L				Units
Off-Site Well ID	**Sample Date**	**Analysis Date**	**Comment**	**^{3}H measurements and Sigma values (2)**		**^{14}C measurements and Sigma values (3)**		**All other Nuclides and Sigma values (4)**		
City of Tucson Well I2-A	2/4/1982	Not Available		< 547				< 352		pCi/L
City of Tucson Well I2-A	3/8/1982	Not Available		< 385				< 249		pCi/L
City of Tucson Well I2-A	4/1/1982	Not Available		< 396				< 255		pCi/L
City of Tucson Well I2-A	4/29/1982	Not Available		< 335				< 221		pCi/L
City of Tucson Well I2-A	5/27/1982	Not Available		< 505				< 304		pCi/L
City of Tucson Well I2-A	6/24/1982	Not Available		< 397				< 246		pCi/L
City of Tucson Well I2-A	7/29/1982	Not Available		< 375				< 252		pCi/L
City of Tucson Well I2-A	8/26/1982	Not Available		< 397				< 288		pCi/L
City of Tucson Well I2-A	9/30/1982	Not Available		< 550				< 418		pCi/L
City of Tucson Well I2-A	10/28/1982	Not Available		< 604				< 377		pCi/L
City of Tucson Well I2-A	12/2/1982	Not Available		< 441				< 355		pCi/L
City of Tucson Well I2-A	1/20/1983	Not Available		< 429				< 240		pCi/L
City of Tucson Well I2-A	3/1/1983	Not Available		< 424				< 244		pCi/L
City of Tucson Well I2-A	4/14/1983	Not Available		< 455				< 241		pCi/L
City of Tucson Well I2-A	5/26/1983	Not Available		< 436				< 257		pCi/L
City of Tucson Well I2-A	7/14/1983	Not Available		< 417				< 256		pCi/L
City of Tucson Well I2-A	9/1/1983	Not Available		< 407				< 283		pCi/L
City of Tucson Well I2-A	9/29/1983	Not Available		< 428				< 351		pCi/L
City of Tucson Well I2-A	10/27/1983	Not Available		< 602				< 375		pCi/L
City of Tucson Well I2-A	12/1/1983	Not Available		< 402				< 259		pCi/L
City of Tucson Well I2-A	1/5/1984	1/20/1984		< 538				< 322		pCi/L
City of Tucson Well I2-A	2/2/1984	2/3/1984		< 413				< 241		pCi/L
City of Tucson Well I2-A	2/29/1984	3/16/1984		< 432				< 224		pCi/L
City of Tucson Well I2-A	3/29/1984	4/20/1984		< 633				< 418		pCi/L
City of Tucson Well I2-A	5/3/1984	5/23/1984		< 617				< 382		pCi/L
City of Tucson Well I2-A	5/31/1984	6/14/1984		< 422				< 313		pCi/L
City of Tucson Well I2-A	7/3/1984	7/13/1984		< 444				< 268		pCi/L
City of Tucson Well I2-A	8/2/1984	8/17/1984		< 367		< 344		< 164		pCi/L
City of Tucson Well I2-A	8/28/1984	9/7/1984		< 341		< 329		< 134		pCi/L
City of Tucson Well I2-A	10/16/1984	10/17/1984		< 340		< 256		< 158		pCi/L
City of Tucson Well I2-A	11/1/1984	11/6/1984		< 362		< 239		< 183		pCi/L
City of Tucson Well I2-A	1/16/1985	1/25/1985		< 333		< 235		< 138		pCi/L
City of Tucson Well I2-A	2/26/1985	3/8/1985		< 316		< 228		< 128		pCi/L
City of Tucson Well I2-A	3/12/1985	3/15/1985		< 317		< 235		< 123		pCi/L
City of Tucson Well I2-A	5/2/1985	5/24/1985		< 323		< 237		< 131		pCi/L
City of Tucson Well I2-A	8/14/1985	8/23/1985		< 329		< 234		< 107		pCi/L
City of Tucson Well I2-A	9/6/1985	9/13/1985		< 337		< 280		< 136		pCi/L
City of Tucson Well I2-A	10/2/1985	10/15/1985		< 345		< 262		< 161		pCi/L
City of Tucson Well I2-A	10/25/1985	10/25/1985		< 350		< 258		< 146		pCi/L
City of Tucson Well I2-A	11/20/1985	11/22/1985		< 331		< 239		< 124		pCi/L
City of Tucson Well I2-A	1/22/1986	1/24/1986		< 391		< 302		185	34	pCi/L
City of Tucson Well I2-A	1/29/1986	1/31/1986		< 415		< 257		< 139		pCi/L
City of Tucson Well I2-A	3/6/1986	3/14/1986		< 336		< 235		< 121		pCi/L
City of Tucson Well I2-A	3/31/1986	4/4/1986		< 338		< 252		< 147		pCi/L
City of Tucson Well I2-A	4/30/1986	5/1/1986		< 318		< 236		< 123		pCi/L
City of Tucson Well I2-A	5/29/1986	5/30/1986		< 331		< 239		155	29	pCi/L
City of Tucson Well I2-A	6/25/1986	6/27/1986		< 371		< 240		< 128		pCi/L
City of Tucson Well I2-A	7/29/1986	8/5/1986		< 330		< 237		< 124		pCi/L
City of Tucson Well I2-A	8/27/1986	8/29/1986		421	87	310	66	< 131		pCi/L
City of Tucson Well I2-A	9/25/1986	9/26/1986		< 387		< 247		< 143		pCi/L
City of Tucson Well I2-A	10/30/1986	10/31/1986		< 380		< 236		< 143		pCi/L
City of Tucson Well I2-A	11/21/1986	11/26/1986		< 377		< 231		< 116		pCi/L
City of Tucson Well I2-A	12/31/1986	1/16/1987		< 337		< 256		< 127		pCi/L
City of Tucson Well I2-A	1/29/1987	1/30/1987		< 312		< 238		< 155		pCi/L

Appendix Table C2
Radiologic Data for Groundwater from Off-Site Monitoring Wells [1]
Page Trowbridge Ranch Landfill

Drinking Water Standard (MCL)-->				20000 pCi/L		2,000 pCi/L				Units
Off-Site Well ID	**Sample Date**	**Analysis Date**	**Comment**	**^{3}H measurements and Sigma values [2]**		**^{14}C measurements and Sigma values [3]**		**All other Nuclides and Sigma values [4]**		
City of Tucson Well I2-A	2/25/1987	3/13/1987		< 346		< 241		< 143		pCi/L
City of Tucson Well I2-A	3/30/1987	4/3/1987		< 329		< 241		< 161		pCi/L
City of Tucson Well I2-A	4/29/1987	5/4/1987		< 338		254	63	< 152		pCi/L
City of Tucson Well I2-A	5/28/1987	6/5/1987		< 335		< 236		< 119		pCi/L
City of Tucson Well I2-A	6/26/1987	7/3/1987		< 326		< 231		< 131		pCi/L
City of Tucson Well I2-A	7/29/1987	7/31/1987		< 333		< 250		141	32	pCi/L
City of Tucson Well I2-A	8/31/1987	9/18/1987		< 361		< 253		< 242		pCi/L
City of Tucson Well I2-A	9/30/1987	10/2/1987		< 366		< 250		< 229		pCi/L
City of Tucson Well I2-A	10/29/1987	11/20/1987		< 349		< 201		< 233		pCi/L
City of Tucson Well I2-A	11/20/1987	11/25/1987		< 392		< 209		< 243		pCi/L
City of Tucson Well I2-A	12/31/1987	1/8/1988		< 335		< 203		< 257		pCi/L
City of Tucson Well I2-A	1/27/1988	1/29/1988		< 356		256	64	< 247		pCi/L
City of Tucson Well I2-A	2/29/1988	3/7/1988		< 343		< 232		< 270		pCi/L
City of Tucson Well I2-A	3/31/1988	4/8/1988		< 340		< 229		< 252		pCi/L
City of Tucson Well I2-A	4/27/1988	4/29/1988		< 449		< 251		< 301		pCi/L
City of Tucson Well I2-A	6/6/1988	6/10/1988		< 434		< 252		< 427		pCi/L
City of Tucson Well I2-A	6/6/1988	6/10/1988	Eval-Universol	< 370		273	64	< 248		pCi/L
City of Tucson Well I2-A	6/29/1988	7/16/1988		< 325		< 245		< 259		pCi/L
City of Tucson Well I2-A	7/28/1988	7/30/1988		< 344		< 234		< 234		pCi/L
City of Tucson Well I2-A	9/1/1988	9/2/1988		< 325		< 226		279	60	pCi/L
City of Tucson Well I2-A	9/29/1988	9/30/1988		< 336		< 240		< 235		pCi/L
City of Tucson Well I2-A	10/27/1988	11/4/1988		< 356		< 232		< 193		pCi/L
City of Tucson Well I2-A	11/17/1988	11/18/1988		< 348		< 230		< 245		pCi/L
City of Tucson Well I2-A	11/17/1988	11/18/1988	Eval-Universol-ES	< 365		< 236		< 250		pCi/L
City of Tucson Well I2-A	1/6/1989	1/12/1989		< 359		< 245		< 228		pCi/L
City of Tucson Well I2-A	1/31/1989	2/3/1989		< 319		< 225		< 208		pCi/L
City of Tucson Well I2-A	2/28/1989	3/3/1989		< 330		< 222		< 192		pCi/L
City of Tucson Well I-2B	7/24/2006	8/3/2006		< 236		< 166		< 221		pCi/L
City of Tucson Well I-2B	10/11/2006	11/1/2006		< 475		< 260		< 355		pCi/L
City of Tucson Well I-2B	1/10/2007	1/16/2007		< 404		< 241		< 348		pCi/L
City of Tucson Well I-2B	4/11/2007	5/2/2007		< 379		< 161		< 379		pCi/L
City of Tucson Well I2-B	3/31/1989	4/10/1989		< 307		< 224		< 257		pCi/L
City of Tucson Well I2-B	5/3/1989	5/12/1989		< 295		< 235		< 241		pCi/L
City of Tucson Well I2-B	6/1/1989	6/9/1989		< 293		< 250		< 210		pCi/L
City of Tucson Well I2-B	6/29/1989	7/7/1989		< 315		< 233		< 164		pCi/L
City of Tucson Well I2-B	7/28/1989	8/16/1989		< 369		< 235		< 243		pCi/L
City of Tucson Well I2-B	9/8/1989	10/4/1989		< 362		< 245		< 205		pCi/L
City of Tucson Well I2-B	10/4/1989	10/6/1989		< 355		< 221		< 256		pCi/L
City of Tucson Well I2-B	11/1/1989	11/3/1989		< 349		< 237		< 235		pCi/L
City of Tucson Well I2-B	12/6/1989	12/22/1989		< 314		< 230		< 233		pCi/L
City of Tucson Well I2-B	1/5/1990	1/8/1990		< 303		< 192		< 206		pCi/L
City of Tucson Well I2-B	2/7/1990	2/23/1990		< 322		208	54	< 172		pCi/L
City of Tucson Well I2-B	2/28/1990	3/12/1990		< 321		< 251		< 238		pCi/L
City of Tucson Well I2-B	3/29/1990	4/2/1990		< 312		< 209		183	48	pCi/L
City of Tucson Well I2-B	5/16/1990	5/18/1990		< 336		< 242		< 252		pCi/L
City of Tucson Well I2-B	6/6/1990	6/8/1990		< 333		< 208		231	59	pCi/L
City of Tucson Well I2-B	7/5/1990	7/6/1990		< 348		< 211		< 187		pCi/L
City of Tucson Well I2-B	8/2/1990	8/3/1990		351	93	< 231		< 266		pCi/L
City of Tucson Well I2-B	9/6/1990	9/14/1990		< 362		< 231		< 243		pCi/L
City of Tucson Well I2-B	10/3/1990	10/4/1990		< 319		< 213		< 216		pCi/L
City of Tucson Well I2-B	10/31/1990	11/8/1990		< 356		< 236		< 273		pCi/L

Appendix Table C2
Radiologic Data for Groundwater from Off-Site Monitoring Wells [1]
Page Trowbridge Ranch Landfill

Drinking Water Standard (MCL)-->				20000 pCi/L		2,000 pCi/L				Units
Off-Site Well ID	Sample Date	Analysis Date	Comment	^{3}H measurements and Sigma values [2]		^{14}C measurements and Sigma values [3]		All other Nuclides and Sigma values [4]		
City of Tucson Well I2-B	12/3/1990	12/7/1990		< 340		< 236		< 266		pCi/L
City of Tucson Well I2-B	1/10/1991	1/14/1991		< 376		< 252		< 250		pCi/L
City of Tucson Well I2-B	2/5/1991	2/12/1991		< 411		< 284		< 262		pCi/L
City of Tucson Well I2-B	3/7/1991	3/14/1991		< 391		< 253		< 271		pCi/L
City of Tucson Well I2-B	3/26/1991	3/29/1991		< 359		< 241		< 235		pCi/L
City of Tucson Well I2-B	4/30/1991	5/4/1991		< 364		< 276		< 258		pCi/L
City of Tucson Well I2-B	5/30/1991	6/1/1991		< 357		< 230		< 229		pCi/L
City of Tucson Well I2-B	7/2/1991	7/3/1991		< 401		< 249		< 265		pCi/L
City of Tucson Well I2-B	8/1/1991	8/6/1991		< 381		< 265		< 254		pCi/L
City of Tucson Well I2-B	8/29/1991	8/31/1991		< 400		< 270		< 264		pCi/L
City of Tucson Well I2-B	9/24/1991	9/27/1991		< 374		< 257		< 243		pCi/L
City of Tucson Well I2-B	10/31/1991	11/1/1991		< 374		< 257		< 208		pCi/L
City of Tucson Well I2-B	12/5/1991	Not available		< 354		< 241		< 226		pCi/L
City of Tucson Well I2-B	1/9/1992	1/10/1992		< 377		< 254		< 240		pCi/L
City of Tucson Well I2-B	1/30/1992	1/31/1992		< 380		< 256		< 239		pCi/L
City of Tucson Well I2-B	3/12/1992	3/13/1992		< 373		NA		< 195		pCi/L
City of Tucson Well I2-B	4/7/1992	4/8/1992		< 388		NA		< 175		pCi/L
City of Tucson Well I2-B	5/5/1992	5/5/1992		< 386		< 256		< 245		pCi/L
City of Tucson Well I2-B	6/2/1992	6/2/1992		< 371		< 237		< 204		pCi/L
City of Tucson Well I2-B	7/10/1992	7/10/1992		< 335		< 249		< 228		pCi/L
City of Tucson Well I2-B	7/30/1992	7/30/1992		< 351		< 231		< 252		pCi/L
City of Tucson Well I2-B	8/26/1992	8/27/1992		< 324		< 244		< 258		pCi/L
City of Tucson Well I2-B	10/8/1992	10/8/1992		< 335		< 241		< 263		pCi/L
City of Tucson Well I2-B	11/5/1992	11/13/1992		< 319		< 235		< 210		pCi/L
City of Tucson Well I2-B	12/15/1992	12/18/1992		< 328		< 216		< 263		pCi/L
City of Tucson Well I2-B	1/22/1993	1/29/1993		< 312		< 230		< 250		pCi/L
City of Tucson Well I2-B	2/5/1993	2/5/1993		< 317		< 226		< 235		pCi/L
City of Tucson Well I2-B	2/26/1993	2/26/1993		< 354		< 247		< 215		pCi/L
City of Tucson Well I2-B	4/5/1993	4/7/1993		< 345		< 201		< 175		pCi/L
City of Tucson Well I2-B	5/14/1993	5/16/1993		< 320		< 212		< 230		pCi/L
City of Tucson Well I2-B	6/10/1993	6/16/1993		< 324		< 214		< 207		pCi/L
City of Tucson Well I2-B	7/7/1993	7/9/1993		< 274		< 202		< 224		pCi/L
City of Tucson Well I2-B	7/30/1993	7/30/1993		< 290		< 214		< 199		pCi/L
City of Tucson Well I2-B	9/2/1993	9/10/1993		< 301		< 154		< 165		pCi/L
City of Tucson Well I2-B	10/15/1993	10/15/1993		< 510		< 355		< 409		pCi/L
City of Tucson Well I2-B	10/15/1993	11/17/1993	Repeat Analysis					< 217		pCi/L
City of Tucson Well I2-B	10/28/1993	10/31/1993		< 271		< 197		< 211		pCi/L
City of Tucson Well I2-B	11/23/1993	11/24/1993		< 302		< 211		< 210		pCi/L
City of Tucson Well I2-B	12/20/1993	12/23/1993		< 293		< 173		< 185		pCi/L
City of Tucson Well I2-B	1/18/1994	1/26/1994		< 309		< 206		< 166		pCi/L
City of Tucson Well I2-B	2/24/1994	2/24/1994		< 297		< 184		< 219		pCi/L
City of Tucson Well I2-B	3/22/1994	3/24/1994		< 285		< 197		< 228		pCi/L
City of Tucson Well I2-B	4/12/1994	4/15/1994		< 283		< 197		< 209		pCi/L
City of Tucson Well I2-B	5/31/1994	6/2/1994		< 200		< 121		< 174		pCi/L
City of Tucson Well I2-B	6/14/1994	6/15/1994		< 184		< 137		213	46	pCi/L
City of Tucson Well I2-B	6/14/1994	6/22/1994	Repeat Analysis					< 170		pCi/L
City of Tucson Well I2-B	7/7/1994	7/12/1994		< 374		< 277		< 353		pCi/L
City of Tucson Well I2-B	8/4/1994	8/10/1994		< 183		< 138		< 159		pCi/L
City of Tucson Well I2-B	9/8/1994	9/9/1994		< 216		< 137		< 173		pCi/L
City of Tucson Well I2-B	10/6/1994	10/8/1994		< 206		< 171		< 238		pCi/L
City of Tucson Well I2-B	11/3/1994	11/9/1994		< 211		< 168		< 258		pCi/L
City of Tucson Well I2-B	12/8/1994	12/10/1994		< 209		< 171		< 256		pCi/L
City of Tucson Well I2-B	1/10/1995	1/14/1995		< 213		< 150		< 211		pCi/L
City of Tucson Well I2-B	2/7/1995	2/14/1995		< 231		< 146		< 240		pCi/L

Appendix Table C2
Radiologic Data for Groundwater from Off-Site Monitoring Wells [1]
Page Trowbridge Ranch Landfill

Drinking Water Standard (MCL)-->				20000 pCi/L		2,000 pCi/L				Units
Off-Site Well ID	**Sample Date**	**Analysis Date**	**Comment**	**^{3}H measurements and Sigma values [2]**		**^{14}C measurements and Sigma values [3]**		**All other Nuclides and Sigma values [4]**		
City of Tucson Well I2-B	3/7/1995	3/10/1995		< 200		< 131		< 214		pCi/L
City of Tucson Well I2-B	4/6/1995	4/14/1995		< 198		< 142		< 180		pCi/L
City of Tucson Well I2-B	5/11/1995	5/13/1995		< 212		< 120		< 246		pCi/L
City of Tucson Well I2-B	6/8/1995	6/14/1995		< 212		< 120		< 193		pCi/L
City of Tucson Well I2-B	7/6/1995	7/7/1995		< 209		< 126		< 234		pCi/L
City of Tucson Well I2-B	8/11/1995	8/20/1995		< 212		< 329		< 236		pCi/L
City of Tucson Well I2-B	9/12/1995	9/15/1995		< 202		< 147		< 204		pCi/L
City of Tucson Well I2-B	10/13/1995	10/17/1995		< 220		< 174		< 228		pCi/L
City of Tucson Well I2-B	11/21/1995	11/22/1995		< 204		< 129		< 200		pCi/L
City of Tucson Well I2-B	12/15/1995	12/15/1995		< 226		< 150		< 224		pCi/L
City of Tucson Well I2-B	1/23/1996	1/25/1996		< 232		< 86		< 234		pCi/L
City of Tucson Well I2-B	2/7/1996	2/8/1996		< 211		< 102		< 189		pCi/L
City of Tucson Well I2-B	3/19/1996	3/21/1996		< 205		< 156		< 211		pCi/L
City of Tucson Well I2-B	4/30/1996	Not available		< 213		< 206		< 237		pCi/L
City of Tucson Well I2-B	6/6/1996	6/8/1996		< 222		< 107		< 257		pCi/L
City of Tucson Well I2-B	6/27/1996	7/3/1996		< 220		< 90		< 240		pCi/L
City of Tucson Well I2-B	11/13/1996	11/21/1996		< 232		< 136		< 213		pCi/L
City of Tucson Well I2-B	12/12/1996	12/17/1996		< 225		< 155		< 208		pCi/L
City of Tucson Well I2-B	1/2/1997	1/3/1997		< 226		< 93		< 206	< 206	pCi/L
City of Tucson Well I2-B	2/13/1997	2/14/1997		< 236		< 184		< 185		pCi/L
City of Tucson Well I2-B	3/13/1997	3/14/1997		< 234		< 159		< 187		pCi/L
City of Tucson Well I2-B	4/8/1997	4/10/1997		< 222		< 107		< 239		pCi/L
City of Tucson Well I2-B	5/29/1997	5/30/1997		< 217		< 86		< 213		pCi/L
City of Tucson Well I2-B	6/16/1997	6/19/1997		< 204		< 186		< 217		pCi/L
City of Tucson Well I2-B	7/15/1997	7/15/1997		< 225		< 166		< 598		pCi/L
City of Tucson Well I2-B	8/14/1997	8/14/1997		< 234		< 135		< 246		pCi/L
City of Tucson Well I2-B	9/16/1997	9/18/1997		< 234		< 185		< 243		pCi/L
City of Tucson Well I2-B	10/13/1997	10/14/1997		< 238		< 121		< 247		pCi/L
City of Tucson Well I2-B	11/18/1997	11/24/1997		< 245		< 157		< 225		pCi/L
City of Tucson Well I2-B	12/18/1997	12/19/1997		< 236		< 120		< 248		pCi/L
City of Tucson Well I2-B	1/16/1998	1/17/1998		< 225		< 210		< 247		pCi/L
City of Tucson Well I2-B	2/17/1998	2/19/1998		< 229		< 97		< 239		pCi/L
City of Tucson Well I2-B	3/20/1998	3/24/1998		< 218		< 118		< 215		pCi/L
City of Tucson Well I2-B	4/21/1998	4/23/1998		< 227		< 150		< 230		pCi/L
City of Tucson Well I2-B	5/26/1998	5/27/1998		< 219		< 127		361	66	pCi/L
City of Tucson Well I2-B	5/26/1998	5/30/1998	Repeat Analysis					< 242		pCi/L
City of Tucson Well I2-B	7/7/1998	7/10/1998		361	58	< 174		< 226		pCi/L
City of Tucson Well I2-B	7/7/1998	7/14/1998	Repeat Analysis	< 213						pCi/L
City of Tucson Well I2-B	10/1/1998	10/2/1998		< 212		< 100		< 213		pCi/L
City of Tucson Well I2-B	1/4/1999	1/5/1999		< 220		< 99		357	47	pCi/L
City of Tucson Well I2-B	1/4/1999	1/8/1999	Repeat Analysis					< 240		pCi/L
City of Tucson Well I2-B	4/5/1999	4/10/1999		< 214		< 108		< 205		pCi/L
City of Tucson Well I2-B	7/6/1999	7/8/1999		< 240		< 109		< 211		pCi/L
City of Tucson Well I2-B	10/5/1999	10/8/1999		< 241		< 146		< 202		pCi/L
City of Tucson Well I2-B	1/19/2000	Not available		< 237		< 152		< 162		pCi/L
City of Tucson Well I2-B	4/26/2000	5/1/2000		< 231		< 141		< 225		pCi/L
City of Tucson Well I2-B	7/13/2000	7/13/2000		< 223		< 99		319	62	pCi/L
City of Tucson Well I2-B	7/13/2000	7/18/2000	Repeat Analysis					< 220		pCi/L
City of Tucson Well I2-B	10/16/2000	10/20/2000		< 236		< 91		< 244		pCi/L
City of Tucson Well I2-B	11/17/2000	11/22/2000		< 240		< 125		353	61	pCi/L
City of Tucson Well I2-B	11/17/2000	12/7/2000	Repeat Analysis					< 159		pCi/L
City of Tucson Well I2-B	1/31/2001	2/4/2001		< 227		< 107		431	55	pCi/L
City of Tucson Well I2-B	1/31/2001	2/20/2001	Repeat Analysis	< 233		< 175		< 218		pCi/L
City of Tucson Well I2-B	4/9/2001	4/12/2001	Sample #1 (Full)	< 236		< 119		< 255		pCi/L

Appendix Table C2
Radiologic Data for Groundwater from Off-Site Monitoring Wells (1)
Page Trowbridge Ranch Landfill

Drinking Water Standard (MCL)-->				20000 pCi/L		2,000 pCi/L				Units
Off-Site Well ID	**Sample Date**	**Analysis Date**	**Comment**	**^{3}H measurements and Sigma values (2)**		**^{14}C measurements and Sigma values (3)**		**All other Nuclides and Sigma values (4)**		
City of Tucson Well I2-B	4/9/2001	4/12/2001	Sample #2 (Half)	< 231		< 95		< 252		pCi/L
City of Tucson Well I2-B	7/30/2001	7/31/2001	Sample #1 (Full)	< 197		152	34	1114	70	pCi/L
City of Tucson Well I2-B	7/30/2001	7/31/2001	Sample #2 (Half)	< 221		< 137		< 246		pCi/L
City of Tucson Well I2-B	10/10/2001	10/19/2001		< 221		< 216		< 244		pCi/L
City of Tucson Well I2-B	1/28/2002	2/4/2002		< 267		< 122		< 237		pCi/L
City of Tucson Well I2-B	3/27/2002	3/29/2002		< 242		< 213		< 251		pCi/L
City of Tucson Well I2-B	6/26/2002	6/28/2002		< 235		< 185		< 256		pCi/L
City of Tucson Well I2-B	8/14/2002	8/16/2002	than normal	< 237		< 172		< 243		pCi/L
City of Tucson Well I2-B	8/14/2002	8/24/2002	Repeat Analysis	< 225		< 171		< 239		pCi/L
City of Tucson Well I2-B	10/23/2002	10/28/2002		< 221		< 184		< 262		pCi/L
City of Tucson Well I2-B	1/15/2003	1/26/2003		< 207		< 184		< 268		pCi/L
City of Tucson Well I2-B	4/23/2003	5/1/2003		< 222		< 186		< 267		pCi/L
City of Tucson Well I2-B	7/9/2003	7/18/2003		< 226		< 181		< 271		pCi/L
City of Tucson Well I2-B	10/22/2003	11/12/2003		<312		< 215		< 282		pCi/L
City of Tucson Well I2-B	1/29/2004	2/20/2004		< 226		< 195		< 297		pCi/L
City of Tucson Well I2-B	4/21/2004	4/30/2004		< 242		< 211		< 257		pCi/L
City of Tucson Well I2-B	7/7/2004	7/18/2004		< 218		< 201		< 167		pCi/L
City of Tucson Well I2-B	10/13/2004	10/24/2004		< 289		< 228		< 249		pCi/L
City of Tucson Well I2-B	1/21/2005	2/6/2005		< 226		< 222		< 241		pCi/L
City of Tucson Well I2-B	4/13/2005	4/28/2005		<238		<203		<256		pCi/L
City of Tucson Well I2-B	7/25/2005	8/5/2005		< 247		< 206		< 257		pCi/L
City of Tucson Well I2-B	10/12/2005	10/21/2005		< 287		< 222		< 256		pCi/L
City of Tucson Well I2-B	10/12/2005	12/1/2005	Repeat Analysis	< 235		< 201		< 228		pCi/L
City of Tucson Well I2-B	1/18/2006	2/24/2006		< 372		< 194		< 217		pCi/L
City of Tucson Well I2-B	4/12/2006	4/24/2006		3089	33	349	48	< 248		pCi/L
City of Tucson Well I2-B	4/12/2006	4/27/2006	Repeat Analysis	< 309		< 176				pCi/L
Goodman Ranch Well	1/12/1982	Not Available		< 400				< 283		pCi/L
Goodman Ranch Well	2/4/1982	Not Available		< 536				< 352		pCi/L
Goodman Ranch Well	3/8/1982	Not Available		< 389				< 255		pCi/L
Goodman Ranch Well	4/1/1982	Not Available		< 382				< 255		pCi/L
Goodman Ranch Well	4/29/1982	Not Available		< 345				< 221		pCi/L
Goodman Ranch Well	5/27/1982	Not Available		< 505				< 308		pCi/L
Goodman Ranch Well	6/24/1982	Not Available		< 415				< 250		pCi/L
Goodman Ranch Well	7/29/1982	Not Available		< 393				< 264		pCi/L
Goodman Ranch Well	8/26/1982	Not Available		< 406				< 273		pCi/L
Goodman Ranch Well	9/30/1982	Not Available		< 551				< 664		pCi/L
Goodman Ranch Well	10/28/1982	Not Available		< 608				< 377		pCi/L
Goodman Ranch Well	12/2/1982	Not Available		< 449				< 303		pCi/L
Goodman Ranch Well	1/20/1983	Not Available		< 452				< 240		pCi/L
Goodman Ranch Well	3/1/1983	Not Available		< 421				< 246		pCi/L
Goodman Ranch Well	4/14/1983	Not Available		< 455				< 245		pCi/L
Goodman Ranch Well	5/26/1983	Not Available		< 439				< 258		pCi/L
Goodman Ranch Well	7/14/1983	Not Available		< 419				< 347		pCi/L
Goodman Ranch Well	9/1/1983	Not Available		< 406				< 269		pCi/L
Goodman Ranch Well	9/29/1983	Not Available		< 432				< 338		pCi/L
Goodman Ranch Well	10/27/1983	Not Available		< 612				< 366		pCi/L
Goodman Ranch Well	12/1/1983	Not Available		< 416				< 337		pCi/L
Goodman Ranch Well	1/5/1984	1/20/1984		< 419				< 246		pCi/L
Goodman Ranch Well	2/2/1984	2/3/1984		< 413				< 245		pCi/L
Goodman Ranch Well	2/29/1984	3/16/1984		< 449				< 222		pCi/L
Goodman Ranch Well	3/29/1984	4/20/1984		< 617				< 346		pCi/L
Goodman Ranch Well	5/3/1984	5/23/1984		< 611				< 368		pCi/L

Appendix Table C2
Radiologic Data for Groundwater from Off-Site Monitoring Wells (1)
Page Trowbridge Ranch Landfill

Drinking Water Standard (MCL)-->				20000 pCi/L		2,000 pCi/L				Units
Off-Site Well ID	**Sample Date**	**Analysis Date**	**Comment**	**^{3}H measurements and Sigma values (2)**		**^{14}C measurements and Sigma values (3)**		**All other Nuclides and Sigma values (4)**		
Goodman Ranch Well	5/31/1984	6/14/1984		< 427				< 246		pCi/L
Goodman Ranch Well	7/3/1984	7/13/1984		< 442				< 247		pCi/L
Goodman Ranch Well	8/2/1984	8/17/1984		< 375		< 333		< 169		pCi/L
Goodman Ranch Well	8/28/1984	9/7/1984		< 339		< 370		< 128		pCi/L
Goodman Ranch Well	10/16/1984	10/17/1984		< 346		< 248		< 149		pCi/L
Goodman Ranch Well	11/1/1984	11/6/1984		< 339		< 235		< 177		pCi/L
Goodman Ranch Well	1/16/1985	1/25/1985		< 324		< 240		< 134		pCi/L
Goodman Ranch Well	2/26/1985	3/8/1985		< 319		< 220		< 125		pCi/L
Goodman Ranch Well	3/12/1985	3/15/1985		< 334		< 234		< 119		pCi/L
Goodman Ranch Well	5/2/1985	5/24/1985		< 319		< 237		< 126		pCi/L
Goodman Ranch Well	8/14/1985	8/23/1985		< 329		< 229		< 105		pCi/L
Goodman Ranch Well	9/6/1985	9/13/1985		< 334		< 240		< 128		pCi/L
Goodman Ranch Well	10/2/1985	10/15/1985		395	92	< 244		< 151		pCi/L
Goodman Ranch Well	10/25/1985	10/25/1985		< 338		< 241		< 122		pCi/L
Goodman Ranch Well	11/20/1985	11/22/1985		< 329		< 236		< 120		pCi/L
SaddleBrooke #17 Well	4/9/2001	4/12/2001	Sample #2 (Half)	< 233		< 105		< 246		pCi/L
SaddleBrooke #17 Well	7/30/2001	7/31/2001	Sample #2 (Half)	< 225		< 131		< 240		pCi/L
SaddleBrooke Well #17	1/19/2000	Not available		< 234		< 153		< 160		pCi/L
SaddleBrooke Well #17	4/26/2000	5/1/2000		< 236		< 158		< 212		pCi/L
SaddleBrooke Well #17	7/13/2000	7/13/2000		< 226		109	26	915	63	pCi/L
SaddleBrooke Well #17	7/13/2000	8/21/2000	Re-count					< 283		pCi/L
SaddleBrooke Well #17	7/13/2000	7/18/2000	Repeat Analysis			< 99		< 218		pCi/L
SaddleBrooke Well #17	10/16/2000	10/20/2000		< 234		< 93		< 241		pCi/L
SaddleBrooke Well #17	11/17/2000	11/22/2000		< 238		< 117		< 229		pCi/L
SaddleBrooke Well #17	1/31/2001	2/4/2001		< 218		< 108		< 210		pCi/L
SaddleBrooke Well #17	1/31/2001	2/20/2001	Insufficient sample							pCi/L
SaddleBrooke Well #17	4/9/2001	4/12/2001	Sample #1 (Full)	< 232		< 109		378	< 69	pCi/L
SaddleBrooke Well #17	7/30/2001	7/31/2001	Sample #1 (Full)	< 237		179	35	1131	70	pCi/L
SaddleBrooke Well #17	10/10/2001	10/19/2001		< 222		< 218		< 239		pCi/L
SaddleBrooke Well #17	1/28/2002	2/4/2002		< 254		< 126		< 233		pCi/L
SaddleBrooke Well #17	3/27/2002	3/29/2002		< 238		< 182		< 242		pCi/L
SaddleBrooke Well #17	6/26/2002	6/28/2002		< 235		< 178		< 255		pCi/L
SaddleBrooke Well #17	8/14/2002	8/16/2002	**	< 238		< 169		< 234		pCi/L
SaddleBrooke Well #17	8/14/2002	8/24/2002	Repeat Analysis	< 228		< 168		< 231		pCi/L
SaddleBrooke Well #17	10/23/2002	10/28/2002		1162	67	354	46	< 263		pCi/L
SaddleBrooke Well #17	10/23/2002	11/12/2002	Repeat Analysis	347	61	305	46			pCi/L
SaddleBrooke Well #17	10/23/2002	11/16/2002	Repeat Analysis	< 220		< 168				pCi/L
SaddleBrooke Well #17	1/15/2003	1/26/2003		< 209		< 177		< 259		pCi/L
SaddleBrooke Well #17	4/23/2003	5/1/2003		< 218		< 192		< 263		pCi/L
SaddleBrooke Well #17	7/9/2003	7/18/2003		< 230		< 185		< 266		pCi/L
SaddleBrooke Well #17	10/22/2003	11/12/2003		< 316		< 212		< 277		pCi/L
SaddleBrooke Well #17	1/29/2004	2/20/2004		< 225		< 195		< 246		pCi/L
SaddleBrooke Well #17	4/21/2004	4/30/2004		< 238		< 228		< 251		pCi/L
SaddleBrooke Well #17	7/7/2004	7/18/2004		< 213		< 190		< 162		pCi/L
SaddleBrooke Well #17	10/13/2004	10/24/2004		< 287		< 249		< 238		pCi/L
SaddleBrooke Well #17	1/21/2005	2/6/2005		< 225		< 204		< 227		pCi/L
SaddleBrooke Well #17	4/13/2005	4/28/2005		<235		<201		<252		pCi/L
SaddleBrooke Well #17	7/25/2005	8/5/2005		< 226		< 207		< 258		pCi/L
SaddleBrooke Well #17	10/12/2005	10/21/2005		< 290		< 236		< 249		pCi/L
SaddleBrooke Well #17	10/12/2005	12/1/2005	Repeat Analysis	< 233		< 200		< 220		pCi/L

Appendix Table C2

Radiologic Data for Groundwater from Off-Site Monitoring Wells (1)

Page Trowbridge Ranch Landfill

Drinking Water Standard (MCL)-->				20000 pCi/L		2,000 pCi/L				Units
Off-Site Well ID	**Sample Date**	**Analysis Date**	**Comment**	**^{3}H measurements and Sigma values (2)**		**^{14}C measurements and Sigma values (3)**		**All other Nuclides and Sigma values (4)**		
SaddleBrooke Well #17	1/18/2006	2/24/2006		< 370		< 192		< 212		pCi/L
SaddleBrooke Well #17	4/12/2006	4/24/2006		< 362		<171		< 238		pCi/L
SaddleBrooke Well #17	7/24/2006	8/3/2006		< 241		< 165		< 217		pCi/L
SaddleBrooke Well #17	10/11/2006	11/1/2006		< 473		< 257		< 361		pCi/L
SaddleBrooke Well #17	1/10/2007	1/16/2007		< 411		< 242		< 364		pCi/L
SaddleBrooke Well #17	4/11/2007	5/2/2007		< 403		< 160		< 256		pCi/L

Notes

< = Less than lower limit of detection

MCL = Maximum Contaminant Level

MW = Monitoring Well

UA = University of Arizona

(1) Results from Liquid Scintillation Counting

(2) Results from Channel A

(3) Results from Channel B

(4) Results from Channel C

Appendix C-3
Summary Statistics for All Groundwater Sampling Events (1984 through 2007)
Page Trowbridge Ranch Landfill

Monitoring Well (1)	Analyte	Units	# of Detects	# of Samples	FOD	Range in Detection Limits (DL)		Range in Detected Concentration		Average Concentration (2)
MW-1	1,1,1-Trichloroethane	mg/L	2	40	5.0%	0.00E+00	2.00E-03	1.10E-03	1.10E-03	4.14E-04
MW-1	1,1,2,2-Tetrachloroethane	mg/L	1	40	2.5%	0.00E+00	2.00E-03	2.00E-06	2.00E-06	3.74E-04
MW-1	1,1-Dichloroethane	mg/L	1	40	2.5%	0.00E+00	2.00E-03	4.00E-05	4.00E-05	3.82E-04
MW-1	2,4,6-Trichlorophenol	mg/L	1	35	2.9%	0.00E+00	2.50E-02	1.00E-02	1.00E-02	4.72E-03
MW-1	Aldrin	mg/L	1	34	2.9%	2.00E-06	1.00E-03	1.00E-04	1.00E-04	8.99E-05
MW-1	B/N Fraction	mg/L	1	2	50.0%	0.00E+00	0.00E+00	1.00E-02	1.00E-02	5.00E-03
MW-1	Barium (Ba)	mg/L	1	8	12.5%	4.50E-04	7.00E-01	8.50E-02	8.50E-02	1.16E-01
MW-1	Bromoform	mg/L	2	40	5.0%	0.00E+00	2.00E-03	6.00E-06	2.10E-03	4.57E-04
MW-1	Calcium (Ca)	mg/L	1	1	100.0%			2.83E+01	2.83E+01	2.83E+01
MW-1	Chloride (Cl-)	mg/L	34	35	97.1%	5.00E+00	5.00E+00	6.06E-03	1.00E+01	6.08E+00
MW-1	Chloroform	mg/L	2	40	5.0%	0.00E+00	2.00E-03	2.00E-03	5.80E-03	5.45E-04
MW-1	Chromium (Cr)	mg/L	1	8	12.5%	1.00E-05	9.00E-02	6.00E-03	6.00E-03	1.31E-02
MW-1	Fluoride (Fl-)	mg/L	7	7	100.0%			8.16E-04	8.45E-01	5.78E-01
MW-1	Iron (Fe)	mg/L	5	5	100.0%			2.50E-04	2.86E+00	8.84E-01
MW-1	Iron (Fe), Filtered	mg/L	1	1	100.0%			2.30E-01	2.30E-01	2.30E-01
MW-1	Magnesium (Mg)	mg/L	2	2	100.0%			7.70E+00	1.00E+01	8.85E+00
MW-1	Manganese (Mn)	mg/L	31	31	100.0%			1.95E-04	6.20E-01	2.60E-01
MW-1	Manganese (Mn), Filtered	mg/L	1	1	100.0%			1.70E-01	1.70E-01	1.70E-01
MW-1	Methylene chloride	mg/L	5	40	12.5%	1.80E-04	1.00E-02	5.50E-05	2.50E-02	2.10E-03
MW-1	Nitrate (NO3)	mg/L	5	5	100.0%			6.61E-03	9.24E+00	4.85E+00
MW-1	Nitrite/Nitrate Total	mg/L	2	2	100.0%			1.20E+00	1.61E+00	1.41E+00
MW-1	Phenol	mg/L	1	37	2.7%	0.00E+00	2.50E-02	8.00E-03	8.00E-03	2.98E-03
MW-1	Sodium (Na)	mg/L	30	30	100.0%			3.71E-02	1.22E+02	3.48E+01
MW-1	Sulfate (SO4)	mg/L	24	35	68.6%	1.00E+00	2.50E+01	4.71E-03	1.70E+01	4.24E+00
MW-1	Tetrachloroethene	mg/L	1	38	2.6%	0.00E+00	2.00E-03	2.00E-06	2.00E-06	3.83E-04
MW-1	Toluene	mg/L	2	35	5.7%	2.00E-04	6.70E-03	2.50E-03	4.80E-03	7.66E-04
MW-1	Trichlorofluoromethane	mg/L	1	40	2.5%	0.00E+00	2.00E-03	3.00E-05	3.00E-05	4.39E-04
MW-1	Zinc (Zn)	mg/L	7	7	100.0%			4.90E-04	7.30E-01	3.58E-01
MW-1	Zinc (Zn), Filtered	mg/L	1	1	100.0%			1.30E-01	1.30E-01	1.30E-01
MW-1	1,1,1,2-Tetrachloroethane	mg/L	0	14		5.00E-04	1.00E+00			

Appendix C-3
Summary Statistics for All Groundwater Sampling Events (1984 through 2007)
Page Trowbridge Ranch Landfill

Monitoring Well (1)	Analyte	Units	# of Detects	# of Samples	FOD	Range in Detection Limits (DL)		Range in Detected Concentration		Average Concentration (2)
MW-1	1,1,2-Trichloroethane	mg/L	0	40		0.00E+00	2.00E-03			
MW-1	1,1,2-Trichlorotrifluoroethane	mg/L	0	4		1.00E-03	1.00E-03			
MW-1	1,1-Dichloroethene	mg/L	0	38		0.00E+00	2.00E-03			
MW-1	1,1-Dichloropropene	mg/L	0	11		5.00E-04	5.00E-04			
MW-1	1,2,3,5-Tetrachlorobenzene	mg/L	0	4		1.00E-03	1.00E-03			
MW-1	1,2,3-Trichlorobenzene	mg/L	0	11		5.00E-04	5.00E-04			
MW-1	1,2,3-Trichloropropane	mg/L	0	11		5.00E-04	2.00E-03			
MW-1	1,2,4-Trichlorobenzene	mg/L	0	11		5.00E-04	5.00E-04			
MW-1	1,2,4-Trimethylbenzene	mg/L	0	11		5.00E-04	5.00E-04			
MW-1	1,2-Dibromo-3-chloropropane	mg/L	0	14		1.00E-03	2.00E-03			
MW-1	1,2-Dibromoethane	mg/L	0	10		5.00E-04	5.00E-04			
MW-1	1,2-Dichlorobenzene	mg/L	0	39		0.00E+00	2.00E-03			
MW-1	1,2-Dichloroethane	mg/L	0	40		0.00E+00	2.00E-03			
MW-1	1,2-Dichloropropane	mg/L	0	37		0.00E+00	2.00E-03			
MW-1	1,2-Diphenylhydrazine (As Azobenzene)	mg/L	0	4		1.00E-02	1.00E-02			
MW-1	1,3,5-Trimethylbenzene	mg/L	0	11		5.00E-04	5.00E-04			
MW-1	1,3-Dichlorobenzene	mg/L	0	39		0.00E+00	2.00E-03			
MW-1	1,3-Dichloropropane	mg/L	0	15		5.00E-04	1.00E-03			
MW-1	1,4-DDD	mg/L	0	1		1.00E-04	1.00E-04			
MW-1	1,4-DDE	mg/L	0	1		1.00E-04	1.00E-04			
MW-1	1,4-Dichlorobenzene	mg/L	0	39		0.00E+00	2.00E-03			
MW-1	2,2-Dichloropropane	mg/L	0	11		5.00E-04	5.00E-04			
MW-1	2,4,5-Trichlorophenol	mg/L	0	9		2.00E-02	2.00E-02			
MW-1	2,4-DDD	mg/L	0	4		1.00E-04	1.00E-03			
MW-1	2,4-DDT	mg/L	0	4		1.00E-04	1.00E-03			
MW-1	2,4-Dichlorophenol	mg/L	0	35		0.00E+00	2.50E-02			
MW-1	2,4-Dimethylphenol	mg/L	0	34		0.00E+00	2.50E-02			
MW-1	2,4-Dinitrophenol	mg/L	0	35		0.00E+00	1.00E-01			
MW-1	2,4-Dinitrotoluene	mg/L	0	9		5.00E-03	1.00E-02			
MW-1	2,6-Dinitrotoluene	mg/L	0	9		5.00E-03	1.00E-02			

Appendix C-3
Summary Statistics for All Groundwater Sampling Events (1984 through 2007)
Page Trowbridge Ranch Landfill

Monitoring Well (1)	Analyte	Units	# of Detects	# of Samples	FOD	Range in Detection Limits (DL)		Range in Detected Concentration		Average Concentration (2)
MW-1	2-Chloroethyl Vinyl Ether	mg/L	0	22		0.00E+00	1.00E-02			
MW-1	2-Chloronaphthalene	mg/L	0	9		1.00E-02	1.00E-02			
MW-1	2-Chlorophenol	mg/L	0	35		0.00E+00	2.50E-02			
MW-1	2-Chlorotoluene	mg/L	0	15		5.00E-04	1.00E-03			
MW-1	2-Methyl-4,6-dinitrophenol	mg/L	0	35		0.00E+00	1.00E-01			
MW-1	2-Methylnaphthalene	mg/L	0	9		1.00E-02	1.00E-02			
MW-1	2-Methylphenol	mg/L	0	9		1.00E-02	1.00E-02			
MW-1	2-Nitroaniline	mg/L	0	9		1.00E-02	1.00E-02			
MW-1	2-Nitrophenol	mg/L	0	35		0.00E+00	2.50E-02			
MW-1	3 & 4-Methylphenol	mg/L	0	5		1.00E-02	1.00E-02			
MW-1	3,3´-Dichlorobenzidine	mg/L	0	9		1.00E-02	1.00E-02			
MW-1	3-Nitroaniline	mg/L	0	9		1.00E-02	1.00E-02			
MW-1	4,4'-DDD	mg/L	0	30		1.10E-05	1.00E-03			
MW-1	4,4'-DDE	mg/L	0	30		4.00E-06	1.00E-03			
MW-1	4,4'-DDT	mg/L	0	31		1.20E-05	1.00E-03			
MW-1	4-Bromophenyl phenyl ether	mg/L	0	9		5.00E-03	1.00E-02			
MW-1	4-Chloro-3-methylphenol	mg/L	0	35		0.00E+00	2.50E-02			
MW-1	4-Chloroaniline	mg/L	0	9		1.00E-02	1.00E-02			
MW-1	4-Chlorophenyl phenyl ether	mg/L	0	9		1.00E-02	1.00E-02			
MW-1	4-Chlorotoluene	mg/L	0	13		5.00E-04	1.00E-03			
MW-1	4-Isopropyltoluene	mg/L	0	11		5.00E-04	5.00E-04			
MW-1	4-Methylphenol	mg/L	0	4		1.00E-02	1.00E-02			
MW-1	4-Nitroaniline	mg/L	0	9		1.00E-02	1.00E-02			
MW-1	4-Nitrophenol	mg/L	0	32		0.00E+00	1.00E-01			
MW-1	Acenaphthene	mg/L	0	9		1.00E-02	1.00E-02			
MW-1	Acenaphthylene	mg/L	0	9		1.00E-02	1.00E-02			
MW-1	Acid Fraction	mg/L	0	2		0.00E+00	0.00E+00			
MW-1	alpha-BHC	mg/L	0	34		2.00E-06	1.00E-03			
MW-1	Anthracene	mg/L	0	9		5.00E-03	1.00E-02			
MW-1	Arsenic (As)	mg/L	0	8		3.00E-06	2.00E-02			
MW-1	Azobenzene	mg/L	0	5		5.00E-03	1.00E-02			

Appendix C-3
Summary Statistics for All Groundwater Sampling Events (1984 through 2007)
Page Trowbridge Ranch Landfill

Monitoring Well (1)	Analyte	Units	# of Detects	# of Samples	FOD	Range in Detection Limits (DL)		Range in Detected Concentration		Average Concentration (2)
MW-1	Benz(a)anthracene	mg/L	0	9		1.00E-02	1.00E-02			
MW-1	Benzene	mg/L	0	35		2.00E-04	6.50E-03			
MW-1	Benzo(a)pyrene	mg/L	0	9		5.00E-03	1.00E-02			
MW-1	Benzo(b)fluoranthene	mg/L	0	9		5.00E-03	1.00E-02			
MW-1	Benzo(g,h,i)perylene	mg/L	0	9		5.00E-03	1.00E-02			
MW-1	Benzo(k)fluoranthene	mg/L	0	9		5.00E-03	1.00E-02			
MW-1	Benzoic acid	mg/L	0	9		2.50E-02	5.00E-02			
MW-1	Benzyl alcohol	mg/L	0	9		1.00E-02	1.00E-02			
MW-1	beta-BHC	mg/L	0	34		4.00E-06	1.00E-03			
MW-1	Bis(2-chloroethoxy)methane	mg/L	0	9		1.00E-02	1.00E-02			
MW-1	Bis(2-chloroethyl)ether	mg/L	0	9		1.00E-02	1.00E-02			
MW-1	Bis(2-chloroisopropyl)ether	mg/L	0	9		1.00E-02	1.00E-02			
MW-1	Bis(2-ethylhexyl)phthalate	mg/L	0	9		5.00E-03	1.00E-02			
MW-1	Bromobenzene	mg/L	0	11		5.00E-04	5.00E-04			
MW-1	Bromochloromethane	mg/L	0	15		5.00E-04	1.00E-03			
MW-1	Bromodichloromethane	mg/L	0	38		0.00E+00	2.00E-03			
MW-1	Bromomethane	mg/L	0	37		0.00E+00	4.00E-03			
MW-1	Butyl benzyl phthalate	mg/L	0	9		1.00E-02	1.00E-02			
MW-1	Cadmium (Cd)	mg/L	0	8		2.00E-06	3.00E-02			
MW-1	Cadmium (Cd), Filtered	mg/L	0	1		1.00E-03	1.00E-03			
MW-1	Carbon tetrachloride	mg/L	0	40		0.00E+00	2.00E-03			
MW-1	Chlordane	mg/L	0	32		1.40E-05	2.50E-02			
MW-1	Chlorobenzene	mg/L	0	40		0.00E+00	2.00E-03			
MW-1	Chloroethane	mg/L	0	36		0.00E+00	2.00E-03			
MW-1	Chloromethane	mg/L	0	37		0.00E+00	5.00E-03			
MW-1	Chloronaphthalene	mg/L	0	4		1.00E-03	1.00E-03			
MW-1	Chromium (Cr), Filtered	mg/L	0	1		1.00E-02	1.00E-02			
MW-1	Chrysene	mg/L	0	9		5.00E-03	1.00E-02			
MW-1	cis-1,2-Dichloroethene	mg/L	0	15		5.00E-04	1.00E-03			
MW-1	cis-1,3-Dichloropropene	mg/L	0	38		0.00E+00	2.00E-03			
MW-1	Copper (Cu)	mg/L	0	7		4.90E-05	1.00E-01			

Appendix C-3
Summary Statistics for All Groundwater Sampling Events (1984 through 2007)
Page Trowbridge Ranch Landfill

Monitoring Well (1)	Analyte	Units	# of Detects	# of Samples	FOD	Range in Detection Limits (DL)		Range in Detected Concentration		Average Concentration (2)
MW-1	DDD (p,p-DDD)	mg/L	0	4		1.20E-05	6.00E-03			
MW-1	DDE (p,p-DDE)	mg/L	0	4		4.00E-06	2.00E-03			
MW-1	DDT (p,p-DDT)	mg/L	0	4		1.20E-05	6.00E-03			
MW-1	delta-BHC	mg/L	0	34		2.00E-06	1.00E-03			
MW-1	Dibenz(a,h)anthracene	mg/L	0	9		5.00E-03	1.00E-02			
MW-1	Dibenzofuran	mg/L	0	9		1.00E-02	1.00E-02			
MW-1	Dibromochloromethane	mg/L	0	36		0.00E+00	2.00E-03			
MW-1	Dibromoethane	mg/L	0	4		1.00E-03	1.00E-03			
MW-1	Dibromomethane	mg/L	0	11		5.00E-04	5.00E-04			
MW-1	Dichlorobenzene	mg/L	0	1		1.40E-03	1.40E-03			
MW-1	Dichlorodifluoromethane	mg/L	0	26		0.00E+00	5.00E-03			
MW-1	Dieldrin	mg/L	0	34		2.00E-06	2.00E-03			
MW-1	Diethyl phthalate	mg/L	0	9		1.00E-02	1.00E-02			
MW-1	Dimethyl phthalate	mg/L	0	9		2.00E-02	2.00E-02			
MW-1	Di-n-butyl phthalate	mg/L	0	9		1.00E-02	1.00E-02			
MW-1	Di-n-octyl phthalate	mg/L	0	9		1.00E-02	1.00E-02			
MW-1	Endosulfan I	mg/L	0	32		4.00E-06	2.00E-03			
MW-1	Endosulfan II	mg/L	0	32		4.00E-06	2.00E-03			
MW-1	Endosulfan sulfate	mg/L	0	34		2.00E-05	6.00E-03			
MW-1	Endrin	mg/L	0	34		6.00E-06	2.00E-03			
MW-1	Endrin aldehyde	mg/L	0	33		2.00E-05	6.00E-03			
MW-1	Endrin Ketone	mg/L	0	2		1.00E-04	2.00E-04			
MW-1	Ethylbenzene	mg/L	0	35		2.00E-04	9.50E-03			
MW-1	Fluoranthene	mg/L	0	9		5.00E-03	1.00E-02			
MW-1	Fluorene	mg/L	0	9		1.00E-02	1.00E-02			
MW-1	gamma-BHC	mg/L	0	34		2.00E-06	1.00E-03			
MW-1	Heptachlor	mg/L	0	34		2.00E-06	1.00E-03			
MW-1	Heptachlor epoxide	mg/L	0	34		1.00E-05	1.00E-03			
MW-1	Hexachlorobenzene	mg/L	0	9		5.00E-03	1.00E-02			
MW-1	Hexachlorobutadiene	mg/L	0	11		5.00E-04	5.00E-04			

Appendix C-3
Summary Statistics for All Groundwater Sampling Events (1984 through 2007)
Page Trowbridge Ranch Landfill

Monitoring Well (1)	Analyte	Units	# of Detects	# of Samples	FOD	Range in Detection Limits (DL)		Range in Detected Concentration		Average Concentration (2)
MW-1	Hexachlorocyclopentadiene	mg/L	0	9		1.00E-02	1.00E-02			
MW-1	Hexachloroethane	mg/L	0	9		1.00E-02	1.00E-02			
MW-1	Indeno(1,2,3-cd)pyrene	mg/L	0	9		5.00E-03	1.00E-02			
MW-1	Isophorone	mg/L	0	9		1.00E-02	1.00E-02			
MW-1	Isopropylbenzene	mg/L	0	15		5.00E-04	1.00E-03			
MW-1	Lead (Pb)	mg/L	0	8		2.00E-05	2.80E-01			
MW-1	Lead (Pb), Filtered	mg/L	0	1		2.00E-02	2.00E-02			
MW-1	m,p-Xylene	mg/L	0	13		5.00E-04	5.00E-04			
MW-1	Mercury (Hg)	mg/L	0	8		1.00E-06	5.00E-03			
MW-1	Methoxychlor	mg/L	0	30		5.00E-05	1.00E-03			
MW-1	M-Xylene	mg/L	0	2		2.00E-04	2.00E-04			
MW-1	Naphthalene	mg/L	0	14		5.00E-04	1.00E-03			
MW-1	n-Butylbenzene	mg/L	0	15		5.00E-04	1.00E-03			
MW-1	Nickel (Ni)	mg/L	0	6		2.30E-04	3.20E-01			
MW-1	Nickel (Ni), Filtered	mg/L	0	1		1.00E-01	1.00E-01			
MW-1	Nitrobenzene	mg/L	0	9		1.00E-02	1.00E-02			
MW-1	N-Nitrosodi-n-propylamine	mg/L	0	9		1.00E-02	1.00E-02			
MW-1	N-Nitrosodiphenylamine	mg/L	0	9		5.00E-03	1.00E-02			
MW-1	n-Propylbenzene	mg/L	0	15		5.00E-04	1.00E-03			
MW-1	O,P-Xylene	mg/L	0	3		0.00E+00	2.00E-04			
MW-1	o-Xylene	mg/L	0	13		5.00E-04	5.00E-04			
MW-1	PCB-1016 (Aroclor)	mg/L	0	18		7.00E-05	1.00E-03			
MW-1	PCB-1221 (Aroclor)	mg/L	0	18		7.00E-05	1.00E-03			
MW-1	PCB-1232 (Aroclor)	mg/L	0	18		7.00E-05	1.00E-03			
MW-1	PCB-1242 (Aroclor)	mg/L	0	18		7.00E-05	1.00E-03			
MW-1	PCB-1248 (Aroclor)	mg/L	0	16		5.00E-04	1.00E-03			
MW-1	PCB-1254 (Aroclor)	mg/L	0	18		7.00E-05	1.00E-03			
MW-1	PCB-1260 (Aroclor)	mg/L	0	18		7.00E-05	1.00E-03			
MW-1	Pentachlorophenol	mg/L	0	35		0.00E+00	1.00E-01			

Appendix C-3
Summary Statistics for All Groundwater Sampling Events (1984 through 2007)
Page Trowbridge Ranch Landfill

Monitoring Well (1)	Analyte	Units	# of Detects	# of Samples	FOD	Range in Detection Limits (DL)		Range in Detected Concentration		Average Concentration (2)
MW-1	Phenanthrene	mg/L	0	9		5.00E-03	1.00E-02			
MW-1	Pyrene	mg/L	0	9		5.00E-03	1.00E-02			
MW-1	sec-Butylbenzene	mg/L	0	15		5.00E-04	1.00E-03			
MW-1	Selenium (Se)	mg/L	0	8		5.00E-06	5.00E-03			
MW-1	Silver (Ag)	mg/L	0	8		5.00E-06	5.00E-02			
MW-1	Styrene	mg/L	0	15		5.00E-04	1.00E-03			
MW-1	tert-Butylbenzene	mg/L	0	15		5.00E-04	1.00E-03			
MW-1	Tin (Sn)	mg/L	0	1		5.00E+00	5.00E+00			
MW-1	Tin (Sn), Filtered	mg/L	0	1		5.00E+00	5.00E+00			
MW-1	Total Trihalomethanes (THMs)	mg/L	0	1		5.00E-03	5.00E-03			
MW-1	Total-1,2-Dichloroethene	mg/L	0	2		5.00E-04	5.00E-04			
MW-1	Toxaphene	mg/L	0	31		1.00E-04	1.00E-03			
MW-1	trans-1,2-Dichloroethene	mg/L	0	40		0.00E+00	2.00E-03			
MW-1	trans-1,3-Dichloropropene	mg/L	0	38		0.00E+00	2.00E-03			
MW-1	Trichloroethene	mg/L	0	40		0.00E+00	2.00E-03			
MW-1	Trihalomethanes, Total	mg/L	0	10		5.00E-04	2.00E-03			
MW-1	Trimethyl Benzene	mg/L	0	4		1.00E-03	1.00E-03			
MW-1	Vinyl chloride	mg/L	0	37		0.00E+00	2.00E-03			
MW-1	Xylenes, Total	mg/L	0	21		5.00E-04	5.00E-03			
MW-5	1,1,1-Trichloroethane	mg/L	1	28	3.6%	2.00E-04	2.00E-03	4.80E-03	4.80E-03	6.61E-04
MW-5	Benzene	mg/L	1	28	3.6%	2.00E-04	2.00E-03	5.40E-04	5.40E-04	5.03E-04
MW-5	Bis(2-ethylhexyl)phthalate	mg/L	1	10	10.0%	5.00E-03	1.00E-02	1.70E-02	1.70E-02	5.45E-03
MW-5	Chloride (Cl-)	mg/L	24	25	96.0%	5.00E+00	5.00E+00	5.60E+00	1.00E+01	6.86E+00
MW-5	Chloroform	mg/L	2	28	7.1%	2.00E-04	2.00E-03	2.00E-03	6.70E-03	7.82E-04
MW-5	Magnesium (Mg)	mg/L	1	1	100.0%			9.10E+00	9.10E+00	9.10E+00
MW-5	Manganese (Mn)	mg/L	24	24	100.0%			4.60E-02	8.80E-01	3.45E-01
MW-5	Methylene chloride	mg/L	2	28	7.1%	5.00E-04	1.00E-02	3.50E-03	1.70E-02	2.63E-03
MW-5	Sodium (Na)	mg/L	25	25	100.0%			1.66E+01	4.75E+01	3.32E+01

Appendix C-3
Summary Statistics for All Groundwater Sampling Events (1984 through 2007)
Page Trowbridge Ranch Landfill

Monitoring Well (1)	Analyte	Units	# of Detects	# of Samples	FOD	Range in Detection Limits (DL)		Range in Detected Concentration		Average Concentration (2)
MW-5	Sulfate (SO4)	mg/L	16	25	64.0%	1.00E+00	2.50E+01	2.55E+00	6.00E+00	4.11E+00
MW-5	Toluene	mg/L	1	28	3.6%	2.00E-04	2.00E-03	4.00E-03	4.00E-03	6.45E-04
MW-5	1,1,1,2-Tetrachloroethane	mg/L	0	12		5.00E-04	1.00E-03			
MW-5	1,1,2,2-Tetrachloroethane	mg/L	0	28		5.00E-04	2.00E-03			
MW-5	1,1,2-Trichloroethane	mg/L	0	28		2.00E-04	2.00E-03			
MW-5	1,1,2-Trichlorotrifluoroethane	mg/L	0	1		1.00E-03	1.00E-03			
MW-5	1,1-Dichloroethane	mg/L	0	28		2.00E-04	2.00E-03			
MW-5	1,1-Dichloroethene	mg/L	0	28		5.00E-04	2.00E-03			
MW-5	1,1-Dichloropropene	mg/L	0	12		5.00E-04	1.00E-03			
MW-5	1,2,3,5-Tetrachlorobenzene	mg/L	0	1		1.00E-03	1.00E-03			
MW-5	1,2,3-Trichlorobenzene	mg/L	0	12		5.00E-04	5.00E-03			
MW-5	1,2,3-Trichloropropane	mg/L	0	12		5.00E-04	2.00E-03			
MW-5	1,2,4-Trichlorobenzene	mg/L	0	12		5.00E-04	1.00E-02			
MW-5	1,2,4-Trimethylbenzene	mg/L	0	12		5.00E-04	1.00E-03			
MW-5	1,2-Dibromo-3-chloropropane	mg/L	0	11		1.00E-03	2.00E-03			
MW-5	1,2-Dibromoethane	mg/L	0	11		5.00E-04	1.00E-03			
MW-5	1,2-Dichlorobenzene	mg/L	0	28		5.00E-04	2.00E-03			
MW-5	1,2-Dichloroethane	mg/L	0	28		2.00E-04	2.00E-03			
MW-5	1,2-Dichloropropane	mg/L	0	27		5.00E-04	2.00E-03			
MW-5	1,2-Diphenylhydrazine (As Azobenzene)	mg/L	0	5		5.00E-03	1.00E-02			
MW-5	1,3,5-Trimethylbenzene	mg/L	0	12		5.00E-04	1.00E-03			
MW-5	1,3-Dichlorobenzene	mg/L	0	28		5.00E-04	2.00E-03			
MW-5	1,3-Dichloropropane	mg/L	0	13		5.00E-04	1.00E-03			
MW-5	1,4-Dichlorobenzene	mg/L	0	28		5.00E-04	2.00E-03			
MW-5	2,2-Dichloropropane	mg/L	0	12		5.00E-04	1.00E-03			
MW-5	2,4,5-Trichlorophenol	mg/L	0	10		3.00E-03	2.00E-02			
MW-5	2,4,6-Trichlorophenol	mg/L	0	26		2.00E-03	2.00E-02			
MW-5	2,4-DDD	mg/L	0	1		1.00E-03	1.00E-03			
MW-5	2,4-DDT	mg/L	0	1		1.00E-03	1.00E-03			
MW-5	2,4-Dichlorophenol	mg/L	0	26		2.00E-03	1.00E-02			
MW-5	2,4-Dimethylphenol	mg/L	0	25		2.00E-03	1.00E-02			

Appendix C-3
Summary Statistics for All Groundwater Sampling Events (1984 through 2007)
Page Trowbridge Ranch Landfill

Monitoring Well (1)	Analyte	Units	# of Detects	# of Samples	FOD	Range in Detection Limits (DL)		Range in Detected Concentration		Average Concentration (2)
MW-5	2,4-Dinitrophenol	mg/L	0	26		1.00E-02	5.20E-02			
MW-5	2,4-Dinitrotoluene	mg/L	0	10		5.00E-03	1.00E-02			
MW-5	2,6-Dinitrotoluene	mg/L	0	10		5.00E-03	1.00E-02			
MW-5	2-Butanone	mg/L	0	1		5.00E-03	5.00E-03			
MW-5	2-Chloroethyl Vinyl Ether	mg/L	0	11		5.00E-04	1.00E-02			
MW-5	2-Chloronaphthalene	mg/L	0	10		1.00E-02	1.00E-02			
MW-5	2-Chlorophenol	mg/L	0	26		1.00E-03	1.50E-02			
MW-5	2-Chlorotoluene	mg/L	0	13		5.00E-04	1.00E-03			
MW-5	2-Hexanone	mg/L	0	1		5.00E-03	5.00E-03			
MW-5	2-Methyl-4,6-dinitrophenol	mg/L	0	26		5.00E-03	5.00E-02			
MW-5	2-Methylnaphthalene	mg/L	0	9		1.00E-02	1.00E-02			
MW-5	2-Methylphenol	mg/L	0	10		3.00E-03	1.00E-02			
MW-5	2-Nitroaniline	mg/L	0	9		1.00E-02	1.00E-02			
MW-5	2-Nitrophenol	mg/L	0	26		2.00E-03	1.50E-02			
MW-5	3 & 4-Methylphenol	mg/L	0	5		1.00E-02	1.00E-02			
MW-5	3,3´-Dichlorobenzidine	mg/L	0	10		1.00E-02	1.00E-02			
MW-5	3-Nitroaniline	mg/L	0	9		1.00E-02	1.00E-02			
MW-5	4,4'-DDD	mg/L	0	25		5.00E-05	1.00E-03			
MW-5	4,4'-DDE	mg/L	0	26		5.00E-05	1.00E-03			
MW-5	4,4'-DDT	mg/L	0	26		5.00E-05	1.00E-03			
MW-5	4-Bromophenyl phenyl ether	mg/L	0	10		5.00E-03	1.00E-02			
MW-5	4-Chloro-3-methylphenol	mg/L	0	26		2.00E-03	1.00E-02			
MW-5	4-Chloroaniline	mg/L	0	9		1.00E-02	1.00E-02			
MW-5	4-Chlorophenyl phenyl ether	mg/L	0	10		1.00E-02	1.00E-02			
MW-5	4-Chlorotoluene	mg/L	0	13		5.00E-04	1.00E-03			
MW-5	4-Isopropyltoluene	mg/L	0	12		5.00E-04	1.00E-03			
MW-5	4-Methyl-2-Pentanone	mg/L	0	1		5.00E-03	5.00E-03			
MW-5	4-Methylphenol	mg/L	0	5		3.00E-03	1.00E-02			
MW-5	4-Nitroaniline	mg/L	0	9		1.00E-02	1.00E-02			
MW-5	4-Nitrophenol	mg/L	0	26		5.00E-03	2.50E-02			

Appendix C-3
Summary Statistics for All Groundwater Sampling Events (1984 through 2007)
Page Trowbridge Ranch Landfill

Monitoring Well (1)	Analyte	Units	# of Detects	# of Samples	FOD	Range in Detection Limits (DL)		Range in Detected Concentration		Average Concentration (2)
MW-5	Acenaphthene	mg/L	0	10		1.00E-02	1.00E-02			
MW-5	Acenaphthylene	mg/L	0	10		1.00E-02	1.00E-02			
MW-5	Acetone	mg/L	0	1		5.00E-03	5.00E-03			
MW-5	Aldrin	mg/L	0	26		5.00E-05	1.00E-03			
MW-5	alpha-BHC	mg/L	0	26		5.00E-05	1.00E-03			
MW-5	alpha-Chlordane	mg/L	0	1		5.00E-05	5.00E-05			
MW-5	Anthracene	mg/L	0	10		5.00E-03	1.00E-02			
MW-5	Azobenzene	mg/L	0	5		5.00E-03	1.00E-02			
MW-5	Benz(a)anthracene	mg/L	0	10		1.00E-02	1.00E-02			
MW-5	Benzidine	mg/L	0	1		1.50E-01	1.50E-01			
MW-5	Benzo(a)pyrene	mg/L	0	10		5.00E-03	1.00E-02			
MW-5	Benzo(b)fluoranthene	mg/L	0	10		5.00E-03	1.00E-02			
MW-5	Benzo(g,h,i)perylene	mg/L	0	10		5.00E-03	1.00E-02			
MW-5	Benzo(k)fluoranthene	mg/L	0	10		5.00E-03	1.00E-02			
MW-5	Benzoic acid	mg/L	0	9		2.50E-02	5.00E-02			
MW-5	Benzyl alcohol	mg/L	0	9		1.00E-02	1.00E-02			
MW-5	beta-BHC	mg/L	0	26		5.00E-05	1.00E-03			
MW-5	Bis(2-chloroethoxy)methane	mg/L	0	10		1.00E-02	1.00E-02			
MW-5	Bis(2-chloroethyl)ether	mg/L	0	10		1.00E-02	1.00E-02			
MW-5	Bis(2-chloroisopropyl)ether	mg/L	0	10		1.00E-02	1.00E-02			
MW-5	Bromobenzene	mg/L	0	12		5.00E-04	1.00E-03			
MW-5	Bromochloromethane	mg/L	0	13		5.00E-04	1.00E-03			
MW-5	Bromodichloromethane	mg/L	0	28		2.00E-04	2.00E-03			
MW-5	Bromoform	mg/L	0	28		5.00E-04	2.00E-03			
MW-5	Bromomethane	mg/L	0	28		0.00E+00	5.00E-03			
MW-5	Butyl benzyl phthalate	mg/L	0	10		1.00E-02	1.00E-02			
MW-5	Carbon tetrachloride	mg/L	0	28		2.00E-04	2.00E-03			
MW-5	Chlordane	mg/L	0	25		5.00E-04	1.00E-03			
MW-5	Chlordane Technical	mg/L	0	1		1.00E-03	1.00E-03			
MW-5	Chlorobenzene	mg/L	0	28		2.00E-04	2.00E-03			
MW-5	Chloroethane	mg/L	0	28		0.00E+00	2.00E-03			

Appendix C-3
Summary Statistics for All Groundwater Sampling Events (1984 through 2007)
Page Trowbridge Ranch Landfill

Monitoring Well (1)	Analyte	Units	# of Detects	# of Samples	FOD	Range in Detection Limits (DL)		Range in Detected Concentration		Average Concentration (2)
MW-5	Chloromethane	mg/L	0	28		5.00E-04	5.00E-03			
MW-5	Chloronaphthalene	mg/L	0	1		1.00E-03	1.00E-03			
MW-5	Chrysene	mg/L	0	10		5.00E-03	1.00E-02			
MW-5	cis-1,2-Dichloroethene	mg/L	0	14		5.00E-04	1.00E-03			
MW-5	cis-1,3-Dichloropropene	mg/L	0	28		5.00E-04	2.00E-03			
MW-5	DDD	mg/L	0	1		1.00E-04	1.00E-04			
MW-5	delta-BHC	mg/L	0	26		5.00E-05	1.00E-03			
MW-5	Dibenz(a,h)anthracene	mg/L	0	10		5.00E-03	1.00E-02			
MW-5	Dibenzofuran	mg/L	0	9		1.00E-02	1.00E-02			
MW-5	Dibromochloromethane	mg/L	0	28		2.00E-04	2.00E-03			
MW-5	Dibromoethane	mg/L	0	1		1.00E-03	1.00E-03			
MW-5	Dibromomethane	mg/L	0	11		5.00E-04	5.00E-04			
MW-5	Dichlorodifluoromethane	mg/L	0	18		5.00E-04	5.00E-03			
MW-5	Dieldrin	mg/L	0	26		5.00E-05	1.00E-03			
MW-5	Diethyl phthalate	mg/L	0	10		1.00E-02	1.00E-02			
MW-5	Dimethyl phthalate	mg/L	0	10		2.00E-02	2.00E-02			
MW-5	Di-n-butyl phthalate	mg/L	0	10		1.00E-02	1.00E-02			
MW-5	Di-n-octyl phthalate	mg/L	0	10		1.00E-02	1.00E-02			
MW-5	Endosulfan I	mg/L	0	26		5.00E-05	1.00E-03			
MW-5	Endosulfan II	mg/L	0	26		5.00E-05	1.00E-03			
MW-5	Endosulfan sulfate	mg/L	0	26		5.00E-05	1.00E-03			
MW-5	Endrin	mg/L	0	26		5.00E-05	1.00E-03			
MW-5	Endrin aldehyde	mg/L	0	26		5.00E-05	1.00E-03			
MW-5	Ethylbenzene	mg/L	0	28		5.00E-04	2.00E-03			
MW-5	Fluoranthene	mg/L	0	10		5.00E-03	1.00E-02			
MW-5	Fluorene	mg/L	0	10		1.00E-02	1.00E-02			
MW-5	gamma-BHC	mg/L	0	26		5.00E-05	1.00E-03			
MW-5	gamma-Chlordane	mg/L	0	1		5.00E-05	5.00E-05			
MW-5	Heptachlor	mg/L	0	26		5.00E-05	1.00E-03			
MW-5	Heptachlor epoxide	mg/L	0	26		5.00E-05	1.00E-03			
MW-5	Hexachlorobenzene	mg/L	0	10		5.00E-03	1.00E-02			

Appendix C-3
Summary Statistics for All Groundwater Sampling Events (1984 through 2007)
Page Trowbridge Ranch Landfill

Monitoring Well (1)	Analyte	Units	# of Detects	# of Samples	FOD	Range in Detection Limits (DL)		Range in Detected Concentration		Average Concentration (2)
MW-5	Hexachlorobutadiene	mg/L	0	12		5.00E-04	1.00E-02			
MW-5	Hexachlorocyclopentadiene	mg/L	0	10		1.00E-02	1.00E-02			
MW-5	Hexachloroethane	mg/L	0	10		1.00E-02	1.00E-02			
MW-5	Indeno(1,2,3-cd)pyrene	mg/L	0	10		5.00E-03	1.00E-02			
MW-5	Isophorone	mg/L	0	10		1.00E-02	1.00E-02			
MW-5	Isopropylbenzene	mg/L	0	12		5.00E-04	1.00E-03			
MW-5	m,p-Xylene	mg/L	0	16		5.00E-04	1.00E-03			
MW-5	Methoxychlor	mg/L	0	26		5.00E-05	1.00E-03			
MW-5	Methyl tert-butyl ether	mg/L	0	1		1.00E-03	1.00E-03			
MW-5	Naphthalene	mg/L	0	13		5.00E-04	1.00E-02			
MW-5	n-Butylbenzene	mg/L	0	13		5.00E-04	1.00E-03			
MW-5	Nitrobenzene	mg/L	0	10		1.00E-02	1.00E-02			
MW-5	N-Nitrosodimethylamine	mg/L	0	1		1.00E-02	1.00E-02			
MW-5	N-Nitrosodi-n-propylamine	mg/L	0	10		1.00E-02	1.00E-02			
MW-5	N-Nitrosodiphenylamine	mg/L	0	10		5.00E-03	1.00E-02			
MW-5	n-Propylbenzene	mg/L	0	13		5.00E-04	1.00E-03			
MW-5	o-Xylene	mg/L	0	16		5.00E-04	1.00E-03			
MW-5	PCB-1016 (Aroclor)	mg/L	0	16		5.00E-04	1.00E-03			
MW-5	PCB-1221 (Aroclor)	mg/L	0	16		5.00E-04	1.00E-03			
MW-5	PCB-1232 (Aroclor)	mg/L	0	16		5.00E-04	1.00E-03			
MW-5	PCB-1242 (Aroclor)	mg/L	0	16		5.00E-04	1.00E-03			
MW-5	PCB-1248 (Aroclor)	mg/L	0	16		5.00E-04	1.00E-03			
MW-5	PCB-1254 (Aroclor)	mg/L	0	16		5.00E-04	1.00E-03			
MW-5	PCB-1260 (Aroclor)	mg/L	0	16		5.00E-04	1.00E-03			
MW-5	Pentachlorophenol	mg/L	0	26		5.00E-03	5.00E-02			
MW-5	Phenanthrene	mg/L	0	10		5.00E-03	1.00E-02			
MW-5	Phenol	mg/L	0	26		2.00E-03	1.00E-02			
MW-5	Pyrene	mg/L	0	10		5.00E-03	1.00E-02			
MW-5	sec-Butylbenzene	mg/L	0	13		5.00E-04	1.00E-03			
MW-5	Styrene	mg/L	0	13		5.00E-04	1.00E-03			
MW-5	tert-Butylbenzene	mg/L	0	13		5.00E-04	1.00E-03			
MW-5	Tetrachloroethene	mg/L	0	28		2.00E-04	2.00E-03			

Appendix C-3
Summary Statistics for All Groundwater Sampling Events (1984 through 2007)
Page Trowbridge Ranch Landfill

Monitoring Well (1)	Analyte	Units	# of Detects	# of Samples	FOD	Range in Detection Limits (DL)		Range in Detected Concentration		Average Concentration (2)
MW-5	Toxaphene	mg/L	0	26		5.00E-04	2.00E-03			
MW-5	trans-1,2-Dichloroethene	mg/L	0	28		2.00E-04	2.00E-03			
MW-5	trans-1,3-Dichloropropene	mg/L	0	28		5.00E-04	2.00E-03			
MW-5	Trichloroethene	mg/L	0	28		2.00E-04	2.00E-03			
MW-5	Trichlorofluoromethane	mg/L	0	28		5.00E-04	2.00E-03			
MW-5	Trihalomethanes, Total	mg/L	0	10		5.00E-04	2.00E-03			
MW-5	Trimethyl Benzene	mg/L	0	1		1.00E-03	1.00E-03			
MW-5	Vinyl Acetate	mg/L	0	1		1.00E-03	1.00E-03			
MW-5	Vinyl chloride	mg/L	0	28		2.00E-04	2.00E-03			
MW-5	Xylenes, Total	mg/L	0	18		5.00E-04	5.00E-03			
MW-2	B/N Fraction	mg/L	1	2	50.0%	0.00E+00	0.00E+00	1.00E-02	1.00E-02	5.00E-03
MW-2	Calcium (Ca)	mg/L	1	1	100.0%			3.01E+01	3.01E+01	3.01E+01
MW-2	Chloride (Cl-)	mg/L	35	36	97.2%	5.00E+00	5.00E+00	5.77E-03	1.00E+01	6.61E+00
MW-2	Chloroform	mg/L	1	42	2.4%	0.00E+00	2.00E-03	6.80E-03	6.80E-03	4.95E-04
MW-2	Chloromethane	mg/L	1	40	2.5%	0.00E+00	5.00E-03	7.90E-04	7.90E-04	7.07E-04
MW-2	Chromium (Cr)	mg/L	1	7	14.3%	1.00E-05	7.00E-02	4.00E-03	4.00E-03	8.00E-03
MW-2	Fluoride (Fl-)	mg/L	7	7	100.0%			5.80E-04	6.60E-01	4.49E-01
MW-2	Iron (Fe)	mg/L	5	5	100.0%			2.90E-04	3.67E+00	1.08E+00
MW-2	Magnesium (Mg)	mg/L	2	2	100.0%			7.10E+00	8.70E+00	7.90E+00
MW-2	Manganese (Mn)	mg/L	33	33	100.0%			1.40E-04	6.80E+00	5.06E-01
MW-2	Manganese (Mn), Filtered	mg/L	1	1	100.0%			9.00E-02	9.00E-02	9.00E-02
MW-2	Methylene chloride	mg/L	5	42	11.9%	1.00E-04	1.00E-02	3.00E-05	2.70E-02	1.91E-03
MW-2	Nitrate (NO3)	mg/L	5	5	100.0%			7.07E-03	1.10E+01	5.82E+00
MW-2	Nitrite/Nitrate Total	mg/L	2	2	100.0%			1.21E+00	1.48E+00	1.34E+00
MW-2	Phenol	mg/L	1	39	2.6%	0.00E+00	1.00E-02	8.00E-03	8.00E-03	2.84E-03
MW-2	Sodium (Na)	mg/L	32	32	100.0%			3.56E-02	4.70E+01	3.29E+01
MW-2	Sulfate (SO4)	mg/L	26	37	70.3%	1.00E+00	2.50E+01	3.30E-03	1.10E+01	3.75E+00
MW-2	Toluene	mg/L	1	39	2.6%	0.00E+00	6.70E-03	1.40E-02	1.40E-02	8.38E-04
MW-2	Trichlorofluoromethane	mg/L	1	40	2.5%	0.00E+00	2.00E-03	3.40E-04	3.40E-04	4.39E-04
MW-2	Zinc (Zn)	mg/L	6	6	100.0%			1.33E-03	7.20E-01	3.33E-01
MW-2	Zinc (Zn), Filtered	mg/L	1	1	100.0%			2.05E-01	2.05E-01	2.05E-01
MW-2	1,1,1,2-Tetrachloroethane	mg/L	0	16		5.00E-04	1.00E+00			
MW-2	1,1,1-Trichloroethane	mg/L	0	42		0.00E+00	2.00E-03			

Appendix C-3
Summary Statistics for All Groundwater Sampling Events (1984 through 2007)
Page Trowbridge Ranch Landfill

Monitoring Well (1)	Analyte	Units	# of Detects	# of Samples	FOD	Range in Detection Limits (DL)		Range in Detected Concentration		Average Concentration (2)
MW-2	1,1,2,2-Tetrachloroethane	mg/L	0	42		0.00E+00	2.00E-03			
MW-2	1,1,2-Trichloroethane	mg/L	0	42		0.00E+00	2.00E-03			
MW-2	1,1,2-Trichlorotrifluoroethane	mg/L	0	4		1.00E-03	1.00E-03			
MW-2	1,1-Dichloroethane	mg/L	0	42		0.00E+00	2.00E-03			
MW-2	1,1-Dichloroethene	mg/L	0	41		0.00E+00	2.00E-03			
MW-2	1,1-Dichloropropene	mg/L	0	14		5.00E-04	1.00E-03			
MW-2	1,2,3,5-Tetrachlorobenzene	mg/L	0	4		1.00E-03	1.00E-03			
MW-2	1,2,3-Trichlorobenzene	mg/L	0	12		5.00E-04	5.00E-03			
MW-2	1,2,3-Trichloropropane	mg/L	0	14		5.00E-04	2.00E-03			
MW-2	1,2,4-Trichlorobenzene	mg/L	0	15		5.00E-04	1.00E-02			
MW-2	1,2,4-Trimethylbenzene	mg/L	0	12		5.00E-04	1.00E-03			
MW-2	1,2-Dibromo-3-chloropropane	mg/L	0	14		1.00E-03	2.00E-03			
MW-2	1,2-Dibromoethane	mg/L	0	11		5.00E-04	1.00E-03			
MW-2	1,2-Dichlorobenzene	mg/L	0	42		0.00E+00	1.00E-02			
MW-2	1,2-Dichloroethane	mg/L	0	42		0.00E+00	2.00E-03			
MW-2	1,2-Dichloropropane	mg/L	0	39		0.00E+00	2.00E-03			
MW-2	1,2-Diphenylhydrazine (As Azobenzene)	mg/L	0	6		5.00E-03	1.00E-02			
MW-2	1,3,5-Trimethylbenzene	mg/L	0	12		5.00E-04	1.00E-03			
MW-2	1,3-Dichlorobenzene	mg/L	0	42		0.00E+00	1.00E-02			
MW-2	1,3-Dichloropropane	mg/L	0	18		5.00E-04	1.00E-03			
MW-2	1,3-Dichloropropene, Total	mg/L	0	2		5.00E-04	5.00E-04			
MW-2	1,4-DDD	mg/L	0	1		1.00E-04	1.00E-04			
MW-2	1,4-DDE	mg/L	0	1		1.00E-04	1.00E-04			
MW-2	1,4-Dichlorobenzene	mg/L	0	42		0.00E+00	1.00E-02			
MW-2	2,2-Dichloropropane	mg/L	0	14		5.00E-04	1.00E-03			
MW-2	2,4,5-Trichlorophenol	mg/L	0	12		3.00E-03	5.00E-02			
MW-2	2,4,6-Trichlorophenol	mg/L	0	37		0.00E+00	2.00E-02			
MW-2	2,4-DDD	mg/L	0	4		1.00E-04	1.00E-03			
MW-2	2,4-DDT	mg/L	0	4		1.00E-04	1.00E-03			
MW-2	2,4-Dichlorophenol	mg/L	0	37		0.00E+00	1.00E-02			

Appendix C-3
Summary Statistics for All Groundwater Sampling Events (1984 through 2007)
Page Trowbridge Ranch Landfill

Monitoring Well (1)	Analyte	Units	# of Detects	# of Samples	FOD	Range in Detection Limits (DL)		Range in Detected Concentration		Average Concentration (2)
MW-2	2,4-Dimethylphenol	mg/L	0	36		0.00E+00	1.00E-02			
MW-2	2,4-Dinitrophenol	mg/L	0	37		0.00E+00	1.00E-01			
MW-2	2,4-Dinitrotoluene	mg/L	0	11		5.00E-03	1.00E-02			
MW-2	2,6-Dinitrotoluene	mg/L	0	11		5.00E-03	1.00E-02			
MW-2	2-Butanone	mg/L	0	1		5.00E-03	5.00E-03			
MW-2	2-Chloroethyl Vinyl Ether	mg/L	0	23		0.00E+00	1.00E-02			
MW-2	2-Chloronaphthalene	mg/L	0	11		1.00E-02	1.00E-02			
MW-2	2-Chlorophenol	mg/L	0	37		0.00E+00	1.50E-02			
MW-2	2-Chlorotoluene	mg/L	0	18		5.00E-04	1.00E-03			
MW-2	2-Hexanone	mg/L	0	1		5.00E-03	5.00E-03			
MW-2	2-Methyl-4,6-dinitrophenol	mg/L	0	37		0.00E+00	1.00E-01			
MW-2	2-Methylnaphthalene	mg/L	0	10		1.00E-02	1.00E-02			
MW-2	2-Methylphenol	mg/L	0	12		3.00E-03	1.00E-02			
MW-2	2-Nitroaniline	mg/L	0	10		1.00E-02	1.00E-02			
MW-2	2-Nitrophenol	mg/L	0	37		0.00E+00	1.50E-02			
MW-2	3 & 4-Methylphenol	mg/L	0	6		1.00E-02	1.00E-02			
MW-2	3,3´-Dichlorobenzidine	mg/L	0	11		1.00E-02	1.00E-02			
MW-2	3-Nitroaniline	mg/L	0	10		1.00E-02	1.00E-02			
MW-2	4,4'-DDD	mg/L	0	32		1.10E-05	1.00E-03			
MW-2	4,4'-DDE	mg/L	0	33		4.00E-06	1.00E-03			
MW-2	4,4'-DDT	mg/L	0	34		1.20E-05	1.00E-03			
MW-2	4-Bromophenyl phenyl ether	mg/L	0	11		5.00E-03	1.00E-02			
MW-2	4-Chloro-3-methylphenol	mg/L	0	37		0.00E+00	1.00E-02			
MW-2	4-Chloroaniline	mg/L	0	10		1.00E-02	1.00E-02			
MW-2	4-Chlorophenyl phenyl ether	mg/L	0	11		1.00E-02	1.00E-02			
MW-2	4-Chlorotoluene	mg/L	0	16		5.00E-04	1.00E-03			
MW-2	4-Isopropyltoluene	mg/L	0	12		5.00E-04	1.00E-03			
MW-2	4-Methyl-2-Pentanone	mg/L	0	1		5.00E-03	5.00E-03			
MW-2	4-Methylphenol	mg/L	0	6		3.00E-03	1.00E-02			
MW-2	4-Nitroaniline	mg/L	0	10		1.00E-02	1.00E-02			
MW-2	4-Nitrophenol	mg/L	0	34		0.00E+00	4.00E-02			
MW-2	Acenaphthene	mg/L	0	11		1.00E-02	1.00E-02			

Appendix C-3
Summary Statistics for All Groundwater Sampling Events (1984 through 2007)
Page Trowbridge Ranch Landfill

Monitoring Well (1)	Analyte	Units	# of Detects	# of Samples	FOD	Range in Detection Limits (DL)		Range in Detected Concentration		Average Concentration (2)
MW-2	Acenaphthylene	mg/L	0	11		1.00E-02	1.00E-02			
MW-2	Acetone	mg/L	0	1		5.00E-03	5.00E-03			
MW-2	Acid Fraction	mg/L	0	2		0.00E+00	0.00E+00			
MW-2	Aldrin	mg/L	0	37		2.00E-06	1.00E-03			
MW-2	alpha-BHC	mg/L	0	37		2.00E-06	1.00E-03			
MW-2	alpha-Chlordane	mg/L	0	1		5.00E-05	5.00E-05			
MW-2	Anthracene	mg/L	0	11		5.00E-03	1.00E-02			
MW-2	Arsenic (As)	mg/L	0	7		3.00E-06	2.00E-02			
MW-2	Azobenzene	mg/L	0	5		5.00E-03	1.00E-02			
MW-2	Barium (Ba)	mg/L	0	7		4.50E-04	5.70E-01			
MW-2	Benz(a)anthracene	mg/L	0	11		1.00E-02	1.00E-02			
MW-2	Benzene	mg/L	0	39		0.00E+00	6.50E-03			
MW-2	Benzidine	mg/L	0	1		1.50E-01	1.50E-01			
MW-2	Benzo(a)pyrene	mg/L	0	11		5.00E-03	1.00E-02			
MW-2	Benzo(b)fluoranthene	mg/L	0	11		5.00E-03	1.00E-02			
MW-2	Benzo(g,h,i)perylene	mg/L	0	11		5.00E-03	1.00E-02			
MW-2	Benzo(k)fluoranthene	mg/L	0	11		5.00E-03	1.00E-02			
MW-2	Benzoic acid	mg/L	0	11		2.50E-02	5.00E-02			
MW-2	Benzyl alcohol	mg/L	0	11		1.00E-02	1.00E-02			
MW-2	beta-BHC	mg/L	0	37		4.00E-06	1.00E-03			
MW-2	Bis(2-chloroethoxy)methane	mg/L	0	11		1.00E-02	1.00E-02			
MW-2	Bis(2-chloroethyl)ether	mg/L	0	11		1.00E-02	1.00E-02			
MW-2	Bis(2-chloroisopropyl)ether	mg/L	0	11		1.00E-02	1.00E-02			
MW-2	Bis(2-ethylhexyl)phthalate	mg/L	0	11		5.00E-03	1.00E-02			
MW-2	Bromobenzene	mg/L	0	14		5.00E-04	1.00E-03			
MW-2	Bromochloromethane	mg/L	0	16		5.00E-04	1.00E-03			
MW-2	Bromodichloromethane	mg/L	0	41		0.00E+00	2.00E-03			
MW-2	Bromoform	mg/L	0	42		0.00E+00	2.00E-03			
MW-2	Bromomethane	mg/L	0	40		0.00E+00	5.00E-03			
MW-2	Butyl benzyl phthalate	mg/L	0	11		1.00E-02	1.00E-02			
MW-2	Cadmium (Cd)	mg/L	0	7		2.00E-06	4.00E-02			
MW-2	Cadmium (Cd), Filtered	mg/L	0	1		1.00E-03	1.00E-03			

Appendix C-3
Summary Statistics for All Groundwater Sampling Events (1984 through 2007)
Page Trowbridge Ranch Landfill

Monitoring Well (1)	Analyte	Units	# of Detects	# of Samples	FOD	Range in Detection Limits (DL)		Range in Detected Concentration		Average Concentration (2)
MW-2	Carbon tetrachloride	mg/L	0	42		0.00E+00	2.00E-03			
MW-2	Chlordane	mg/L	0	34		1.40E-05	2.50E-02			
MW-2	Chlordane Technical	mg/L	0	1		1.00E-03	1.00E-03			
MW-2	Chlorobenzene	mg/L	0	42		0.00E+00	2.00E-03			
MW-2	Chloroethane	mg/L	0	41		0.00E+00	2.00E-03			
MW-2	Chloronaphthalene	mg/L	0	4		1.00E-03	1.00E-03			
MW-2	Chromium (Cr), Filtered	mg/L	0	1		1.00E-02	1.00E-02			
MW-2	Chrysene	mg/L	0	11		5.00E-03	1.00E-02			
MW-2	cis-1,2-Dichloroethene	mg/L	0	19		5.00E-04	1.00E-03			
MW-2	cis-1,3-Dichloropropene	mg/L	0	39		0.00E+00	2.00E-03			
MW-2	Copper (Cu)	mg/L	0	6		4.90E-05	1.00E-01			
MW-2	DDD	mg/L	0	1		1.00E-04	1.00E-04			
MW-2	DDD (p,p-DDD)	mg/L	0	4		1.20E-05	6.00E-03			
MW-2	DDE (p,p-DDE)	mg/L	0	4		4.00E-06	2.00E-03			
MW-2	DDT (p,p-DDT)	mg/L	0	4		1.20E-05	6.00E-03			
MW-2	delta-BHC	mg/L	0	37		2.00E-06	1.00E-03			
MW-2	Dibenz(a,h)anthracene	mg/L	0	11		5.00E-03	1.00E-02			
MW-2	Dibenzofuran	mg/L	0	10		1.00E-02	1.00E-02			
MW-2	Dibromochloromethane	mg/L	0	41		0.00E+00	2.00E-03			
MW-2	Dibromoethane	mg/L	0	4		1.00E-03	1.00E-03			
MW-2	Dibromomethane	mg/L	0	13		5.00E-04	5.00E-04			
MW-2	Dichlorobenzene	mg/L	0	1		1.40E-03	1.40E-03			
MW-2	Dichlorodifluoromethane	mg/L	0	27		0.00E+00	5.00E-03			
MW-2	Dieldrin	mg/L	0	37		2.00E-06	2.00E-03			
MW-2	Diethyl phthalate	mg/L	0	11		1.00E-02	1.00E-02			
MW-2	Dimethyl phthalate	mg/L	0	11		2.00E-02	2.00E-02			
MW-2	Di-n-butyl phthalate	mg/L	0	11		1.00E-02	1.00E-02			
MW-2	Dinitro-2-Methylphenol	mg/L	0	1		5.00E-02	5.00E-02			
MW-2	Di-n-octyl phthalate	mg/L	0	11		1.00E-02	1.00E-02			
MW-2	Endosulfan I	mg/L	0	35		4.00E-06	2.00E-03			
MW-2	Endosulfan II	mg/L	0	35		4.00E-06	2.00E-03			

Appendix C-3
Summary Statistics for All Groundwater Sampling Events (1984 through 2007)
Page Trowbridge Ranch Landfill

Monitoring Well (1)	Analyte	Units	# of Detects	# of Samples	FOD	Range in Detection Limits (DL)		Range in Detected Concentration		Average Concentration (2)
MW-2	Endosulfan sulfate	mg/L	0	37		2.00E-05	6.00E-03			
MW-2	Endrin	mg/L	0	37		6.00E-06	2.00E-03			
MW-2	Endrin aldehyde	mg/L	0	36		2.00E-05	6.00E-03			
MW-2	Endrin Ketone	mg/L	0	2		1.00E-04	2.00E-04			
MW-2	Ethylbenzene	mg/L	0	39		0.00E+00	9.50E-03			
MW-2	Fluoranthene	mg/L	0	11		5.00E-03	1.00E-02			
MW-2	Fluorene	mg/L	0	11		1.00E-02	1.00E-02			
MW-2	gamma-BHC	mg/L	0	37		2.00E-06	1.00E-03			
MW-2	gamma-Chlordane	mg/L	0	1		5.00E-05	5.00E-05			
MW-2	Heptachlor	mg/L	0	37		2.00E-06	1.00E-03			
MW-2	Heptachlor epoxide	mg/L	0	37		1.00E-05	1.00E-03			
MW-2	Hexachlorobenzene	mg/L	0	11		5.00E-03	1.00E-02			
MW-2	Hexachlorobutadiene	mg/L	0	13		5.00E-04	1.00E-02			
MW-2	Hexachlorocyclopentadiene	mg/L	0	11		1.00E-02	1.00E-02			
MW-2	Hexachloroethane	mg/L	0	11		1.00E-02	1.00E-02			
MW-2	Indeno(1,2,3-cd)pyrene	mg/L	0	11		5.00E-03	1.00E-02			
MW-2	Iron (Fe), Filtered	mg/L	0	1		1.00E-01	1.00E-01			
MW-2	Isophorone	mg/L	0	11		1.00E-02	1.00E-02			
MW-2	Isopropylbenzene	mg/L	0	15		5.00E-04	1.00E-03			
MW-2	Lead (Pb)	mg/L	0	7		2.00E-05	3.30E-01			
MW-2	Lead (Pb), Filtered	mg/L	0	1		2.00E-02	2.00E-02			
MW-2	m,p-Xylene	mg/L	0	17		5.00E-04	1.00E-03			
MW-2	m,p-Xylenes	mg/L	0	2		5.00E-04	5.00E-04			
MW-2	Mercury (Hg)	mg/L	0	7		1.00E-06	5.00E-03			
MW-2	Methoxychlor	mg/L	0	33		5.00E-05	1.00E-03			
MW-2	Methyl tert-butyl ether	mg/L	0	1		1.00E-03	1.00E-03			
MW-2	M-Xylene	mg/L	0	2		2.00E-04	2.00E-04			
MW-2	Naphthalene	mg/L	0	16		5.00E-04	1.00E-02			
MW-2	n-Butylbenzene	mg/L	0	16		5.00E-04	1.00E-03			
MW-2	Nickel (Ni)	mg/L	0	5		2.30E-04	2.50E-01			
MW-2	Nickel (Ni), Filtered	mg/L	0	1		1.00E-01	1.00E-01			

Appendix C-3
Summary Statistics for All Groundwater Sampling Events (1984 through 2007)
Page Trowbridge Ranch Landfill

Monitoring Well (1)	Analyte	Units	# of Detects	# of Samples	FOD	Range in Detection Limits (DL)		Range in Detected Concentration		Average Concentration (2)
MW-2	Nitrobenzene	mg/L	0	11		1.00E-02	1.00E-02			
MW-2	N-Nitrosodimethylamine	mg/L	0	1		1.00E-02	1.00E-02			
MW-2	N-Nitrosodi-n-propylamine	mg/L	0	11		1.00E-02	1.00E-02			
MW-2	N-Nitrosodiphenylamine	mg/L	0	11		5.00E-03	1.00E-02			
MW-2	n-Propylbenzene	mg/L	0	16		5.00E-04	1.00E-03			
MW-2	O,P-Xylene	mg/L	0	3		0.00E+00	2.00E-04			
MW-2	o-Xylene	mg/L	0	19		5.00E-04	1.00E-03			
MW-2	PCB-1016 (Aroclor)	mg/L	0	20		7.00E-05	1.00E-03			
MW-2	PCB-1221 (Aroclor)	mg/L	0	20		7.00E-05	1.00E-03			
MW-2	PCB-1232 (Aroclor)	mg/L	0	20		7.00E-05	1.00E-03			
MW-2	PCB-1242 (Aroclor)	mg/L	0	20		7.00E-05	1.00E-03			
MW-2	PCB-1248 (Aroclor)	mg/L	0	18		5.00E-04	1.00E-03			
MW-2	PCB-1254 (Aroclor)	mg/L	0	20		7.00E-05	1.00E-03			
MW-2	PCB-1260 (Aroclor)	mg/L	0	20		7.00E-05	1.00E-03			
MW-2	Pentachlorophenol	mg/L	0	37		0.00E+00	1.00E-01			
MW-2	Phenanthrene	mg/L	0	11		5.00E-03	1.00E-02			
MW-2	Pyrene	mg/L	0	11		5.00E-03	1.00E-02			
MW-2	sec-Butylbenzene	mg/L	0	16		5.00E-04	1.00E-03			
MW-2	Selenium (Se)	mg/L	0	7		5.00E-06	5.00E-03			
MW-2	Silver (Ag)	mg/L	0	7		5.00E-06	4.00E-02			
MW-2	Styrene	mg/L	0	18		5.00E-04	1.00E-03			
MW-2	tert-Butylbenzene	mg/L	0	16		5.00E-04	1.00E-03			
MW-2	Tetrachloroethene	mg/L	0	41		0.00E+00	2.00E-03			
MW-2	Tin (Sn)	mg/L	0	1		5.00E+00	5.00E+00			
MW-2	Tin (Sn), Filtered	mg/L	0	1		5.00E+00	5.00E+00			
MW-2	Total Trihalomethanes (THMs)	mg/L	0	1		5.00E-03	5.00E-03			
MW-2	Total-1,2-Dichloroethene	mg/L	0	2		5.00E-04	5.00E-04			
MW-2	Toxaphene	mg/L	0	34		1.00E-04	2.00E-03			
MW-2	trans-1,2-Dichloroethene	mg/L	0	42		0.00E+00	2.00E-03			
MW-2	trans-1,3-Dichloropropene	mg/L	0	39		0.00E+00	2.00E-03			

Appendix C-3
Summary Statistics for All Groundwater Sampling Events (1984 through 2007)
Page Trowbridge Ranch Landfill

Monitoring Well (1)	Analyte	Units	# of Detects	# of Samples	FOD	Range in Detection Limits (DL)		Range in Detected Concentration		Average Concentration (2)
MW-2	Trichloroethene	mg/L	0	42		0.00E+00	2.00E-03			
MW-2	Trihalomethanes, Total	mg/L	0	12		5.00E-04	2.00E-03			
MW-2	Trimethyl Benzene	mg/L	0	4		1.00E-03	1.00E-03			
MW-2	Vinyl Acetate	mg/L	0	1		1.00E-03	1.00E-03			
MW-2	Vinyl chloride	mg/L	0	40		0.00E+00	2.00E-03			
MW-2	Xylenes, Total	mg/L	0	23		5.00E-04	5.00E-03			
MW-3	B/N Fraction	mg/L	1	2	50.0%	0.00E+00	0.00E+00	1.00E-02	1.00E-02	5.00E-03
MW-3	Calcium (Ca)	mg/L	1	1	100.0%			2.53E+01	2.53E+01	2.53E+01
MW-3	Chloride (Cl-)	mg/L	35	36	97.2%	5.00E+00	5.00E+00	5.21E-03	1.00E+01	5.87E+00
MW-3	Chloroform	mg/L	1	40	2.5%	0.00E+00	2.00E-03	6.70E-03	6.70E-03	5.18E-04
MW-3	Chromium (Cr)	mg/L	1	7	14.3%	1.00E-05	8.00E-02	5.00E-03	5.00E-03	8.36E-03
MW-3	Fluoride (Fl-)	mg/L	6	7	85.7%	6.00E-01	6.00E-01	6.20E-04	7.90E-01	4.39E-01
MW-3	Iron (Fe)	mg/L	5	5	100.0%			3.70E-04	2.73E+00	1.35E+00
MW-3	Magnesium (Mg)	mg/L	3	3	100.0%			7.30E+00	9.60E+00	8.30E+00
MW-3	Manganese (Mn)	mg/L	31	31	100.0%			2.00E-04	7.72E+00	4.98E-01
MW-3	Methoxychlor	mg/L	1	32	3.1%	5.00E-05	1.00E-03	2.50E-04	2.50E-04	1.18E-04
MW-3	Methylene chloride	mg/L	6	40	15.0%	1.00E-04	1.00E-02	1.00E-05	2.60E-02	2.27E-03
MW-3	Nitrate (NO3)	mg/L	5	5	100.0%			6.79E-03	1.24E+01	5.81E+00
MW-3	Nitrite/Nitrate Total	mg/L	2	2	100.0%			1.10E+00	1.40E+00	1.25E+00
MW-3	Phenol	mg/L	1	38	2.6%	0.00E+00	1.00E-02	5.00E-03	5.00E-03	2.74E-03
MW-3	Sodium (Na)	mg/L	31	31	100.0%			3.56E-02	8.25E+01	3.46E+01
MW-3	Sulfate (SO4)	mg/L	24	36	66.7%	1.00E+00	2.50E+01	3.45E-03	1.05E+01	3.66E+00
MW-3	Toluene	mg/L	1	37	2.7%	0.00E+00	6.70E-03	4.00E-03	4.00E-03	6.07E-04
MW-3	Trichlorofluoromethane	mg/L	1	40	2.5%	0.00E+00	2.00E-03	4.10E-04	4.10E-04	4.53E-04
MW-3	Zinc (Zn)	mg/L	6	6	100.0%			6.19E-04	7.60E-01	3.96E-01
MW-3	Zinc (Zn), Filtered	mg/L	1	1	100.0%			1.60E-01	1.60E-01	1.60E-01
MW-3	1,1,1,2-Tetrachloroethane	mg/L	0	13		5.00E-04	1.00E+00			
MW-3	1,1,1-Trichloroethane	mg/L	0	40		0.00E+00	2.00E-03			
MW-3	1,1,2,2-Tetrachloroethane	mg/L	0	40		0.00E+00	2.00E-03			
MW-3	1,1,2-Trichloroethane	mg/L	0	40		0.00E+00	2.00E-03			
MW-3	1,1,2-Trichlorotrifluoroethane	mg/L	0	3		1.00E-03	1.00E-03			

Appendix C-3
Summary Statistics for All Groundwater Sampling Events (1984 through 2007)
Page Trowbridge Ranch Landfill

Monitoring Well (1)	Analyte	Units	# of Detects	# of Samples	FOD	Range in Detection Limits (DL)		Range in Detected Concentration		Average Concentration (2)
MW-3	1,1-Dichloroethane	mg/L	0	40		0.00E+00	2.00E-03			
MW-3	1,1-Dichloroethene	mg/L	0	39		0.00E+00	2.00E-03			
MW-3	1,1-Dichloropropene	mg/L	0	12		5.00E-04	1.00E-03			
MW-3	1,2,3,5-Tetrachlorobenzene	mg/L	0	3		1.00E-03	1.00E-03			
MW-3	1,2,3-Trichlorobenzene	mg/L	0	12		5.00E-04	5.00E-03			
MW-3	1,2,3-Trichloropropane	mg/L	0	12		5.00E-04	2.00E-03			
MW-3	1,2,4-Trichlorobenzene	mg/L	0	12		5.00E-04	1.00E-02			
MW-3	1,2,4-Trimethylbenzene	mg/L	0	12		5.00E-04	1.00E-03			
MW-3	1,2-Dibromo-3-chloropropane	mg/L	0	13		1.00E-03	2.00E-03			
MW-3	1,2-Dibromoethane	mg/L	0	11		5.00E-04	1.00E-03			
MW-3	1,2-Dichlorobenzene	mg/L	0	39		0.00E+00	2.00E-03			
MW-3	1,2-Dichloroethane	mg/L	0	40		0.00E+00	2.00E-03			
MW-3	1,2-Dichloropropane	mg/L	0	38		0.00E+00	2.00E-03			
MW-3	1,2-Diphenylhydrazine (As Azobenzene)	mg/L	0	5		5.00E-03	1.00E-02			
MW-3	1,3,5-Trimethylbenzene	mg/L	0	12		5.00E-04	1.00E-03			
MW-3	1,3-Dichlorobenzene	mg/L	0	39		0.00E+00	2.00E-03			
MW-3	1,3-Dichloropropane	mg/L	0	15		5.00E-04	1.00E-03			
MW-3	1,4-DDD	mg/L	0	1		1.00E-04	1.00E-04			
MW-3	1,4-DDE	mg/L	0	1		1.00E-04	1.00E-04			
MW-3	1,4-Dichlorobenzene	mg/L	0	39		0.00E+00	2.00E-03			
MW-3	2,2-Dichloropropane	mg/L	0	12		5.00E-04	1.00E-03			
MW-3	2,4,5-Trichlorophenol	mg/L	0	11		3.00E-03	5.00E-02			
MW-3	2,4,6-Trichlorophenol	mg/L	0	36		0.00E+00	2.00E-02			
MW-3	2,4-DDD	mg/L	0	3		1.00E-04	1.00E-03			
MW-3	2,4-DDT	mg/L	0	3		1.00E-04	1.00E-03			
MW-3	2,4-Dichlorophenol	mg/L	0	36		0.00E+00	1.00E-02			
MW-3	2,4-Dimethylphenol	mg/L	0	35		0.00E+00	1.00E-02			
MW-3	2,4-Dinitrophenol	mg/L	0	36		0.00E+00	1.00E-01			
MW-3	2,4-Dinitrotoluene	mg/L	0	10		5.00E-03	1.00E-02			
MW-3	2,6-Dinitrotoluene	mg/L	0	10		5.00E-03	1.00E-02			

Appendix C-3
Summary Statistics for All Groundwater Sampling Events (1984 through 2007)
Page Trowbridge Ranch Landfill

Monitoring Well (1)	Analyte	Units	# of Detects	# of Samples	FOD	Range in Detection Limits (DL)		Range in Detected Concentration		Average Concentration (2)
MW-3	2-Butanone	mg/L	0	1		5.00E-03	5.00E-03			
MW-3	2-Chloroethyl Vinyl Ether	mg/L	0	22		0.00E+00	1.00E-02			
MW-3	2-Chloronaphthalene	mg/L	0	10		1.00E-02	1.00E-02			
MW-3	2-Chlorophenol	mg/L	0	36		0.00E+00	1.50E-02			
MW-3	2-Chlorotoluene	mg/L	0	15		5.00E-04	1.00E-03			
MW-3	2-Hexanone	mg/L	0	1		5.00E-03	5.00E-03			
MW-3	2-Methyl-4,6-dinitrophenol	mg/L	0	36		0.00E+00	1.00E-01			
MW-3	2-Methylnaphthalene	mg/L	0	9		1.00E-02	1.00E-02			
MW-3	2-Methylphenol	mg/L	0	11		3.00E-03	1.00E-02			
MW-3	2-Nitroaniline	mg/L	0	9		1.00E-02	1.00E-02			
MW-3	2-Nitrophenol	mg/L	0	36		0.00E+00	1.50E-02			
MW-3	3 & 4-Methylphenol	mg/L	0	5		1.00E-02	1.00E-02			
MW-3	3,3´-Dichlorobenzidine	mg/L	0	10		1.00E-02	1.00E-02			
MW-3	3-Nitroaniline	mg/L	0	9		1.00E-02	1.00E-02			
MW-3	4,4'-DDD	mg/L	0	31		1.10E-05	1.00E-03			
MW-3	4,4'-DDE	mg/L	0	32		4.00E-06	1.00E-03			
MW-3	4,4'-DDT	mg/L	0	33		1.20E-05	1.00E-03			
MW-3	4-Bromophenyl phenyl ether	mg/L	0	10		5.00E-03	1.00E-02			
MW-3	4-Chloro-3-methylphenol	mg/L	0	36		0.00E+00	1.00E-02			
MW-3	4-Chloroaniline	mg/L	0	9		1.00E-02	1.00E-02			
MW-3	4-Chlorophenyl phenyl ether	mg/L	0	10		1.00E-02	1.00E-02			
MW-3	4-Chlorotoluene	mg/L	0	13		5.00E-04	1.00E-03			
MW-3	4-Isopropyltoluene	mg/L	0	12		5.00E-04	1.00E-03			
MW-3	4-Methyl-2-Pentanone	mg/L	0	1		5.00E-03	5.00E-03			
MW-3	4-Methylphenol	mg/L	0	6		3.00E-03	1.00E-02			
MW-3	4-Nitroaniline	mg/L	0	9		1.00E-02	1.00E-02			
MW-3	4-Nitrophenol	mg/L	0	33		0.00E+00	4.00E-02			
MW-3	Acenaphthene	mg/L	0	10		1.00E-02	1.00E-02			
MW-3	Acenaphthylene	mg/L	0	10		1.00E-02	1.00E-02			
MW-3	Acetone	mg/L	0	1		5.00E-03	5.00E-03			
MW-3	Acid Fraction	mg/L	0	2		0.00E+00	0.00E+00			
MW-3	Aldrin	mg/L	0	36		2.00E-06	1.00E-03			
MW-3	alpha-BHC	mg/L	0	36		2.00E-06	1.00E-03			

Appendix C-3
Summary Statistics for All Groundwater Sampling Events (1984 through 2007)
Page Trowbridge Ranch Landfill

Monitoring Well (1)	Analyte	Units	# of Detects	# of Samples	FOD	Range in Detection Limits (DL)		Range in Detected Concentration		Average Concentration (2)
MW-3	alpha-Chlordane	mg/L	0	1		5.00E-05	5.00E-05			
MW-3	Anthracene	mg/L	0	10		5.00E-03	1.00E-02			
MW-3	Arsenic (As)	mg/L	0	7		3.00E-06	2.00E-02			
MW-3	Azobenzene	mg/L	0	5		5.00E-03	1.00E-02			
MW-3	Barium (Ba)	mg/L	0	7		4.50E-04	7.00E-01			
MW-3	Benz(a)anthracene	mg/L	0	10		1.00E-02	1.00E-02			
MW-3	Benzene	mg/L	0	37		0.00E+00	6.50E-03			
MW-3	Benzidine	mg/L	0	1		1.50E-01	1.50E-01			
MW-3	Benzo(a)pyrene	mg/L	0	10		5.00E-03	1.00E-02			
MW-3	Benzo(b)fluoranthene	mg/L	0	10		5.00E-03	1.00E-02			
MW-3	Benzo(g,h,i)perylene	mg/L	0	10		5.00E-03	1.00E-02			
MW-3	Benzo(k)fluoranthene	mg/L	0	10		5.00E-03	1.00E-02			
MW-3	Benzoic acid	mg/L	0	10		2.50E-02	5.00E-02			
MW-3	Benzyl alcohol	mg/L	0	10		1.00E-02	1.00E-02			
MW-3	beta-BHC	mg/L	0	36		4.00E-06	1.00E-03			
MW-3	Bis(2-chloroethoxy)methane	mg/L	0	10		1.00E-02	1.00E-02			
MW-3	Bis(2-chloroethyl)ether	mg/L	0	10		1.00E-02	1.00E-02			
MW-3	Bis(2-chloroisopropyl)ether	mg/L	0	10		1.00E-02	1.00E-02			
MW-3	Bis(2-ethylhexyl)phthalate	mg/L	0	10		5.00E-03	1.00E-02			
MW-3	Bromobenzene	mg/L	0	12		5.00E-04	1.00E-03			
MW-3	Bromochloromethane	mg/L	0	15		5.00E-04	1.00E-03			
MW-3	Bromodichloromethane	mg/L	0	39		0.00E+00	2.00E-03			
MW-3	Bromoform	mg/L	0	40		0.00E+00	2.00E-03			
MW-3	Bromomethane	mg/L	0	38		0.00E+00	5.00E-03			
MW-3	Butyl benzyl phthalate	mg/L	0	10		1.00E-02	1.00E-02			
MW-3	Cadmium (Cd)	mg/L	0	7		2.00E-06	3.00E-02			
MW-3	Cadmium (Cd), Filtered	mg/L	0	1		1.00E-03	1.00E-03			
MW-3	Carbon tetrachloride	mg/L	0	40		0.00E+00	2.00E-03			
MW-3	Chlordane	mg/L	0	33		1.40E-05	2.50E-02			
MW-3	Chlordane Technical	mg/L	0	1		1.00E-03	1.00E-03			

Appendix C-3
Summary Statistics for All Groundwater Sampling Events (1984 through 2007)
Page Trowbridge Ranch Landfill

Monitoring Well (1)	Analyte	Units	# of Detects	# of Samples	FOD	Range in Detection Limits (DL)		Range in Detected Concentration		Average Concentration (2)
MW-3	Chlorobenzene	mg/L	0	40		0.00E+00	2.00E-03			
MW-3	Chloroethane	mg/L	0	39		0.00E+00	2.00E-03			
MW-3	Chloromethane	mg/L	0	38		0.00E+00	5.00E-03			
MW-3	Chloronaphthalene	mg/L	0	3		1.00E-03	1.00E-03			
MW-3	Chromium (Cr), Filtered	mg/L	0	1		1.00E-02	1.00E-02			
MW-3	Chrysene	mg/L	0	10		5.00E-03	1.00E-02			
MW-3	cis-1,2-Dichloroethene	mg/L	0	16		5.00E-04	1.00E-03			
MW-3	cis-1,3-Dichloropropene	mg/L	0	39		0.00E+00	2.00E-03			
MW-3	Copper (Cu)	mg/L	0	6		4.90E-05	1.00E-01			
MW-3	DDD	mg/L	0	1		1.00E-04	1.00E-04			
MW-3	DDD (p,p-DDD)	mg/L	0	4		1.20E-05	6.00E-03			
MW-3	DDE (p,p-DDE)	mg/L	0	4		4.00E-06	2.00E-03			
MW-3	DDT (p,p-DDT)	mg/L	0	4		1.20E-05	6.00E-03			
MW-3	delta-BHC	mg/L	0	36		2.00E-06	1.00E-03			
MW-3	Dibenz(a,h)anthracene	mg/L	0	10		5.00E-03	1.00E-02			
MW-3	Dibenzofuran	mg/L	0	9		1.00E-02	1.00E-02			
MW-3	Dibromochloromethane	mg/L	0	39		0.00E+00	2.00E-03			
MW-3	Dibromoethane	mg/L	0	3		1.00E-03	1.00E-03			
MW-3	Dibromomethane	mg/L	0	11		5.00E-04	5.00E-04			
MW-3	Dichlorobenzene	mg/L	0	1		1.40E-03	1.40E-03			
MW-3	Dichlorodifluoromethane	mg/L	0	28		0.00E+00	5.00E-03			
MW-3	Dieldrin	mg/L	0	36		2.00E-06	2.00E-03			
MW-3	Diethyl phthalate	mg/L	0	10		1.00E-02	1.00E-02			
MW-3	Dimethyl phthalate	mg/L	0	10		2.00E-02	2.00E-02			
MW-3	Di-n-butyl phthalate	mg/L	0	10		1.00E-02	1.00E-02			
MW-3	Dinitro-2-Methylphenol	mg/L	0	1		5.00E-02	5.00E-02			
MW-3	Di-n-octyl phthalate	mg/L	0	10		1.00E-02	1.00E-02			
MW-3	Endosulfan I	mg/L	0	34		4.00E-06	2.00E-03			
MW-3	Endosulfan II	mg/L	0	34		4.00E-06	2.00E-03			
MW-3	Endosulfan sulfate	mg/L	0	36		2.00E-05	6.00E-03			

Appendix C-3
Summary Statistics for All Groundwater Sampling Events (1984 through 2007)
Page Trowbridge Ranch Landfill

Monitoring Well (1)	Analyte	Units	# of Detects	# of Samples	FOD	Range in Detection Limits (DL)		Range in Detected Concentration		Average Concentration (2)
MW-3	Endrin	mg/L	0	36		6.00E-06	2.00E-03			
MW-3	Endrin aldehyde	mg/L	0	35		2.00E-05	6.00E-03			
MW-3	Endrin Ketone	mg/L	0	2		1.00E-04	2.00E-04			
MW-3	Ethylbenzene	mg/L	0	37		0.00E+00	9.50E-03			
MW-3	Fluoranthene	mg/L	0	10		5.00E-03	1.00E-02			
MW-3	Fluorene	mg/L	0	10		1.00E-02	1.00E-02			
MW-3	gamma-BHC	mg/L	0	36		2.00E-06	1.00E-03			
MW-3	gamma-Chlordane	mg/L	0	1		5.00E-05	5.00E-05			
MW-3	Heptachlor	mg/L	0	36		2.00E-06	1.00E-03			
MW-3	Heptachlor epoxide	mg/L	0	36		1.00E-05	1.00E-03			
MW-3	Hexachlorobenzene	mg/L	0	10		5.00E-03	1.00E-02			
MW-3	Hexachlorobutadiene	mg/L	0	12		5.00E-04	1.00E-02			
MW-3	Hexachlorocyclopentadiene	mg/L	0	10		1.00E-02	1.00E-02			
MW-3	Hexachloroethane	mg/L	0	10		1.00E-02	1.00E-02			
MW-3	Indeno(1,2,3-cd)pyrene	mg/L	0	10		5.00E-03	1.00E-02			
MW-3	Iron (Fe), Filtered	mg/L	0	1		1.00E-01	1.00E-01			
MW-3	Isophorone	mg/L	0	10		1.00E-02	1.00E-02			
MW-3	Isopropylbenzene	mg/L	0	14		5.00E-04	1.00E-03			
MW-3	Lead (Pb)	mg/L	0	7		2.00E-05	2.80E-01			
MW-3	Lead (Pb), Filtered	mg/L	0	1		2.00E-02	2.00E-02			
MW-3	m,p-Xylene	mg/L	0	17		5.00E-04	1.00E-03			
MW-3	Manganese (Mn), Filtered	mg/L	0	1		5.00E-02	5.00E-02			
MW-3	Mercury (Hg)	mg/L	0	7		1.00E-06	5.00E-03			
MW-3	Methyl tert-butyl ether	mg/L	0	1		1.00E-03	1.00E-03			
MW-3	M-Xylene	mg/L	0	2		2.00E-04	2.00E-04			
MW-3	Naphthalene	mg/L	0	14		5.00E-04	1.00E-02			
MW-3	n-Butylbenzene	mg/L	0	15		5.00E-04	1.00E-03			
MW-3	Nickel (Ni)	mg/L	0	5		2.30E-04	3.20E-01			
MW-3	Nickel (Ni), Filtered	mg/L	0	1		1.00E-01	1.00E-01			
MW-3	Nitrobenzene	mg/L	0	10		1.00E-02	1.00E-02			

Appendix C-3
Summary Statistics for All Groundwater Sampling Events (1984 through 2007)
Page Trowbridge Ranch Landfill

Monitoring Well (1)	Analyte	Units	# of Detects	# of Samples	FOD	Range in Detection Limits (DL)		Range in Detected Concentration		Average Concentration (2)
MW-3	N-Nitrosodimethylamine	mg/L	0	1		1.00E-02	1.00E-02			
MW-3	N-Nitrosodi-n-propylamine	mg/L	0	10		1.00E-02	1.00E-02			
MW-3	N-Nitrosodiphenylamine	mg/L	0	10		5.00E-03	1.00E-02			
MW-3	n-Propylbenzene	mg/L	0	15		0.00E+00	1.00E-03			
MW-3	O,P-Xylene	mg/L	0	3		0.00E+00	2.00E-04			
MW-3	o-Xylene	mg/L	0	17		5.00E-04	1.00E-03			
MW-3	PCB-1016 (Aroclor)	mg/L	0	21		7.00E-05	1.00E-03			
MW-3	PCB-1221 (Aroclor)	mg/L	0	21		7.00E-05	1.00E-03			
MW-3	PCB-1232 (Aroclor)	mg/L	0	21		7.00E-05	1.00E-03			
MW-3	PCB-1242 (Aroclor)	mg/L	0	21		7.00E-05	1.00E-03			
MW-3	PCB-1248 (Aroclor)	mg/L	0	19		5.00E-04	1.00E-03			
MW-3	PCB-1254 (Aroclor)	mg/L	0	21		7.00E-05	1.00E-03			
MW-3	PCB-1260 (Aroclor)	mg/L	0	21		7.00E-05	1.00E-03			
MW-3	Pentachlorophenol	mg/L	0	36		0.00E+00	1.00E-01			
MW-3	Phenanthrene	mg/L	0	10		5.00E-03	1.00E-02			
MW-3	Pyrene	mg/L	0	10		5.00E-03	1.00E-02			
MW-3	sec-Butylbenzene	mg/L	0	15		5.00E-04	1.00E-03			
MW-3	Selenium (Se)	mg/L	0	7		5.00E-06	5.00E-03			
MW-3	Silver (Ag)	mg/L	0	7		5.00E-06	5.00E-02			
MW-3	Styrene	mg/L	0	15		5.00E-04	1.00E-03			
MW-3	tert-Butylbenzene	mg/L	0	15		5.00E-04	1.00E-03			
MW-3	Tetrachloroethene	mg/L	0	39		0.00E+00	2.00E-03			
MW-3	Tin (Sn)	mg/L	0	1		6.00E+00	6.00E+00			
MW-3	Tin (Sn), Filtered	mg/L	0	1		5.00E+00	5.00E+00			
MW-3	Total Trihalomethanes (THMs)	mg/L	0	1		5.00E-03	5.00E-03			
MW-3	Total-1,2-Dichloroethene	mg/L	0	2		5.00E-04	5.00E-04			
MW-3	Toxaphene	mg/L	0	33		1.00E-04	2.00E-03			
MW-3	trans-1,2-Dichloroethene	mg/L	0	40		0.00E+00	2.00E-03			
MW-3	trans-1,3-Dichloropropene	mg/L	0	39		0.00E+00	2.00E-03			
MW-3	Trichloroethene	mg/L	0	40		0.00E+00	2.00E-03			
MW-3	Trihalomethanes, Total	mg/L	0	10		5.00E-04	2.00E-03			

Appendix C-3
Summary Statistics for All Groundwater Sampling Events (1984 through 2007)
Page Trowbridge Ranch Landfill

Monitoring Well (1)	Analyte	Units	# of Detects	# of Samples	FOD	Range in Detection Limits (DL)		Range in Detected Concentration		Average Concentration (2)
MW-3	Trimethyl Benzene	mg/L	0	3		1.00E-03	1.00E-03			
MW-3	Vinyl Acetate	mg/L	0	1		1.00E-03	1.00E-03			
MW-3	Vinyl chloride	mg/L	0	38		0.00E+00	2.00E-03			
MW-3	Xylenes, Total	mg/L	0	21		5.00E-04	5.00E-03			
MW-4	1,1,1-Trichloroethane	mg/L	1	41	2.4%	0.00E+00	2.00E-03	5.10E-03	5.10E-03	4.99E-04
MW-4	2,4,6-Trichlorophenol	mg/L	1	38	2.6%	0.00E+00	2.00E-02	2.00E-02	2.00E-02	4.94E-03
MW-4	Aldrin	mg/L	1	37	2.7%	2.00E-06	1.00E-03	2.00E-04	2.00E-04	7.52E-05
MW-4	Arsenic (As)	mg/L	1	7	14.3%	3.00E-06	2.00E-02	5.00E-06	5.00E-06	2.86E-03
MW-4	Barium (Ba)	mg/L	2	7	28.6%	4.50E-04	4.90E-01	7.60E-02	1.20E-01	7.02E-02
MW-4	Bis(2-ethylhexyl)phthalate	mg/L	1	11	9.1%	5.00E-03	1.00E-02	1.20E-02	1.20E-02	4.95E-03
MW-4	Calcium (Ca)	mg/L	1	1	100.0%			2.39E+01	2.39E+01	2.39E+01
MW-4	Chlordane	mg/L	1	34	2.9%	1.40E-05	1.00E-03	5.00E-05	5.00E-05	2.61E-04
MW-4	Chloride (Cl-)	mg/L	37	38	97.4%	5.00E+00	5.00E+00	4.82E-03	1.00E+01	5.41E+00
MW-4	Chloroform	mg/L	3	41	7.3%	0.00E+00	2.00E-03	5.60E-04	6.70E-03	6.08E-04
MW-4	Chromium (Cr)	mg/L	3	7	42.9%	1.00E-05	1.00E-02	6.00E-03	3.60E-02	8.44E-03
MW-4	Dieldrin	mg/L	1	37	2.7%	2.00E-06	1.00E-03	1.50E-04	1.50E-04	7.61E-05
MW-4	Fluoride (Fl-)	mg/L	7	7	100.0%			7.82E-04	8.10E-01	4.37E-01
MW-4	Iron (Fe)	mg/L	5	5	100.0%			6.30E-04	3.19E+01	7.07E+00
MW-4	Magnesium (Mg)	mg/L	3	3	100.0%			7.50E+00	8.85E+00	8.03E+00
MW-4	Manganese (Mn)	mg/L	33	33	100.0%			1.80E-04	4.40E-01	2.27E-01
MW-4	Manganese (Mn), Filtered	mg/L	1	1	100.0%			2.00E-01	2.00E-01	2.00E-01
MW-4	Methoxychlor	mg/L	1	34	2.9%	5.00E-05	1.00E-03	3.00E-04	3.00E-04	1.35E-04
MW-4	Methylene chloride	mg/L	5	41	12.2%	1.00E-04	1.00E-02	9.00E-05	2.50E-02	2.06E-03
MW-4	Nitrate (NO3)	mg/L	5	5	100.0%			6.78E-03	8.38E+00	3.33E+00
MW-4	Nitrite/Nitrate Total	mg/L	2	2	100.0%			8.45E-01	1.31E+00	1.08E+00
MW-4	Phenol	mg/L	1	40	2.5%	0.00E+00	1.00E-02	1.20E-02	1.20E-02	2.94E-03
MW-4	Sodium (Na)	mg/L	33	33	100.0%			3.46E-02	4.50E+01	3.11E+01
MW-4	Sulfate (SO4)	mg/L	25	38	65.8%	1.00E+00	2.50E+01	3.05E-03	9.00E+00	3.47E+00
MW-4	Trihalomethanes, Total	mg/L	1	11	9.1%	5.00E-04	2.00E-03	5.60E-04	5.60E-04	3.46E-04

Appendix C-3
Summary Statistics for All Groundwater Sampling Events (1984 through 2007)
Page Trowbridge Ranch Landfill

Monitoring Well (1)	Analyte	Units	# of Detects	# of Samples	FOD	Range in Detection Limits (DL)		Range in Detected Concentration		Average Concentration (2)
MW-4	Zinc (Zn)	mg/L	6	6	100.0%			3.55E-04	6.58E+00	1.32E+00
MW-4	Zinc (Zn), Filtered	mg/L	1	1	100.0%			1.40E-01	1.40E-01	1.40E-01
MW-4	1,1,1,2-Tetrachloroethane	mg/L	0	15		5.00E-04	1.00E+00			
MW-4	1,1,2,2-Tetrachloroethane	mg/L	0	41		0.00E+00	2.00E-03			
MW-4	1,1,2-Trichloroethane	mg/L	0	41		0.00E+00	2.00E-03			
MW-4	1,1,2-Trichlorotrifluoroethane	mg/L	0	4		1.00E-03	1.00E-03			
MW-4	1,1-Dichloroethane	mg/L	0	41		0.00E+00	2.00E-03			
MW-4	1,1-Dichloroethene	mg/L	0	40		0.00E+00	2.00E-03			
MW-4	1,1-Dichloropropene	mg/L	0	13		5.00E-04	1.00E-03			
MW-4	1,2,3,5-Tetrachlorobenzene	mg/L	0	4		1.00E-03	1.00E-03			
MW-4	1,2,3-Trichlorobenzene	mg/L	0	12		5.00E-04	5.00E-03			
MW-4	1,2,3-Trichloropropane	mg/L	0	13		5.00E-04	2.00E-03			
MW-4	1,2,4-Trichlorobenzene	mg/L	0	14		5.00E-04	1.00E-02			
MW-4	1,2,4-Trimethylbenzene	mg/L	0	12		5.00E-04	1.00E-03			
MW-4	1,2-Dibromo-3-chloropropane	mg/L	0	14		1.00E-03	2.00E-03			
MW-4	1,2-Dibromoethane	mg/L	0	11		5.00E-04	1.00E-03			
MW-4	1,2-Dichlorobenzene	mg/L	0	41		0.00E+00	1.00E-02			
MW-4	1,2-Dichloroethane	mg/L	0	41		0.00E+00	2.00E-03			
MW-4	1,2-Dichloropropane	mg/L	0	38		0.00E+00	2.00E-03			
MW-4	1,2-Diphenylhydrazine (As Azobenzene)	mg/L	0	6		5.00E-03	1.00E-02			
MW-4	1,3,5-Trimethylbenzene	mg/L	0	12		5.00E-04	1.00E-03			
MW-4	1,3-Dichlorobenzene	mg/L	0	41		0.00E+00	1.00E-02			
MW-4	1,3-Dichloropropane	mg/L	0	17		5.00E-04	1.00E-03			
MW-4	1,3-Dichloropropene, Total	mg/L	0	1		5.00E-04	5.00E-04			
MW-4	1,4-DDD	mg/L	0	1		1.00E-04	1.00E-04			
MW-4	1,4-DDE	mg/L	0	1		1.00E-04	1.00E-04			
MW-4	1,4-Dichlorobenzene	mg/L	0	41		0.00E+00	1.00E-02			
MW-4	2,2-Dichloropropane	mg/L	0	13		5.00E-04	1.00E-03			

Appendix C-3
Summary Statistics for All Groundwater Sampling Events (1984 through 2007)
Page Trowbridge Ranch Landfill

Monitoring Well (1)	Analyte	Units	# of Detects	# of Samples	FOD	Range in Detection Limits (DL)		Range in Detected Concentration		Average Concentration (2)
MW-4	2,4,5-Trichlorophenol	mg/L	0	11		3.00E-03	2.00E-02			
MW-4	2,4-DDD	mg/L	0	4		1.00E-04	1.00E-03			
MW-4	2,4-DDT	mg/L	0	4		1.00E-04	1.00E-03			
MW-4	2,4-Dichlorophenol	mg/L	0	38		0.00E+00	1.00E-02			
MW-4	2,4-Dimethylphenol	mg/L	0	37		0.00E+00	1.00E-02			
MW-4	2,4-Dinitrophenol	mg/L	0	38		0.00E+00	1.00E-01			
MW-4	2,4-Dinitrotoluene	mg/L	0	11		5.00E-03	1.00E-02			
MW-4	2,6-Dinitrotoluene	mg/L	0	11		5.00E-03	1.00E-02			
MW-4	2-Butanone	mg/L	0	1		5.00E-03	5.00E-03			
MW-4	2-Chloroethyl Vinyl Ether	mg/L	0	21		0.00E+00	1.00E-02			
MW-4	2-Chloronaphthalene	mg/L	0	11		1.00E-02	1.00E-02			
MW-4	2-Chlorophenol	mg/L	0	38		0.00E+00	1.50E-02			
MW-4	2-Chlorotoluene	mg/L	0	17		5.00E-04	1.00E-03			
MW-4	2-Hexanone	mg/L	0	1		5.00E-03	5.00E-03			
MW-4	2-Methyl-4,6-dinitrophenol	mg/L	0	38		0.00E+00	1.00E-01			
MW-4	2-Methylnaphthalene	mg/L	0	10		1.00E-02	1.00E-02			
MW-4	2-Methylphenol	mg/L	0	11		3.00E-03	1.00E-02			
MW-4	2-Nitroaniline	mg/L	0	10		1.00E-02	1.00E-02			
MW-4	2-Nitrophenol	mg/L	0	38		0.00E+00	1.50E-02			
MW-4	3 & 4-Methylphenol	mg/L	0	6		1.00E-02	1.00E-02			
MW-4	3,3´-Dichlorobenzidine	mg/L	0	11		1.00E-02	1.00E-02			
MW-4	3-Nitroaniline	mg/L	0	10		1.00E-02	1.00E-02			
MW-4	4,4'-DDD	mg/L	0	33		1.10E-05	1.00E-03			
MW-4	4,4'-DDE	mg/L	0	34		4.00E-06	1.00E-03			
MW-4	4,4'-DDT	mg/L	0	35		1.20E-05	1.00E-03			
MW-4	4-Bromophenyl phenyl ether	mg/L	0	11		5.00E-03	1.00E-02			
MW-4	4-Chloro-3-Methylphenol	mg/L	0	38		0.00E+00	1.00E-02			
MW-4	4-Chloroaniline	mg/L	0	10		1.00E-02	1.00E-02			
MW-4	4-Chlorophenyl phenyl ether	mg/L	0	11		1.00E-02	1.00E-02			
MW-4	4-Chlorotoluene	mg/L	0	15		5.00E-04	1.00E-03			
MW-4	4-Isopropyltoluene	mg/L	0	12		5.00E-04	1.00E-03			

Appendix C-3
Summary Statistics for All Groundwater Sampling Events (1984 through 2007)
Page Trowbridge Ranch Landfill

Monitoring Well (1)	Analyte	Units	# of Detects	# of Samples	FOD	Range in Detection Limits (DL)		Range in Detected Concentration		Average Concentration (2)
MW-4	4-Methyl-2-Pentanone	mg/L	0	1		5.00E-03	5.00E-03			
MW-4	4-Methylphenol	mg/L	0	5		3.00E-03	1.00E-02			
MW-4	4-Nitroaniline	mg/L	0	10		1.00E-02	1.00E-02			
MW-4	4-Nitrophenol	mg/L	0	34		0.00E+00	4.00E-02			
MW-4	Acenaphthene	mg/L	0	11		1.00E-02	1.00E-02			
MW-4	Acenaphthylene	mg/L	0	11		1.00E-02	1.00E-02			
MW-4	Acetone	mg/L	0	1		5.00E-03	5.00E-03			
MW-4	Acid Fraction	mg/L	0	2		0.00E+00	0.00E+00			
MW-4	alpha-BHC	mg/L	0	37		2.00E-06	1.00E-03			
MW-4	alpha-Chlordane	mg/L	0	1		5.00E-05	5.00E-05			
MW-4	Anthracene	mg/L	0	11		5.00E-03	1.00E-02			
MW-4	Azobenzene	mg/L	0	5		5.00E-03	1.00E-02			
MW-4	B/N Fraction	mg/L	0	2		0.00E+00	0.00E+00			
MW-4	Benz(a)anthracene	mg/L	0	11		1.00E-02	1.00E-02			
MW-4	Benzene	mg/L	0	36		2.00E-04	6.50E-03			
MW-4	Benzidine	mg/L	0	1		1.50E-01	1.50E-01			
MW-4	Benzo(a)pyrene	mg/L	0	11		5.00E-03	1.00E-02			
MW-4	Benzo(b)fluoranthene	mg/L	0	11		5.00E-03	1.00E-02			
MW-4	Benzo(g,h,i)perylene	mg/L	0	11		5.00E-03	1.00E-02			
MW-4	Benzo(k)fluoranthene	mg/L	0	11		5.00E-03	1.00E-02			
MW-4	Benzoic acid	mg/L	0	10		2.50E-02	5.00E-02			
MW-4	Benzyl alcohol	mg/L	0	10		1.00E-02	1.00E-02			
MW-4	beta-BHC	mg/L	0	37		4.00E-06	1.00E-03			
MW-4	Bis(2-chloroethoxy)methane	mg/L	0	11		1.00E-02	1.00E-02			
MW-4	Bis(2-chloroethyl)ether	mg/L	0	11		1.00E-02	1.00E-02			
MW-4	Bis(2-chloroisopropyl)ether	mg/L	0	11		1.00E-02	1.00E-02			
MW-4	Bromobenzene	mg/L	0	13		5.00E-04	1.00E-03			
MW-4	Bromochloromethane	mg/L	0	16		5.00E-04	1.00E-03			
MW-4	Bromodichloromethane	mg/L	0	40		0.00E+00	2.00E-03			
MW-4	Bromoform	mg/L	0	41		0.00E+00	2.00E-03			
MW-4	Bromomethane	mg/L	0	38		0.00E+00	5.00E-03			

Appendix C-3
Summary Statistics for All Groundwater Sampling Events (1984 through 2007)
Page Trowbridge Ranch Landfill

Monitoring Well (1)	Analyte	Units	# of Detects	# of Samples	FOD	Range in Detection Limits (DL)		Range in Detected Concentration		Average Concentration (2)
MW-4	Butyl benzyl phthalate	mg/L	0	11		1.00E-02	1.00E-02			
MW-4	Cadmium (Cd)	mg/L	0	7		2.00E-06	3.00E-03			
MW-4	Cadmium (Cd), Filtered	mg/L	0	1		1.00E-03	1.00E-03			
MW-4	Carbon tetrachloride	mg/L	0	41		0.00E+00	2.00E-03			
MW-4	Chlordane Technical	mg/L	0	1		1.00E-03	1.00E-03			
MW-4	Chlorobenzene	mg/L	0	41		0.00E+00	2.00E-03			
MW-4	Chloroethane	mg/L	0	39		0.00E+00	2.00E-03			
MW-4	Chloromethane	mg/L	0	38		0.00E+00	5.00E-03			
MW-4	Chloronaphthalene	mg/L	0	4		1.00E-03	1.00E-03			
MW-4	Chromium (Cr), Filtered	mg/L	0	1		1.00E-02	1.00E-02			
MW-4	Chrysene	mg/L	0	11		5.00E-03	1.00E-02			
MW-4	cis-1,2-Dichloroethene	mg/L	0	18		5.00E-04	1.00E-03			
MW-4	cis-1,3-Dichloropropene	mg/L	0	39		0.00E+00	2.00E-03			
MW-4	Copper (Cu)	mg/L	0	6		3.00E-05	1.00E-01			
MW-4	DDD	mg/L	0	1		1.00E-04	1.00E-04			
MW-4	DDD (p,p-DDD)	mg/L	0	3		1.20E-05	1.00E-04			
MW-4	DDE (p,p-DDE)	mg/L	0	3		4.00E-06	1.00E-04			
MW-4	DDT (p,p-DDT)	mg/L	0	3		1.20E-05	1.00E-04			
MW-4	delta-BHC	mg/L	0	37		2.00E-06	1.00E-03			
MW-4	Dibenz(a,h)anthracene	mg/L	0	11		5.00E-03	1.00E-02			
MW-4	Dibenzofuran	mg/L	0	10		1.00E-02	1.00E-02			
MW-4	Dibromochloromethane	mg/L	0	40		0.00E+00	2.00E-03			
MW-4	Dibromoethane	mg/L	0	4		1.00E-03	1.00E-03			
MW-4	Dibromomethane	mg/L	0	12		5.00E-04	5.00E-04			
MW-4	Dichlorobenzene	mg/L	0	1		1.40E-03	1.40E-03			
MW-4	Dichlorodifluoromethane	mg/L	0	26		0.00E+00	5.00E-03			
MW-4	Diethyl phthalate	mg/L	0	11		1.00E-02	1.00E-02			
MW-4	Dimethyl phthalate	mg/L	0	11		2.00E-02	2.00E-02			
MW-4	Di-n-butyl phthalate	mg/L	0	11		1.00E-02	1.00E-02			
MW-4	Di-n-octyl phthalate	mg/L	0	11		1.00E-02	1.00E-02			
MW-4	Endosulfan I	mg/L	0	35		4.00E-06	1.00E-03			

Appendix C-3
Summary Statistics for All Groundwater Sampling Events (1984 through 2007)
Page Trowbridge Ranch Landfill

Monitoring Well (1)	Analyte	Units	# of Detects	# of Samples	FOD	Range in Detection Limits (DL)		Range in Detected Concentration		Average Concentration (2)
MW-4	Endosulfan II	mg/L	0	35		4.00E-06	1.00E-03			
MW-4	Endosulfan sulfate	mg/L	0	37		2.00E-05	1.00E-03			
MW-4	Endrin	mg/L	0	37		6.00E-06	1.00E-03			
MW-4	Endrin aldehyde	mg/L	0	36		2.00E-05	1.00E-03			
MW-4	Endrin Ketone	mg/L	0	2		1.00E-04	2.00E-04			
MW-4	Ethylbenzene	mg/L	0	36		2.00E-04	9.50E-03			
MW-4	Fluoranthene	mg/L	0	11		5.00E-03	1.00E-02			
MW-4	Fluorene	mg/L	0	11		1.00E-02	1.00E-02			
MW-4	gamma-BHC	mg/L	0	37		2.00E-06	1.00E-03			
MW-4	gamma-Chlordane	mg/L	0	1		5.00E-05	5.00E-05			
MW-4	Heptachlor	mg/L	0	37		2.00E-06	1.00E-03			
MW-4	Heptachlor epoxide	mg/L	0	37		1.00E-05	1.00E-03			
MW-4	Hexachlorobenzene	mg/L	0	11		5.00E-03	1.00E-02			
MW-4	Hexachlorobutadiene	mg/L	0	13		5.00E-04	1.00E-02			
MW-4	Hexachlorocyclopentadiene	mg/L	0	11		1.00E-02	1.00E-02			
MW-4	Hexachloroethane	mg/L	0	11		1.00E-02	1.00E-02			
MW-4	Indeno(1,2,3-cd)pyrene	mg/L	0	11		5.00E-03	1.00E-02			
MW-4	Iron (Fe), Filtered	mg/L	0	1		1.00E-01	1.00E-01			
MW-4	Isophorone	mg/L	0	11		1.00E-02	1.00E-02			
MW-4	Isopropylbenzene	mg/L	0	15		5.00E-04	1.00E-03			
MW-4	Lead (Pb)	mg/L	0	7		2.00E-05	4.70E-02			
MW-4	Lead (Pb), Filtered	mg/L	0	1		2.00E-02	2.00E-02			
MW-4	m,p-Xylene	mg/L	0	15		5.00E-04	1.00E-03			
MW-4	m,p-Xylenes	mg/L	0	1		5.00E-04	5.00E-04			
MW-4	Mercury (Hg)	mg/L	0	7		1.00E-06	1.00E-03			
MW-4	Methyl tert-butyl ether	mg/L	0	1		1.00E-03	1.00E-03			
MW-4	M-Xylene	mg/L	0	2		2.00E-04	2.00E-04			
MW-4	Naphthalene	mg/L	0	16		5.00E-04	1.00E-02			
MW-4	n-Butylbenzene	mg/L	0	16		5.00E-04	1.00E-03			
MW-4	Nickel (Ni)	mg/L	0	5		1.70E-04	1.00E-01			
MW-4	Nickel (Ni), Filtered	mg/L	0	1		1.00E-01	1.00E-01			
MW-4	Nitrobenzene	mg/L	0	11		1.00E-02	1.00E-02			

Appendix C-3
Summary Statistics for All Groundwater Sampling Events (1984 through 2007)
Page Trowbridge Ranch Landfill

Monitoring Well (1)	Analyte	Units	# of Detects	# of Samples	FOD	Range in Detection Limits (DL)		Range in Detected Concentration		Average Concentration (2)
MW-4	N-Nitrosodimethylamine	mg/L	0	1		1.00E-02	1.00E-02			
MW-4	N-Nitrosodi-n-propylamine	mg/L	0	11		1.00E-02	1.00E-02			
MW-4	N-Nitrosodiphenylamine	mg/L	0	11		5.00E-03	1.00E-02			
MW-4	n-Propylbenzene	mg/L	0	16		5.00E-04	1.00E-03			
MW-4	O,P-Xylene	mg/L	0	3		0.00E+00	2.00E-04			
MW-4	o-Xylene	mg/L	0	16		5.00E-04	1.00E-03			
MW-4	PCB-1016 (Aroclor)	mg/L	0	21		7.00E-05	1.00E-03			
MW-4	PCB-1221 (Aroclor)	mg/L	0	21		7.00E-05	1.00E-03			
MW-4	PCB-1232 (Aroclor)	mg/L	0	21		7.00E-05	1.00E-03			
MW-4	PCB-1242 (Aroclor)	mg/L	0	21		7.00E-05	1.00E-03			
MW-4	PCB-1248 (Aroclor)	mg/L	0	19		5.00E-04	1.00E-03			
MW-4	PCB-1254 (Aroclor)	mg/L	0	21		7.00E-05	1.00E-03			
MW-4	PCB-1260 (Aroclor)	mg/L	0	21		7.00E-05	1.00E-03			
MW-4	Pentachlorophenol	mg/L	0	38		0.00E+00	1.00E-01			
MW-4	Phenanthrene	mg/L	0	11		5.00E-03	1.00E-02			
MW-4	Pyrene	mg/L	0	11		5.00E-03	1.00E-02			
MW-4	sec-Butylbenzene	mg/L	0	16		5.00E-04	1.00E-03			
MW-4	Selenium (Se)	mg/L	0	7		3.00E-06	5.00E-03			
MW-4	Silver (Ag)	mg/L	0	7		5.00E-06	1.40E-02			
MW-4	Styrene	mg/L	0	17		5.00E-04	1.00E-03			
MW-4	tert-Butylbenzene	mg/L	0	16		5.00E-04	1.00E-03			
MW-4	Tetrachloroethene	mg/L	0	40		0.00E+00	2.00E-03			
MW-4	Tin (Sn)	mg/L	0	1		5.00E+00	5.00E+00			
MW-4	Tin (Sn), Filtered	mg/L	0	1		5.00E+00	5.00E+00			
MW-4	Toluene	mg/L	0	36		2.00E-04	6.70E-03			
MW-4	Total Trihalomethanes (THMs)	mg/L	0	1		5.00E-03	5.00E-03			
MW-4	Total-1,2-Dichloroethene	mg/L	0	2		5.00E-04	5.00E-04			
MW-4	Toxaphene	mg/L	0	35		1.00E-04	2.00E-03			
MW-4	trans-1,2-Dichloroethene	mg/L	0	41		0.00E+00	2.00E-03			

Appendix C-3
Summary Statistics for All Groundwater Sampling Events (1984 through 2007)
Page Trowbridge Ranch Landfill

Monitoring Well (1)	Analyte	Units	# of Detects	# of Samples	FOD	Range in Detection Limits (DL)		Range in Detected Concentration		Average Concentration (2)
MW-4	trans-1,3-Dichloropropene	mg/L	0	39		0.00E+00	2.00E-03			
MW-4	Trichloroethene	mg/L	0	41		0.00E+00	2.00E-03			
MW-4	Trichlorofluoromethane	mg/L	0	40		0.00E+00	2.00E-03			
MW-4	Trimethyl Benzene	mg/L	0	4		1.00E-03	1.00E-03			
MW-4	Vinyl Acetate	mg/L	0	1		1.00E-03	1.00E-03			
MW-4	Vinyl chloride	mg/L	0	38		0.00E+00	2.00E-03			
MW-4	Xylenes, Total	mg/L	0	23		5.00E-04	5.00E-03			
Notes:										
(1) MW-5 replaced MW-1 in 1991.										
(2) Represents arithmetic average of detected concentrations and value equal to one-half non-detected analytes.										
Summary data represents biannual sampling events between										

Appendix C-4
Groundwater Data (1984 - 2007)
Page Trowbridge Ranch Landfill

		Sample ID	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1 (Dup)	MW-1	MW-1	MW-1 (Dup)	MW-1	MW-1	MW-1	MW-1 (filtered)	MW-1 (Dup)	MW-1	MW-1 (Dup)
		Well ID	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1
		Sample Date/Time	11/26/1984	1/31/1985	4/10/1985	5/23/1985	6/6/1985	9/19/1985	9/19/1985	7/23/1986	10/29/1986	10/29/1986	3/5/1987	4/23/1987	7/9/1987	7/9/1987	7/9/1987	4/21/1988	4/21/1988
CAS_Number	**OGDEN_ANALYTE**	**FinalUnits**																	
100-01-6	4-Nitroaniline	MG/L																	
100-02-7	4-Nitrophenol	MG/L	0 U-NDT	0 U-NDT				0 U					0.035 U		0.04 U				
100-41-4	Ethylbenzene	MG/L		0.0005 U						0.0002 U	0.0016 U	0.0016 U	0.0095 U		0.0005 U		0.0005 U	0.0002 U	0.0002 U
100-42-5	Styrene	MG/L																	
100-51-6	Benzyl alcohol	MG/L																	
10061-01-5	cis-1,3-Dichloropropene	MG/L	0 U	0.00005 U	0.0001 U	0.0002 U	0.0002 U	0 U		0.0001 U					0.00001 U		0.00001 U	0.0002 U	0.0002 U
10061-02-6	trans-1,3-Dichloropropene	MG/L	0.00001 U	0.00001 U	0.0002 U	0.00034 U	0.00034 U	0 U		0.0005 U					0.00003 U		0.00003 U	0.00034 U	0.00034 U
101-55-3	4-Bromophenyl phenyl ether	MG/L																	
1024-57-3	Heptachlor epoxide	MG/L				0.00005 U	0.00005 U			0.00005 U			0.00002 U	0.001 U	0.00001 U		0.00001 U	0.000083 U	0.000083 U
1031-07-8	Endosulfan sulfate	MG/L				0.0001 U	0.0001 U			0.0001 U			0.00002 U	0.006 U	0.0001 U		0.00012 U	0.000066 U	0.000066 U
103-33-3	Azobenzene	MG/L																	
103-65-1	n-Propylbenzene	MG/L																	
104-51-8	n-Butylbenzene	MG/L																	
105-67-9	2,4-Dimethylphenol	MG/L	0.002 U	0.001 U	0.003 U	0.003 U	0.003 U	0 U					0.0009 U		0.003 U				
106-43-4	4-Chlorotoluene	MG/L																	
106-44-5	3 & 4-Methylphenol	MG/L																	
106-44-5	4-Methylphenol	MG/L																	
106-46-7	1,4-Dichlorobenzene	MG/L	0.00004 U	0.0002 U	0.0005 U	0.00024 U	0.00024 U	0 U		0.0001 U	0.0001 U	0.0001 U			0.00005 U		0.00005 U	0.0002 U	0.0002 U
106-47-8	4-Chloroaniline	MG/L																	
106-93-4	1,2-Dibromoethane	MG/L																	
107-06-2	1,2-Dichloroethane	MG/L	0.00003 U	0.00003 U	0.0001 U	0.00003 U	0.00003 U	0 U		0.0001 U	0.00018 U	0.00018 U	0.0002 U		0.00001 U		0.00001 U	0.00003 U	0.00003 U
108-05-4	Vinyl Acetate	MG/L																	
108-10-1	4-Methyl-2-Pentanone	MG/L																	
108-38-3	M-Xylene	MG/L																0.0002 U	0.0002 U
108-60-1	Bis(2-chloroisopropyl)ether	MG/L																	
108-67-8	1,3,5-Trimethylbenzene	MG/L																	
108-86-1	Bromobenzene	MG/L																	
108-88-3	Toluene	MG/L		0.0005 U						0.0025	0.0015 U	0.0015 U	0.0067 U		0.0005 U		0.0005 U	0.0002 U	0.0002 U
108-90-7	Chlorobenzene	MG/L	0.0003 U	0.0003 U	0.0005 U	0.00025 U	0.00025 U	0 U		0.0001 U	0.00017 U	0.00017 U	0.0003 U		0.00002 U		0.00002 U	0.0002 U	0.0002 U
108-95-2	Phenol	MG/L	0.002 U	0.001 U	0.002 U	0.002 U	0.002 U	0 U		0.01 U			0.0006 U		0.0025 U			0.003 U	0.004
110-75-8	2-Chloroethyl Vinyl Ether	MG/L	0 U-NDT	0 U-NDT		0.00013 U	0.00013 U	0 U		0.0001 U	0.00084 U	0.00084 U	0.001 U		0.0005 U		0.0005 U	0.00013 U	0.00013 U
11096-82-5	PCB-1260 (Aroclor)	MG/L								0.001 U					0.001 U			0.00007 U	0.00007 U
11097-69-1	PCB-1254 (Aroclor)	MG/L								0.001 U					0.001 U			0.00007 U	0.00007 U
11104-28-2	PCB-1221 (Aroclor)	MG/L								0.0005 U					0.001 U			0.00007 U	0.00007 U
11104-29-3	PCB-1242 (Aroclor)	MG/L								0.0005 U					0.001 U			0.00007 U	0.00007 U
11141-16-5	PCB-1232 (Aroclor)	MG/L								0.0005 U					0.001 U			0.00007 U	0.00007 U
111-44-4	Bis(2-chloroethyl)ether	MG/L																	
111-91-1	Bis(2-chloroethoxy)methane	MG/L																	
117-81-7	Bis(2-ethylhexyl)phthalate	MG/L																	
117-84-0	Di-n-octyl phthalate	MG/L																	
118-74-1	Hexachlorobenzene	MG/L																	
120-12-7	Anthracene	MG/L																	
120-82-1	1,2,4-Trichlorobenzene	MG/L																	
120-83-2	2,4-Dichlorophenol	MG/L	0.002 U	0.002 U	0.005 U	0.005 U	0.005 U	0 U					0.0016 U		0.004 U				
121-14-2	2,4-Dinitrotoluene	MG/L																	
122-66-7	1,2-Diphenylhydrazine (As Azobenzene)	MG/L																	
124-48-1	Dibromochloromethane	MG/L			0.0001 U	0.00009 U	0.00009 U	0 U		0.0001 U					0.00001 U		0.00001 U	0.00009 U	0.00009 U
12672-29-6	PCB-1248 (Aroclor)	MG/L								0.0005 U					0.001 U				
12674-11-2	PCB-1016 (Aroclor)	MG/L								0.0005 U					0.001 U			0.00007 U	0.00007 U
127-18-4	Tetrachloroethene	MG/L	0.000002	0.00005 U	0.00005 U	0.00003 U	0.00003 U	0 U		0.0005 U					0.00001 U		0.00001 U	0.00003 U	0.00003 U
129-00-0	Pyrene	MG/L																	
131-11-3	Dimethyl phthalate	MG/L																	
132-64-9	Dibenzofuran	MG/L																	
1330-20-7	m,p-Xylene	MG/L																	
1330-20-7	Xylenes, Total	MG/L													0.0005 U		0.0005 U		
135-98-8	sec-Butylbenzene	MG/L																	
142-28-9	1,3-Dichloropropane	MG/L																	
14808-79-8	Sulfate (SO4)	MG/L		5.54	0.0936	4.57	5.66	0.00471		1 U					10 U			6.4	7.4
156-59-2	cis-1,2-Dichloroethene	MG/L																	
156-60-5	trans-1,2-Dichloroethene	MG/L	0.0002 U	0.0002 U	0.0001 U	0.0001 U	0.0001 U	0 U		0.0001 U	0.00018 U	0.00018 U	0.0004 U		0.00001 U		0.00001 U	0.0001 U	0.0001 U
1634-04-4	Methyl tert-butyl ether	MG/L																	
16887-00-6	Chloride (Cl-)	MG/L		6.47	0.00606	5.44	5.88	0.00667		8					6.4			6.3	4.9
16984-48-8	Fluoride (Fl-)	MG/L		0.8	0.000816	0.845	0.786	0.00082							0.8				
191-24-2	Benzo(g,h,i)perylene	MG/L																	
193-39-5	Indeno(1,2,3-cd)pyrene	MG/L																	
205-99-2	Benzo(b)fluoranthene	MG/L																	
206-44-0	Fluoranthene	MG/L																	
207-08-9	Benzo(k)fluoranthene	MG/L																	
208-96-8	Acenaphthylene	MG/L																	
218-01-9	Chrysene	MG/L																	
25551-13-7	Trimethyl Benzene	MG/L																	
309-00-2	Aldrin	MG/L				0.0001	0.00005 U			0.00005 U			0.000002 U	0.001 U	0.000005 U		0.000005 U	0.000004 U	0.000004 U
319-84-6	alpha-BHC	MG/L				0.00001 U	0.00001 U			0.00005 U			0.000002 U	0.001 U	0.000005 U		0.000005 U	0.000003 U	0.000003 U
319-85-7	beta-BHC	MG/L				0.00001 U	0.00001 U			0.00005 U			0.000004 U	0.001 U	0.000005 U		0.000005 U	0.000006 U	0.000006 U
319-86-8	delta-BHC	MG/L				0.00001 U	0.00001 U			0.00005 U			0.000002 U	0.001 U	0.000005 U		0.000005 U	0.000009 U	0.000009 U
33213-65-9	Endosulfan II	MG/L								0.0001 U			0.000012 U	0.002 U	0.00002 U		0.00002 U	0.000004 U	0.000004 U
50-29-3	2,4-DDT	MG/L																	

Appendix C-4
Groundwater Data (1984 - 2007)
Page Trowbridge Ranch Landfill

		Sample ID	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1 (Dup)	MW-1	MW-1	MW-1 (Dup)	MW-1	MW-1	MW-1	MW-1 (filtered)	MW-1 (Dup)	MW-1	MW-1 (Dup)
		Well ID	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1
		Sample Date/Time	11/26/1984	1/31/1985	4/10/1985	5/23/1985	6/6/1985	9/19/1985	9/19/1985	7/23/1986	10/29/1986	10/29/1986	3/5/1987	4/23/1987	7/9/1987	7/9/1987	7/9/1987	4/21/1988	4/21/1988
CAS_Number	**OGDEN_ANALYTE**	**FinalUnits**																	
50-29-3	4,4'-DDT	MG/L				0.00005 U	0.00005 U			0.0001 U								0.000012 U	0.000012 U
50-29-3	DDT (p,p-DDT)	MG/L											0.000012 U	0.006 U	0.00006 U		0.00006 U		
50-32-8	Benzo(a)pyrene	MG/L																	
5103-71-9	alpha-Chlordane	MG/L																	
51-28-5	2,4-Dinitrophenol	MG/L	0 U-NDT	0.04 U	0.1 U	0.1 U	0.1 U	0 U					0.015 U		0.04 U				
53-19-0	2,4-DDD	MG/L																	
534-52-1	2-Methyl-4,6-dinitrophenol	MG/L																	
53494-70-5	Endrin Ketone	MG/L								0.0001 U					0.0002 U				
53-70-3	Dibenz(a,h)anthracene	MG/L																	
540-59-0	Total-1,2-Dichloroethene	MG/L													0.0005 U				
541-73-1	1,3-Dichlorobenzene	MG/L	0.00002 U	0.0002 U	0.0005 U	0.00032 U	0.00032 U	0 U		0.0001 U	0.00017 U	0.00017 U			0.00005 U		0.00005 U	0.0002 U	0.0002 U
542-75-6	1,3-Dichloropropene, Total	MG/L																	
56-23-5	Carbon tetrachloride	MG/L	0.00002 U	0.0001 U	0.00005 U	0.00012 U	0.00012 U	0 U		0.0005 U	0.00013 U	0.00013 U	0.0001 U		0.00001 U		0.00001 U	0.00012 U	0.00012 U
563-58-6	1,1-Dichloropropene	MG/L																	
56-55-3	Benz(a)anthracene	MG/L																	
57-74-2	gamma-Chlordane	MG/L																	
57-74-9	Chlordane	MG/L								0.0005 U			0.000015 U	0.025 U	0.00002 U		0.00002 U	0.000014 U	0.000014 U
57-74-9	Chlordane Technical	MG/L																	
58-89-9	gamma-BHC	MG/L				0.00001 U	0.00001 U			0.00005 U			0.000002 U	0.001 U	0.000005 U		0.000005 U	0.000004 U	0.000004 U
591-78-6	2-Hexanone	MG/L																	
594-20-7	2,2-Dichloropropane	MG/L																	
59-50-7	4-Chloro-3-methylphenol	MG/L	0.01 U	0.0025 U	0.01 U	0.01 U	0.01 U	0 U					0.0015 U		0.005 U				
60-57-1	Dieldrin	MG/L				0.00005 U	0.00005 U			0.0001 U			0.000004 U	0.002 U	0.00002 U		0.00002 U	0.000002 U	0.000002 U
606-20-2	2,6-Dinitrotoluene	MG/L																	
621-64-7	N-Nitrosodi-n-propylamine	MG/L																	
62-75-9	N-Nitrosodimethylamine	MG/L																	
630-20-6	1,1,1,2-Tetrachloroethane	MG/L																	
634-90-2	1,2,3,5-Tetrachlorobenzene	MG/L																	
65-85-0	Benzoic acid	MG/L																	
67-64-1	Acetone	MG/L																	
67-66-3	Chloroform	MG/L	0.00005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U	0 U		0.0001 U	0.00017 U	0.00017 U	0.0002 U		0.000005 U		0.000005 U	0.00005 U	0.00005 U
67-72-1	Hexachloroethane	MG/L																	
7005-72-3	4-Chlorophenyl phenyl ether	MG/L																	
71-43-2	Benzene	MG/L		0.0005 U						0.0002 U	0.0013 U	0.0013 U	0.0065 U		0.0008 U		0.0008 U	0.0002 U	0.0002 U
71-55-6	1,1,1-Trichloroethane	MG/L	0.00005 U	0.0002 U	0.0011	0.00003 U	0.00003 U	0 U		0.0001 U	0.00013 U	0.00013 U	0.0002 U		0.00001 U		0.00001 U	0.00003 U	0.00003 U
72-20-8	Endrin	MG/L				0.00005 U	0.00005 U			0.0001 U			0.00001 U	0.002 U	0.00002 U		0.00002 U	0.000006 U	0.000006 U
72-43-5	Methoxychlor	MG/L								0.0005 U					0.0005 U			0.00005 U	0.00005 U
72-54-8	1,4-DDD	MG/L								0.0001 U									
72-54-8	2,4-DDD	MG/L																	
72-54-8	4,4'-DDD	MG/L				0.00005 U	0.00005 U											0.000011 U	0.000011 U
72-54-8	DDD (p,p-DDD)	MG/L											0.000012 U	0.006 U	0.00002 U		0.00002 U		
72-55-9	1,4-DDE	MG/L								0.0001 U									
72-55-9	4,4'-DDE	MG/L				0.00005 U	0.00005 U											0.000004 U	0.000004 U
72-55-9	DDE (p,p-DDE)	MG/L											0.000004 U	0.002 U	0.00002 U		0.00002 U		
7421-93-4	Endrin aldehyde	MG/L				0.0001 U	0.0001 U						0.00002 U	0.006 U	0.00006 U		0.00006 U	0.000023 U	0.000023 U
7439-89-6	Iron (Fe)	MG/L						0.00025	0.00025	0.59			0.52		0.2	0.23			
7439-92-1	Lead (Pb)	MG/L	0.02 U	0.28 U	0.00023 U	0.047 U	0.047 U	0.00002 U	0.00002 U						0.02 U	0.02 U			
7439-95-4	Magnesium (Mg)	MG/L													10				
7439-96-5	Manganese (Mn)	MG/L						0.00019	0.0002	0.24			0.21		0.16	0.17		0.2	0.19
7439-97-6	Mercury (Hg)	MG/L	0.005 U	0.005 U	0.000005 U	0.001 U	0.001 U	0.000001 U							0.0005 U				
7440-02-0	Nickel (Ni)	MG/L	0.2 U	0.32 U	0.00023 U	0.042 U	0.023 U								0.1 U	0.1 U			
7440-22-4	Silver (Ag)	MG/L	0.03 U	0.05 U	0.000063 U	0.003 U	0.014 U	0.000005 U	0.000005 U						0.005 U				
7440-23-5	Sodium (Na)	MG/L						0.0371							31.9			31.6	32.1
7440-31-5	Tin (Sn)	MG/L													5 U	5 U			
7440-38-2	Arsenic (As)	MG/L	0.002 U	0.003 U	0.000004 U	0.005 U	0.005 U	0.000003 U							0.02 U				
7440-39-3	Barium (Ba)	MG/L	0.3 U	0.7 U	0.000507 U	0.085	0.49 U	0.00045 U	0.00045 U						0.1 U				

Appendix C-4
Groundwater Data (1984 - 2007)
Page Trowbridge Ranch Landfill

		Sample ID	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1 (Dup)	MW-1	MW-1	MW-1 (Dup)	MW-1	MW-1	MW-1	MW-1 (filtered)	MW-1 (Dup)	MW-1	MW-1 (Dup)
		Well ID	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1
		Sample Date/Time	11/26/1984	1/31/1985	4/10/1985	5/23/1985	6/6/1985	9/19/1985	9/19/1985	7/23/1986	10/29/1986	10/29/1986	3/5/1987	4/23/1987	7/9/1987	7/9/1987	7/9/1987	4/21/1988	4/21/1988
CAS_Number	**OGDEN_ANALYTE**	**FinalUnits**																	
7440-43-9	Cadmium (Cd)	MG/L	0.02 U	0.03 U	0.000022 U	0.003 U	0.003 U	0.000002 U	0.000002 U						0.001 U	0.001 U			
7440-47-3	Chromium (Cr)	MG/L	0.09 U	0.08 U	0.00004 U	0.007 U	0.006	0.00001 U	0.00001 U						0.01 U	0.01 U			
7440-50-8	Copper (Cu)	MG/L	0.03 U	0.04 U	0.000049 U	0.021 U	0.021 U								0.1 U				
7440-66-6	Zinc (Zn)	MG/L	0.11	0.65	0.00049	0.73	0.293								0.15	0.13			
7440-70-2	Calcium (Ca)	MG/L													28.3				
74-83-9	Bromomethane	MG/L	0 U-NDT	0 U-NDT		0.00118 U	0.00118 U	0 U		0.0001 U					0.0005 U			0.00118 U	0.00118 U
74-87-3	Chloromethane	MG/L				0.00008 U	0.00008 U	0 U		0.0001 U					0.00002 U		0.00002 U	0.00008 U	0.00008 U
74-95-3	Dibromoethane	MG/L																	
74-95-3	Dibromomethane	MG/L																	
74-97-5	Bromochloromethane	MG/L																	
75-00-3	Chloroethane	MG/L	0 U-NDT	0 U-NDT		0.00052 U	0.00052 U	0 U		0.0001 U	0.00017 U	0.00017 U	0.0006 U		0.00001 U		0.00001 U	0.00052 U	0.00052 U
75-01-4	Vinyl chloride	MG/L	0 U-NDT	0 U-NDT		0.00018 U	0.00018 U	0 U		0.0001 U					0.00025 U		0.00025 U	0.00018 U	0.00018 U
75-09-2	Methylene chloride	MG/L	0.0002 U	0.0002 U	0.0005 U	0.00025 U	0.0001	0.00013		0.0005 U	0.00018 U	0.00018 U	0.0003 U		0.0005 U		0.00004	0.00025 U	0.00025 U
75-25-2	Bromoform	MG/L	0.000006	0.00001 U	0.0001 U	0.0002 U	0.0002 U	0 U		0.0001 U	0.00081 U	0.00081 U	0.001 U		0.0005 U		0.0005 U	0.0002 U	0.0002 U
75-27-4	Bromodichloromethane	MG/L	0.00001 U	0.00004 U	0.00005 U	0.0001 U	0.0001 U	0 U		0.0001 U					0.00001 U		0.00001 U	0.0001 U	0.0001 U
75-34-3	1,1-Dichloroethane	MG/L	0.0006 U	0.0006 U	0.0001 U	0.00007 U	0.00004	0 U		0 U	0.00016 U	0.00016 U	0.0004 U		0.00001 U		0.00001 U	0.00007 U	0.00007 U
75-35-4	1,1-Dichloroethene	MG/L	0.00005 U	0.00005 U	0.0001 U	0.00013 U	0.00013 U	0 U		0.0001 U					0.00001 U		0.00001 U	0.00013 U	0.00013 U
75-69-4	Trichlorofluoromethane	MG/L	0.000002 U	0.002 U	0.0005 U	0 U-NDT	0.00003	0 U		0.0001 U	0.00011 U	0.00011 U	0.0003 U		0.00001 U		0.00001 U	0.0005 U	0.0005 U
75-71-8	Dichlorodifluoromethane	MG/L	0 U-NDT	0 U-NDT		0.00181 U	0.00181 U	0 U		0.0001 U					0.0005 U			0.00181 U	0.00181 U
76-13-1	1,1,2-Trichlorotrifluoroethane	MG/L																	
76-44-8	Heptachlor	MG/L				0.00005 U	0.00005 U			0.00005 U			0.000002 U	0.001 U	0.000005 U		0.000005 U	0.000003 U	0.000003 U
7732-18-5	Chloromethane	MG/L	0 U-NDT	0 U-NDT															
77-47-4	Hexachlorocyclopentadiene	MG/L																	
7782-49-2	Selenium (Se)	MG/L	0.001 U	0.005 U	0.000005 U	0.005 U	0.004 U	0.000005 U							0.0005 U				
78-59-1	Isophorone	MG/L																	
78-87-5	1,2-Dichloropropane	MG/L	0.0003 U	0.0003 U	0.0001 U	0.00004 U	0.00004 U	0 U		0.0005 U	0.00016 U	0.00016 U	0.0002 U		0.00001 U		0.00001 U	0.00004 U	0.00004 U
78-93-3	2-Butanone	MG/L																	
79-00-5	1,1,2-Trichloroethane	MG/L	0 U	0.00005 U	0.0001 U	0.00002 U	0.00002 U	0 U		0.0001 U	0.00016 U	0.00016 U	0.0001 U		0.00001 U		0.00001 U	0.00002 U	0.00002 U
79-01-6	Trichloroethene	MG/L	0.0001 U	0.0002 U	0.00005 U	0.00012 U	0.00012 U	0 U		0.0001 U	0.00016 U	0.00016 U	0.0001 U		0.000005 U		0.000005 U	0.00012 U	0.00012 U
79-34-5	1,1,2,2-Tetrachloroethane	MG/L	0.000002	0.00005 U	0.00005 U	0.00003 U	0.00003 U	0 U		0.0001 U	0.00019 U	0.00019 U	0.0004 U		0.00001 U		0.00001 U	0.00003 U	0.00003 U
8001-35-2	Toxaphene	MG/L								0.001 U			0.0002 U		0.0002 U		0.0002 U	0.00024 U	0.00024 U
8071-51-0	2-Methyl-4,6-dinitrophenol	MG/L	0 U-NDT	0.04 U	0.1 U	0.1 U	0.1 U	0 U					0.015 U		0.03 U				
83-32-9	Acenaphthene	MG/L																	
84-66-2	Diethyl phthalate	MG/L																	
84-74-2	Di-n-butyl phthalate	MG/L																	
85-01-8	Phenanthrene	MG/L																	
85-68-7	Butyl benzyl phthalate	MG/L																	
86-30-6	N-Nitrosodiphenylamine	MG/L																	
86-73-7	Fluorene	MG/L																	
87-61-6	1,2,3-Trichlorobenzene	MG/L																	
87-68-3	Hexachlorobutadiene	MG/L																	
87-86-5	Pentachlorophenol	MG/L	0 U-NDT	0.04 U	0.1 U	0.1 U	0.1 U	0 U					0.009 U		0.015 U				
88-06-2	2,4,6-Trichlorophenol	MG/L	0.006 U	0.002 U	0.005 U	0.005 U	0.005 U	0 U					0.002 U		0.005 U				
88-74-4	2-Nitroaniline	MG/L																	
88-75-5	2-Nitrophenol	MG/L	0.002 U	0.001 U	0.003 U	0.003 U	0.003 U	0 U					0.0007 U		0.005 U				
90-13-1	Chloronaphthalene	MG/L																	
91-20-3	Naphthalene	MG/L																	
91-57-6	2-Methylnaphthalene	MG/L																	
91-58-7	2-Chloronaphthalene	MG/L																	
91-94-1	3,3´-Dichlorobenzidine	MG/L																	
92-87-5	Benzidine	MG/L																	
95-47-6	o-Xylene	MG/L																	
95-48-7	2-Methylphenol	MG/L																	
95-49-8	2-Chlorotoluene	MG/L																	
95-50-1	1,2-Dichlorobenzene	MG/L	0.00002 U	0.0002 U	0.0005 U	0.00015 U	0.00015 U	0 U		0.0001 U	0.00016 U	0.00016 U			0.00007 U		0.00007 U	0.0002 U	0.0002 U
95-57-8	2-Chlorophenol	MG/L	0.002 U	0.001 U	0.003 U	0.003 U	0.003 U	0 U					0.0007 U		0.003 U				
95-63-6	1,2,4-Trimethylbenzene	MG/L																	
95-95-4	2,4,5-Trichlorophenol	MG/L																	
959-98-8	Endosulfan I	MG/L								0.00005 U			0.000004 U	0.002 U	0.00001 U		0.00001 U	0.000014 U	0.000014 U
96-12-8	1,2-Dibromo-3-chloropropane	MG/L																	
96-18-4	1,2,3-Trichloropropane	MG/L																	
98-06-6	tert-Butylbenzene	MG/L																	
98-82-8	Isopropylbenzene	MG/L																	
98-95-3	Nitrobenzene	MG/L																	
99-09-2	3-Nitroaniline	MG/L																	
99-87-6	4-Isopropyltoluene	MG/L																	
DDD	DDD	MG/L																	
GIS-130-312	m,p-Xylenes	MG/L																	
NO3NO2N	Nitrate (NO3)	MG/L		9.24	0.00749	6.52	8.46	0.00661											
NO3NO2N	Nitrite/Nitrate Total	MG/L													1.61				
O&PXYLENE	O,P-Xylene	MG/L																0.0002 U	0.0002 U
THMs	Trihalomethanes, Total	MG/L																	
UNKNOWN	Acid Fraction	MG/L													0 U				
UNKNOWN	B/N Fraction	MG/L													0.01				
UNKNOWN	Dichlorobenzene	MG/L											0.0014 U						
UNKNOWN	Dinitro-2-Methylphenol	MG/L																	
UNKNOWN	Total Trihalomethanes (THMs)	MG/L																	

Appendix C-4
Groundwater Data (1984 - 2007)
Page Trowbridge Ranch Landfill

		Sample ID	MW-1	MW-1	MW-1	MW-1 (Dup)	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1
		Well ID	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1
		Sample Date/Time	10/21/1988	4/18/1989	10/31/1989	4/18/1990	4/18/1990	11/16/1990	5/6/1991	5/10/1991	10/28/1991	10/29/1991	4/21/1992	10/13/1992	4/20/1993	10/12/1993	4/12/1994	10/11/1994	4/26/1995
CAS_Number	**OGDEN_ANALYTE**	**FinalUnits**																	
100-01-6	4-Nitroaniline	MG/L																	
100-02-7	4-Nitrophenol	MG/L	0.00523 U	0 U	0.005 U	0.005 U	0.005 U	0.005 U		0.01 U		0.01 U	0.01 U	0.02 U	0.02 U	0.02 U	0.1 U	0.02 U	0.02 U
100-41-4	Ethylbenzene	MG/L	0.0002 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0005 U			0.0005 U	0.001 U	0.001 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
100-42-5	Styrene	MG/L		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U											
100-51-6	Benzyl alcohol	MG/L																	
10061-01-5	cis-1,3-Dichloropropene	MG/L	0.0002 U	0.0005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0005 U			0.0005 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
10061-02-6	trans-1,3-Dichloropropene	MG/L	0.00034 U	0.0005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0005 U			0.0005 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
101-55-3	4-Bromophenyl phenyl ether	MG/L																	
1024-57-3	Heptachlor epoxide	MG/L	0.000083 U	0.00005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0001 U		0.0001 U		0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U
1031-07-8	Endosulfan sulfate	MG/L	0.000066 U	0.0001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0001 U		0.0001 U		0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U
103-33-3	Azobenzene	MG/L																	
103-65-1	n-Propylbenzene	MG/L		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U											
104-51-8	n-Butylbenzene	MG/L		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U											
105-67-9	2,4-Dimethylphenol	MG/L	0.00104 U	0 U	0.002 U	0.002 U	0.002 U	0.002 U		0.005 U		0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.025 U		0.005 U
106-43-4	4-Chlorotoluene	MG/L				0.001 U	0.001 U	0.001 U											
106-44-5	3 & 4-Methylphenol	MG/L																	
106-44-5	4-Methylphenol	MG/L																	
106-46-7	1,4-Dichlorobenzene	MG/L	0.0002 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0005 U			0.0005 U	0.001 U	0.001 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
106-47-8	4-Chloroaniline	MG/L																	
106-93-4	1,2-Dibromoethane	MG/L																	
107-06-2	1,2-Dichloroethane	MG/L	0.00003 U	0.0005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0002 U			0.0002 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
108-05-4	Vinyl Acetate	MG/L																	
108-10-1	4-Methyl-2-Pentanone	MG/L																	
108-38-3	M-Xylene	MG/L	0.0002 U																
108-60-1	Bis(2-chloroisopropyl)ether	MG/L																	
108-67-8	1,3,5-Trimethylbenzene	MG/L																	
108-86-1	Bromobenzene	MG/L																	
108-88-3	Toluene	MG/L	0.0002 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0002 U			0.0002 U	0.001 U	0.001 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
108-90-7	Chlorobenzene	MG/L	0.0002 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0002 U			0.0002 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
108-95-2	Phenol	MG/L	0.00128 U	0 U	0.002 U	0.002 U	0.002 U	0.002 U		0.005 U		0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.025 U	0.005 U	0.005 U
110-75-8	2-Chloroethyl Vinyl Ether	MG/L	0.00013 U	0.0005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0005 U			0.0005 U	0.005 U	0.005 U	0.01 U	0.01 U	0.01 U		
11096-82-5	PCB-1260 (Aroclor)	MG/L	0.00007 U	0.001 U					0.001 U		0.001 U		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
11097-69-1	PCB-1254 (Aroclor)	MG/L	0.00007 U	0.001 U					0.001 U		0.001 U		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
11104-28-2	PCB-1221 (Aroclor)	MG/L	0.00007 U	0.0005 U					0.001 U		0.001 U		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
11104-29-3	PCB-1242 (Aroclor)	MG/L	0.00007 U	0.0005 U					0.001 U		0.001 U		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
11141-16-5	PCB-1232 (Aroclor)	MG/L	0.00007 U	0.0005 U					0.001 U		0.001 U		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
111-44-4	Bis(2-chloroethyl)ether	MG/L																	
111-91-1	Bis(2-chloroethoxy)methane	MG/L																	
117-81-7	Bis(2-ethylhexyl)phthalate	MG/L																	
117-84-0	Di-n-octyl phthalate	MG/L																	
118-74-1	Hexachlorobenzene	MG/L																	
120-12-7	Anthracene	MG/L																	
120-82-1	1,2,4-Trichlorobenzene	MG/L																	
120-83-2	2,4-Dichlorophenol	MG/L	0.00193 U	0 U	0.002 U	0.002 U	0.002 U	0.002 U		0.005 U		0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.025 U	0.005 U	0.005 U
121-14-2	2,4-Dinitrotoluene	MG/L																	
122-66-7	1,2-Diphenylhydrazine (As Azobenzene)	MG/L																	
124-48-1	Dibromochloromethane	MG/L	0.00009 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0002 U			0.0002 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
12672-29-6	PCB-1248 (Aroclor)	MG/L		0.0005 U					0.001 U		0.001 U		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
12674-11-2	PCB-1016 (Aroclor)	MG/L	0.00007 U	0.0005 U					0.001 U		0.001 U		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
127-18-4	Tetrachloroethene	MG/L	0.00003 U	0.0005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0002 U			0.0002 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
129-00-0	Pyrene	MG/L																	
131-11-3	Dimethyl phthalate	MG/L																	
132-64-9	Dibenzofuran	MG/L																	
1330-20-7	m,p-Xylene	MG/L							0.0005 U			0.0005 U							
1330-20-7	Xylenes, Total	MG/L		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U					0.001 U	0.001 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
135-98-8	sec-Butylbenzene	MG/L		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U											
142-28-9	1,3-Dichloropropane	MG/L		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U											
14808-79-8	Sulfate (SO4)	MG/L	10 U	10 U	1.4	1 U	1 U	5 U	1 U			10		4.2	5.2	5	6	4.3	5 U
156-59-2	cis-1,2-Dichloroethene	MG/L		0.001 U	0.001 U		0.001 U	0.001 U											
156-60-5	trans-1,2-Dichloroethene	MG/L	0.0001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0002 U			0.0002 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
1634-04-4	Methyl tert-butyl ether	MG/L																	
16887-00-6	Chloride (Cl-)	MG/L	5.8	5.6	7.5	5.6	6.4	7.2	10			6		7.3	6.9	7	9	8	6.3
16984-48-8	Fluoride (Fl-)	MG/L		0.81															
191-24-2	Benzo(g,h,i)perylene	MG/L																	
193-39-5	Indeno(1,2,3-cd)pyrene	MG/L																	
205-99-2	Benzo(b)fluoranthene	MG/L																	
206-44-0	Fluoranthene	MG/L																	
207-08-9	Benzo(k)fluoranthene	MG/L																	
208-96-8	Acenaphthylene	MG/L																	
218-01-9	Chrysene	MG/L																	
25551-13-7	Trimethyl Benzene	MG/L		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U											
309-00-2	Aldrin	MG/L	0.000004 U	0.00005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0001 U		0.0001 U		0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U
319-84-6	alpha-BHC	MG/L	0.000003 U	0.00005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0001 U		0.0001 U		0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U
319-85-7	beta-BHC	MG/L	0.000006 U	0.00005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0001 U		0.0001 U		0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U
319-86-8	delta-BHC	MG/L	0.000009 U	0.00005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0001 U		0.0001 U		0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U
33213-65-9	Endosulfan II	MG/L	0.000004 U	0.0001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0001 U		0.0001 U		0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U
50-29-3	2,4-DDT	MG/L		0.0001 U	0.001 U	0.001 U	0.001 U	0.001 U											

Appendix C-4
Groundwater Data (1984 - 2007)
Page Trowbridge Ranch Landfill

		Sample ID	MW-1	MW-1	MW-1	MW-1 (Dup)	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1
		Well ID	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1
		Sample Date/Time	10/21/1988	4/18/1989	10/31/1989	4/18/1990	4/18/1990	11/16/1990	5/6/1991	5/10/1991	10/28/1991	10/29/1991	4/21/1992	10/13/1992	4/20/1993	10/12/1993	4/12/1994	10/11/1994	4/26/1995
CAS_Number	**OGDEN_ANALYTE**	**FinalUnits**																	
50-29-3	4,4'-DDT	MG/L	0.000012 U	0.0001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0001 U		0.0001 U		0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U
50-29-3	DDT (p,p-DDT)	MG/L		0.0001 U															
50-32-8	Benzo(a)pyrene	MG/L																	
5103-71-9	alpha-Chlordane	MG/L																	
51-28-5	2,4-Dinitrophenol	MG/L	0.013 U	0 U	0.02 U	0.02 U	0.02 U	0.02 U		0.01 U		0.015 U	0.01 U	0.02 U	0.02 U	0.02 U	0.1 U	0.05 U	0.05 U
53-19-0	2,4-DDD	MG/L					0.001 U	0.001 U											
534-52-1	2-Methyl-4,6-dinitrophenol	MG/L								0.01 U		0.015 U	0.01 U	0.02 U	0.02 U	0.02 U	0.1 U	0.03 U	0.03 U
53494-70-5	Endrin Ketone	MG/L																	
53-70-3	Dibenz(a,h)anthracene	MG/L																	
540-59-0	Total-1,2-Dichloroethene	MG/L		0.0005 U															
541-73-1	1,3-Dichlorobenzene	MG/L	0.0002 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0005 U			0.0005 U	0.001 U	0.001 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
542-75-6	1,3-Dichloropropene, Total	MG/L																	
56-23-5	Carbon tetrachloride	MG/L	0.00012 U	0.0005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0002 U			0.0002 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
563-58-6	1,1-Dichloropropene	MG/L																	
56-55-3	Benz(a)anthracene	MG/L																	
57-74-2	gamma-Chlordane	MG/L																	
57-74-9	Chlordane	MG/L	0.000014 U	0.0001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		0.001 U		0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
57-74-9	Chlordane Technical	MG/L																	
58-89-9	gamma-BHC	MG/L	0.000004 U	0.00005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0001 U		0.0001 U		0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U
591-78-6	2-Hexanone	MG/L																	
594-20-7	2,2-Dichloropropane	MG/L																	
59-50-7	4-Chloro-3-methylphenol	MG/L	0.00222 U	0 U	0.002 U	0.002 U	0.002 U	0.002 U		0.005 U		0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.025 U	0.005 U	0.005 U
60-57-1	Dieldrin	MG/L	0.000002 U	0.0001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0001 U		0.0001 U		0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U
606-20-2	2,6-Dinitrotoluene	MG/L																	
621-64-7	N-Nitrosodi-n-propylamine	MG/L																	
62-75-9	N-Nitrosodimethylamine	MG/L																	
630-20-6	1,1,1,2-Tetrachloroethane	MG/L			1 U	1 U	0.001 U	0.001 U											
634-90-2	1,2,3,5-Tetrachlorobenzene	MG/L		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U											
65-85-0	Benzoic acid	MG/L																	
67-64-1	Acetone	MG/L																	
67-66-3	Chloroform	MG/L	0.00005 U	0.0005 U	0.001 U	0.002		0.001 U	0.0002 U			0.0058	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
67-72-1	Hexachloroethane	MG/L																	
7005-72-3	4-Chlorophenyl phenyl ether	MG/L																	
71-43-2	Benzene	MG/L	0.0002 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0002 U			0.0002 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
71-55-6	1,1,1-Trichloroethane	MG/L	0.00003 U	0.0005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0002 U			0.0002 U	0.0011	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
72-20-8	Endrin	MG/L	0.000006 U	0.0001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0001 U		0.0001 U		0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U
72-43-5	Methoxychlor	MG/L	0.00005 U	0.0005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0005 U		0.0005 U		0.0005 U	0.0005 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U
72-54-8	1,4-DDD	MG/L																	
72-54-8	2,4-DDD	MG/L		0.0001 U	0.001 U	0.001 U													
72-54-8	4,4'-DDD	MG/L	0.000011 U	0.0001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0001 U		0.0001 U		0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U
72-54-8	DDD (p,p-DDD)	MG/L		0.0001 U															
72-55-9	1,4-DDE	MG/L																	
72-55-9	4,4'-DDE	MG/L	0.000004 U	0.0001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0001 U		0.0001 U		0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U
72-55-9	DDE (p,p-DDE)	MG/L		0.0001 U															
7421-93-4	Endrin aldehyde	MG/L	0.000023 U	0.0001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0001 U		0.0001 U		0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U
7439-89-6	Iron (Fe)	MG/L		2.86															
7439-92-1	Lead (Pb)	MG/L		0.01 U															
7439-95-4	Magnesium (Mg)	MG/L			7.7														
7439-96-5	Manganese (Mn)	MG/L	0.142	0.34		0.35	0.37	0.168	0.29			0.32		0.53	0.35	0.21	0.62	0.46	0.59
7439-97-6	Mercury (Hg)	MG/L		0.0005 U															
7440-02-0	Nickel (Ni)	MG/L																	
7440-22-4	Silver (Ag)	MG/L		0.001 U															
7440-23-5	Sodium (Na)	MG/L	28.1	28.3	30.9	31.2	31.4	32.9	122			36		37.2	29.2	29.1	39	31.2	29.8
7440-31-5	Tin (Sn)	MG/L																	
7440-38-2	Arsenic (As)	MG/L		0.01 U															
7440-39-3	Barium (Ba)	MG/L		0.1 U															

Appendix C-4
Groundwater Data (1984 - 2007)
Page Trowbridge Ranch Landfill

		Sample ID	MW-1	MW-1	MW-1	MW-1 (Dup)	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1
		Well ID	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1
		Sample Date/Time	10/21/1988	4/18/1989	10/31/1989	4/18/1990	4/18/1990	11/16/1990	5/6/1991	5/10/1991	10/28/1991	10/29/1991	4/21/1992	10/13/1992	4/20/1993	10/12/1993	4/12/1994	10/11/1994	4/26/1995
CAS_Number	**OGDEN_ANALYTE**	**FinalUnits**																	
7440-43-9	Cadmium (Cd)	MG/L		0.001 U															
7440-47-3	Chromium (Cr)	MG/L		0.01 U															
7440-50-8	Copper (Cu)	MG/L		0.1 U															
7440-66-6	Zinc (Zn)	MG/L		0.57															
7440-70-2	Calcium (Ca)	MG/L																	
74-83-9	Bromomethane	MG/L	0.00118 U	0.0005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U			0.001 U	0.002 U	0.002 U	0.004 U	0.002 U	0.002 U	0.002 U	0.002 U
74-87-3	Chloromethane	MG/L	0.00008 U	0.0005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0005 U			0.0005 U	0.001 U	0.001 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
74-95-3	Dibromoethane	MG/L		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U											
74-95-3	Dibromomethane	MG/L																	
74-97-5	Bromochloromethane	MG/L		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U											
75-00-3	Chloroethane	MG/L	0.00052 U	0.0005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U			0.001 U				0.002 U	0.002 U	0.002 U	0.002 U
75-01-4	Vinyl chloride	MG/L	0.00018 U	0.0003 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0002 U			0.0002 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
75-09-2	Methylene chloride	MG/L	0.00025 U	0.0005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.002 U			0.002 U	0.025	0.0058	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
75-25-2	Bromoform	MG/L	0.0002 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0005 U			0.0005 U	0.0021	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
75-27-4	Bromodichloromethane	MG/L	0.0001 U	0.0005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0002 U			0.0002 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
75-34-3	1,1-Dichloroethane	MG/L	0.00007 U	0.0005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0002 U			0.0002 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
75-35-4	1,1-Dichloroethene	MG/L	0.00013 U	0.0005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0005 U			0.0005 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
75-69-4	Trichlorofluoromethane	MG/L	0.0005 U	0.0005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U			0.001 U	0.001 U	0.001 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
75-71-8	Dichlorodifluoromethane	MG/L	0.00181 U	0.0005 U															0.005 U
76-13-1	1,1,2-Trichlorotrifluoroethane	MG/L		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U											
76-44-8	Heptachlor	MG/L	0.000003 U	0.00005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0001 U		0.0001 U		0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U
7732-18-5	Chloromethane	MG/L																	
77-47-4	Hexachlorocyclopentadiene	MG/L																	
7782-49-2	Selenium (Se)	MG/L		0.005 U															
78-59-1	Isophorone	MG/L																	
78-87-5	1,2-Dichloropropane	MG/L	0.00004 U	0.0005 U					0.0005 U			0.0005 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
78-93-3	2-Butanone	MG/L																	
79-00-5	1,1,2-Trichloroethane	MG/L	0.00002 U	0.0005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0002 U			0.0002 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
79-01-6	Trichloroethene	MG/L	0.00012 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0002 U			0.0002 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
79-34-5	1,1,2,2-Tetrachloroethane	MG/L	0.00003 U	0.0005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0005 U			0.0005 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
8001-35-2	Toxaphene	MG/L	0.00024 U	0.0001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		0.001 U		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
8071-51-0	2-Methyl-4,6-dinitrophenol	MG/L	0.016 U	0 U	0.02 U	0.02 U	0.02 U	0.02 U											
83-32-9	Acenaphthene	MG/L																	
84-66-2	Diethyl phthalate	MG/L																	
84-74-2	Di-n-butyl phthalate	MG/L																	
85-01-8	Phenanthrene	MG/L																	
85-68-7	Butyl benzyl phthalate	MG/L																	
86-30-6	N-Nitrosodiphenylamine	MG/L																	
86-73-7	Fluorene	MG/L																	
87-61-6	1,2,3-Trichlorobenzene	MG/L																	
87-68-3	Hexachlorobutadiene	MG/L																	
87-86-5	Pentachlorophenol	MG/L	0.0074 U	0 U	0.01 U	0.01 U	0.01 U	0.01 U		0.005 U		0.015 U	0.01 U	0.02 U	0.02 U	0.02 U	0.1 U	0.02 U	0.02 U
88-06-2	2,4,6-Trichlorophenol	MG/L	0.00111 U	0 U	0.002 U	0.002 U	0.002 U	0.01		0.005 U		0.015 U	0.005 U	0.005 U	0.005 U	0.005 U	0.025 U	0.005 U	0.005 U
88-74-4	2-Nitroaniline	MG/L																	
88-75-5	2-Nitrophenol	MG/L	0.00208 U	0 U	0.002 U	0.002 U	0.002 U	0.002 U		0.01 U		0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.025 U	0.005 U	0.005 U
90-13-1	Chloronaphthalene	MG/L		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U											
91-20-3	Naphthalene	MG/L			0.001 U	0.001 U	0.001 U	0.001 U											
91-57-6	2-Methylnaphthalene	MG/L																	
91-58-7	2-Chloronaphthalene	MG/L																	
91-94-1	3,3´-Dichlorobenzidine	MG/L																	
92-87-5	Benzidine	MG/L																	
95-47-6	o-Xylene	MG/L							0.0005 U			0.0005 U							
95-48-7	2-Methylphenol	MG/L																	
95-49-8	2-Chlorotoluene	MG/L		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U											
95-50-1	1,2-Dichlorobenzene	MG/L	0.0002 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0005 U			0.0005 U	0.001 U	0.001 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
95-57-8	2-Chlorophenol	MG/L	0.00055 U	0 U	0.001 U	0.001 U	0.001 U	0.001 U		0.005 U		0.015 U	0.005 U	0.005 U	0.005 U	0.005 U	0.025 U	0.005 U	0.005 U
95-63-6	1,2,4-Trimethylbenzene	MG/L																	
95-95-4	2,4,5-Trichlorophenol	MG/L																	
959-98-8	Endosulfan I	MG/L	0.000014 U	0.00005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0001 U		0.0001 U		0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U
96-12-8	1,2-Dibromo-3-chloropropane	MG/L		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U											
96-18-4	1,2,3-Trichloropropane	MG/L																	
98-06-6	tert-Butylbenzene	MG/L		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U											
98-82-8	Isopropylbenzene	MG/L		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U											
98-95-3	Nitrobenzene	MG/L																	
99-09-2	3-Nitroaniline	MG/L																	
99-87-6	4-Isopropyltoluene	MG/L																	
DDD	DDD	MG/L																	
GIS-130-312	m,p-Xylenes	MG/L																	
NO3NO2N	Nitrate (NO3)	MG/L																	
NO3NO2N	Nitrite/Nitrate Total	MG/L		1.2															
O&PXYLENE	O,P-Xylene	MG/L	0.0002 U	0 U															
THMs	Trihalomethanes, Total	MG/L																	
UNKNOWN	Acid Fraction	MG/L		0 U															
UNKNOWN	B/N Fraction	MG/L		0 U															
UNKNOWN	Dichlorobenzene	MG/L																	
UNKNOWN	Dinitro-2-Methylphenol	MG/L																	
UNKNOWN	Total Trihalomethanes (THMs)	MG/L		0.005 U															

Appendix C-4
Groundwater Data (1984 - 2007)
Page Trowbridge Ranch Landfill

		Sample ID	MW-1	MW-1	MW-1	MW-1	MW-1	MW #1	MW #1	MW #1
		Well ID	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1
		Sample Date/Time	10/25/1995	2/21/1996	10/9/1996	11/5/1997	10/26/2001	4/23/2003 8:30:00 AM	10/22/2003 8:30:00 AM	4/21/2004 8:30:00 AM
CAS_Number	**OGDEN_ANALYTE**	**FinalUnits**								
100-01-6	4-Nitroaniline	MG/L						0.01 U	0.01 U	0.01 U
100-02-7	4-Nitrophenol	MG/L	0.02 U	0.02 U	0.02 U	0.021 U		0.025 U	0.025 U	0.025 U
100-41-4	Ethylbenzene	MG/L	0.002 U	0.002 U	0.002 U	0.002 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
100-42-5	Styrene	MG/L					0.0005 U	0.0005 U	0.0005 U	0.0005 U
100-51-6	Benzyl alcohol	MG/L						0.01 U	0.01 U	0.01 U
10061-01-5	cis-1,3-Dichloropropene	MG/L	0.002 U	0.002 U	0.002 U	0.002 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
10061-02-6	trans-1,3-Dichloropropene	MG/L	0.002 U	0.002 U	0.002 U	0.002 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
101-55-3	4-Bromophenyl phenyl ether	MG/L						0.005 U	0.01 U	0.01 U
1024-57-3	Heptachlor epoxide	MG/L	0.0001 U	0.0001 U	0.0001 U	0.0001 U		0.00005 U	0.00005 U	0.00005 U
1031-07-8	Endosulfan sulfate	MG/L	0.0001 U	0.0001 U	0.0001 U	0.0001 U		0.00005 U	0.00005 U	0.00005 U
103-33-3	Azobenzene	MG/L						0.005 U	0.01 U	0.01 U
103-65-1	n-Propylbenzene	MG/L					0.0005 U	0.0005 U	0.0005 U	0.0005 U
104-51-8	n-Butylbenzene	MG/L					0.0005 U	0.0005 U	0.0005 U	0.0005 U
105-67-9	2,4-Dimethylphenol	MG/L	0.005 U	0.005 U	0.005 U	0.0052 U		0.01 U	0.01 U	0.01 U
106-43-4	4-Chlorotoluene	MG/L					0.0005 U	0.0005 U	0.0005 U	0.0005 U
106-44-5	3 & 4-Methylphenol	MG/L								
106-44-5	4-Methylphenol	MG/L						0.01 U	0.01 U	0.01 U
106-46-7	1,4-Dichlorobenzene	MG/L	0.002 U	0.002 U	0.002 U	0.002 U	0.0005 U	0.01 U	0.0005 U	0.01 U
106-47-8	4-Chloroaniline	MG/L						0.01 U	0.01 U	0.01 U
106-93-4	1,2-Dibromoethane	MG/L						0.0005 U	0.0005 U	0.0005 U
107-06-2	1,2-Dichloroethane	MG/L	0.002 U	0.002 U	0.002 U	0.002 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
108-05-4	Vinyl Acetate	MG/L								
108-10-1	4-Methyl-2-Pentanone	MG/L								
108-38-3	M-Xylene	MG/L								
108-60-1	Bis(2-chloroisopropyl)ether	MG/L						0.01 U	0.01 U	0.01 U
108-67-8	1,3,5-Trimethylbenzene	MG/L					0.0005 U	0.0005 U	0.0005 U	0.0005 U
108-86-1	Bromobenzene	MG/L					0.0005 U	0.0005 U	0.0005 U	0.0005 U
108-88-3	Toluene	MG/L	0.002 U	0.002 U	0.002 U	0.002 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
108-90-7	Chlorobenzene	MG/L	0.002 U	0.002 U	0.002 U	0.002 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
108-95-2	Phenol	MG/L	0.005 U	0.005 U	0.005 U	0.0052 U		0.01 U	0.01 U	0.01 U
110-75-8	2-Chloroethyl Vinyl Ether	MG/L								
11096-82-5	PCB-1260 (Aroclor)	MG/L	0.001 U	0.001 U	0.001 U	0.001 U				
11097-69-1	PCB-1254 (Aroclor)	MG/L	0.001 U	0.001 U	0.001 U	0.001 U				
11104-28-2	PCB-1221 (Aroclor)	MG/L	0.001 U	0.001 U	0.001 U	0.001 U				
11104-29-3	PCB-1242 (Aroclor)	MG/L	0.001 U	0.001 U	0.001 U	0.001 U				
11141-16-5	PCB-1232 (Aroclor)	MG/L	0.001 U	0.001 U	0.001 U	0.001 U				
111-44-4	Bis(2-chloroethyl)ether	MG/L						0.01 U	0.01 U	0.01 U
111-91-1	Bis(2-chloroethoxy)methane	MG/L						0.01 U	0.01 U	0.01 U
117-81-7	Bis(2-ethylhexyl)phthalate	MG/L						0.01 U	0.01 U	0.01 U
117-84-0	Di-n-octyl phthalate	MG/L						0.01 U	0.01 U	0.01 U
118-74-1	Hexachlorobenzene	MG/L						0.005 U	0.01 U	0.01 U
120-12-7	Anthracene	MG/L						0.005 U	0.01 U	0.01 U
120-82-1	1,2,4-Trichlorobenzene	MG/L					0.0005 U	0.01 U	0.0005 U	0.01 U
120-83-2	2,4-Dichlorophenol	MG/L	0.005 U	0.005 U	0.005 U	0.0052 U		0.01 U	0.01 U	0.01 U
121-14-2	2,4-Dinitrotoluene	MG/L						0.005 U	0.01 U	0.01 U
122-66-7	1,2-Diphenylhydrazine (As Azobenzene)	MG/L								
124-48-1	Dibromochloromethane	MG/L	0.002 U	0.002 U	0.002 U	0.002 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
12672-29-6	PCB-1248 (Aroclor)	MG/L	0.001 U	0.001 U	0.001 U	0.001 U				
12674-11-2	PCB-1016 (Aroclor)	MG/L	0.001 U	0.001 U	0.001 U	0.001 U				
127-18-4	Tetrachloroethene	MG/L	0.002 U	0.002 U	0.002 U	0.002 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
129-00-0	Pyrene	MG/L						0.005 U	0.01 U	0.01 U
131-11-3	Dimethyl phthalate	MG/L						0.02 U	0.02 U	0.02 U
132-64-9	Dibenzofuran	MG/L						0.01 U	0.01 U	0.01 U
1330-20-7	m,p-Xylene	MG/L					0.0005 U	0.0005 U	0.0005 U	0.0005 U
1330-20-7	Xylenes, Total	MG/L	0.005 U	0.005 U	0.005 U	0.005 U				
135-98-8	sec-Butylbenzene	MG/L					0.0005 U	0.0005 U	0.0005 U	0.0005 U
142-28-9	1,3-Dichloropropane	MG/L					0.0005 U	0.0005 U	0.0005 U	0.0005 U
14808-79-8	Sulfate (SO4)	MG/L	5 U	5 U	5 U	5 U	25 U	2.9	4.1	3.5
156-59-2	cis-1,2-Dichloroethene	MG/L					0.0005 U	0.0005 U	0.0005 U	0.0005 U
156-60-5	trans-1,2-Dichloroethene	MG/L	0.002 U	0.002 U	0.002 U	0.002 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
1634-04-4	Methyl tert-butyl ether	MG/L								
16887-00-6	Chloride (Cl-)	MG/L	5.4	6.4	6.4	7.1	5 U	6.9	5.9	3.4
16984-48-8	Fluoride (Fl-)	MG/L								
191-24-2	Benzo(g,h,i)perylene	MG/L						0.005 U	0.01 U	0.01 U
193-39-5	Indeno(1,2,3-cd)pyrene	MG/L						0.005 U	0.01 U	0.01 U
205-99-2	Benzo(b)fluoranthene	MG/L						0.005 U	0.01 U	0.01 U
206-44-0	Fluoranthene	MG/L						0.005 U	0.01 U	0.01 U
207-08-9	Benzo(k)fluoranthene	MG/L						0.005 U	0.01 U	0.01 U
208-96-8	Acenaphthylene	MG/L						0.01 U	0.01 U	0.01 U
218-01-9	Chrysene	MG/L						0.005 U	0.01 U	0.01 U
25551-13-7	Trimethyl Benzene	MG/L								
309-00-2	Aldrin	MG/L	0.0001 U	0.0001 U	0.0001 U	0.0001 U		0.00005 U	0.00005 U	0.00005 U
319-84-6	alpha-BHC	MG/L	0.0001 U	0.0001 U	0.0001 U	0.0001 U		0.00005 U	0.00005 U	0.00005 U
319-85-7	beta-BHC	MG/L	0.0001 U	0.0001 U	0.0001 U	0.0001 U		0.00005 U	0.00005 U	0.00005 U
319-86-8	delta-BHC	MG/L	0.0001 U	0.0001 U	0.0001 U	0.0001 U		0.00005 U	0.00005 U	0.00005 U
33213-65-9	Endosulfan II	MG/L	0.0001 U	0.0001 U	0.0001 U	0.0001 U		0.00005 U	0.00005 U	0.00005 U
50-29-3	2,4-DDT	MG/L								

Appendix C-4
Groundwater Data (1984 - 2007)
Page Trowbridge Ranch Landfill

		Sample ID	MW-1	MW-1	MW-1	MW-1	MW-1	MW #1	MW #1	MW #1
		Well ID	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1
		Sample Date/Time	10/25/1995	2/21/1996	10/9/1996	11/5/1997	10/26/2001	4/23/2003 8:30:00 AM	10/22/2003 8:30:00 AM	4/21/2004 8:30:00 AM
CAS_Number	**OGDEN_ANALYTE**	**FinalUnits**								
50-29-3	4,4'-DDT	MG/L	0.0001 U	0.0001 U	0.0001 U	0.0001 U		0.00005 U	0.00005 U	0.00005 U
50-29-3	DDT (p,p-DDT)	MG/L								
50-32-8	Benzo(a)pyrene	MG/L						0.005 U	0.01 U	0.01 U
5103-71-9	alpha-Chlordane	MG/L								
51-28-5	2,4-Dinitrophenol	MG/L	0.05 U	0.05 U	0.05 U	0.052 U		0.05 U	0.05 U	0.05 U
53-19-0	2,4-DDD	MG/L								
534-52-1	2-Methyl-4,6-dinitrophenol	MG/L	0.03 U	0.03 U	0.03 U	0.031 U		0.05 U	0.05 U	0.05 U
53494-70-5	Endrin Ketone	MG/L								
53-70-3	Dibenz(a,h)anthracene	MG/L						0.005 U	0.01 U	0.01 U
540-59-0	Total-1,2-Dichloroethene	MG/L								
541-73-1	1,3-Dichlorobenzene	MG/L	0.002 U	0.002 U	0.002 U	0.002 U	0.0005 U	0.01 U	0.0005 U	0.01 U
542-75-6	1,3-Dichloropropene, Total	MG/L								
56-23-5	Carbon tetrachloride	MG/L	0.002 U	0.002 U	0.002 U	0.002 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
563-58-6	1,1-Dichloropropene	MG/L					0.0005 U	0.0005 U	0.0005 U	0.0005 U
56-55-3	Benz(a)anthracene	MG/L						0.01 U	0.01 U	0.01 U
57-74-2	gamma-Chlordane	MG/L								
57-74-9	Chlordane	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U		0.0005 U	0.0005 U	0.0005 U
57-74-9	Chlordane Technical	MG/L								
58-89-9	gamma-BHC	MG/L	0.0001 U	0.0001 U	0.0001 U	0.0001 U		0.00005 U	0.00005 U	0.00005 U
591-78-6	2-Hexanone	MG/L								
594-20-7	2,2-Dichloropropane	MG/L					0.0005 U	0.0005 U	0.0005 U	0.0005 U
59-50-7	4-Chloro-3-methylphenol	MG/L	0.005 U	0.005 U	0.005 U	0.0052 U		0.01 U	0.01 U	0.01 U
60-57-1	Dieldrin	MG/L	0.0001 U	0.0001 U	0.0001 U	0.0001 U		0.00005 U	0.00005 U	0.00005 U
606-20-2	2,6-Dinitrotoluene	MG/L						0.005 U	0.01 U	0.01 U
621-64-7	N-Nitrosodi-n-propylamine	MG/L						0.01 U	0.01 U	0.01 U
62-75-9	N-Nitrosodimethylamine	MG/L								
630-20-6	1,1,1,2-Tetrachloroethane	MG/L					0.0005 U	0.0005 U	0.0005 U	0.0005 U
634-90-2	1,2,3,5-Tetrachlorobenzene	MG/L								
65-85-0	Benzoic acid	MG/L						0.05 U	0.05 U	0.05 U
67-64-1	Acetone	MG/L								
67-66-3	Chloroform	MG/L	0.002 U	0.002 U	0.002 U	0.002 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
67-72-1	Hexachloroethane	MG/L						0.01 U	0.01 U	0.01 U
7005-72-3	4-Chlorophenyl phenyl ether	MG/L						0.01 U	0.01 U	0.01 U
71-43-2	Benzene	MG/L	0.002 U	0.002 U	0.002 U	0.002 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
71-55-6	1,1,1-Trichloroethane	MG/L	0.002 U	0.002 U	0.002 U	0.002 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
72-20-8	Endrin	MG/L	0.0001 U	0.0001 U	0.0001 U	0.0001 U		0.00005 U	0.00005 U	0.00005 U
72-43-5	Methoxychlor	MG/L	0.0001 U	0.0001 U	0.0001 U	0.0001 U		0.0001 U	0.0001 U	0.0001 U
72-54-8	1,4-DDD	MG/L								
72-54-8	2,4-DDD	MG/L								
72-54-8	4,4'-DDD	MG/L	0.0001 U	0.0001 U	0.0001 U	0.0001 U		0.00005 U	0.00005 U	0.00005 U
72-54-8	DDD (p,p-DDD)	MG/L								
72-55-9	1,4-DDE	MG/L								
72-55-9	4,4'-DDE	MG/L	0.0001 U	0.0001 U	0.0001 U	0.0001 U		0.00005 U	0.00005 U	0.00005 U
72-55-9	DDE (p,p-DDE)	MG/L								
7421-93-4	Endrin aldehyde	MG/L	0.0001 U	0.0001 U	0.0001 U	0.0001 U		0.00005 U	0.00005 U	0.00005 U
7439-89-6	Iron (Fe)	MG/L								
7439-92-1	Lead (Pb)	MG/L								
7439-95-4	Magnesium (Mg)	MG/L								
7439-96-5	Manganese (Mn)	MG/L	0.3	0.35	0.4	0.3	0.19	0.17	0.2	0.22
7439-97-6	Mercury (Hg)	MG/L								
7440-02-0	Nickel (Ni)	MG/L								
7440-22-4	Silver (Ag)	MG/L								
7440-23-5	Sodium (Na)	MG/L	15.8	36.5	37.2	30	36	31	33	30
7440-31-5	Tin (Sn)	MG/L								
7440-38-2	Arsenic (As)	MG/L								
7440-39-3	Barium (Ba)	MG/L								

Appendix C-4
Groundwater Data (1984 - 2007)
Page Trowbridge Ranch Landfill

		Sample ID	MW-1	MW-1	MW-1	MW-1	MW-1	MW #1	MW #1	MW #1
		Well ID	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1
		Sample Date/Time	10/25/1995	2/21/1996	10/9/1996	11/5/1997	10/26/2001	4/23/2003 8:30:00 AM	10/22/2003 8:30:00 AM	4/21/2004 8:30:00 AM
CAS_Number	**OGDEN_ANALYTE**	**FinalUnits**								
7440-43-9	Cadmium (Cd)	MG/L								
7440-47-3	Chromium (Cr)	MG/L								
7440-50-8	Copper (Cu)	MG/L								
7440-66-6	Zinc (Zn)	MG/L								
7440-70-2	Calcium (Ca)	MG/L								
74-83-9	Bromomethane	MG/L	0.002 U	0.002 U	0.002 U	0.002 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
74-87-3	Chloromethane	MG/L	0.005 U	0.005 U	0.005 U	0.005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
74-95-3	Dibromoethane	MG/L								
74-95-3	Dibromomethane	MG/L					0.0005 U	0.0005 U	0.0005 U	0.0005 U
74-97-5	Bromochloromethane	MG/L					0.0005 U	0.0005 U	0.0005 U	0.0005 U
75-00-3	Chloroethane	MG/L	0.002 U	0.002 U	0.002 U	0.002 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
75-01-4	Vinyl chloride	MG/L	0.002 U	0.002 U	0.002 U	0.002 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
75-09-2	Methylene chloride	MG/L	0.01 U	0.01 U	0.01 U	0.01 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
75-25-2	Bromoform	MG/L	0.002 U	0.002 U	0.002 U	0.002 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
75-27-4	Bromodichloromethane	MG/L	0.002 U	0.002 U	0.002 U	0.002 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
75-34-3	1,1-Dichloroethane	MG/L	0.002 U	0.002 U	0.002 U	0.002 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
75-35-4	1,1-Dichloroethene	MG/L	0.002 U	0.002 U	0.002 U	0.002 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
75-69-4	Trichlorofluoromethane	MG/L	0.002 U	0.002 U	0.002 U	0.002 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
75-71-8	Dichlorodifluoromethane	MG/L	0.005 U	0.005 U	0.005 U	0.005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
76-13-1	1,1,2-Trichlorotrifluoroethane	MG/L								
76-44-8	Heptachlor	MG/L	0.0001 U	0.0001 U	0.0001 U	0.0001 U		0.00005 U	0.00005 U	0.00005 U
7732-18-5	Chloromethane	MG/L								
77-47-4	Hexachlorocyclopentadiene	MG/L						0.01 U	0.01 U	0.01 U
7782-49-2	Selenium (Se)	MG/L								
78-59-1	Isophorone	MG/L						0.01 U	0.01 U	0.01 U
78-87-5	1,2-Dichloropropane	MG/L	0.002 U	0.002 U	0.002 U	0.002 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
78-93-3	2-Butanone	MG/L								
79-00-5	1,1,2-Trichloroethane	MG/L	0.002 U	0.002 U	0.002 U	0.002 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
79-01-6	Trichloroethene	MG/L	0.002 U	0.002 U	0.002 U	0.002 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
79-34-5	1,1,2,2-Tetrachloroethane	MG/L	0.002 U	0.002 U	0.002 U	0.002 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
8001-35-2	Toxaphene	MG/L	0.001 U	0.001 U	0.001 U	0.001 U		0.001 U	0.001 U	0.001 U
8071-51-0	2-Methyl-4,6-dinitrophenol	MG/L								
83-32-9	Acenaphthene	MG/L						0.01 U	0.01 U	0.01 U
84-66-2	Diethyl phthalate	MG/L						0.01 U	0.01 U	0.01 U
84-74-2	Di-n-butyl phthalate	MG/L						0.01 U	0.01 U	0.01 U
85-01-8	Phenanthrene	MG/L						0.005 U	0.01 U	0.01 U
85-68-7	Butyl benzyl phthalate	MG/L						0.01 U	0.01 U	0.01 U
86-30-6	N-Nitrosodiphenylamine	MG/L						0.005 U	0.01 U	0.01 U
86-73-7	Fluorene	MG/L						0.01 U	0.01 U	0.01 U
87-61-6	1,2,3-Trichlorobenzene	MG/L					0.0005 U	0.0005 U	0.0005 U	0.0005 U
87-68-3	Hexachlorobutadiene	MG/L					0.0005 U	0.01 U	0.0005 U	0.01 U
87-86-5	Pentachlorophenol	MG/L	0.02 U	0.02 U	0.02 U	0.01 U		0.05 U	0.05 U	0.05 U
88-06-2	2,4,6-Trichlorophenol	MG/L	0.005 U	0.005 U	0.005 U	0.0052 U		0.02 U	0.02 U	0.02 U
88-74-4	2-Nitroaniline	MG/L						0.01 U	0.01 U	0.01 U
88-75-5	2-Nitrophenol	MG/L	0.005 U	0.005 U	0.005 U	0.0052 U		0.015 U	0.015 U	0.015 U
90-13-1	Chloronaphthalene	MG/L								
91-20-3	Naphthalene	MG/L					0.0005 U	0.0005 U	0.0005 U	0.01 U
91-57-6	2-Methylnaphthalene	MG/L						0.01 U	0.01 U	0.01 U
91-58-7	2-Chloronaphthalene	MG/L						0.01 U	0.01 U	0.01 U
91-94-1	3,3´-Dichlorobenzidine	MG/L						0.01 U	0.01 U	0.01 U
92-87-5	Benzidine	MG/L								
95-47-6	o-Xylene	MG/L					0.0005 U	0.0005 U	0.0005 U	0.0005 U
95-48-7	2-Methylphenol	MG/L						0.01 U	0.01 U	0.01 U
95-49-8	2-Chlorotoluene	MG/L					0.0005 U	0.0005 U	0.0005 U	0.0005 U
95-50-1	1,2-Dichlorobenzene	MG/L	0.002 U	0.002 U	0.002 U	0.002 U	0.0005 U	0.01 U	0.0005 U	0.01 U
95-57-8	2-Chlorophenol	MG/L	0.005 U	0.005 U	0.005 U	0.0052 U		0.01 U	0.01 U	0.01 U
95-63-6	1,2,4-Trimethylbenzene	MG/L					0.0005 U	0.0005 U	0.0005 U	0.0005 U
95-95-4	2,4,5-Trichlorophenol	MG/L						0.02 U	0.02 U	0.02 U
959-98-8	Endosulfan I	MG/L	0.0001 U	0.0001 U	0.0001 U	0.0001 U		0.00005 U	0.00005 U	0.00005 U
96-12-8	1,2-Dibromo-3-chloropropane	MG/L						0.002 U	0.002 U	0.002 U
96-18-4	1,2,3-Trichloropropane	MG/L					0.0005 U	0.0005 U	0.0005 U	0.0005 U
98-06-6	tert-Butylbenzene	MG/L					0.0005 U	0.0005 U	0.0005 U	0.0005 U
98-82-8	Isopropylbenzene	MG/L					0.0005 U	0.0005 U	0.0005 U	0.0005 U
98-95-3	Nitrobenzene	MG/L						0.01 U	0.01 U	0.01 U
99-09-2	3-Nitroaniline	MG/L						0.01 U	0.01 U	0.01 U
99-87-6	4-Isopropyltoluene	MG/L					0.0005 U	0.0005 U	0.0005 U	0.0005 U
DDD	DDD	MG/L								
GIS-130-312	m,p-Xylenes	MG/L								
NO3NO2N	Nitrate (NO3)	MG/L								
NO3NO2N	Nitrite/Nitrate Total	MG/L								
O&PXYLENE	O,P-Xylene	MG/L								
THMs	Trihalomethanes, Total	MG/L						0.0005 U	0.0005 U	0.0005 U
UNKNOWN	Acid Fraction	MG/L								
UNKNOWN	B/N Fraction	MG/L								
UNKNOWN	Dichlorobenzene	MG/L								
UNKNOWN	Dinitro-2-Methylphenol	MG/L								
UNKNOWN	Total Trihalomethanes (THMs)	MG/L								

Appendix C-4
Groundwater Data (1984 - 2007)
Page Trowbridge Ranch Landfill

		Sample ID Well ID Sample Date/Time	MW#1 MW-1 5/5/2004 7:35:00 AM	MW #1 MW-1 10/13/2004 8:15:00 AM	MW #1 MW-1 4/13/2005 9:30:00 AM	MW#1 MW-1 10/12/2005 8:00:00 AM	MW#1 MW-1 4/12/2006 8:45:00 AM	MW #1 MW-1 11/7/2006 10:00:00 AM	MW #1 MW-1 4/11/2007 8:15:00 AM	MW-2 MW-2 9/20/1985	MW-2 MW-2 6/7/1985	MW-2 MW-2 5/24/1985	MW-2 MW-2 1/23/1985	MW-2 MW-2 4/10/1985	MW-2 (Dup) MW-2 9/20/1985	MW-2 MW-2 7/24/1986	MW-2 (Dup) MW-2 3/6/1987	MW-2 MW-2 3/6/1987	MW-2 MW-2 4/23/1987
CAS_Number	**OGDEN_ANALYTE**	**FinalUnits**																	
100-01-6	4-Nitroaniline	MG/L		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U										
100-02-7	4-Nitrophenol	MG/L		0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0 U			0 U-NDT					0.035 U	
100-41-4	Ethylbenzene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U		0 U		0.0005 U			0.0002 U		0.0095 U	
100-42-5	Styrene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U										
100-51-6	Benzyl alcohol	MG/L		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U										
10061-01-5	cis-1,3-Dichloropropene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0 U	0.0002 U	0.0002 U	0.00005 U	0.0001 U		0.0001 U			
10061-02-6	trans-1,3-Dichloropropene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0 U	0.00034 U	0.00034 U	0.00001 U	0.0002 U		0.0001 U			
101-55-3	4-Bromophenyl phenyl ether	MG/L		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U										
1024-57-3	Heptachlor epoxide	MG/L		0.00005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U		0.00005 U	0.00005 U				0.00005 U		0.00002 U	0.001 U
1031-07-8	Endosulfan sulfate	MG/L		0.00005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U		0.0001 U	0.0001 U				0.0001 U		0.00002 U	0.006 U
103-33-3	Azobenzene	MG/L		0.01 U	0.01 U														
103-65-1	n-Propylbenzene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U										
104-51-8	n-Butylbenzene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U										
105-67-9	2,4-Dimethylphenol	MG/L		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0 U	0.003 U	0.003 U	0.001 U	0.003 U				0.0009 U	
106-43-4	4-Chlorotoluene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U										
106-44-5	3 & 4-Methylphenol	MG/L			0.01 U	0.01 U	0.01 U	0.01 U	0.01 U										
106-44-5	4-Methylphenol	MG/L		0.01 U															
106-46-7	1,4-Dichlorobenzene	MG/L	0.0005 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0 U	0.00024 U	0.00024 U	0.0002 U	0.0005 U		0.0001 U			
106-47-8	4-Chloroaniline	MG/L		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U										
106-93-4	1,2-Dibromoethane	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U										
107-06-2	1,2-Dichloroethane	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0 U	0.00003 U	0.00003 U	0.00003 U	0.0001 U		0.0001 U		0.0002 U	
108-05-4	Vinyl Acetate	MG/L																	
108-10-1	4-Methyl-2-Pentanone	MG/L																	
108-38-3	M-Xylene	MG/L																	
108-60-1	Bis(2-chloroisopropyl)ether	MG/L		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U										
108-67-8	1,3,5-Trimethylbenzene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U										
108-86-1	Bromobenzene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U										
108-88-3	Toluene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0048	0.0005 U		0 U		0.0005 U			0.0002 U		0.0067 U	
108-90-7	Chlorobenzene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0 U	0.00025 U	0.00025 U	0.0003 U	0.0005 U		0.0001 U		0.0003 U	
108-95-2	Phenol	MG/L		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0 U	0.002 U	0.002 U	0.001 U	0.002 U		0.01 U		0.0006 U	
110-75-8	2-Chloroethyl Vinyl Ether	MG/L								0 U	0.00013 U	0.00013 U	0 U-NDT			0.0001 U		0.001 U	
11096-82-5	PCB-1260 (Aroclor)	MG/L														0.001 U			
11097-69-1	PCB-1254 (Aroclor)	MG/L														0.001 U			
11104-28-2	PCB-1221 (Aroclor)	MG/L														0.0005 U			
11104-29-3	PCB-1242 (Aroclor)	MG/L														0.0005 U			
11141-16-5	PCB-1232 (Aroclor)	MG/L														0.0005 U			
111-44-4	Bis(2-chloroethyl)ether	MG/L		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U										
111-91-1	Bis(2-chloroethoxy)methane	MG/L		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U										
117-81-7	Bis(2-ethylhexyl)phthalate	MG/L		0.01 U	0.01 U	0.01 U	0.01 U	0.005 U	0.005 U										
117-84-0	Di-n-octyl phthalate	MG/L		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U										
118-74-1	Hexachlorobenzene	MG/L		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U										
120-12-7	Anthracene	MG/L		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U										
120-82-1	1,2,4-Trichlorobenzene	MG/L	0.0005 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U										
120-83-2	2,4-Dichlorophenol	MG/L		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0 U	0.005 U	0.005 U	0.002 U	0.005 U				0.0016 U	
121-14-2	2,4-Dinitrotoluene	MG/L		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U										
122-66-7	1,2-Diphenylhydrazine (As Azobenzene)	MG/L				0.01 U	0.01 U	0.01 U	0.01 U										
124-48-1	Dibromochloromethane	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0 U	0.00009 U	0.00009 U	0.00005 U	0.0001 U		0.0001 U			
12672-29-6	PCB-1248 (Aroclor)	MG/L														0.0005 U			
12674-11-2	PCB-1016 (Aroclor)	MG/L														0.0005 U			
127-18-4	Tetrachloroethene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0 U	0.00003 U	0.00003 U	0.00005 U	0.00005 U		0.0001 U			
129-00-0	Pyrene	MG/L		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U										
131-11-3	Dimethyl phthalate	MG/L		0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U										
132-64-9	Dibenzofuran	MG/L		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U										
1330-20-7	m,p-Xylene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U										
1330-20-7	Xylenes, Total	MG/L			0.001 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U										
135-98-8	sec-Butylbenzene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U										
142-28-9	1,3-Dichloropropane	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U										
14808-79-8	Sulfate (SO4)	MG/L		4.3	4.3	3.8	3.4	4.3	4.3	0.00301	3.31	4.3	3.96	0.0728	0.00359	1 U			
156-59-2	cis-1,2-Dichloroethene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U										
156-60-5	trans-1,2-Dichloroethene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0 U	0.0001 U	0.0001 U	0.0002 U	0.0001 U		0.0001 U		0.0004 U	
1634-04-4	Methyl tert-butyl ether	MG/L																	
16887-00-6	Chloride (Cl-)	MG/L		7.1	5.9	6.6	2.7	6.7	6.9	0.00477	5.81	5.48	5.19		0.00676	7			
16984-48-8	Fluoride (Fl-)	MG/L								0.0005	0.66	0.65	0.58	0.000636	0.00066				
191-24-2	Benzo(g,h,i)perylene	MG/L		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U										
193-39-5	Indeno(1,2,3-cd)pyrene	MG/L		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U										
205-99-2	Benzo(b)fluoranthene	MG/L		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U										
206-44-0	Fluoranthene	MG/L		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U										
207-08-9	Benzo(k)fluoranthene	MG/L		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U										
208-96-8	Acenaphthylene	MG/L		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U										
218-01-9	Chrysene	MG/L		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U										
25551-13-7	Trimethyl Benzene	MG/L																	
309-00-2	Aldrin	MG/L		0.00005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U		0.00005 U	0.00005 U				0.00005 U		0.000002 U	0.001 U
319-84-6	alpha-BHC	MG/L		0.00005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U		0.00001 U	0.00001 U				0.00005 U		0.000002 U	0.001 U
319-85-7	beta-BHC	MG/L		0.00005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U		0.00001 U	0.00001 U				0.00005 U		0.000004 U	0.001 U
319-86-8	delta-BHC	MG/L		0.00005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U		0.00001 U	0.00001 U				0.00005 U		0.000002 U	0.001 U
33213-65-9	Endosulfan II	MG/L		0.00005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U							0.0001 U		0.000012 U	0.002 U
50-29-3	2,4-DDT	MG/L																	

Appendix C-4
Groundwater Data (1984 - 2007)
Page Trowbridge Ranch Landfill

		Sample ID Well ID Sample Date/Time	MW#1 MW-1 5/5/2004 7:35:00 AM	MW #1 MW-1 10/13/2004 8:15:00 AM	MW #1 MW-1 4/13/2005 9:30:00 AM	MW#1 MW-1 10/12/2005 8:00:00 AM	MW#1 MW-1 4/12/2006 8:45:00 AM	MW #1 MW-1 11/7/2006 10:00:00 AM	MW #1 MW-1 4/11/2007 8:15:00 AM	MW-2 MW-2 9/20/1985	MW-2 MW-2 6/7/1985	MW-2 MW-2 5/24/1985	MW-2 MW-2 1/23/1985	MW-2 MW-2 4/10/1985	MW-2 (Dup) MW-2 9/20/1985	MW-2 MW-2 7/24/1986	MW-2 (Dup) MW-2 3/6/1987	MW-2 MW-2 3/6/1987	MW-2 MW-2 4/23/1987
CAS_Number	**OGDEN_ANALYTE**	**FinalUnits**																	
50-29-3	4,4'-DDT	MG/L		0.00005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U		0.00005 U	0.00005 U				0.0001 U			
50-29-3	DDT (p,p-DDT)	MG/L																0.000012 U	0.006 U
50-32-8	Benzo(a)pyrene	MG/L		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U										
5103-71-9	alpha-Chlordane	MG/L																	
51-28-5	2,4-Dinitrophenol	MG/L		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0 U	0.1 U	0.1 U	0.04 U	0.1 U				0.015 U	
53-19-0	2,4-DDD	MG/L																	
534-52-1	2-Methyl-4,6-dinitrophenol	MG/L		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U										
53494-70-5	Endrin Ketone	MG/L														0.0001 U			
53-70-3	Dibenz(a,h)anthracene	MG/L		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U										
540-59-0	Total-1,2-Dichloroethene	MG/L																	
541-73-1	1,3-Dichlorobenzene	MG/L	0.0005 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0 U	0.00032 U	0.00032 U	0.0002 U	0.0005 U		0.0001 U			
542-75-6	1,3-Dichloropropene, Total	MG/L																	
56-23-5	Carbon tetrachloride	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0 U	0.00012 U	0.00012 U	0.0001 U	0.00005 U		0.0001 U		0.0001 U	
563-58-6	1,1-Dichloropropene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U										
56-55-3	Benz(a)anthracene	MG/L		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U										
57-74-2	gamma-Chlordane	MG/L																	
57-74-9	Chlordane	MG/L		0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U							0.0005 U		0.000015 U	0.025 U
57-74-9	Chlordane Technical	MG/L																	
58-89-9	gamma-BHC	MG/L		0.00005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U		0.00001 U	0.00001 U				0.00005 U		0.000002 U	0.001 U
591-78-6	2-Hexanone	MG/L																	
594-20-7	2,2-Dichloropropane	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U										
59-50-7	4-Chloro-3-methylphenol	MG/L		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0 U	0.01 U	0.01 U	0.0025 U	0.01 U				0.0015 U	
60-57-1	Dieldrin	MG/L		0.00005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U		0.00005 U	0.00005 U				0.0001 U		0.000004 U	0.002 U
606-20-2	2,6-Dinitrotoluene	MG/L		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U										
621-64-7	N-Nitrosodi-n-propylamine	MG/L		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U										
62-75-9	N-Nitrosodimethylamine	MG/L																	
630-20-6	1,1,1,2-Tetrachloroethane	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U										
634-90-2	1,2,3,5-Tetrachlorobenzene	MG/L																	
65-85-0	Benzoic acid	MG/L		0.05 U	0.05 U	0.05 U	0.05 U	0.025 U	0.025 U										
67-64-1	Acetone	MG/L																	
67-66-3	Chloroform	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U		0.0001 U		0.0002 U	
67-72-1	Hexachloroethane	MG/L		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U										
7005-72-3	4-Chlorophenyl phenyl ether	MG/L		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U										
71-43-2	Benzene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U		0 U		0.0005 U			0.0002 U		0.0065 U	
71-55-6	1,1,1-Trichloroethane	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0 U	0.00003 U	0.00003 U	0.0002 U	0.00005 U		0.0001 U		0.0002 U	
72-20-8	Endrin	MG/L		0.00005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U		0.00005 U	0.00005 U				0.0001 U		0.00001 U	0.002 U
72-43-5	Methoxychlor	MG/L		0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U							0.0005 U			
72-54-8	1,4-DDD	MG/L														0.0001 U			
72-54-8	2,4-DDD	MG/L																	
72-54-8	4,4'-DDD	MG/L		0.00005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U		0.00005 U	0.00005 U							
72-54-8	DDD (p,p-DDD)	MG/L																0.000012 U	0.006 U
72-55-9	1,4-DDE	MG/L														0.0001 U			
72-55-9	4,4'-DDE	MG/L		0.00005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U		0.00005 U	0.00005 U							
72-55-9	DDE (p,p-DDE)	MG/L																0.000004 U	0.002 U
7421-93-4	Endrin aldehyde	MG/L		0.00005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U		0.0001 U	0.0001 U						0.00002 U	0.006 U
7439-89-6	Iron (Fe)	MG/L								0.00029						0.73	0.6	0.37	
7439-92-1	Lead (Pb)	MG/L								0.00002 U	0.047 U	0.047 U	0.33 U	0.00023 U					
7439-95-4	Magnesium (Mg)	MG/L																	
7439-96-5	Manganese (Mn)	MG/L		0.1	0.14	0.093	0.097	0.089	0.21	0.00014						0.16	0.18	0.17	
7439-97-6	Mercury (Hg)	MG/L								0.000001 U	0.001 U	0.001 U	0.005 U	0.000005 U					
7440-02-0	Nickel (Ni)	MG/L									0.023 U	0.042 U	0.25 U	0.00023 U					
7440-22-4	Silver (Ag)	MG/L								0.000005 U	0.014 U	0.003 U	0.04 U	0.000063 U					
7440-23-5	Sodium (Na)	MG/L		33	39	36	33	36	34	0.0356									
7440-31-5	Tin (Sn)	MG/L																	
7440-38-2	Arsenic (As)	MG/L								0.000003 U	0.004 U	0.005 U	0.005 U	0.000004 U					
7440-39-3	Barium (Ba)	MG/L								0.00045 U	0.49 U	0.041 U	0.57 U	0.000507 U					

Appendix C-4
Groundwater Data (1984 - 2007)
Page Trowbridge Ranch Landfill

		Sample ID Well ID Sample Date/Time	MW#1 MW-1 5/5/2004 7:35:00 AM	MW #1 MW-1 10/13/2004 8:15:00 AM	MW #1 MW-1 4/13/2005 9:30:00 AM	MW#1 MW-1 10/12/2005 8:00:00 AM	MW#1 MW-1 4/12/2006 8:45:00 AM	MW #1 MW-1 11/7/2006 10:00:00 AM	MW #1 MW-1 4/11/2007 8:15:00 AM	MW-2 MW-2 9/20/1985	MW-2 MW-2 6/7/1985	MW-2 MW-2 5/24/1985	MW-2 MW-2 1/23/1985	MW-2 MW-2 4/10/1985	MW-2 (Dup) MW-2 9/20/1985	MW-2 MW-2 7/24/1986	MW-2 (Dup) MW-2 3/6/1987	MW-2 MW-2 3/6/1987	MW-2 MW-2 4/23/1987
CAS_Number	**OGDEN_ANALYTE**	**FinalUnits**																	
7440-43-9	Cadmium (Cd)	MG/L								0.000002 U	0.003 U	0.003 U	0.04 U	0.000022 U					
7440-47-3	Chromium (Cr)	MG/L								0.00001 U	0.004	0.014 U	0.07 U	0.00004 U					
7440-50-8	Copper (Cu)	MG/L									0.021 U	0.021 U	0.02 U	0.000049 U					
7440-66-6	Zinc (Zn)	MG/L									0.275	0.37	0.39	0.00133					
7440-70-2	Calcium (Ca)	MG/L																	
74-83-9	Bromomethane	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0 U	0.00118 U	0.00118 U	0 U-NDT			0.0001 U			
74-87-3	Chloromethane	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0 U	0.00008 U	0.00008 U	0 U-NDT			0.0001 U			
74-95-3	Dibromoethane	MG/L																	
74-95-3	Dibromomethane	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U										
74-97-5	Bromochloromethane	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U										
75-00-3	Chloroethane	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0 U	0.00052 U	0.00052 U	0 U-NDT			0.0001 U		0.0006 U	
75-01-4	Vinyl chloride	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0 U	0.00018 U	0.00018 U	0 U-NDT			0.0001 U			
75-09-2	Methylene chloride	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.00013	0.00003	0.00025 U	0.0002 U	0.0005 U		0.0001 U		0.0003 U	
75-25-2	Bromoform	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0 U	0.0002 U	0.0002 U	0.00001 U	0.0001 U		0.0001 U		0.001 U	
75-27-4	Bromodichloromethane	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0 U	0.0001 U	0.0001 U	0.00004 U	0.00005 U		0.0001 U			
75-34-3	1,1-Dichloroethane	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0 U	0.00007 U	0.00007 U	0.0006 U	0.0001 U		0 U		0.0004 U	
75-35-4	1,1-Dichloroethene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0 U	0.00013 U	0.00013 U	0.00005 U	0.0001 U		0.0001 U			
75-69-4	Trichlorofluoromethane	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0 U	0.00034	0 U-NDT	0.002 U	0.0005 U		0.0001 U		0.0003 U	
75-71-8	Dichlorodifluoromethane	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0 U	0.00181 U	0.00181 U	0 U-NDT			0.0001 U			
76-13-1	1,1,2-Trichlorotrifluoroethane	MG/L																	
76-44-8	Heptachlor	MG/L		0.00005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U		0.00005 U	0.00005 U				0.00005 U		0.000002 U	0.001 U
7732-18-5	Chloromethane	MG/L																	
77-47-4	Hexachlorocyclopentadiene	MG/L		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U										
7782-49-2	Selenium (Se)	MG/L								0.000005 U	0.004 U	0.005 U	0.003 U	0.000005 U					
78-59-1	Isophorone	MG/L		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U										
78-87-5	1,2-Dichloropropane	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0 U	0.00004 U	0.00004 U	0.0003 U	0.0001 U		0.0001 U		0.0002 U	
78-93-3	2-Butanone	MG/L																	
79-00-5	1,1,2-Trichloroethane	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0 U	0.00002 U	0.00002 U	0.00005 U	0.0001 U		0.0001 U		0.0001 U	
79-01-6	Trichloroethene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0 U	0.00012 U	0.00012 U	0.0002 U	0.00005 U		0.0001 U		0.0001 U	
79-34-5	1,1,2,2-Tetrachloroethane	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0 U	0.00003 U	0.00003 U	0.00005 U	0.00005 U		0.0001 U		0.0004 U	
8001-35-2	Toxaphene	MG/L		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U							0.001 U		0.0002 U	
8071-51-0	2-Methyl-4,6-dinitrophenol	MG/L								0 U	0.1 U	0.1 U	0.04 U	0.1 U				0.015 U	
83-32-9	Acenaphthene	MG/L		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U										
84-66-2	Diethyl phthalate	MG/L		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U										
84-74-2	Di-n-butyl phthalate	MG/L		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U										
85-01-8	Phenanthrene	MG/L		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U										
85-68-7	Butyl benzyl phthalate	MG/L		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U										
86-30-6	N-Nitrosodiphenylamine	MG/L		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U										
86-73-7	Fluorene	MG/L		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U										
87-61-6	1,2,3-Trichlorobenzene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U										
87-68-3	Hexachlorobutadiene	MG/L	0.0005 U	0.01 U	0.01 U	0.0005 U	0.01 U	0.01 U	0.01 U										
87-86-5	Pentachlorophenol	MG/L		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0 U	0.1 U	0.1 U	0.04 U	0.1 U				0.009 U	
88-06-2	2,4,6-Trichlorophenol	MG/L		0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0 U	0.005 U	0.005 U	0.002 U	0.005 U				0.002 U	
88-74-4	2-Nitroaniline	MG/L		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U										
88-75-5	2-Nitrophenol	MG/L		0.015 U	0.015 U	0.015 U	0.015 U	0.015 U	0.015 U	0 U	0.003 U	0.003 U	0.001 U	0.003 U				0.0007 U	
90-13-1	Chloronaphthalene	MG/L																	
91-20-3	Naphthalene	MG/L	0.0005 U	0.01 U	0.01 U	0.0005 U	0.01 U	0.01 U	0.01 U										
91-57-6	2-Methylnaphthalene	MG/L		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U										
91-58-7	2-Chloronaphthalene	MG/L		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U										
91-94-1	3,3´-Dichlorobenzidine	MG/L		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U										
92-87-5	Benzidine	MG/L																	
95-47-6	o-Xylene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U										
95-48-7	2-Methylphenol	MG/L		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U										
95-49-8	2-Chlorotoluene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U										
95-50-1	1,2-Dichlorobenzene	MG/L	0.0005 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0 U	0.00015 U	0.00015 U	0.0002 U	0.0005 U		0.0001 U			
95-57-8	2-Chlorophenol	MG/L		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0 U	0.003 U	0.003 U	0.001 U	0.003 U				0.0007 U	
95-63-6	1,2,4-Trimethylbenzene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U										
95-95-4	2,4,5-Trichlorophenol	MG/L		0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U										
959-98-8	Endosulfan I	MG/L		0.00005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U							0.00005 U		0.000004 U	0.002 U
96-12-8	1,2-Dibromo-3-chloropropane	MG/L	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U										
96-18-4	1,2,3-Trichloropropane	MG/L	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U										
98-06-6	tert-Butylbenzene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U										
98-82-8	Isopropylbenzene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U										
98-95-3	Nitrobenzene	MG/L		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U										
99-09-2	3-Nitroaniline	MG/L		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U										
99-87-6	4-Isopropyltoluene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U										
DDD	DDD	MG/L																	
GIS-130-312	m,p-Xylenes	MG/L																	
NO3NO2N	Nitrate (NO3)	MG/L								0.00678	9.14	8.94	11	0.00862	0.00735				
NO3NO2N	Nitrite/Nitrate Total	MG/L																	
O&PXYLENE	O,P-Xylene	MG/L																	
THMs	Trihalomethanes, Total	MG/L	0.0005 U	0.0005 U	0.002 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U										
UNKNOWN	Acid Fraction	MG/L																	
UNKNOWN	B/N Fraction	MG/L																	
UNKNOWN	Dichlorobenzene	MG/L																0.0014 U	
UNKNOWN	Dinitro-2-Methylphenol	MG/L																	
UNKNOWN	Total Trihalomethanes (THMs)	MG/L																	

Appendix C-4
Groundwater Data (1984 - 2007)
Page Trowbridge Ranch Landfill

		Sample ID	MW-2 (Dup filtered)	MW-2	MW-2 (filtered)	MW-2 (Dup)	MW-2 (Dup)	MW-2	MW-2 (Dup)	MW-2	MW-2 (Dup)	MW-2	MW-2	MW-2	MW-2	MW-2	MW-2	MW-2	MW-2 (Rerun)
		Well ID	MW-2	MW-2	MW-2	MW-2	MW-2	MW-2	MW-2	MW-2	MW-2	MW-2	MW-2	MW-2	MW-2	MW-2	MW-2	MW-2	MW-2
		Sample Date/Time	7/9/1987	7/9/1987	7/9/1987	7/9/1987	4/22/1988	4/22/1988	10/21/1988	10/21/1988	4/18/1989	4/18/1989	10/31/1989	11/16/1990	4/18/1990	5/10/1991	5/6/1991	10/28/1991	10/29/1991
CAS_Number	**OGDEN_ANALYTE**	**FinalUnits**																	
100-01-6	4-Nitroaniline	MG/L																	
100-02-7	4-Nitrophenol	MG/L		0.04 U					0.00523 U	0.00523 U		0 U	0.005 U	0.005 U	0.005 U	0.01 U	0.01 U		
100-41-4	Ethylbenzene	MG/L		0.0005 U		0.0005 U		0.0002 U	0.0002 U	0.0002 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		0.0005 U		0.0005 U
100-42-5	Styrene	MG/L										0.001 U	0.001 U	0.001 U	0.001 U				
100-51-6	Benzyl alcohol	MG/L																	
10061-01-5	cis-1,3-Dichloropropene	MG/L		0.00001 U		0.00001 U		0.0002 U	0.0002 U	0.0002 U	0.0005 U	0.0005 U	0.001 U	0.001 U	0.001 U		0.0005 U		0.0005 U
10061-02-6	trans-1,3-Dichloropropene	MG/L		0.00003 U		0.00003 U		0.00034 U	0.00034 U	0.00034 U	0.0005 U	0.0005 U	0.001 U	0.001 U	0.001 U		0.0005 U		0.0005 U
101-55-3	4-Bromophenyl phenyl ether	MG/L																	
1024-57-3	Heptachlor epoxide	MG/L		0.00001 U		0.00005 U		0.000083 U	0.000083 U	0.000083 U	0.00005 U	0.00005 U	0.001 U	0.001 U	0.001 U		0.0001 U	0.0001 U	
1031-07-8	Endosulfan sulfate	MG/L		0.0001 U		0.0001 U		0.000066 U	0.000066 U	0.000066 U	0.0001 U	0.0001 U	0.001 U	0.001 U	0.001 U		0.0001 U	0.0001 U	
103-33-3	Azobenzene	MG/L																	
103-65-1	n-Propylbenzene	MG/L										0.001 U	0.001 U	0.001 U	0.001 U				
104-51-8	n-Butylbenzene	MG/L										0.001 U	0.001 U	0.001 U	0.001 U				
105-67-9	2,4-Dimethylphenol	MG/L		0.003 U					0.00104 U	0.00104 U		0 U	0.002 U	0.002 U	0.002 U	0.005 U	0.005 U		
106-43-4	4-Chlorotoluene	MG/L												0.001 U	0.001 U				
106-44-5	3 & 4-Methylphenol	MG/L																	
106-44-5	4-Methylphenol	MG/L																	
106-46-7	1,4-Dichlorobenzene	MG/L		0.00005 U		0.00005 U		0.0002 U	0.0002 U	0.0002 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		0.0005 U		0.0005 U
106-47-8	4-Chloroaniline	MG/L																	
106-93-4	1,2-Dibromoethane	MG/L																	
107-06-2	1,2-Dichloroethane	MG/L		0.00001 U		0.00001 U		0.00003 U	0.00003 U	0.00003 U	0.0005 U	0.0005 U	0.001 U	0.001 U	0.001 U		0.0002 U		0.0002 U
108-05-4	Vinyl Acetate	MG/L																	
108-10-1	4-Methyl-2-Pentanone	MG/L																	
108-38-3	M-Xylene	MG/L						0.0002 U	0.0002 U	0.0002 U									
108-60-1	Bis(2-chloroisopropyl)ether	MG/L																	
108-67-8	1,3,5-Trimethylbenzene	MG/L																	
108-86-1	Bromobenzene	MG/L																	
108-88-3	Toluene	MG/L		0.0005 U		0.0005 U		0.0002 U	0.0002 U	0.0002 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		0.0002 U		0.0002 U
108-90-7	Chlorobenzene	MG/L		0.00002 U		0.00002 U		0.0002 U	0.0002 U	0.0002 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		0.0002 U		0.0002 U
108-95-2	Phenol	MG/L		0.0025 U			0.003 U	0.008	0.00128 U	0.00128 U		0 U	0.002 U	0.002 U	0.002 U	0.005 U	0.005 U		
110-75-8	2-Chloroethyl Vinyl Ether	MG/L		0.0005 U		0.0005 U		0.00013 U	0.00013 U	0.00013 U	0.0005 U	0.0005 U	0.001 U	0.001 U	0.001 U		0.0005 U		0.0005 U
11096-82-5	PCB-1260 (Aroclor)	MG/L		0.001 U		0.001 U		0.00007 U	0.00007 U	0.00007 U	0.001 U	0.001 U					0.001 U	0.001 U	
11097-69-1	PCB-1254 (Aroclor)	MG/L		0.001 U		0.001 U		0.00007 U	0.00007 U	0.00007 U	0.001 U	0.001 U					0.001 U	0.001 U	
11104-28-2	PCB-1221 (Aroclor)	MG/L		0.001 U		0.001 U		0.00007 U	0.00007 U	0.00007 U	0.0005 U	0.0005 U					0.001 U	0.001 U	
11104-29-3	PCB-1242 (Aroclor)	MG/L		0.001 U		0.001 U		0.00007 U	0.00007 U	0.00007 U	0.0005 U	0.0005 U					0.001 U	0.001 U	
11141-16-5	PCB-1232 (Aroclor)	MG/L		0.001 U		0.001 U		0.00007 U	0.00007 U	0.00007 U	0.0005 U	0.0005 U					0.001 U	0.001 U	
111-44-4	Bis(2-chloroethyl)ether	MG/L																	
111-91-1	Bis(2-chloroethoxy)methane	MG/L																	
117-81-7	Bis(2-ethylhexyl)phthalate	MG/L																	
117-84-0	Di-n-octyl phthalate	MG/L																	
118-74-1	Hexachlorobenzene	MG/L																	
120-12-7	Anthracene	MG/L																	
120-82-1	1,2,4-Trichlorobenzene	MG/L																	
120-83-2	2,4-Dichlorophenol	MG/L		0.004 U					0.00193 U	0.00193 U		0 U	0.002 U	0.002 U	0.002 U	0.005 U	0.005 U		
121-14-2	2,4-Dinitrotoluene	MG/L																	
122-66-7	1,2-Diphenylhydrazine (As Azobenzene)	MG/L																	
124-48-1	Dibromochloromethane	MG/L		0.00001 U		0.00001 U		0.00009 U	0.00009 U	0.00009 U	0.002 U	0.001 U	0.001 U	0.001 U	0.001 U		0.0002 U		0.0002 U
12672-29-6	PCB-1248 (Aroclor)	MG/L		0.001 U		0.001 U					0.0005 U	0.0005 U					0.001 U	0.001 U	
12674-11-2	PCB-1016 (Aroclor)	MG/L		0.001 U		0.001 U		0.00007 U	0.00007 U	0.00007 U	0.0005 U	0.0005 U					0.001 U	0.001 U	
127-18-4	Tetrachloroethene	MG/L		0.00001 U		0.00001 U		0.00003 U	0.00003 U	0.00003 U	0.0005 U	0.0005 U	0.001 U	0.001 U	0.001 U		0.0002 U		0.0002 U
129-00-0	Pyrene	MG/L																	
131-11-3	Dimethyl phthalate	MG/L																	
132-64-9	Dibenzofuran	MG/L																	
1330-20-7	m,p-Xylene	MG/L															0.0005 U		0.0005 U
1330-20-7	Xylenes, Total	MG/L		0.0005 U		0.0005 U					0.003 U	0.001 U	0.001 U	0.001 U	0.001 U				
135-98-8	sec-Butylbenzene	MG/L										0.001 U	0.001 U	0.001 U	0.001 U				
142-28-9	1,3-Dichloropropane	MG/L										0.001 U	0.001 U	0.001 U	0.001 U				
14808-79-8	Sulfate (SO4)	MG/L		10 U		10 U		6.6	10 U	10 U	10 U	10 U	1.7	5 U	1 U		1 U		
156-59-2	cis-1,2-Dichloroethene	MG/L										0.001 U	0.001 U	0.001 U	0.001 U				
156-60-5	trans-1,2-Dichloroethene	MG/L		0.00001 U		0.00001 U		0.0001 U	0.0001 U	0.0001 U		0.001 U	0.001 U	0.001 U	0.001 U		0.0002 U		0.0002 U
1634-04-4	Methyl tert-butyl ether	MG/L																	
16887-00-6	Chloride (Cl-)	MG/L		6.64		6.8		7	7.3	7.3	5.1	6.2	7.6	7.73	5.6		10		
16984-48-8	Fluoride (Fl-)	MG/L		0.6		0.6					0.66	0.64							
191-24-2	Benzo(g,h,i)perylene	MG/L																	
193-39-5	Indeno(1,2,3-cd)pyrene	MG/L																	
205-99-2	Benzo(b)fluoranthene	MG/L																	
206-44-0	Fluoranthene	MG/L																	
207-08-9	Benzo(k)fluoranthene	MG/L																	
208-96-8	Acenaphthylene	MG/L																	
218-01-9	Chrysene	MG/L																	
25551-13-7	Trimethyl Benzene	MG/L										0.001 U	0.001 U	0.001 U	0.001 U				
309-00-2	Aldrin	MG/L		0.000005 U		0.00005 U		0.000004 U	0.000004 U	0.000004 U	0.00005 U	0.00005 U	0.001 U	0.001 U	0.001 U		0.0001 U	0.0001 U	
319-84-6	alpha-BHC	MG/L		0.000005 U		0.00005 U		0.000003 U	0.000003 U	0.000003 U	0.00005 U	0.00005 U	0.001 U	0.001 U	0.001 U		0.0001 U	0.0001 U	
319-85-7	beta-BHC	MG/L		0.000005 U		0.00005 U		0.000006 U	0.000006 U	0.000006 U	0.00005 U	0.00005 U	0.001 U	0.001 U	0.001 U		0.0001 U	0.0001 U	
319-86-8	delta-BHC	MG/L		0.000005 U		0.00005 U		0.000009 U	0.000009 U	0.000009 U	0.00005 U	0.00005 U	0.001 U	0.001 U	0.001 U		0.0001 U	0.0001 U	
33213-65-9	Endosulfan II	MG/L		0.00002 U		0.0001 U		0.000004 U	0.000004 U	0.000004 U	0.0001 U	0.0001 U	0.001 U	0.001 U	0.001 U		0.0001 U	0.0001 U	
50-29-3	2,4-DDT	MG/L										0.0001 U	0.001 U	0.001 U	0.001 U				

Appendix C-4
Groundwater Data (1984 - 2007)
Page Trowbridge Ranch Landfill

		Sample ID Well ID Sample Date/Time	MW-2 (Dup filtered) MW-2 7/9/1987	MW-2 MW-2 7/9/1987	MW-2 (filtered) MW-2 7/9/1987	MW-2 (Dup) MW-2 7/9/1987	MW-2 (Dup) MW-2 4/22/1988	MW-2 MW-2 4/22/1988	MW-2 (Dup) MW-2 10/21/1988	MW-2 MW-2 10/21/1988	MW-2 (Dup) MW-2 4/18/1989	MW-2 MW-2 4/18/1989	MW-2 MW-2 10/31/1989	MW-2 MW-2 11/16/1990	MW-2 MW-2 4/18/1990	MW-2 MW-2 5/10/1991	MW-2 MW-2 5/6/1991	MW-2 MW-2 10/28/1991	MW-2 (Rerun) MW-2 10/29/1991
CAS_Number	**OGDEN_ANALYTE**	**FinalUnits**																	
50-29-3	4,4'-DDT	MG/L						0.000012 U	0.000012 U	0.000012 U		0.0001 U	0.001 U	0.001 U	0.001 U		0.0001 U	0.0001 U	
50-29-3	DDT (p,p-DDT)	MG/L		0.00006 U		0.0001 U					0.0001 U	0.0001 U							
50-32-8	Benzo(a)pyrene	MG/L																	
5103-71-9	alpha-Chlordane	MG/L																	
51-28-5	2,4-Dinitrophenol	MG/L		0.04 U					0.013 U	0.013 U		0 U	0.02 U	0.02 U	0.02 U	0.01 U	0.01 U		
53-19-0	2,4-DDD	MG/L												0.001 U	0.001 U				
534-52-1	2-Methyl-4,6-dinitrophenol	MG/L														0.01 U	0.01 U		
53494-70-5	Endrin Ketone	MG/L		0.0002 U		0.0002 U													
53-70-3	Dibenz(a,h)anthracene	MG/L																	
540-59-0	Total-1,2-Dichloroethene	MG/L		0.0005 U		0.0005 U					0.0005 U	0.0005 U							
541-73-1	1,3-Dichlorobenzene	MG/L		0.00005 U		0.00005 U		0.0002 U	0.0002 U	0.0002 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		0.0005 U		0.0005 U
542-75-6	1,3-Dichloropropene, Total	MG/L																	
56-23-5	Carbon tetrachloride	MG/L		0.00001 U		0.00001 U		0.00012 U	0.00012 U	0.00012 U	0.0005 U	0.001 U	0.001 U	0.001 U	0.001 U		0.0002 U		0.0002 U
563-58-6	1,1-Dichloropropene	MG/L																	
56-55-3	Benz(a)anthracene	MG/L																	
57-74-2	gamma-Chlordane	MG/L																	
57-74-9	Chlordane	MG/L		0.00002 U		0.0005 U		0.000014 U	0.000014 U	0.000014 U	0.0005 U	0.0001 U	0.001 U	0.001 U	0.001 U		0.001 U	0.001 U	
57-74-9	Chlordane Technical	MG/L																	
58-89-9	gamma-BHC	MG/L		0.000005 U		0.00005 U		0.000004 U	0.000004 U	0.000004 U	0.00005 U	0.00005 U	0.001 U	0.001 U	0.001 U		0.0001 U	0.0001 U	
591-78-6	2-Hexanone	MG/L																	
594-20-7	2,2-Dichloropropane	MG/L																	
59-50-7	4-Chloro-3-methylphenol	MG/L		0.005 U					0.00222 U	0.00222 U		0 U	0.002 U	0.002 U	0.002 U	0.005 U	0.005 U		
60-57-1	Dieldrin	MG/L		0.00002 U		0.0001 U		0.000002 U	0.000002 U	0.000002 U	0.0001 U	0.0001 U	0.001 U	0.001 U	0.001 U		0.0001 U	0.0001 U	
606-20-2	2,6-Dinitrotoluene	MG/L																	
621-64-7	N-Nitrosodi-n-propylamine	MG/L																	
62-75-9	N-Nitrosodimethylamine	MG/L																	
630-20-6	1,1,1,2-Tetrachloroethane	MG/L											1 U	0.001 U	0.001 U				
634-90-2	1,2,3,5-Tetrachlorobenzene	MG/L										0.001 U	0.001 U	0.001 U	0.001 U				
65-85-0	Benzoic acid	MG/L																	
67-64-1	Acetone	MG/L																	
67-66-3	Chloroform	MG/L		0.000005 U		0.000005 U		0.00005 U	0.00005 U	0.00005 U	0.0005 U	0.0005 U	0.001 U	0.001 U	0.001 U		0.0002 U		0.0002 U
67-72-1	Hexachloroethane	MG/L																	
7005-72-3	4-Chlorophenyl phenyl ether	MG/L																	
71-43-2	Benzene	MG/L		0.0008 U		0.0008 U		0.0002 U	0.0002 U	0.0002 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		0.0002 U		0.0002 U
71-55-6	1,1,1-Trichloroethane	MG/L		0.00001 U		0.00001 U		0.00003 U	0.00003 U	0.00003 U	0.0005 U	0.0005 U	0.001 U	0.001 U	0.001 U		0.0002 U		0.0002 U
72-20-8	Endrin	MG/L		0.00002 U		0.0001 U		0.000006 U	0.000006 U	0.000006 U	0.0001 U	0.0001 U	0.001 U	0.001 U	0.001 U		0.0001 U	0.0001 U	
72-43-5	Methoxychlor	MG/L		0.0005 U		0.0005 U		0.00005 U	0.00005 U	0.00005 U	0.0005 U	0.0005 U	0.001 U	0.001 U	0.001 U		0.0005 U	0.0005 U	
72-54-8	1,4-DDD	MG/L																	
72-54-8	2,4-DDD	MG/L										0.0001 U	0.001 U	0.001 U	0.001 U				
72-54-8	4,4'-DDD	MG/L						0.000011 U	0.000011 U	0.000011 U		0.0001 U	0.001 U	0.001 U	0.001 U		0.0001 U	0.0001 U	
72-54-8	DDD (p,p-DDD)	MG/L		0.00002 U		0.0001 U					0.0001 U	0.0001 U							
72-55-9	1,4-DDE	MG/L																	
72-55-9	4,4'-DDE	MG/L						0.000004 U	0.000004 U	0.000004 U		0.0001 U	0.001 U	0.001 U	0.001 U		0.0001 U	0.0001 U	
72-55-9	DDE (p,p-DDE)	MG/L		0.00002 U		0.0001 U					0.0001 U	0.0001 U							
7421-93-4	Endrin aldehyde	MG/L		0.00006 U				0.000023 U	0.000023 U	0.000023 U		0.0001 U	0.001 U	0.001 U	0.001 U		0.0001 U	0.0001 U	
7439-89-6	Iron (Fe)	MG/L	0.1 U	0.5	0.1 U	0.53					3.51	3.83							
7439-92-1	Lead (Pb)	MG/L	0.02 U	0.02 U	0.02 U	0.02 U					0.01 U	0.01 U							
7439-95-4	Magnesium (Mg)	MG/L		8.9		8.5							7.1						
7439-96-5	Manganese (Mn)	MG/L	0.09	0.09	0.09	0.09		0.31	0.393	0.365	0.49	0.49		0.402	0.35		0.46		
7439-97-6	Mercury (Hg)	MG/L		0.0005 U		0.0005 U					0.0005 U	0.0005 U							
7440-02-0	Nickel (Ni)	MG/L	0.1 U	0.1 U	0.1 U	0.1 U													
7440-22-4	Silver (Ag)	MG/L		0.005 U		0.005 U					0.001 U	0.001 U							
7440-23-5	Sodium (Na)	MG/L		31.5		35.2		32	28.8	29.4	29.1	29.3	32.4	33	31.5		47		
7440-31-5	Tin (Sn)	MG/L	5 U	5 U	5 U	5 U													
7440-38-2	Arsenic (As)	MG/L		0.02 U		0.02 U					0.01 U	0.01 U							
7440-39-3	Barium (Ba)	MG/L		0.01 U		0.1 U					0.1 U	0.1 U							

Appendix C-4
Groundwater Data (1984 - 2007)
Page Trowbridge Ranch Landfill

		Sample ID Well ID Sample Date/Time	MW-2 (Dup filtered) MW-2 7/9/1987	MW-2 MW-2 7/9/1987	MW-2 (filtered) MW-2 7/9/1987	MW-2 (Dup) MW-2 7/9/1987	MW-2 (Dup) MW-2 4/22/1988	MW-2 MW-2 4/22/1988	MW-2 (Dup) MW-2 10/21/1988	MW-2 MW-2 10/21/1988	MW-2 (Dup) MW-2 4/18/1989	MW-2 MW-2 4/18/1989	MW-2 MW-2 10/31/1989	MW-2 MW-2 11/16/1990	MW-2 MW-2 4/18/1990	MW-2 MW-2 5/10/1991	MW-2 MW-2 5/6/1991	MW-2 MW-2 10/28/1991	MW-2 (Rerun) MW-2 10/29/1991
CAS_Number	**OGDEN_ANALYTE**	**FinalUnits**																	
7440-43-9	Cadmium (Cd)	MG/L	0.001 U	0.001 U	0.001 U	0.001 U					0.001 U	0.001 U							
7440-47-3	Chromium (Cr)	MG/L	0.01 U	0.01 U	0.01 U	0.01 U					0.01 U	0.01 U							
7440-50-8	Copper (Cu)	MG/L		0.1 U		0.1 U					0.1 U	0.1 U							
7440-66-6	Zinc (Zn)	MG/L	0.21	0.24	0.2	0.24					0.72	0.72							
7440-70-2	Calcium (Ca)	MG/L		30.2		30													
74-83-9	Bromomethane	MG/L		0.0005 U		0.0005 U		0.00118 U	0.00118 U	0.00118 U	0.0005 U	0.0005 U	0.001 U	0.001 U	0.001 U		0.001 U		0.001 U
74-87-3	Chloromethane	MG/L		0.00002 U		0.00002 U		0.00008 U	0.00008 U	0.00008 U	0.0005 U	0.0005 U	0.001 U	0.001 U	0.001 U		0.0005 U		0.0005 U
74-95-3	Dibromoethane	MG/L										0.001 U	0.001 U	0.001 U	0.001 U				
74-95-3	Dibromomethane	MG/L																	
74-97-5	Bromochloromethane	MG/L										0.001 U	0.001 U	0.001 U	0.001 U				
75-00-3	Chloroethane	MG/L		0.00001 U		0.00001 U		0.00052 U	0.00052 U	0.00052 U	0.0005 U	0.0005 U	0.001 U	0.001 U	0.001 U		0.001 U		0.001 U
75-01-4	Vinyl chloride	MG/L		0.00025 U		0.00025 U		0.00018 U	0.00018 U	0.00018 U	0.0003 U	0.0003 U	0.001 U	0.001 U	0.001 U		0.0002 U		0.0002 U
75-09-2	Methylene chloride	MG/L		0.0005 U		0.0005 U		0.00025 U	0.00025 U	0.00025 U	0.0005 U	0.0005 U	0.001 U	0.001 U	0.001 U		0.002 U		0.002 U
75-25-2	Bromoform	MG/L		0.0005 U		0.0005 U		0.0002 U	0.0002 U	0.0002 U	0.003 U	0.001 U	0.001 U	0.001 U	0.001 U		0.0005 U		0.0005 U
75-27-4	Bromodichloromethane	MG/L		0.00001 U		0.00001 U		0.0001 U	0.0001 U	0.0001 U	0.0005 U	0.0005 U	0.001 U	0.001 U	0.001 U		0.0002 U		0.0002 U
75-34-3	1,1-Dichloroethane	MG/L		0.00001 U		0.00001 U		0.00007 U	0.00007 U	0.00007 U	0.0005 U	0.0005 U	0.001 U	0.001 U	0.001 U		0.0002 U		0.0002 U
75-35-4	1,1-Dichloroethene	MG/L		0.00001 U		0.00001 U		0.00013 U	0.00013 U	0.00013 U	0.0005 U	0.0005 U	0.001 U	0.001 U	0.001 U		0.0005 U		0.0005 U
75-69-4	Trichlorofluoromethane	MG/L		0.00001 U		0.00001 U		0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.001 U	0.001 U	0.001 U		0.001 U		0.001 U
75-71-8	Dichlorodifluoromethane	MG/L		0.0005 U		0.0005 U		0.00181 U	0.00181 U	0.00181 U	0.0005 U	0.0005 U							
76-13-1	1,1,2-Trichlorotrifluoroethane	MG/L										0.001 U	0.001 U	0.001 U	0.001 U				
76-44-8	Heptachlor	MG/L		0.000005 U		0.00005 U		0.000003 U	0.000003 U	0.000003 U	0.00005 U	0.00005 U	0.001 U	0.001 U	0.001 U		0.0001 U	0.0001 U	
7732-18-5	Chloromethane	MG/L																	
77-47-4	Hexachlorocyclopentadiene	MG/L																	
7782-49-2	Selenium (Se)	MG/L		0.005 U		0.005 U					0.005 U	0.005 U							
78-59-1	Isophorone	MG/L																	
78-87-5	1,2-Dichloropropane	MG/L		0.00001 U		0.00001 U		0.00004 U	0.00004 U	0.00004 U	0.0005 U	0.0005 U					0.0005 U		0.0005 U
78-93-3	2-Butanone	MG/L																	
79-00-5	1,1,2-Trichloroethane	MG/L		0.00001 U		0.00001 U		0.00002 U	0.00002 U	0.00002 U	0.0005 U	0.0005 U	0.001 U	0.001 U	0.001 U		0.0002 U		0.0002 U
79-01-6	Trichloroethene	MG/L		0.000005 U		0.000005 U		0.00012 U	0.00012 U	0.00012 U	0.0005 U	0.001 U	0.001 U	0.001 U	0.001 U		0.0002 U		0.0002 U
79-34-5	1,1,2,2-Tetrachloroethane	MG/L		0.00001 U		0.00001 U		0.00003 U	0.00003 U	0.00003 U	0.0005 U	0.0005 U	0.001 U	0.001 U	0.001 U		0.0005 U		0.0005 U
8001-35-2	Toxaphene	MG/L		0.0002 U		0.001 U		0.00024 U	0.00024 U	0.00024 U	0.002 U	0.0001 U	0.001 U	0.001 U	0.001 U		0.001 U	0.001 U	
8071-51-0	2-Methyl-4,6-dinitrophenol	MG/L		0.03 U					0.016 U	0.016 U		0 U	0.02 U	0.02 U	0.02 U				
83-32-9	Acenaphthene	MG/L																	
84-66-2	Diethyl phthalate	MG/L																	
84-74-2	Di-n-butyl phthalate	MG/L																	
85-01-8	Phenanthrene	MG/L																	
85-68-7	Butyl benzyl phthalate	MG/L																	
86-30-6	N-Nitrosodiphenylamine	MG/L																	
86-73-7	Fluorene	MG/L																	
87-61-6	1,2,3-Trichlorobenzene	MG/L																	
87-68-3	Hexachlorobutadiene	MG/L																	
87-86-5	Pentachlorophenol	MG/L		0.015 U					0.0074 U	0.0074 U		0 U	0.01 U	0.01 U	0.01 U	0.005 U	0.005 U		
88-06-2	2,4,6-Trichlorophenol	MG/L		0.005 U		0.005 U			0.00111 U	0.00111 U		0 U	0.002 U	0.002 U	0.002 U	0.005 U	0.005 U		
88-74-4	2-Nitroaniline	MG/L																	
88-75-5	2-Nitrophenol	MG/L		0.005 U					0.00208 U	0.00208 U		0 U	0.002 U	0.002 U	0.002 U	0.01 U	0.01 U		
90-13-1	Chloronaphthalene	MG/L										0.001 U	0.001 U	0.001 U	0.001 U				
91-20-3	Naphthalene	MG/L											0.001 U	0.001 U	0.001 U				
91-57-6	2-Methylnaphthalene	MG/L																	
91-58-7	2-Chloronaphthalene	MG/L																	
91-94-1	3,3´-Dichlorobenzidine	MG/L																	
92-87-5	Benzidine	MG/L																	
95-47-6	o-Xylene	MG/L															0.0005 U		0.0005 U
95-48-7	2-Methylphenol	MG/L																	
95-49-8	2-Chlorotoluene	MG/L										0.001 U	0.001 U	0.001 U	0.001 U				
95-50-1	1,2-Dichlorobenzene	MG/L		0.00007 U		0.00007 U		0.0002 U	0.0002 U	0.0002 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		0.0005 U		0.0005 U
95-57-8	2-Chlorophenol	MG/L		0.003 U					0.00055 U	0.00055 U		0 U	0.001 U	0.001 U	0.001 U	0.005 U	0.005 U		
95-63-6	1,2,4-Trimethylbenzene	MG/L																	
95-95-4	2,4,5-Trichlorophenol	MG/L																	
959-98-8	Endosulfan I	MG/L		0.00001 U		0.00005 U		0.000014 U	0.000014 U	0.000014 U	0.00005 U	0.00005 U	0.001 U	0.001 U	0.001 U		0.0001 U	0.0001 U	
96-12-8	1,2-Dibromo-3-chloropropane	MG/L										0.001 U	0.001 U	0.001 U	0.001 U				
96-18-4	1,2,3-Trichloropropane	MG/L																	
98-06-6	tert-Butylbenzene	MG/L										0.001 U	0.001 U	0.001 U	0.001 U				
98-82-8	Isopropylbenzene	MG/L										0.001 U	0.001 U	0.001 U	0.001 U				
98-95-3	Nitrobenzene	MG/L																	
99-09-2	3-Nitroaniline	MG/L																	
99-87-6	4-Isopropyltoluene	MG/L																	
DDD	DDD	MG/L																	
GIS-130-312	m,p-Xylenes	MG/L																	
NO3NO2N	Nitrate (NO3)	MG/L																	
NO3NO2N	Nitrite/Nitrate Total	MG/L		1.48		1.47					1.21	1.2							
O&PXYLENE	O,P-Xylene	MG/L						0.0002 U	0.0002 U	0.0002 U		0 U							
THMs	Trihalomethanes, Total	MG/L																	
UNKNOWN	Acid Fraction	MG/L		0 U		0 U					0 U	0 U							
UNKNOWN	B/N Fraction	MG/L		0.01		0.01					0 U	0 U							
UNKNOWN	Dichlorobenzene	MG/L																	
UNKNOWN	Dinitro-2-Methylphenol	MG/L																	
UNKNOWN	Total Trihalomethanes (THMs)	MG/L									0.005 U	0.005 U							

Appendix C-4
Groundwater Data (1984 - 2007)
Page Trowbridge Ranch Landfill

		Sample ID	MW-2 (Dup)	MW-2	MW-2 (Dup)	MW-2
		Well ID	MW-2	MW-2	MW-2	MW-2
		Sample Date/Time	10/29/1991	10/29/1991	11/12/1991	4/21/1992
CAS_Number	**OGDEN_ANALYTE**	**FinalUnits**				
100-01-6	4-Nitroaniline	MG/L				
100-02-7	4-Nitrophenol	MG/L		0.01 U		0.01 U
100-41-4	Ethylbenzene	MG/L	0.0005 U	0.005 U	0.0005 U	0.001 U
100-42-5	Styrene	MG/L				
100-51-6	Benzyl alcohol	MG/L				
10061-01-5	cis-1,3-Dichloropropene	MG/L	0.0005 U	0.005 U	0.0005 U	0.0005 U
10061-02-6	trans-1,3-Dichloropropene	MG/L	0.0005 U	0.005 U	0.0005 U	0.0005 U
101-55-3	4-Bromophenyl phenyl ether	MG/L				
1024-57-3	Heptachlor epoxide	MG/L		0.0001 U		0.0001 U
1031-07-8	Endosulfan sulfate	MG/L		0.0001 U		0.0001 U
103-33-3	Azobenzene	MG/L				
103-65-1	n-Propylbenzene	MG/L				
104-51-8	n-Butylbenzene	MG/L				
105-67-9	2,4-Dimethylphenol	MG/L		0.005 U		0.005 U
106-43-4	4-Chlorotoluene	MG/L				
106-44-5	3 & 4-Methylphenol	MG/L				
106-44-5	4-Methylphenol	MG/L				
106-46-7	1,4-Dichlorobenzene	MG/L	0.0005 U	0.005 U	0.0005 U	0.001 U
106-47-8	4-Chloroaniline	MG/L				
106-93-4	1,2-Dibromoethane	MG/L				
107-06-2	1,2-Dichloroethane	MG/L	0.0002 U	0.002 U	0.0002 U	0.0005 U
108-05-4	Vinyl Acetate	MG/L				
108-10-1	4-Methyl-2-Pentanone	MG/L				
108-38-3	M-Xylene	MG/L				
108-60-1	Bis(2-chloroisopropyl)ether	MG/L				
108-67-8	1,3,5-Trimethylbenzene	MG/L				
108-86-1	Bromobenzene	MG/L				
108-88-3	Toluene	MG/L	0.0002 U	0.002 U	0.0002 U	0.001 U
108-90-7	Chlorobenzene	MG/L	0.0002 U	0.002 U	0.0002 U	0.0005 U
108-95-2	Phenol	MG/L		0.005 U		0.005 U
110-75-8	2-Chloroethyl Vinyl Ether	MG/L	0.0005 U	0.0005 U	0.0005 U	0.005 U
11096-82-5	PCB-1260 (Aroclor)	MG/L		0.001 U		0.001 U
11097-69-1	PCB-1254 (Aroclor)	MG/L		0.001 U		0.001 U
11104-28-2	PCB-1221 (Aroclor)	MG/L		0.001 U		0.001 U
11104-29-3	PCB-1242 (Aroclor)	MG/L		0.001 U		0.001 U
11141-16-5	PCB-1232 (Aroclor)	MG/L		0.001 U		0.001 U
111-44-4	Bis(2-chloroethyl)ether	MG/L				
111-91-1	Bis(2-chloroethoxy)methane	MG/L				
117-81-7	Bis(2-ethylhexyl)phthalate	MG/L				
117-84-0	Di-n-octyl phthalate	MG/L				
118-74-1	Hexachlorobenzene	MG/L				
120-12-7	Anthracene	MG/L				
120-82-1	1,2,4-Trichlorobenzene	MG/L				
120-83-2	2,4-Dichlorophenol	MG/L		0.005 U		0.005 U
121-14-2	2,4-Dinitrotoluene	MG/L				
122-66-7	1,2-Diphenylhydrazine (As Azobenzene)	MG/L				
124-48-1	Dibromochloromethane	MG/L	0.0002 U	0.002 U	0.0002 U	0.0005 U
12672-29-6	PCB-1248 (Aroclor)	MG/L		0.001 U		0.001 U
12674-11-2	PCB-1016 (Aroclor)	MG/L		0.001 U		0.001 U
127-18-4	Tetrachloroethene	MG/L	0.0002 U	0.002 U	0.0002 U	0.0005 U
129-00-0	Pyrene	MG/L				
131-11-3	Dimethyl phthalate	MG/L				
132-64-9	Dibenzofuran	MG/L				
1330-20-7	m,p-Xylene	MG/L	0.0005 U	0.005 U	0.0005 U	
1330-20-7	Xylenes, Total	MG/L				0.001 U
135-98-8	sec-Butylbenzene	MG/L				
142-28-9	1,3-Dichloropropane	MG/L				
14808-79-8	Sulfate (SO4)	MG/L		3		3.8
156-59-2	cis-1,2-Dichloroethene	MG/L				
156-60-5	trans-1,2-Dichloroethene	MG/L	0.0002 U	0.002 U	0.0002 U	0.0005 U
1634-04-4	Methyl tert-butyl ether	MG/L				
16887-00-6	Chloride (Cl-)	MG/L		7		7.1
16984-48-8	Fluoride (Fl-)	MG/L				
191-24-2	Benzo(g,h,i)perylene	MG/L				
193-39-5	Indeno(1,2,3-cd)pyrene	MG/L				
205-99-2	Benzo(b)fluoranthene	MG/L				
206-44-0	Fluoranthene	MG/L				
207-08-9	Benzo(k)fluoranthene	MG/L				
208-96-8	Acenaphthylene	MG/L				
218-01-9	Chrysene	MG/L				
25551-13-7	Trimethyl Benzene	MG/L				
309-00-2	Aldrin	MG/L		0.0001 U		0.0001 U
319-84-6	alpha-BHC	MG/L		0.0001 U		0.0001 U
319-85-7	beta-BHC	MG/L		0.0001 U		0.0001 U
319-86-8	delta-BHC	MG/L		0.0001 U		0.0001 U
33213-65-9	Endosulfan II	MG/L		0.0001 U		0.0001 U
50-29-3	2,4-DDT	MG/L				

Appendix C-4
Groundwater Data (1984 - 2007)
Page Trowbridge Ranch Landfill

		Sample ID	MW-2 (Dup)	MW-2	MW-2 (Dup)	MW-2
		Well ID	MW-2	MW-2	MW-2	MW-2
		Sample Date/Time	10/29/1991	10/29/1991	11/12/1991	4/21/1992
CAS_Number	**OGDEN_ANALYTE**	**FinalUnits**				
50-29-3	4,4'-DDT	MG/L		0.0001 U		0.0001 U
50-29-3	DDT (p,p-DDT)	MG/L				
50-32-8	Benzo(a)pyrene	MG/L				
5103-71-9	alpha-Chlordane	MG/L				
51-28-5	2,4-Dinitrophenol	MG/L		0.015 U		0.01 U
53-19-0	2,4-DDD	MG/L				
534-52-1	2-Methyl-4,6-dinitrophenol	MG/L		0.015 U		0.01 U
53494-70-5	Endrin Ketone	MG/L				
53-70-3	Dibenz(a,h)anthracene	MG/L				
540-59-0	Total-1,2-Dichloroethene	MG/L				
541-73-1	1,3-Dichlorobenzene	MG/L	0.0005 U	0.005 U	0.0005 U	0.001 U
542-75-6	1,3-Dichloropropene, Total	MG/L				
56-23-5	Carbon tetrachloride	MG/L	0.0002 U	0.002 U	0.0002 U	0.0005 U
563-58-6	1,1-Dichloropropene	MG/L				
56-55-3	Benz(a)anthracene	MG/L				
57-74-2	gamma-Chlordane	MG/L				
57-74-9	Chlordane	MG/L		0.001 U		0.0005 U
57-74-9	Chlordane Technical	MG/L				
58-89-9	gamma-BHC	MG/L		0.0001 U		0.0001 U
591-78-6	2-Hexanone	MG/L				
594-20-7	2,2-Dichloropropane	MG/L				
59-50-7	4-Chloro-3-methylphenol	MG/L		0.005 U		0.005 U
60-57-1	Dieldrin	MG/L		0.0001 U		0.0001 U
606-20-2	2,6-Dinitrotoluene	MG/L				
621-64-7	N-Nitrosodi-n-propylamine	MG/L				
62-75-9	N-Nitrosodimethylamine	MG/L				
630-20-6	1,1,1,2-Tetrachloroethane	MG/L				
634-90-2	1,2,3,5-Tetrachlorobenzene	MG/L				
65-85-0	Benzoic acid	MG/L				
67-64-1	Acetone	MG/L				
67-66-3	Chloroform	MG/L	0.0002 U	0.0002 U	0.0002 U	0.0005 U
67-72-1	Hexachloroethane	MG/L				
7005-72-3	4-Chlorophenyl phenyl ether	MG/L				
71-43-2	Benzene	MG/L	0.0002 U	0.002 U	0.0002 U	0.0005 U
71-55-6	1,1,1-Trichloroethane	MG/L	0.0002 U	0.002 U	0.0002 U	0.0005 U
72-20-8	Endrin	MG/L		0.0001 U		0.0001 U
72-43-5	Methoxychlor	MG/L		0.0005 U		0.0005 U
72-54-8	1,4-DDD	MG/L				
72-54-8	2,4-DDD	MG/L				
72-54-8	4,4'-DDD	MG/L		0.0001 U		0.0001 U
72-54-8	DDD (p,p-DDD)	MG/L				
72-55-9	1,4-DDE	MG/L				
72-55-9	4,4'-DDE	MG/L		0.0001 U		0.0001 U
72-55-9	DDE (p,p-DDE)	MG/L				
7421-93-4	Endrin aldehyde	MG/L		0.0001 U		0.0001 U
7439-89-6	Iron (Fe)	MG/L				
7439-92-1	Lead (Pb)	MG/L				
7439-95-4	Magnesium (Mg)	MG/L				
7439-96-5	Manganese (Mn)	MG/L		0.5		0.51
7439-97-6	Mercury (Hg)	MG/L				
7440-02-0	Nickel (Ni)	MG/L				
7440-22-4	Silver (Ag)	MG/L				
7440-23-5	Sodium (Na)	MG/L		37		46
7440-31-5	Tin (Sn)	MG/L				
7440-38-2	Arsenic (As)	MG/L				
7440-39-3	Barium (Ba)	MG/L				

Appendix C-4
Groundwater Data (1984 - 2007)
Page Trowbridge Ranch Landfill

		Sample ID	MW-2 (Dup)	MW-2	MW-2 (Dup)	MW-2
		Well ID	MW-2	MW-2	MW-2	MW-2
		Sample Date/Time	10/29/1991	10/29/1991	11/12/1991	4/21/1992
CAS_Number	**OGDEN_ANALYTE**	**FinalUnits**				
7440-43-9	Cadmium (Cd)	MG/L				
7440-47-3	Chromium (Cr)	MG/L				
7440-50-8	Copper (Cu)	MG/L				
7440-66-6	Zinc (Zn)	MG/L				
7440-70-2	Calcium (Ca)	MG/L				
74-83-9	Bromomethane	MG/L	0.001 U	0.01 U	0.001 U	0 U
74-87-3	Chloromethane	MG/L	0.0005 U	0.005 U	0.0005 U	0.001 U
74-95-3	Dibromoethane	MG/L				
74-95-3	Dibromomethane	MG/L				
74-97-5	Bromochloromethane	MG/L				
75-00-3	Chloroethane	MG/L	0.001 U	0.01 U	0.001 U	0 U
75-01-4	Vinyl chloride	MG/L	0.0002 U	0.002 U	0.0002 U	0.0005 U
75-09-2	Methylene chloride	MG/L	0.002 U	0.02 U	0.002 U	0.027
75-25-2	Bromoform	MG/L	0.0005 U	0.005 U	0.0005 U	0.0005 U
75-27-4	Bromodichloromethane	MG/L	0.0002 U	0.002 U	0.0002 U	0.0005 U
75-34-3	1,1-Dichloroethane	MG/L	0.0002 U	0.002 U	0.0002 U	0.0005 U
75-35-4	1,1-Dichloroethene	MG/L	0.0005 U	0.005 U	0.0005 U	0.0005 U
75-69-4	Trichlorofluoromethane	MG/L	0.001 U	0.01 U	0.001 U	0.001 U
75-71-8	Dichlorodifluoromethane	MG/L				
76-13-1	1,1,2-Trichlorotrifluoroethane	MG/L				
76-44-8	Heptachlor	MG/L		0.0001 U		0.0001 U
7732-18-5	Chloromethane	MG/L				
77-47-4	Hexachlorocyclopentadiene	MG/L				
7782-49-2	Selenium (Se)	MG/L				
78-59-1	Isophorone	MG/L				
78-87-5	1,2-Dichloropropane	MG/L	0.0005 U	0.005 U	0.0005 U	0.0005 U
78-93-3	2-Butanone	MG/L				
79-00-5	1,1,2-Trichloroethane	MG/L	0.0002 U	0.002 U	0.0002 U	0.0005 U
79-01-6	Trichloroethene	MG/L	0.0002 U	0.002 U	0.0002 U	0.0005 U
79-34-5	1,1,2,2-Tetrachloroethane	MG/L	0.0005 U	0.005 U	0.0005 U	0.0005 U
8001-35-2	Toxaphene	MG/L		0.001 U		0.001 U
8071-51-0	2-Methyl-4,6-dinitrophenol	MG/L				
83-32-9	Acenaphthene	MG/L				
84-66-2	Diethyl phthalate	MG/L				
84-74-2	Di-n-butyl phthalate	MG/L				
85-01-8	Phenanthrene	MG/L				
85-68-7	Butyl benzyl phthalate	MG/L				
86-30-6	N-Nitrosodiphenylamine	MG/L				
86-73-7	Fluorene	MG/L				
87-61-6	1,2,3-Trichlorobenzene	MG/L				
87-68-3	Hexachlorobutadiene	MG/L				
87-86-5	Pentachlorophenol	MG/L		0.015 U		0.01 U
88-06-2	2,4,6-Trichlorophenol	MG/L		0.015 U		0.005 U
88-74-4	2-Nitroaniline	MG/L				
88-75-5	2-Nitrophenol	MG/L		0.005 U		0.005 U
90-13-1	Chloronaphthalene	MG/L				
91-20-3	Naphthalene	MG/L				
91-57-6	2-Methylnaphthalene	MG/L				
91-58-7	2-Chloronaphthalene	MG/L				
91-94-1	3,3´-Dichlorobenzidine	MG/L				
92-87-5	Benzidine	MG/L				
95-47-6	o-Xylene	MG/L	0.0005 U	0.005 U	0.0005 U	
95-48-7	2-Methylphenol	MG/L				
95-49-8	2-Chlorotoluene	MG/L				
95-50-1	1,2-Dichlorobenzene	MG/L	0.0005 U	0.005 U	0.0005 U	0.001 U
95-57-8	2-Chlorophenol	MG/L		0.015 U		0.005 U
95-63-6	1,2,4-Trimethylbenzene	MG/L				
95-95-4	2,4,5-Trichlorophenol	MG/L				
959-98-8	Endosulfan I	MG/L		0.0001 U		0.0001 U
96-12-8	1,2-Dibromo-3-chloropropane	MG/L				
96-18-4	1,2,3-Trichloropropane	MG/L				
98-06-6	tert-Butylbenzene	MG/L				
98-82-8	Isopropylbenzene	MG/L				
98-95-3	Nitrobenzene	MG/L				
99-09-2	3-Nitroaniline	MG/L				
99-87-6	4-Isopropyltoluene	MG/L				
DDD	DDD	MG/L				
GIS-130-312	m,p-Xylenes	MG/L				
NO3NO2N	Nitrate (NO3)	MG/L				
NO3NO2N	Nitrite/Nitrate Total	MG/L				
O&PXYLENE	O,P-Xylene	MG/L				
THMs	Trihalomethanes, Total	MG/L				
UNKNOWN	Acid Fraction	MG/L				
UNKNOWN	B/N Fraction	MG/L				
UNKNOWN	Dichlorobenzene	MG/L				
UNKNOWN	Dinitro-2-Methylphenol	MG/L				
UNKNOWN	Total Trihalomethanes (THMs)	MG/L				

Appendix C-4
Groundwater Data (1984 - 2007)
Page Trowbridge Ranch Landfill

		Sample ID	MW-2	MW-2 (Dup)	MW-2	MW-2	MW-2	MW-2 (Dup)	MW-2	MW-2	MW-2	MW-2	MW-2	MW-2 (Dup)	MW-2	MW-2 (Dup)	MW-2	MW-2
		Well ID	MW-2	MW-2	MW-2	MW-2	MW-2	MW-2	MW-2	MW-2	MW-2	MW-2	MW-2	MW-2	MW-2	MW-2	MW-2	MW-2
		Sample Date/Time	10/13/1992	10/13/1992	4/20/1993	10/12/1993	4/12/1994	10/11/1994	10/11/1994	4/26/1995	10/25/1995	2/21/1996	10/9/1996	10/9/1996	11/5/1997	8/23/2000	8/23/2000	10/26/2001
CAS_Number	**OGDEN_ANALYTE**	**FinalUnits**																
100-01-6	4-Nitroaniline	MG/L																
100-02-7	4-Nitrophenol	MG/L	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.005 U	0.02 U	0.02 U	0.021 U	0.025 U	0.025 U	
100-41-4	Ethylbenzene	MG/L	0.001 U	0.001 U	0.001 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.001 U	0.001 U	0.0005 U
100-42-5	Styrene	MG/L														0.001 U	0.001 U	0.0005 U
100-51-6	Benzyl alcohol	MG/L			0.01 U													
10061-01-5	cis-1,3-Dichloropropene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.001 U	0.001 U	0.0005 U
10061-02-6	trans-1,3-Dichloropropene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.001 U	0.001 U	0.0005 U
101-55-3	4-Bromophenyl phenyl ether	MG/L														0.005 U	0.005 U	
1024-57-3	Heptachlor epoxide	MG/L	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.00005 U	0.0001 U	0.0001 U	0.0001 U		0.00005 U	
1031-07-8	Endosulfan sulfate	MG/L	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.00005 U	0.0001 U	0.0001 U	0.0001 U		0.0001 U	
103-33-3	Azobenzene	MG/L																
103-65-1	n-Propylbenzene	MG/L														0.001 U	0.001 U	0.0005 U
104-51-8	n-Butylbenzene	MG/L														0.001 U	0.001 U	0.0005 U
105-67-9	2,4-Dimethylphenol	MG/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U			0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.0052 U	0.01 U	0.01 U	
106-43-4	4-Chlorotoluene	MG/L														0.001 U	0.001 U	0.0005 U
106-44-5	3 & 4-Methylphenol	MG/L																
106-44-5	4-Methylphenol	MG/L			0.01 U							0.003 U						
106-46-7	1,4-Dichlorobenzene	MG/L	0.001 U	0.001 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.001 U	0.001 U	0.0005 U
106-47-8	4-Chloroaniline	MG/L																
106-93-4	1,2-Dibromoethane	MG/L														0.001 U	0.001 U	
107-06-2	1,2-Dichloroethane	MG/L	0.0005 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.001 U	0.001 U	0.0005 U
108-05-4	Vinyl Acetate	MG/L														0.001 U	0.001 U	
108-10-1	4-Methyl-2-Pentanone	MG/L														0.005 U	0.005 U	
108-38-3	M-Xylene	MG/L																
108-60-1	Bis(2-chloroisopropyl)ether	MG/L														0.01 U	0.01 U	
108-67-8	1,3,5-Trimethylbenzene	MG/L														0.001 U	0.001 U	0.0005 U
108-86-1	Bromobenzene	MG/L														0.001 U	0.001 U	0.0005 U
108-88-3	Toluene	MG/L	0.001 U	0.001 U	0.001 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.001 U	0.001 U	0.0005 U
108-90-7	Chlorobenzene	MG/L	0.0005 U	0.0005 U	0.001 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.001 U	0.001 U	0.0005 U
108-95-2	Phenol	MG/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.003 U	0.005 U	0.005 U	0.0052 U	0.01 U	0.01 U	
110-75-8	2-Chloroethyl Vinyl Ether	MG/L	0.005 U	0.005 U	0.005 U	0.01 U	0.01 U					0.001 U				0.005 U	0.005 U	
11096-82-5	PCB-1260 (Aroclor)	MG/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0005 U	0.001 U	0.001 U	0.001 U		0.001 U	
11097-69-1	PCB-1254 (Aroclor)	MG/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0005 U	0.001 U	0.001 U	0.001 U		0.001 U	
11104-28-2	PCB-1221 (Aroclor)	MG/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0005 U	0.001 U	0.001 U	0.001 U		0.001 U	
11104-29-3	PCB-1242 (Aroclor)	MG/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0005 U	0.001 U	0.001 U	0.001 U		0.001 U	
11141-16-5	PCB-1232 (Aroclor)	MG/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0005 U	0.001 U	0.001 U	0.001 U		0.001 U	
111-44-4	Bis(2-chloroethyl)ether	MG/L														0.01 U	0.01 U	
111-91-1	Bis(2-chloroethoxy)methane	MG/L														0.01 U	0.01 U	
117-81-7	Bis(2-ethylhexyl)phthalate	MG/L														0.01 U	0.01 U	
117-84-0	Di-n-octyl phthalate	MG/L														0.01 U	0.01 U	
118-74-1	Hexachlorobenzene	MG/L														0.005 U	0.005 U	
120-12-7	Anthracene	MG/L														0.005 U	0.005 U	
120-82-1	1,2,4-Trichlorobenzene	MG/L														0.01 U	0.01 U	0.0005 U
120-83-2	2,4-Dichlorophenol	MG/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.003 U	0.005 U	0.005 U	0.0052 U	0.01 U	0.01 U	
121-14-2	2,4-Dinitrotoluene	MG/L														0.005 U	0.005 U	
122-66-7	1,2-Diphenylhydrazine (As Azobenzene)	MG/L														0.005 U	0.005 U	
124-48-1	Dibromochloromethane	MG/L	0.0005 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.001 U	0.001 U	0.0005 U
12672-29-6	PCB-1248 (Aroclor)	MG/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0005 U	0.001 U	0.001 U	0.001 U		0.001 U	
12674-11-2	PCB-1016 (Aroclor)	MG/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0005 U	0.001 U	0.001 U	0.001 U		0.001 U	
127-18-4	Tetrachloroethene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.001 U	0.001 U	0.0005 U
129-00-0	Pyrene	MG/L														0.005 U	0.005 U	
131-11-3	Dimethyl phthalate	MG/L														0.02 U	0.02 U	
132-64-9	Dibenzofuran	MG/L																
1330-20-7	m,p-Xylene	MG/L			0.001 U							0.001 U				0.001 U	0.001 U	0.0005 U
1330-20-7	Xylenes, Total	MG/L	0.001 U	0.001 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U			
135-98-8	sec-Butylbenzene	MG/L														0.001 U	0.001 U	0.0005 U
142-28-9	1,3-Dichloropropane	MG/L														0.001 U	0.001 U	0.0005 U
14808-79-8	Sulfate (SO4)	MG/L	4.1	4.2	5.3	5	5	4.3	4.4	5 U	5 U	5 U	5 U	5 U	5 U			25 U
156-59-2	cis-1,2-Dichloroethene	MG/L										0.0005 U				0.001 U	0.001 U	0.0005 U
156-60-5	trans-1,2-Dichloroethene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.001 U	0.001 U	0.0005 U
1634-04-4	Methyl tert-butyl ether	MG/L														0.001 U	0.001 U	
16887-00-6	Chloride (Cl-)	MG/L	7	7.3	7.3	8	8	8	8.9	7.1	6.4	5 U	6.6	6.4	8.5			5 U
16984-48-8	Fluoride (Fl-)	MG/L																
191-24-2	Benzo(g,h,i)perylene	MG/L														0.005 U	0.005 U	
193-39-5	Indeno(1,2,3-cd)pyrene	MG/L														0.005 U	0.005 U	
205-99-2	Benzo(b)fluoranthene	MG/L														0.005 U	0.005 U	
206-44-0	Fluoranthene	MG/L														0.005 U	0.005 U	
207-08-9	Benzo(k)fluoranthene	MG/L														0.005 U	0.005 U	
208-96-8	Acenaphthylene	MG/L														0.01 U	0.01 U	
218-01-9	Chrysene	MG/L														0.005 U	0.005 U	
25551-13-7	Trimethyl Benzene	MG/L																
309-00-2	Aldrin	MG/L	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.00005 U	0.0001 U	0.0001 U	0.0001 U		0.00005 U	
319-84-6	alpha-BHC	MG/L	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.00005 U	0.0001 U	0.0001 U	0.0001 U		0.00005 U	
319-85-7	beta-BHC	MG/L	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U		0.00005 U	
319-86-8	delta-BHC	MG/L	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U		0.00005 U	
33213-65-9	Endosulfan II	MG/L	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.00005 U	0.0001 U	0.0001 U	0.0001 U		0.0001 U	
50-29-3	2,4-DDT	MG/L																

Appendix C-4
Groundwater Data (1984 - 2007)
Page Trowbridge Ranch Landfill

		Sample ID	MW-2	MW-2 (Dup)	MW-2	MW-2	MW-2	MW-2 (Dup)	MW-2	MW-2	MW-2	MW-2	MW-2	MW-2 (Dup)	MW-2	MW-2 (Dup)	MW-2	MW-2
		Well ID	MW-2	MW-2	MW-2	MW-2	MW-2	MW-2	MW-2	MW-2	MW-2	MW-2	MW-2	MW-2	MW-2	MW-2	MW-2	MW-2
		Sample Date/Time	10/13/1992	10/13/1992	4/20/1993	10/12/1993	4/12/1994	10/11/1994	10/11/1994	4/26/1995	10/25/1995	2/21/1996	10/9/1996	10/9/1996	11/5/1997	8/23/2000	8/23/2000	10/26/2001
CAS_Number	**OGDEN_ANALYTE**	**FinalUnits**																
50-29-3	4,4'-DDT	MG/L	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.00005 U	0.0001 U	0.0001 U	0.0001 U		0.0001 U	
50-29-3	DDT (p,p-DDT)	MG/L																
50-32-8	Benzo(a)pyrene	MG/L														0.005 U	0.005 U	
5103-71-9	alpha-Chlordane	MG/L															0.00005 U	
51-28-5	2,4-Dinitrophenol	MG/L	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.05 U	0.05 U	0.05 U	0.05 U	0.01 U	0.05 U	0.05 U	0.052 U	0.05 U	0.05 U	
53-19-0	2,4-DDD	MG/L																
534-52-1	2-Methyl-4,6-dinitrophenol	MG/L	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U		0.03 U	0.03 U	0.03 U	0.005 U	0.03 U		0.031 U	0.05 U	0.05 U	
53494-70-5	Endrin Ketone	MG/L																
53-70-3	Dibenz(a,h)anthracene	MG/L														0.005 U	0.005 U	
540-59-0	Total-1,2-Dichloroethene	MG/L																
541-73-1	1,3-Dichlorobenzene	MG/L	0.001 U	0.001 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.001 U	0.001 U	0.0005 U
542-75-6	1,3-Dichloropropene, Total	MG/L																
56-23-5	Carbon tetrachloride	MG/L	0.0005 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.001 U	0.001 U	0.0005 U
563-58-6	1,1-Dichloropropene	MG/L														0.001 U	0.001 U	0.0005 U
56-55-3	Benz(a)anthracene	MG/L														0.01 U	0.01 U	
57-74-2	gamma-Chlordane	MG/L															0.00005 U	
57-74-9	Chlordane	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U			
57-74-9	Chlordane Technical	MG/L															0.001 U	
58-89-9	gamma-BHC	MG/L	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U		0.00005 U	
591-78-6	2-Hexanone	MG/L														0.005 U	0.005 U	
594-20-7	2,2-Dichloropropane	MG/L														0.001 U	0.001 U	0.0005 U
59-50-7	4-Chloro-3-methylphenol	MG/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.003 U	0.005 U	0.005 U	0.0052 U	0.01 U	0.01 U	
60-57-1	Dieldrin	MG/L	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.00005 U	0.0001 U	0.0001 U	0.0001 U		0.0001 U	
606-20-2	2,6-Dinitrotoluene	MG/L														0.005 U	0.005 U	
621-64-7	N-Nitrosodi-n-propylamine	MG/L														0.01 U	0.01 U	
62-75-9	N-Nitrosodimethylamine	MG/L														0.01 U	0.01 U	
630-20-6	1,1,1,2-Tetrachloroethane	MG/L																0.0005 U
634-90-2	1,2,3,5-Tetrachlorobenzene	MG/L																
65-85-0	Benzoic acid	MG/L			0.05 U													
67-64-1	Acetone	MG/L														0.005 U	0.005 U	
67-66-3	Chloroform	MG/L	0.0005 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.001 U	0.001 U	0.0005 U
67-72-1	Hexachloroethane	MG/L														0.01 U	0.01 U	
7005-72-3	4-Chlorophenyl phenyl ether	MG/L														0.01 U	0.01 U	
71-43-2	Benzene	MG/L	0.0005 U	0.0005 U	0.001 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.001 U	0.001 U	0.0005 U
71-55-6	1,1,1-Trichloroethane	MG/L	0.0005 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.001 U	0.001 U	0.0005 U
72-20-8	Endrin	MG/L	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.00005 U	0.0001 U	0.0001 U	0.0001 U		0.0001 U	
72-43-5	Methoxychlor	MG/L	0.0005 U	0.0005 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.00005 U	0.0001 U	0.0001 U	0.0001 U		0.0005 U	
72-54-8	1,4-DDD	MG/L																
72-54-8	2,4-DDD	MG/L																
72-54-8	4,4'-DDD	MG/L	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.00005 U	0.0001 U	0.0001 U	0.0001 U			
72-54-8	DDD (p,p-DDD)	MG/L																
72-55-9	1,4-DDE	MG/L																
72-55-9	4,4'-DDE	MG/L	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.00005 U	0.0001 U	0.0001 U	0.0001 U		0.0001 U	
72-55-9	DDE (p,p-DDE)	MG/L																
7421-93-4	Endrin aldehyde	MG/L	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.00005 U	0.0001 U	0.0001 U	0.0001 U		0.0001 U	
7439-89-6	Iron (Fe)	MG/L																
7439-92-1	Lead (Pb)	MG/L																
7439-95-4	Magnesium (Mg)	MG/L																
7439-96-5	Manganese (Mn)	MG/L	0.53	0.53	0.56	0.57	6.8	0.46	0.46	0.48	0.5	0.35	0.38	0.4	0.34			0.23
7439-97-6	Mercury (Hg)	MG/L																
7440-02-0	Nickel (Ni)	MG/L																
7440-22-4	Silver (Ag)	MG/L																
7440-23-5	Sodium (Na)	MG/L	37.5	37.2	29.8	28.1	38	31.2	30.9	28.4	15.7	31	36.3	37.2	31			35
7440-31-5	Tin (Sn)	MG/L																
7440-38-2	Arsenic (As)	MG/L																
7440-39-3	Barium (Ba)	MG/L																

Appendix C-4
Groundwater Data (1984 - 2007)
Page Trowbridge Ranch Landfill

		Sample ID	MW-2	MW-2 (Dup)	MW-2	MW-2	MW-2	MW-2 (Dup)	MW-2	MW-2	MW-2	MW-2	MW-2	MW-2 (Dup)	MW-2	MW-2 (Dup)	MW-2	MW-2
		Well ID	MW-2	MW-2	MW-2	MW-2	MW-2	MW-2	MW-2	MW-2	MW-2	MW-2	MW-2	MW-2	MW-2	MW-2	MW-2	MW-2
		Sample Date/Time	10/13/1992	10/13/1992	4/20/1993	10/12/1993	4/12/1994	10/11/1994	10/11/1994	4/26/1995	10/25/1995	2/21/1996	10/9/1996	10/9/1996	11/5/1997	8/23/2000	8/23/2000	10/26/2001
CAS_Number	**OGDEN_ANALYTE**	**FinalUnits**																
7440-43-9	Cadmium (Cd)	MG/L																
7440-47-3	Chromium (Cr)	MG/L																
7440-50-8	Copper (Cu)	MG/L																
7440-66-6	Zinc (Zn)	MG/L																
7440-70-2	Calcium (Ca)	MG/L																
74-83-9	Bromomethane	MG/L	0 U	0 U	0 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.005 U	0.005 U	0.0005 U
74-87-3	Chloromethane	MG/L	0.001 U	0.001 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.0005 U	0.005 U	0.005 U	0.005 U	0.001 U	0.001 U	0.0005 U
74-95-3	Dibromoethane	MG/L																
74-95-3	Dibromomethane	MG/L																0.0005 U
74-97-5	Bromochloromethane	MG/L														0.001 U	0.001 U	0.0005 U
75-00-3	Chloroethane	MG/L	0 U	0 U	0 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.001 U	0.001 U	0.0005 U
75-01-4	Vinyl chloride	MG/L	0.0005 U	0.0005 U	0.001 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.001 U	0.001 U	0.0005 U
75-09-2	Methylene chloride	MG/L	0.0031	0.0058	0.005 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.002 U	0.01 U	0.01 U	0.01 U	0.002 U	0.002 U	0.0005 U
75-25-2	Bromoform	MG/L	0.0005 U	0.0005 U	0.001 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.001 U	0.001 U	0.0005 U
75-27-4	Bromodichloromethane	MG/L	0.0005 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.001 U	0.001 U	0.0005 U
75-34-3	1,1-Dichloroethane	MG/L	0.0005 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.001 U	0.001 U	0.0005 U
75-35-4	1,1-Dichloroethene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.001 U	0.001 U	0.0005 U
75-69-4	Trichlorofluoromethane	MG/L	0.001 U	0.001 U	0.001 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.001 U	0.001 U	0.0005 U
75-71-8	Dichlorodifluoromethane	MG/L			0.001 U					0.005 U	0.005 U	0.0005 U	0.005 U	0.005 U	0.005 U	0.001 U	0.001 U	0.0005 U
76-13-1	1,1,2-Trichlorotrifluoroethane	MG/L																
76-44-8	Heptachlor	MG/L	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.00005 U	0.0001 U	0.0001 U	0.0001 U		0.00005 U	
7732-18-5	Chloromethane	MG/L																
77-47-4	Hexachlorocyclopentadiene	MG/L														0.01 U	0.01 U	
7782-49-2	Selenium (Se)	MG/L																
78-59-1	Isophorone	MG/L														0.01 U	0.01 U	
78-87-5	1,2-Dichloropropane	MG/L	0.0005 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.001 U	0.001 U	0.0005 U
78-93-3	2-Butanone	MG/L														0.005 U	0.005 U	
79-00-5	1,1,2-Trichloroethane	MG/L	0.0005 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.001 U	0.001 U	0.0005 U
79-01-6	Trichloroethene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.001 U	0.001 U	0.0005 U
79-34-5	1,1,2,2-Tetrachloroethane	MG/L	0.0005 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.001 U	0.001 U	0.0005 U
8001-35-2	Toxaphene	MG/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0005 U	0.001 U	0.001 U	0.001 U		0.002 U	
8071-51-0	2-Methyl-4,6-dinitrophenol	MG/L			0.02 U	0.02 U	0.02 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U				
83-32-9	Acenaphthene	MG/L														0.01 U	0.01 U	
84-66-2	Diethyl phthalate	MG/L														0.01 U	0.01 U	
84-74-2	Di-n-butyl phthalate	MG/L														0.01 U	0.01 U	
85-01-8	Phenanthrene	MG/L														0.005 U	0.005 U	
85-68-7	Butyl benzyl phthalate	MG/L														0.01 U	0.01 U	
86-30-6	N-Nitrosodiphenylamine	MG/L														0.005 U	0.005 U	
86-73-7	Fluorene	MG/L														0.01 U	0.01 U	
87-61-6	1,2,3-Trichlorobenzene	MG/L														0.005 U	0.005 U	0.0005 U
87-68-3	Hexachlorobutadiene	MG/L														0.01 U	0.01 U	0.0005 U
87-86-5	Pentachlorophenol	MG/L	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.005 U	0.02 U	0.02 U	0.01 U	0.05 U	0.05 U	
88-06-2	2,4,6-Trichlorophenol	MG/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.003 U	0.005 U	0.005 U	0.0052 U	0.02 U	0.02 U	
88-74-4	2-Nitroaniline	MG/L																
88-75-5	2-Nitrophenol	MG/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.0052 U	0.015 U	0.015 U	
90-13-1	Chloronaphthalene	MG/L																
91-20-3	Naphthalene	MG/L														0.01 U	0.01 U	0.0005 U
91-57-6	2-Methylnaphthalene	MG/L																
91-58-7	2-Chloronaphthalene	MG/L														0.01 U	0.01 U	
91-94-1	3,3´-Dichlorobenzidine	MG/L														0.01 U	0.01 U	
92-87-5	Benzidine	MG/L														0.15 U	0.15 U	
95-47-6	o-Xylene	MG/L			0.0005 U							0.0005 U				0.001 U	0.001 U	0.0005 U
95-48-7	2-Methylphenol	MG/L			0.01 U							0.003 U						
95-49-8	2-Chlorotoluene	MG/L														0.001 U	0.001 U	0.0005 U
95-50-1	1,2-Dichlorobenzene	MG/L	0.001 U	0.001 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.001 U	0.001 U	0.0005 U
95-57-8	2-Chlorophenol	MG/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.003 U	0.005 U	0.005 U	0.0052 U	0.01 U	0.01 U	
95-63-6	1,2,4-Trimethylbenzene	MG/L														0.001 U	0.001 U	0.0005 U
95-95-4	2,4,5-Trichlorophenol	MG/L			0.05 U							0.003 U						
959-98-8	Endosulfan I	MG/L	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.00005 U	0.0001 U	0.0001 U	0.0001 U		0.00005 U	
96-12-8	1,2-Dibromo-3-chloropropane	MG/L																
96-18-4	1,2,3-Trichloropropane	MG/L														0.001 U	0.001 U	0.0005 U
98-06-6	tert-Butylbenzene	MG/L														0.001 U	0.001 U	0.0005 U
98-82-8	Isopropylbenzene	MG/L																0.0005 U
98-95-3	Nitrobenzene	MG/L														0.01 U	0.01 U	
99-09-2	3-Nitroaniline	MG/L																
99-87-6	4-Isopropyltoluene	MG/L														0.001 U	0.001 U	0.0005 U
DDD	DDD	MG/L															0.0001 U	
GIS-130-312	m,p-Xylenes	MG/L																
NO3NO2N	Nitrate (NO3)	MG/L																
NO3NO2N	Nitrite/Nitrate Total	MG/L																
O&PXYLENE	O,P-Xylene	MG/L																
THMs	Trihalomethanes, Total	MG/L																
UNKNOWN	Acid Fraction	MG/L																
UNKNOWN	B/N Fraction	MG/L																
UNKNOWN	Dichlorobenzene	MG/L																
UNKNOWN	Dinitro-2-Methylphenol	MG/L			0.05 U													
UNKNOWN	Total Trihalomethanes (THMs)	MG/L																

Appendix C-4
Groundwater Data (1984 - 2007)
Page Trowbridge Ranch Landfill

		Sample ID Well ID Sample Date/Time	MW-2 (DUP) MW-2 10/26/2001	MW #2 MW-2 4/23/2003 11:22:00 AM	MW #2 MW-2 10/22/2003 11:34:00 AM	MW #2 MW-2 4/21/2004 11:19:00 AM	MW#2 MW-2 5/5/2004 11:04:00 AM	MW#2 MW-2 10/13/2004 11:05:00 AM	MW #2 MW-2 4/13/2005 12:21:00 PM	MW#2 MW-2 10/12/2005 10:41:00 AM	MW#2 MW-2 4/12/2006 11:16:00 AM	MW #2 MW-2 11/7/2006 10:30:00 AM	MW #2 MW-2 4/11/2007 11:00:00 AM	MW#2 (07-10-0989-01) MW-2 10/24/2007 11:18:00 AM	MW#2 Dup MW-2 10/24/2007	MW#2 MW-2 10/24/2007 11:18:00 AM	MW#2 (07-10-0989-02) MW-2 11/6/2007	MW #2 (07100989) MW-2 10/24/2007 11:18:00 AM	MW #2 Dup (07100989) MW-2 10/24/2007 11:18:00 AM
CAS_Number	**OGDEN_ANALYTE**	**FinalUnits**																	
100-01-6	4-Nitroaniline	MG/L		0.01 U	0.01 U	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U		0.01 U	0.01 U			
100-02-7	4-Nitrophenol	MG/L		0.025 U	0.025 U	0.025 U		0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U		0.025 U	0.025 U			
100-41-4	Ethylbenzene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U		
100-42-5	Styrene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U		
100-51-6	Benzyl alcohol	MG/L		0.01 U	0.01 U	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U		0.01 U	0.01 U			
10061-01-5	cis-1,3-Dichloropropene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U						
10061-02-6	trans-1,3-Dichloropropene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U						
101-55-3	4-Bromophenyl phenyl ether	MG/L		0.005 U	0.01 U	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U		0.01 U	0.01 U			
1024-57-3	Heptachlor epoxide	MG/L		0.00005 U	0.00005 U	0.00005 U		0.00005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U			0.00005 U			
1031-07-8	Endosulfan sulfate	MG/L		0.00005 U	0.00005 U	0.00005 U		0.00005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U			0.00005 U			
103-33-3	Azobenzene	MG/L		0.005 U	0.01 U	0.01 U		0.01 U	0.01 U										
103-65-1	n-Propylbenzene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U						
104-51-8	n-Butylbenzene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U						
105-67-9	2,4-Dimethylphenol	MG/L		0.01 U	0.01 U	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U		0.01 U	0.01 U			
106-43-4	4-Chlorotoluene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U		
106-44-5	3 & 4-Methylphenol	MG/L							0.01 U	0.01 U	0.01 U	0.01 U	0.01 U		0.01 U	0.01 U			
106-44-5	4-Methylphenol	MG/L		0.01 U	0.01 U	0.01 U		0.01 U											
106-46-7	1,4-Dichlorobenzene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.01 U	0.0005 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0005 U	0.01 U	0.01 U	0.0005 U		
106-47-8	4-Chloroaniline	MG/L		0.01 U	0.01 U	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U		0.01 U	0.01 U			
106-93-4	1,2-Dibromoethane	MG/L		0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U						
107-06-2	1,2-Dichloroethane	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U		
108-05-4	Vinyl Acetate	MG/L																	
108-10-1	4-Methyl-2-Pentanone	MG/L																	
108-38-3	M-Xylene	MG/L																	
108-60-1	Bis(2-chloroisopropyl)ether	MG/L		0.01 U	0.01 U	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U		0.01 U	0.01 U			
108-67-8	1,3,5-Trimethylbenzene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U						
108-86-1	Bromobenzene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U		
108-88-3	Toluene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.014	0.0005 U	0.0005 U			0.0005 U		
108-90-7	Chlorobenzene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U		
108-95-2	Phenol	MG/L		0.01 U	0.01 U	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U		0.01 U	0.01 U			
110-75-8	2-Chloroethyl Vinyl Ether	MG/L																	
11096-82-5	PCB-1260 (Aroclor)	MG/L																	
11097-69-1	PCB-1254 (Aroclor)	MG/L																	
11104-28-2	PCB-1221 (Aroclor)	MG/L																	
11104-29-3	PCB-1242 (Aroclor)	MG/L																	
11141-16-5	PCB-1232 (Aroclor)	MG/L																	
111-44-4	Bis(2-chloroethyl)ether	MG/L		0.01 U	0.01 U	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U		0.01 U	0.01 U			
111-91-1	Bis(2-chloroethoxy)methane	MG/L		0.01 U	0.01 U	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U		0.01 U	0.01 U			
117-81-7	Bis(2-ethylhexyl)phthalate	MG/L		0.01 U	0.01 U	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.005 U	0.005 U		0.005 U	0.005 U			
117-84-0	Di-n-octyl phthalate	MG/L		0.01 U	0.01 U	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U		0.01 U	0.01 U			
118-74-1	Hexachlorobenzene	MG/L		0.005 U	0.01 U	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U		0.01 U	0.01 U			
120-12-7	Anthracene	MG/L		0.005 U	0.01 U	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U		0.01 U	0.01 U			
120-82-1	1,2,4-Trichlorobenzene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.01 U	0.0005 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0005 U	0.01 U	0.01 U	0.0005 U		
120-83-2	2,4-Dichlorophenol	MG/L		0.01 U	0.01 U	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U		0.01 U	0.01 U			
121-14-2	2,4-Dinitrotoluene	MG/L		0.005 U	0.01 U	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U		0.01 U	0.01 U			
122-66-7	1,2-Diphenylhydrazine (As Azobenzene)	MG/L								0.01 U	0.01 U	0.01 U	0.01 U		0.01 U	0.01 U			
124-48-1	Dibromochloromethane	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U		
12672-29-6	PCB-1248 (Aroclor)	MG/L																	
12674-11-2	PCB-1016 (Aroclor)	MG/L																	
127-18-4	Tetrachloroethene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U		
129-00-0	Pyrene	MG/L		0.005 U	0.01 U	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U		0.01 U	0.01 U			
131-11-3	Dimethyl phthalate	MG/L		0.02 U	0.02 U	0.02 U		0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U		0.02 U	0.02 U			
132-64-9	Dibenzofuran	MG/L		0.01 U	0.01 U	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U		0.01 U	0.01 U			
1330-20-7	m,p-Xylene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U						
1330-20-7	Xylenes, Total	MG/L							0.001 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0015 U			0.0015 U		
135-98-8	sec-Butylbenzene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U						
142-28-9	1,3-Dichloropropane	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U		
14808-79-8	Sulfate (SO4)	MG/L	25 U	2.7	4.4	4.6		3.8	4.6	4.4	4.1	4.2	4.1					2.8	2.9
156-59-2	cis-1,2-Dichloroethene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U		
156-60-5	trans-1,2-Dichloroethene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U		
1634-04-4	Methyl tert-butyl ether	MG/L																	
16887-00-6	Chloride (Cl-)	MG/L	5 U	7	6.6	6.2		6.9	6.2	7.7	6	6.5	6.9					6.2	6.2
16984-48-8	Fluoride (Fl-)	MG/L																	
191-24-2	Benzo(g,h,i)perylene	MG/L		0.005 U	0.01 U	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U		0.01 U	0.01 U			
193-39-5	Indeno(1,2,3-cd)pyrene	MG/L		0.005 U	0.01 U	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U		0.01 U	0.01 U			
205-99-2	Benzo(b)fluoranthene	MG/L		0.005 U	0.01 U	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U		0.01 U	0.01 U			
206-44-0	Fluoranthene	MG/L		0.005 U	0.01 U	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U		0.01 U	0.01 U			
207-08-9	Benzo(k)fluoranthene	MG/L		0.005 U	0.01 U	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U		0.01 U	0.01 U			
208-96-8	Acenaphthylene	MG/L		0.01 U	0.01 U	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U		0.01 U	0.01 U			
218-01-9	Chrysene	MG/L		0.005 U	0.01 U	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U		0.01 U	0.01 U			
25551-13-7	Trimethyl Benzene	MG/L																	
309-00-2	Aldrin	MG/L		0.00005 U	0.00005 U	0.00005 U		0.00005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U			0.00005 U			
319-84-6	alpha-BHC	MG/L		0.00005 U	0.00005 U	0.00005 U		0.00005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U			0.00005 U			
319-85-7	beta-BHC	MG/L		0.00005 U	0.00005 U	0.00005 U		0.00005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U			0.00005 U			
319-86-8	delta-BHC	MG/L		0.00005 U	0.00005 U	0.00005 U		0.00005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U			0.00005 U			
33213-65-9	Endosulfan II	MG/L		0.00005 U	0.00005 U	0.00005 U		0.00005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U			0.00005 U			
50-29-3	2,4-DDT	MG/L																	

Appendix C-4
Groundwater Data (1984 - 2007)
Page Trowbridge Ranch Landfill

		Sample ID Well ID Sample Date/Time	MW-2 (DUP) MW-2 10/26/2001	MW #2 MW-2 4/23/2003 11:22:00 AM	MW #2 MW-2 10/22/2003 11:34:00 AM	MW #2 MW-2 4/21/2004 11:19:00 AM	MW#2 MW-2 5/5/2004 11:04:00 AM	MW#2 MW-2 10/13/2004 11:05:00 AM	MW #2 MW-2 4/13/2005 12:21:00 PM	MW#2 MW-2 10/12/2005 10:41:00 AM	MW#2 MW-2 4/12/2006 11:16:00 AM	MW #2 MW-2 11/7/2006 10:30:00 AM	MW #2 MW-2 4/11/2007 11:00:00 AM	MW#2 (07-10-0989-01) MW-2 10/24/2007 11:18:00 AM	MW#2 Dup MW-2 10/24/2007	MW#2 MW-2 10/24/2007 11:18:00 AM	MW#2 (07-10-0989-02) MW-2 11/6/2007	MW #2 (07100989) MW-2 10/24/2007 11:18:00 AM	MW #2 Dup (07100989) MW-2 10/24/2007 11:18:00 AM
CAS_Number	**OGDEN_ANALYTE**	**FinalUnits**																	
50-29-3	4,4'-DDT	MG/L		0.00005 U	0.00005 U	0.00005 U		0.00005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U			0.00005 U			
50-29-3	DDT (p,p-DDT)	MG/L																	
50-32-8	Benzo(a)pyrene	MG/L		0.005 U	0.01 U	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U		0.01 U	0.01 U			
5103-71-9	alpha-Chlordane	MG/L																	
51-28-5	2,4-Dinitrophenol	MG/L		0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U		0.05 U	0.05 U			
53-19-0	2,4-DDD	MG/L																	
534-52-1	2-Methyl-4,6-dinitrophenol	MG/L		0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U		0.05 U	0.05 U			
53494-70-5	Endrin Ketone	MG/L																	
53-70-3	Dibenz(a,h)anthracene	MG/L		0.005 U	0.01 U	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U		0.01 U	0.01 U			
540-59-0	Total-1,2-Dichloroethene	MG/L																	
541-73-1	1,3-Dichlorobenzene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.01 U	0.0005 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0005 U	0.01 U	0.01 U	0.0005 U		
542-75-6	1,3-Dichloropropene, Total	MG/L												0.0005 U			0.0005 U		
56-23-5	Carbon tetrachloride	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U		
563-58-6	1,1-Dichloropropene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U		
56-55-3	Benz(a)anthracene	MG/L		0.01 U	0.01 U	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U		0.01 U	0.01 U			
57-74-2	gamma-Chlordane	MG/L																	
57-74-9	Chlordane	MG/L		0.0005 U	0.0005 U	0.0005 U		0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U			
57-74-9	Chlordane Technical	MG/L																	
58-89-9	gamma-BHC	MG/L		0.00005 U	0.00005 U	0.00005 U		0.00005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U			0.00005 U			
591-78-6	2-Hexanone	MG/L																	
594-20-7	2,2-Dichloropropane	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U		
59-50-7	4-Chloro-3-methylphenol	MG/L		0.01 U	0.01 U	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U		0.01 U	0.01 U			
60-57-1	Dieldrin	MG/L		0.00005 U	0.00005 U	0.00005 U		0.00005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U			0.00005 U			
606-20-2	2,6-Dinitrotoluene	MG/L		0.005 U	0.01 U	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U		0.01 U	0.01 U			
621-64-7	N-Nitrosodi-n-propylamine	MG/L		0.01 U	0.01 U	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U		0.01 U	0.01 U			
62-75-9	N-Nitrosodimethylamine	MG/L																	
630-20-6	1,1,1,2-Tetrachloroethane	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U		
634-90-2	1,2,3,5-Tetrachlorobenzene	MG/L																	
65-85-0	Benzoic acid	MG/L		0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U	0.025 U	0.025 U		0.025 U	0.025 U			
67-64-1	Acetone	MG/L																	
67-66-3	Chloroform	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U		
67-72-1	Hexachloroethane	MG/L		0.01 U	0.01 U	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U		0.01 U	0.01 U			
7005-72-3	4-Chlorophenyl phenyl ether	MG/L		0.01 U	0.01 U	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U		0.01 U	0.01 U			
71-43-2	Benzene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U		
71-55-6	1,1,1-Trichloroethane	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U		
72-20-8	Endrin	MG/L		0.00005 U	0.00005 U	0.00005 U		0.00005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U			0.00005 U			
72-43-5	Methoxychlor	MG/L		0.0001 U	0.0001 U	0.0001 U		0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U			0.0001 U			
72-54-8	1,4-DDD	MG/L																	
72-54-8	2,4-DDD	MG/L																	
72-54-8	4,4'-DDD	MG/L		0.00005 U	0.00005 U	0.00005 U		0.00005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U			0.00005 U			
72-54-8	DDD (p,p-DDD)	MG/L																	
72-55-9	1,4-DDE	MG/L																	
72-55-9	4,4'-DDE	MG/L		0.00005 U	0.00005 U	0.00005 U		0.00005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U			0.00005 U			
72-55-9	DDE (p,p-DDE)	MG/L																	
7421-93-4	Endrin aldehyde	MG/L		0.00005 U	0.00005 U	0.00005 U		0.00005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U			0.00005 U			
7439-89-6	Iron (Fe)	MG/L																	
7439-92-1	Lead (Pb)	MG/L																	
7439-95-4	Magnesium (Mg)	MG/L																	
7439-96-5	Manganese (Mn)	MG/L	0.23	0.17	0.17	0.15		0.14	0.14	0.17	0.18	0.14	0.21		0.099	0.13			
7439-97-6	Mercury (Hg)	MG/L																	
7440-02-0	Nickel (Ni)	MG/L																	
7440-22-4	Silver (Ag)	MG/L																	
7440-23-5	Sodium (Na)	MG/L	35	30	32	32		35	39	37	36	38	34		35	33			
7440-31-5	Tin (Sn)	MG/L																	
7440-38-2	Arsenic (As)	MG/L																	
7440-39-3	Barium (Ba)	MG/L																	

Appendix C-4
Groundwater Data (1984 - 2007)
Page Trowbridge Ranch Landfill

		Sample ID Well ID Sample Date/Time	MW-2 (DUP) MW-2 10/26/2001	MW #2 MW-2 4/23/2003 11:22:00 AM	MW #2 MW-2 10/22/2003 11:34:00 AM	MW #2 MW-2 4/21/2004 11:19:00 AM	MW#2 MW-2 5/5/2004 11:04:00 AM	MW#2 MW-2 10/13/2004 11:05:00 AM	MW #2 MW-2 4/13/2005 12:21:00 PM	MW#2 MW-2 10/12/2005 10:41:00 AM	MW#2 MW-2 4/12/2006 11:16:00 AM	MW #2 MW-2 11/7/2006 10:30:00 AM	MW #2 MW-2 4/11/2007 11:00:00 AM	MW#2 (07-10-0989-01) MW-2 10/24/2007 11:18:00 AM	MW#2 Dup MW-2 10/24/2007	MW#2 MW-2 10/24/2007 11:18:00 AM	MW#2 (07-10-0989-02) MW-2 11/6/2007	MW #2 (07100989) MW-2 10/24/2007 11:18:00 AM	MW #2 Dup (07100989) MW-2 10/24/2007 11:18:00 AM
CAS_Number	**OGDEN_ANALYTE**	**FinalUnits**																	
7440-43-9	Cadmium (Cd)	MG/L																	
7440-47-3	Chromium (Cr)	MG/L																	
7440-50-8	Copper (Cu)	MG/L																	
7440-66-6	Zinc (Zn)	MG/L																	
7440-70-2	Calcium (Ca)	MG/L																	
74-83-9	Bromomethane	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U		
74-87-3	Chloromethane	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.00079	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U		
74-95-3	Dibromoethane	MG/L																	
74-95-3	Dibromomethane	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U		
74-97-5	Bromochloromethane	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U						
75-00-3	Chloroethane	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U		
75-01-4	Vinyl chloride	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U		
75-09-2	Methylene chloride	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U		
75-25-2	Bromoform	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U		
75-27-4	Bromodichloromethane	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U		
75-34-3	1,1-Dichloroethane	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U		
75-35-4	1,1-Dichloroethene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U		
75-69-4	Trichlorofluoromethane	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U						
75-71-8	Dichlorodifluoromethane	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U						
76-13-1	1,1,2-Trichlorotrifluoroethane	MG/L																	
76-44-8	Heptachlor	MG/L		0.00005 U	0.00005 U	0.00005 U		0.00005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U			0.00005 U			
7732-18-5	Chloromethane	MG/L																	
77-47-4	Hexachlorocyclopentadiene	MG/L		0.01 U	0.01 U	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U		0.01 U	0.01 U			
7782-49-2	Selenium (Se)	MG/L																	
78-59-1	Isophorone	MG/L		0.01 U	0.01 U	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U		0.01 U	0.01 U			
78-87-5	1,2-Dichloropropane	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U		
78-93-3	2-Butanone	MG/L																	
79-00-5	1,1,2-Trichloroethane	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U		
79-01-6	Trichloroethene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U		
79-34-5	1,1,2,2-Tetrachloroethane	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U		
8001-35-2	Toxaphene	MG/L		0.001 U	0.001 U	0.001 U		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U			0.001 U			
8071-51-0	2-Methyl-4,6-dinitrophenol	MG/L																	
83-32-9	Acenaphthene	MG/L		0.01 U	0.01 U	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U		0.01 U	0.01 U			
84-66-2	Diethyl phthalate	MG/L		0.01 U	0.01 U	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U		0.01 U	0.01 U			
84-74-2	Di-n-butyl phthalate	MG/L		0.01 U	0.01 U	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U		0.01 U	0.01 U			
85-01-8	Phenanthrene	MG/L		0.005 U	0.01 U	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U		0.01 U	0.01 U			
85-68-7	Butyl benzyl phthalate	MG/L		0.01 U	0.01 U	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U		0.01 U	0.01 U			
86-30-6	N-Nitrosodiphenylamine	MG/L		0.005 U	0.01 U	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U		0.01 U	0.01 U			
86-73-7	Fluorene	MG/L		0.01 U	0.01 U	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U		0.01 U	0.01 U			
87-61-6	1,2,3-Trichlorobenzene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U						
87-68-3	Hexachlorobutadiene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.01 U	0.0005 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U		0.01 U	0.01 U			
87-86-5	Pentachlorophenol	MG/L		0.05 U	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U		0.05 U	0.05 U			
88-06-2	2,4,6-Trichlorophenol	MG/L		0.02 U	0.02 U	0.02 U		0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U		0.02 U	0.02 U			
88-74-4	2-Nitroaniline	MG/L		0.01 U	0.01 U	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U		0.01 U	0.01 U			
88-75-5	2-Nitrophenol	MG/L		0.015 U	0.015 U	0.015 U		0.015 U	0.015 U	0.015 U	0.015 U	0.015 U	0.015 U		0.015 U	0.015 U			
90-13-1	Chloronaphthalene	MG/L																	
91-20-3	Naphthalene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.01 U	0.0005 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U		0.01 U	0.01 U			
91-57-6	2-Methylnaphthalene	MG/L		0.01 U	0.01 U	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U		0.01 U	0.01 U			
91-58-7	2-Chloronaphthalene	MG/L		0.01 U	0.01 U	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U		0.01 U	0.01 U			
91-94-1	3,3´-Dichlorobenzidine	MG/L		0.01 U	0.01 U	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U		0.01 U	0.01 U			
92-87-5	Benzidine	MG/L																	
95-47-6	o-Xylene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U		
95-48-7	2-Methylphenol	MG/L		0.01 U	0.01 U	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U		0.01 U	0.01 U			
95-49-8	2-Chlorotoluene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U		
95-50-1	1,2-Dichlorobenzene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.01 U	0.0005 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0005 U	0.01 U	0.01 U	0.0005 U		
95-57-8	2-Chlorophenol	MG/L		0.01 U	0.01 U	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U		0.01 U	0.01 U			
95-63-6	1,2,4-Trimethylbenzene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U						
95-95-4	2,4,5-Trichlorophenol	MG/L		0.02 U	0.02 U	0.02 U		0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U		0.02 U	0.02 U			
959-98-8	Endosulfan I	MG/L		0.00005 U	0.00005 U	0.00005 U		0.00005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U			0.00005 U			
96-12-8	1,2-Dibromo-3-chloropropane	MG/L		0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U						
96-18-4	1,2,3-Trichloropropane	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.0005 U			0.0005 U		
98-06-6	tert-Butylbenzene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U						
98-82-8	Isopropylbenzene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U						
98-95-3	Nitrobenzene	MG/L		0.01 U	0.01 U	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U		0.01 U	0.01 U			
99-09-2	3-Nitroaniline	MG/L		0.01 U	0.01 U	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U		0.01 U	0.01 U			
99-87-6	4-Isopropyltoluene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U						
DDD	DDD	MG/L																	
GIS-130-312	m,p-Xylenes	MG/L												0.0005 U			0.0005 U		
NO3NO2N	Nitrate (NO3)	MG/L																	
NO3NO2N	Nitrite/Nitrate Total	MG/L																	
O&PXYLENE	O,P-Xylene	MG/L																	
THMs	Trihalomethanes, Total	MG/L		0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.002 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U		
UNKNOWN	Acid Fraction	MG/L																	
UNKNOWN	B/N Fraction	MG/L																	
UNKNOWN	Dichlorobenzene	MG/L																	
UNKNOWN	Dinitro-2-Methylphenol	MG/L																	
UNKNOWN	Total Trihalomethanes (THMs)	MG/L																	

Appendix C-4
Groundwater Data (1984 - 2007)
Page Trowbridge Ranch Landfill

		Sample ID	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3 (Dup)	MW-3	MW-3	MW-3 (filtered)	MW-3	MW-3 (Dup)	MW-3	MW-3	MW-3	MW-3 (Dup)	MW-3 (Rerun)	MW-3	MW-3	MW-3	MW-3 (Rerun)	MW-3	MW-3 (Dup)	MW-3 (Dup)
		Well ID	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3
		Sample Date/Time	4/10/1985	1/31/1985	5/24/1985	6/7/1985	9/20/1985	7/24/1986	3/5/1987	3/5/1987	4/23/1987	7/10/1987	7/10/1987	4/21/1988	10/21/1988	4/21/1988	4/18/1989	4/18/1989	10/31/1989	10/31/1989	4/18/1990	5/10/1991	10/29/1991	5/6/1991	5/6/1991	10/29/1991
CAS_Number	**OGDEN_ANALYTE**	**FinalUnits**																								
100-01-6	4-Nitroaniline	MG/L																								
100-02-7	4-Nitrophenol	MG/L		0 U-NDT			0 U			0.035 U			0.04 U		0.00523 U		0 U	0 U		0.005 U	0.005 U	0.01 U		0.01 U	0.01 U	
100-41-4	Ethylbenzene	MG/L		0.0005 U		0 U		0 U		0.0095 U			0.0005 U		0.0002 U	0.0002 U	0.001 U	0.001 U		0.001 U	0.001 U		0.0005 U	0.0005 U	0.0005 U	0.0005 U
100-42-5	Styrene	MG/L															0.001 U	0.001 U		0.001 U	0.001 U					
100-51-6	Benzyl alcohol	MG/L																								
10061-01-5	cis-1,3-Dichloropropene	MG/L	0.0001 U	0.00005 U	0.0002 U	0 U	0 U	0 U					0.00001 U		0.0002 U	0.0002 U	0.0005 U	0.001 U		0.001 U	0.001 U		0.0005 U	0.0005 U	0.0005 U	0.0005 U
10061-02-6	trans-1,3-Dichloropropene	MG/L	0.0002 U	0.00001 U	0.00034 U	0 U	0 U	0 U					0.00003 U		0.00034 U	0.00034 U	0.0005 U	0.001 U		0.001 U	0.001 U		0.0005 U	0.0005 U	0.0005 U	0.0005 U
101-55-3	4-Bromophenyl phenyl ether	MG/L																								
1024-57-3	Heptachlor epoxide	MG/L			0.00005 U	0.00005 U		0.00005 U	0.00002 U	0.00002 U	0.001 U		0.00001 U		0.000083 U	0.000083 U	0.00005 U	0.0001 U	0.001 U	0.001 U	0.001 U			0.0001 U	0.0001 U	
1031-07-8	Endosulfan sulfate	MG/L			0.0001 U	0.0001 U		0.0001 U	0.00002 U	0.00002 U	0.006 U		0.0001 U		0.000066 U	0.000066 U	0.0001 U	0.0001 U	0.001 U	0.001 U	0.001 U			0.0001 U	0.0001 U	
103-33-3	Azobenzene	MG/L																								
103-65-1	n-Propylbenzene	MG/L															0 U	0.001 U		0.001 U	0.001 U					
104-51-8	n-Butylbenzene	MG/L															0.001 U	0.001 U		0.001 U	0.001 U					
105-67-9	2,4-Dimethylphenol	MG/L	0.003 U	0.001 U	0.003 U	0.003 U	0 U			0.0009 U			0.003 U		0.00104 U		0 U	0 U		0.002 U	0.002 U	0.005 U		0.005 U	0.005 U	
106-43-4	4-Chlorotoluene	MG/L																			0.001 U					
106-44-5	3 & 4-Methylphenol	MG/L																								
106-44-5	4-Methylphenol	MG/L																								
106-46-7	1,4-Dichlorobenzene	MG/L	0.0005 U	0.0002 U	0.00024 U	0 U	0 U	0 U					0.00005 U		0.0002 U	0.0002 U	0.001 U	0.001 U		0.001 U	0.001 U		0.0005 U	0.0005 U	0.0005 U	0.0005 U
106-47-8	4-Chloroaniline	MG/L																								
106-93-4	1,2-Dibromoethane	MG/L																								
107-06-2	1,2-Dichloroethane	MG/L	0.0001 U	0.00003 U	0.00003 U	0 U	0 U	0 U		0.0002 U			0.00001 U		0.00003 U	0.00003 U	0.0005 U	0.001 U		0.001 U	0.001 U		0.0002 U	0.0002 U	0.0002 U	0.0002 U
108-05-4	Vinyl Acetate	MG/L																								
108-10-1	4-Methyl-2-Pentanone	MG/L																								
108-38-3	M-Xylene	MG/L													0.0002 U	0.0002 U										
108-60-1	Bis(2-chloroisopropyl)ether	MG/L																								
108-67-8	1,3,5-Trimethylbenzene	MG/L																								
108-86-1	Bromobenzene	MG/L																								
108-88-3	Toluene	MG/L		0.0005 U		0 U		0 U		0.0067 U			0.0005 U		0.0002 U	0.0002 U	0.001 U	0.001 U		0.004	0.001 U		0.0002 U	0.0002 U	0.0002 U	0.0002 U
108-90-7	Chlorobenzene	MG/L	0.0005 U	0.0003 U	0.00025 U	0 U	0 U	0 U		0.0003 U			0.00002 U		0.0002 U	0.0002 U	0.001 U	0.001 U		0.001 U	0.001 U		0.0002 U	0.0002 U	0.0002 U	0.0002 U
108-95-2	Phenol	MG/L	0.002 U	0.001 U	0.002 U	0.002 U	0 U	0.01 U		0.0006 U			0.0025 U	0.007	0.00128 U	0.003	0 U	0 U		0.002 U	0.002 U	0.005 U		0.005 U	0.005 U	
110-75-8	2-Chloroethyl Vinyl Ether	MG/L		0 U-NDT	0.00013 U	0 U	0 U	0 U		0.001 U			0.0005 U		0.00013 U	0.00013 U	0.0005 U	0.001 U		0.001 U	0.001 U		0.0005 U	0.0005 U	0.0005 U	0.0005 U
11096-82-5	PCB-1260 (Aroclor)	MG/L						0.001 U					0.001 U		0.00007 U	0.00007 U	0.001 U							0.001 U	0.001 U	
11097-69-1	PCB-1254 (Aroclor)	MG/L						0.001 U					0.001 U		0.00007 U	0.00007 U	0.001 U							0.001 U	0.001 U	
11104-28-2	PCB-1221 (Aroclor)	MG/L						0.0005 U					0.001 U		0.00007 U	0.00007 U	0.0005 U							0.001 U	0.001 U	
11104-29-3	PCB-1242 (Aroclor)	MG/L						0.0005 U					0.001 U		0.00007 U	0.00007 U	0.0005 U							0.001 U	0.001 U	
11141-16-5	PCB-1232 (Aroclor)	MG/L						0.0005 U					0.001 U		0.00007 U	0.00007 U	0.0005 U							0.001 U	0.001 U	
111-44-4	Bis(2-chloroethyl)ether	MG/L																								
111-91-1	Bis(2-chloroethoxy)methane	MG/L																								
117-81-7	Bis(2-ethylhexyl)phthalate	MG/L																								
117-84-0	Di-n-octyl phthalate	MG/L																								
118-74-1	Hexachlorobenzene	MG/L																								
120-12-7	Anthracene	MG/L																								
120-82-1	1,2,4-Trichlorobenzene	MG/L																								
120-83-2	2,4-Dichlorophenol	MG/L	0.005 U	0.002 U	0.005 U	0.005 U	0 U			0.0016 U			0.004 U		0.00193 U		0 U	0 U		0.002 U	0.002 U	0.005 U		0.005 U	0.005 U	
121-14-2	2,4-Dinitrotoluene	MG/L																								
122-66-7	1,2-Diphenylhydrazine (As Azobenzene)	MG/L																								
124-48-1	Dibromochloromethane	MG/L	0.0001 U	0.00005 U	0.00009 U	0 U	0 U	0 U					0.00001 U		0.00009 U	0.00009 U	0.001 U	0.001 U		0.001 U	0.001 U		0.0002 U	0.0002 U	0.0002 U	0.0002 U
12672-29-6	PCB-1248 (Aroclor)	MG/L						0.0005 U					0.001 U				0.0005 U							0.001 U	0.001 U	
12674-11-2	PCB-1016 (Aroclor)	MG/L						0.0005 U					0.001 U		0.00007 U	0.00007 U	0.0005 U							0.001 U	0.001 U	
127-18-4	Tetrachloroethene	MG/L	0.00005 U	0.00005 U	0.00003 U	0 U	0 U	0 U					0.00001 U		0.00003 U	0.00003 U	0.0005 U	0.001 U		0.001 U	0.001 U		0.0002 U	0.0002 U	0.0002 U	0.0002 U
129-00-0	Pyrene	MG/L																								
131-11-3	Dimethyl phthalate	MG/L																								
132-64-9	Dibenzofuran	MG/L																								
1330-20-7	m,p-Xylene	MG/L																					0.0005 U	0.0005 U	0.0005 U	0.0005 U
1330-20-7	Xylenes, Total	MG/L											0.0005 U				0.001 U	0.001 U		0.001 U	0.001 U					
135-98-8	sec-Butylbenzene	MG/L															0.001 U	0.001 U		0.001 U	0.001 U					
142-28-9	1,3-Dichloropropane	MG/L															0.001 U	0.001 U		0.001 U	0.001 U					
14808-79-8	Sulfate (SO4)	MG/L	0.0912	6.88	4.17	3.56	0.00345	1 U					10 U		10 U	2 U	10 U	11		1.9	1 U			1 U	1 U	
156-59-2	cis-1,2-Dichloroethene	MG/L															0.001 U	0.001 U		0.001 U	0.001 U					
156-60-5	trans-1,2-Dichloroethene	MG/L	0.0001 U	0.0002 U	0.0001 U	0 U	0 U	0 U		0.0004 U			0.00001 U		0.0001 U	0.0001 U	0.001 U	0.001 U		0.001 U	0.001 U		0.0002 U	0.0002 U	0.0002 U	0.0002 U
1634-04-4	Methyl tert-butyl ether	MG/L																								
16887-00-6	Chloride (Cl-)	MG/L	0.00521	5.91	4.86	4.98	0.0056	8					6.1		5.8	7	4.7	6.9		7.2	4.9			10	10	
16984-48-8	Fluoride (Fl-)	MG/L	0.000663	0.79	0.6 U	0.61	0.00062						0.67				0.7									
191-24-2	Benzo(g,h,i)perylene	MG/L																								
193-39-5	Indeno(1,2,3-cd)pyrene	MG/L																								
205-99-2	Benzo(b)fluoranthene	MG/L																								
206-44-0	Fluoranthene	MG/L																								
207-08-9	Benzo(k)fluoranthene	MG/L																								
208-96-8	Acenaphthylene	MG/L																								
218-01-9	Chrysene	MG/L																								
25551-13-7	Trimethyl Benzene	MG/L															0.001 U	0.001 U		0.001 U	0.001 U					
309-00-2	Aldrin	MG/L			0.00005 U	0.00005 U		0.00005 U	0.000002 U	0.000002 U	0.001 U		0.000005 U		0.000004 U	0.000004 U	0.00005 U	0.0001 U	0.001 U	0.001 U	0.001 U			0.0001 U	0.0001 U	
319-84-6	alpha-BHC	MG/L			0.00001 U	0.00001 U		0.00005 U	0.000002 U	0.000002 U	0.001 U		0.000005 U		0.000003 U	0.000003 U	0.00005 U	0.0001 U	0.001 U	0.001 U	0.001 U			0.0001 U	0.0001 U	
319-85-7	beta-BHC	MG/L			0.00001 U	0.00001 U		0.00005 U	0.000004 U	0.000004 U	0.001 U		0.000005 U		0.000006 U	0.000006 U	0.00005 U	0.0001 U	0.001 U	0.001 U	0.001 U			0.0001 U	0.0001 U	
319-86-8	delta-BHC	MG/L			0.00001 U	0.00001 U		0.00005 U	0.000002 U	0.000002 U	0.001 U		0.000005 U		0.000009 U	0.000009 U	0.00005 U	0.0001 U	0.001 U	0.001 U	0.001 U			0.0001 U	0.0001 U	
33213-65-9	Endosulfan II	MG/L						0.0001 U	0.000012 U	0.000012 U	0.002 U		0.00002 U		0.000004 U	0.000004 U	0.0001 U	0.0001 U	0.001 U	0.001 U	0.001 U			0.0001 U	0.0001 U	
50-29-3	2,4-DDT	MG/L															0.0001 U	0.0001 U	0.001 U	0.001 U	0.001 U					
50-29-3	4,4'-DDT	MG/L			0.00005 U	0.00005 U		0.0001 U							0.000012 U	0.000012 U	0.0001 U	0.0001 U	0.001 U	0.001 U	0.001 U			0.0001 U	0.0001 U	

Appendix C-4
Groundwater Data (1984 - 2007)
Page Trowbridge Ranch Landfill

		Sample ID	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3 (Dup)	MW-3	MW-3	MW-3 (filtered)	MW-3	MW-3 (Dup)	MW-3	MW-3	MW-3	MW-3 (Dup)	MW-3 (Rerun)	MW-3	MW-3	MW-3	MW-3 (Rerun)	MW-3	MW-3 (Dup)	MW-3 (Dup)
		Well ID	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3
		Sample Date/Time	4/10/1985	1/31/1985	5/24/1985	6/7/1985	9/20/1985	7/24/1986	3/5/1987	3/5/1987	4/23/1987	7/10/1987	7/10/1987	4/21/1988	10/21/1988	4/21/1988	4/18/1989	4/18/1989	10/31/1989	10/31/1989	4/18/1990	5/10/1991	10/29/1991	5/6/1991	5/6/1991	10/29/1991
50-29-3	DDT (p,p-DDT)	MG/L							0.000012 U	0.000012 U	0.006 U		0.00006 U				0.0001 U									
50-32-8	Benzo(a)pyrene	MG/L																								
5103-71-9	alpha-Chlordane	MG/L																								
51-28-5	2,4-Dinitrophenol	MG/L	0.1 U	0.04 U	0.1 U	0.1 U	0 U			0.015 U			0.04 U		0.013 U		0 U	0 U		0.02 U	0.02 U	0.01 U		0.01 U	0.01 U	
53-19-0	2,4-DDD	MG/L																			0.001 U					
534-52-1	2-Methyl-4,6-dinitrophenol	MG/L																				0.01 U		0.01 U	0.01 U	
53494-70-5	Endrin Ketone	MG/L						0.0001 U					0.0002 U													
53-70-3	Dibenz(a,h)anthracene	MG/L																								
540-59-0	Total-1,2-Dichloroethene	MG/L											0.0005 U				0.0005 U									
541-73-1	1,3-Dichlorobenzene	MG/L	0.0005 U	0.0002 U	0.00032 U	0 U	0 U	0 U					0.00005 U		0.0002 U	0.0002 U	0.001 U	0.001 U		0.001 U	0.001 U		0.0005 U	0.0005 U	0.0005 U	0.0005 U
542-75-6	1,3-Dichloropropene, Total	MG/L																								
56-23-5	Carbon tetrachloride	MG/L	0.00005 U	0.0001 U	0.00012 U	0 U	0 U	0 U		0.0001 U			0.00001 U		0.00012 U	0.00012 U	0.0005 U	0.001 U		0.001 U	0.001 U		0.0002 U	0.0002 U	0.0002 U	0.0002 U
563-58-6	1,1-Dichloropropene	MG/L																								
56-55-3	Benz(a)anthracene	MG/L																								
57-74-2	gamma-Chlordane	MG/L																								
57-74-9	Chlordane	MG/L						0.0005 U	0.000015 U	0.000015 U	0.025 U		0.00002 U		0.000014 U	0.000014 U	0.0001 U	0.0001 U	0.001 U	0.001 U	0.001 U			0.001 U	0.001 U	
57-74-9	Chlordane Technical	MG/L																								
58-89-9	gamma-BHC	MG/L			0.00001 U	0.00001 U		0.00005 U	0.000002 U	0.000002 U	0.001 U		0.000005 U		0.000004 U	0.000004 U	0.00005 U	0.0001 U	0.001 U	0.001 U	0.001 U			0.0001 U	0.0001 U	
591-78-6	2-Hexanone	MG/L																								
594-20-7	2,2-Dichloropropane	MG/L																								
59-50-7	4-Chloro-3-methylphenol	MG/L	0.01 U	0.0025 U	0.01 U	0.01 U	0 U			0.0015 U			0.005 U		0.00222 U		0 U	0 U		0.002 U	0.002 U	0.005 U		0.005 U	0.005 U	
60-57-1	Dieldrin	MG/L			0.00005 U	0.00005 U		0.0001 U	0.000004 U	0.000004 U	0.002 U		0.00002 U		0.000002 U	0.000002 U	0.0001 U	0.0001 U	0.001 U	0.001 U	0.001 U			0.0001 U	0.0001 U	
606-20-2	2,6-Dinitrotoluene	MG/L																								
621-64-7	N-Nitrosodi-n-propylamine	MG/L																								
62-75-9	N-Nitrosodimethylamine	MG/L																								
630-20-6	1,1,1,2-Tetrachloroethane	MG/L																		1 U	0.001 U					
634-90-2	1,2,3,5-Tetrachlorobenzene	MG/L															0.001 U	0.001 U		0.001 U	0.001 U					
65-85-0	Benzoic acid	MG/L																								
67-64-1	Acetone	MG/L																								
67-66-3	Chloroform	MG/L	0.00005 U	0.00005 U	0.00005 U	0 U	0 U	0 U		0.0002 U			0 U-TRAC		0.00005 U	0.00005 U	0.0005 U	0.001 U		0.001 U	0.001 U		0.0002 U	0.0002 U	0.0002 U	0.0002 U
67-72-1	Hexachloroethane	MG/L																								
7005-72-3	4-Chlorophenyl phenyl ether	MG/L																								
71-43-2	Benzene	MG/L		0.0005 U		0 U		0 U		0.0065 U			0.0008 U		0.0002 U	0.0002 U	0.001 U	0.001 U		0.001 U	0.001 U		0.0002 U	0.0002 U	0.0002 U	0.0002 U
71-55-6	1,1,1-Trichloroethane	MG/L	0.00005 U	0.0002 U	0.00003 U	0 U	0 U	0 U		0.0002 U			0 U-TRAC		0.00003 U	0.00003 U	0.0005 U	0.001 U		0.001 U	0.001 U		0.0002 U	0.0002 U	0.0002 U	0.0002 U
72-20-8	Endrin	MG/L			0.00005 U	0.00005 U		0.0001 U	0.00001 U	0.00001 U	0.002 U		0.00002 U		0.000006 U	0.000006 U	0.0001 U	0.0001 U	0.001 U	0.001 U	0.001 U			0.0001 U	0.0001 U	
72-43-5	Methoxychlor	MG/L						0.0005 U					0.0005 U		0.00005 U	0.00005 U	0.0005 U	0.0001 U	0.0001	0.0004	0.001 U			0.0005 U	0.0005 U	
72-54-8	1,4-DDD	MG/L						0.0001 U																		
72-54-8	2,4-DDD	MG/L															0.0001 U	0.0001 U	0.001 U	0.001 U	0.001 U					
72-54-8	4,4'-DDD	MG/L			0.00005 U	0.00005 U									0.000011 U	0.000011 U	0.0001 U	0.0001 U	0.001 U	0.001 U	0.001 U			0.0001 U	0.0001 U	
72-54-8	DDD (p,p-DDD)	MG/L							0.000012 U	0.000012 U	0.006 U		0.00002 U				0.0001 U									
72-55-9	1,4-DDE	MG/L						0.0001 U																		
72-55-9	4,4'-DDE	MG/L			0.00005 U	0.00005 U									0.000004 U	0.000004 U	0.0001 U	0.0001 U	0.001 U	0.001 U	0.001 U			0.0001 U	0.0001 U	
72-55-9	DDE (p,p-DDE)	MG/L							0.000004 U	0.000004 U	0.002 U		0.00002 U				0.0001 U									
7421-93-4	Endrin aldehyde	MG/L			0.0001 U	0.0001 U			0.00002 U	0.00002 U	0.006 U		0.00006 U		0.000023 U	0.000023 U	0.0001 U	0.0001 U	0.001 U	0.001 U	0.001 U			0.0001 U	0.0001 U	
7439-89-6	Iron (Fe)	MG/L					0.00037	0.87		0.53		0.1 U	2.2				2.73									
7439-92-1	Lead (Pb)	MG/L	0.00023 U	0.28 U	0.047 U	0.047 U	0.00002 U					0.02 U	0.02 U				0.01 U									
7439-95-4	Magnesium (Mg)	MG/L											9.6							8						
7439-96-5	Manganese (Mn)	MG/L					0.0002	0.29		0.32		0.05 U	0.05		0.195	0.13	0.26	0.272			0.31			0.29	0.29	
7439-97-6	Mercury (Hg)	MG/L	0.000005 U	0.005 U	0.001 U	0.001 U	0.000001 U						0.0005 U				0.0005 U									
7440-02-0	Nickel (Ni)	MG/L	0.00023 U	0.32 U	0.042 U	0.023 U						0.1 U	0.1 U													
7440-22-4	Silver (Ag)	MG/L	0.000063 U	0.05 U	0.003 U	0.014 U	0.000005 U						0.005 U				0.001 U									
7440-23-5	Sodium (Na)	MG/L					0.0356						32.8		29.8	32.5	28.1	43.1		32.4	33.4			43	122	
7440-31-5	Tin (Sn)	MG/L										5 U	6 U													
7440-38-2	Arsenic (As)	MG/L	0.000004 U	0.003 U	0.005 U	0.004 U	0.000003 U						0.02 U				0.01 U									
7440-39-3	Barium (Ba)	MG/L	0.000507 U	0.7 U	0.041 U	0.49 U	0.00045 U						0.1 U				0.1 U									
7440-43-9	Cadmium (Cd)	MG/L	0.000022 U	0.03 U	0.003 U	0.003 U	0.000002 U					0.001 U	0.001 U				0.001 U									
7440-47-3	Chromium (Cr)	MG/L	0.00004 U	0.08 U	0.007 U	0.005	0.00001 U					0.01 U	0.01 U				0.01 U									
7440-50-8	Copper (Cu)	MG/L	0.000049 U	0.04 U	0.021 U	0.021 U							0.1 U				0.1 U									
7440-66-6	Zinc (Zn)	MG/L	0.000619	0.58	0.39	0.298						0.16	0.35				0.76									
7440-70-2	Calcium (Ca)	MG/L											25.3													
74-83-9	Bromomethane	MG/L		0 U-NDT	0.00118 U	0 U	0 U	0 U					0.0005 U		0.00118 U	0.00118 U	0.0005 U	0.001 U		0.001 U	0.001 U		0.001 U	0.001 U	0.001 U	0.001 U
74-87-3	Chloromethane	MG/L		0 U-NDT	0.00008 U	0 U	0 U	0 U					0.00002 U		0.00008 U	0.00008 U	0.0005 U	0.001 U		0.001 U	0.001 U		0.0005 U	0.0005 U	0.0005 U	0.0005 U
74-95-3	Dibromoethane	MG/L															0.001 U	0.001 U		0.001 U	0.001 U					
74-95-3	Dibromomethane	MG/L																								
74-97-5	Bromochloromethane	MG/L															0.001 U	0.001 U		0.001 U	0.001 U					
75-00-3	Chloroethane	MG/L		0 U-NDT	0.00052 U	0 U	0 U	0 U		0.0006 U			0.00001 U		0.00052 U	0.00052 U	0.0005 U	0.001 U		0.001 U	0.001 U		0.001 U	0.001 U	0.001 U	0.001 U
75-01-4	Vinyl chloride	MG/L		0 U-NDT	0.00018 U	0 U	0 U	0 U					0.00025 U		0.00018 U	0.00018 U	0.0003 U	0.001 U		0.001 U	0.001 U		0.0002 U	0.0002 U	0.0002 U	0.0002 U
75-09-2	Methylene chloride	MG/L	0.0005 U	0.0002 U	0.00025 U	0 U	0.00037	0 U		0.0003 U			0.0005 U		0.00025 U	0.00025 U	0.0005 U	0.001 U		0.008	0.001 U		0.002 U	0.002 U	0.002 U	0.002 U
75-25-2	Bromoform	MG/L	0.0001 U	0.00001 U	0.0002 U	0 U	0 U	0 U		0.001 U			0.0005 U		0.0002 U	0.0002 U	0.001 U	0.001 U		0.001 U	0.001 U		0.0005 U	0.0005 U	0.0005 U	0.0005 U
75-27-4	Bromodichloromethane	MG/L	0.00005 U	0.00004 U	0.0001 U	0 U	0 U	0 U					0.00001 U		0.0001 U	0.0001 U	0.0005 U	0.001 U		0.001 U	0.001 U		0.0002 U	0.0002 U	0.0002 U	0.0002 U
75-34-3	1,1-Dichloroethane	MG/L	0.0001 U	0.0006 U	0.00007 U	0 U	0 U	0 U		0.0004 U			0.00001 U		0.00007 U	0.00007 U	0.0005 U	0.001 U		0.001 U	0.001 U		0.0002 U	0.0002 U	0.0002 U	0.0002 U
75-35-4	1,1-Dichloroethene	MG/L	0.0001 U	0.00005 U	0.00013 U	0 U	0 U	0 U					0.00001 U		0.00013 U	0.00013 U	0.0005 U	0.001 U		0.001 U	0.001 U		0.0005 U	0.0005 U	0.0005 U	0.0005 U
75-69-4	Trichlorofluoromethane	MG/L	0.0005 U	0.002 U	0 U-NDT	0 U	0 U	0 U		0.0003 U			0.00001 U		0.0005 U	0.0005 U	0.0005 U	0.001 U		0.001 U	0.001 U		0.001 U	0.001 U	0.001 U	0.001 U
75-71-8	Dichlorodifluoromethane	MG/L		0 U-NDT	0.00181 U	0 U	0 U	0 U					0.0005 U		0.00181 U	0.00181 U	0.0005 U									
76-13-1	1,1,2-Trichlorotrifluoroethane	MG/L															0.001 U	0.001 U		0.001 U	0.001 U					
76-44-8	Heptachlor	MG/L			0.00005 U	0.00005 U		0.00005 U	0.000002 U	0.000002 U	0.001 U		0.000005 U		0.000003 U	0.000003 U	0.00005 U	0.0001 U	0.001 U	0.001 U	0.001 U			0.0001 U	0.0001 U	
77-47-4	Hexachlorocyclopentadiene	MG/L																								
7782-49-2	Selenium (Se)	MG/L	0.000005 U	0.005 U	0.005 U	0.004 U	0.000005 U						0.005 U				0.005 U									
78-59-1	Isophorone	MG/L																								

Appendix C-4
Groundwater Data (1984 - 2007)
Page Trowbridge Ranch Landfill

		Sample ID	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3 (Dup)	MW-3	MW-3	MW-3 (filtered)	MW-3	MW-3 (Dup)	MW-3	MW-3	MW-3	MW-3 (Dup)	MW-3 (Rerun)	MW-3	MW-3	MW-3	MW-3 (Rerun)	MW-3	MW-3 (Dup)	MW-3 (Dup)
		Well ID	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3
		Sample Date/Time	4/10/1985	1/31/1985	5/24/1985	6/7/1985	9/20/1985	7/24/1986	3/5/1987	3/5/1987	4/23/1987	7/10/1987	7/10/1987	4/21/1988	10/21/1988	4/21/1988	4/18/1989	4/18/1989	10/31/1989	10/31/1989	4/18/1990	5/10/1991	10/29/1991	5/6/1991	5/6/1991	10/29/1991
78-87-5	1,2-Dichloropropane	MG/L	0.0001 U	0.0003 U	0.00004 U	0 U	0 U	0 U		0.0002 U			0.00001 U		0.00004 U	0.00004 U	0.0005 U						0.0005 U	0.0005 U	0.0005 U	0.0005 U
78-93-3	2-Butanone	MG/L																								
79-00-5	1,1,2-Trichloroethane	MG/L	0.0001 U	0.00005 U	0.00002 U	0 U	0 U	0 U		0.0001 U			0.00001 U		0.00002 U	0.00002 U	0.0005 U	0.001 U		0.001 U	0.001 U		0.0002 U	0.0002 U	0.0002 U	0.0002 U
79-01-6	Trichloroethene	MG/L	0.00005 U	0.0002 U	0.00012 U	0 U	0 U	0 U		0.0001 U			0.000005 U		0.00012 U	0.00012 U	0.001 U	0.001 U		0.001 U	0.001 U		0.0002 U	0.0002 U	0.0002 U	0.0002 U
79-34-5	1,1,2,2-Tetrachloroethane	MG/L	0.00005 U	0.00005 U	0.00003 U	0 U	0 U	0 U		0.0004 U			0.00001 U		0.00003 U	0.00003 U	0.0005 U	0.001 U		0.001 U	0.001 U		0.0005 U	0.0005 U	0.0005 U	0.0005 U
8001-35-2	Toxaphene	MG/L						0.001 U	0.0002 U	0.0002 U			0.0002 U		0.00024 U	0.00024 U	0.0001 U	0.0001 U	0.001 U	0.001 U	0.001 U			0.001 U	0.001 U	
8071-51-0	2-Methyl-4,6-dinitrophenol	MG/L	0.1 U	0.04 U	0.1 U	0.1 U	0 U			0.015 U			0.03 U		0.016 U		0 U	0 U		0.02 U	0.02 U					
83-32-9	Acenaphthene	MG/L																								
84-66-2	Diethyl phthalate	MG/L																								
84-74-2	Di-n-butyl phthalate	MG/L																								
85-01-8	Phenanthrene	MG/L																								
85-68-7	Butyl benzyl phthalate	MG/L																								
86-30-6	N-Nitrosodiphenylamine	MG/L																								
86-73-7	Fluorene	MG/L																								
87-61-6	1,2,3-Trichlorobenzene	MG/L																								
87-68-3	Hexachlorobutadiene	MG/L																								
87-86-5	Pentachlorophenol	MG/L	0.1 U	0.04 U	0.1 U	0.1 U	0 U			0.009 U			0.015 U		0.0074 U		0 U	0 U		0.01 U	0.01 U	0.005 U		0.005 U	0.005 U	
88-06-2	2,4,6-Trichlorophenol	MG/L	0.005 U	0.002 U	0.005 U	0.005 U	0 U			0.002 U			0.005 U		0.00111 U		0 U	0 U		0.002 U	0.002 U	0.005 U		0.005 U	0.005 U	
88-74-4	2-Nitroaniline	MG/L																								
88-75-5	2-Nitrophenol	MG/L	0.003 U	0.001 U	0.003 U	0.003 U	0 U			0.0007 U			0.005 U		0.00208 U		0 U	0 U		0.002 U	0.002 U	0.01 U		0.01 U	0.01 U	
90-13-1	Chloronaphthalene	MG/L															0.001 U	0.001 U		0.001 U	0.001 U					
91-20-3	Naphthalene	MG/L																		0.001 U	0.001 U					
91-57-6	2-Methylnaphthalene	MG/L																								
91-58-7	2-Chloronaphthalene	MG/L																								
91-94-1	3,3´-Dichlorobenzidine	MG/L																								
92-87-5	Benzidine	MG/L																								
95-47-6	o-Xylene	MG/L																					0.0005 U	0.0005 U	0.0005 U	0.0005 U
95-48-7	2-Methylphenol	MG/L																								
95-49-8	2-Chlorotoluene	MG/L															0.001 U	0.001 U		0.001 U	0.001 U					
95-50-1	1,2-Dichlorobenzene	MG/L	0.0005 U	0.0002 U	0.00015 U	0 U	0 U	0 U					0.00007 U		0.0002 U	0.0002 U	0.001 U	0.001 U		0.001 U	0.001 U		0.0005 U	0.0005 U	0.0005 U	0.0005 U
95-57-8	2-Chlorophenol	MG/L	0.003 U	0.001 U	0.003 U	0.003 U	0 U			0.0007 U			0.003 U		0.00055 U		0 U	0 U		0.001 U	0.001 U	0.005 U		0.005 U	0.005 U	
95-63-6	1,2,4-Trimethylbenzene	MG/L																								
95-95-4	2,4,5-Trichlorophenol	MG/L																								
959-98-8	Endosulfan I	MG/L						0.00005 U	0.000004 U	0.000004 U	0.002 U		0.00001 U		0.000014 U	0.000014 U	0.00005 U	0.0001 U	0.001 U	0.001 U	0.001 U			0.0001 U	0.0001 U	
96-12-8	1,2-Dibromo-3-chloropropane	MG/L															0.001 U	0.001 U		0.001 U	0.001 U					
96-18-4	1,2,3-Trichloropropane	MG/L																								
98-06-6	tert-Butylbenzene	MG/L															0.001 U	0.001 U		0.001 U	0.001 U					
98-82-8	Isopropylbenzene	MG/L															0.001 U	0.001 U		0.001 U	0.001 U					
98-95-3	Nitrobenzene	MG/L																								
99-09-2	3-Nitroaniline	MG/L																								
99-87-6	4-Isopropyltoluene	MG/L																								
DDD	DDD	MG/L																								
GIS-130-312	m,p-Xylenes	MG/L																								
NO3NO2N	Nitrate (NO3)	MG/L	0.00813	12.4	8.38	8.26	0.00679																			
NO3NO2N	Nitrite/Nitrate Total	MG/L											1.4				1.1									
O&PXYLENE	O,P-Xylene	MG/L													0.0002 U	0.0002 U	0 U	0 U								
THMs	Trihalomethanes, Total	MG/L																								
UNKNOWN	Acid Fraction	MG/L											0 U				0 U									
UNKNOWN	B/N Fraction	MG/L											0.01				0 U									
UNKNOWN	Dichlorobenzene	MG/L								0.0014 U																
UNKNOWN	Dinitro-2-Methylphenol	MG/L																								
UNKNOWN	Total Trihalomethanes (THMs)	MG/L															0.005 U									

Appendix C-4
Groundwater Data (1984 - 2007)
Page Trowbridge Ranch Landfill

		Sample ID	MW-3	MW-3	MW-3 (Dup)	MW-3	MW-3	MW-3	MW-3 (Dup)	MW-3	MW-3	MW-3	MW-3 (Dup)	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3 (Dup)	MW-3	MW-3 (Dup)	MW-3	MW-3	MW #3
		Well ID	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3
		Sample Date/Time	10/28/1991	10/29/1991	11/12/1991	4/21/1992	10/13/1992	4/20/1993	4/20/1993	10/12/1993	4/12/1994	10/11/1994	4/26/1995	4/26/1995	10/25/1995	2/21/1996	10/9/1996	3/26/1997	3/26/1997	11/5/1997	8/23/2000	8/23/2000	10/26/2001	4/23/2003 10:29:00 AM
CAS_Number	**OGDEN_ANALYTE**	**FinalUnits**																						
100-01-6	4-Nitroaniline	MG/L																						0.01 U
100-02-7	4-Nitrophenol	MG/L		0.01 U		0.01 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.005 U	0.02 U	0.02 U	0.02 U	0.021 U		0.025 U		0.025 U
100-41-4	Ethylbenzene	MG/L		0.0005 U	0.0005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.001 U	0.001 U	0.0005 U	0.0005 U
100-42-5	Styrene	MG/L																			0.001 U	0.001 U	0.0005 U	0.0005 U
100-51-6	Benzyl alcohol	MG/L						0.01 U	0.01 U															0.01 U
10061-01-5	cis-1,3-Dichloropropene	MG/L		0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.001 U	0.001 U	0.0005 U	0.0005 U
10061-02-6	trans-1,3-Dichloropropene	MG/L		0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.001 U	0.001 U	0.0005 U	0.0005 U
101-55-3	4-Bromophenyl phenyl ether	MG/L																				0.005 U		0.005 U
1024-57-3	Heptachlor epoxide	MG/L	0.0001 U	0.0001 U		0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.00005 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U		0.00005 U		0.00005 U
1031-07-8	Endosulfan sulfate	MG/L	0.0001 U	0.0001 U		0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.00005 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U		0.0001 U		0.00005 U
103-33-3	Azobenzene	MG/L																						0.005 U
103-65-1	n-Propylbenzene	MG/L																			0.001 U	0.001 U	0.0005 U	0.0005 U
104-51-8	n-Butylbenzene	MG/L																			0.001 U	0.001 U	0.0005 U	0.0005 U
105-67-9	2,4-Dimethylphenol	MG/L		0.005 U		0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U		0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.0052 U		0.01 U		0.01 U
106-43-4	4-Chlorotoluene	MG/L																			0.001 U	0.001 U	0.0005 U	0.0005 U
106-44-5	3 & 4-Methylphenol	MG/L																						
106-44-5	4-Methylphenol	MG/L						0.01 U	0.01 U							0.003 U								0.01 U
106-46-7	1,4-Dichlorobenzene	MG/L		0.0005 U	0.0005 U	0.001 U	0.001 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.001 U	0.001 U	0.0005 U	0.0005 U
106-47-8	4-Chloroaniline	MG/L																						0.01 U
106-93-4	1,2-Dibromoethane	MG/L																			0.001 U	0.001 U		0.0005 U
107-06-2	1,2-Dichloroethane	MG/L		0.0002 U	0.0002 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.001 U	0.001 U	0.0005 U	0.0005 U
108-05-4	Vinyl Acetate	MG/L																			0.001 U	0.001 U		
108-10-1	4-Methyl-2-Pentanone	MG/L																			0.005 U	0.005 U		
108-38-3	M-Xylene	MG/L																						
108-60-1	Bis(2-chloroisopropyl)ether	MG/L																				0.01 U		0.01 U
108-67-8	1,3,5-Trimethylbenzene	MG/L																			0.001 U	0.001 U	0.0005 U	0.0005 U
108-86-1	Bromobenzene	MG/L																			0.001 U	0.001 U	0.0005 U	0.0005 U
108-88-3	Toluene	MG/L		0.0002 U	0.0002 U	0.001 U	0.001 U	0.001 U	0.001 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.001 U	0.001 U	0.0005 U	0.0005 U
108-90-7	Chlorobenzene	MG/L		0.0002 U	0.0002 U	0.0005 U	0.0005 U	0.001 U	0.001 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.001 U	0.001 U	0.0005 U	0.0005 U
108-95-2	Phenol	MG/L		0.005 U		0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.003 U	0.005 U	0.005 U	0.005 U	0.0052 U		0.01 U		0.01 U
110-75-8	2-Chloroethyl Vinyl Ether	MG/L		0.0005 U	0.0005 U	0.005 U	0.005 U	0.01 U	0.005 U	0.01 U	0.01 U					0.001 U					0.005 U	0.005 U		
11096-82-5	PCB-1260 (Aroclor)	MG/L	0.001 U	0.001 U		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0005 U	0.001 U	0.001 U	0.001 U	0.001 U		0.001 U		
11097-69-1	PCB-1254 (Aroclor)	MG/L	0.001 U	0.001 U		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0005 U	0.001 U	0.001 U	0.001 U	0.001 U		0.001 U		
11104-28-2	PCB-1221 (Aroclor)	MG/L	0.001 U	0.001 U		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0005 U	0.001 U	0.001 U	0.001 U	0.001 U		0.001 U		
11104-29-3	PCB-1242 (Aroclor)	MG/L	0.001 U	0.001 U		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0005 U	0.001 U	0.001 U	0.001 U	0.001 U		0.001 U		
11141-16-5	PCB-1232 (Aroclor)	MG/L	0.001 U	0.001 U		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0005 U	0.001 U	0.001 U	0.001 U	0.001 U		0.001 U		
111-44-4	Bis(2-chloroethyl)ether	MG/L																				0.01 U		0.01 U
111-91-1	Bis(2-chloroethoxy)methane	MG/L																				0.01 U		0.01 U
117-81-7	Bis(2-ethylhexyl)phthalate	MG/L																				0.01 U		0.01 U
117-84-0	Di-n-octyl phthalate	MG/L																				0.01 U		0.01 U
118-74-1	Hexachlorobenzene	MG/L																				0.005 U		0.005 U
120-12-7	Anthracene	MG/L																				0.005 U		0.005 U
120-82-1	1,2,4-Trichlorobenzene	MG/L																				0.01 U	0.0005 U	0.0005 U
120-83-2	2,4-Dichlorophenol	MG/L		0.005 U		0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.003 U	0.005 U	0.005 U	0.005 U	0.0052 U		0.01 U		0.01 U
121-14-2	2,4-Dinitrotoluene	MG/L																				0.005 U		0.005 U
122-66-7	1,2-Diphenylhydrazine (As Azobenzene)	MG/L																				0.005 U		
124-48-1	Dibromochloromethane	MG/L		0.0002 U	0.0002 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.001 U	0.001 U	0.0005 U	0.0005 U
12672-29-6	PCB-1248 (Aroclor)	MG/L	0.001 U	0.001 U		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0005 U	0.001 U	0.001 U	0.001 U	0.001 U		0.001 U		
12674-11-2	PCB-1016 (Aroclor)	MG/L	0.001 U	0.001 U		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0005 U	0.001 U	0.001 U	0.001 U	0.001 U		0.001 U		
127-18-4	Tetrachloroethene	MG/L		0.0002 U	0.0002 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.001 U	0.001 U	0.0005 U	0.0005 U
129-00-0	Pyrene	MG/L																				0.005 U		0.005 U
131-11-3	Dimethyl phthalate	MG/L																				0.02 U		0.02 U
132-64-9	Dibenzofuran	MG/L																						0.01 U
1330-20-7	m,p-Xylene	MG/L		0.0005 U	0.0005 U			0.001 U	0.001 U							0.001 U					0.001 U	0.001 U	0.0005 U	0.0005 U
1330-20-7	Xylenes, Total	MG/L				0.001 U	0.001 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U				
135-98-8	sec-Butylbenzene	MG/L																			0.001 U	0.001 U	0.0005 U	0.0005 U
142-28-9	1,3-Dichloropropane	MG/L																			0.001 U	0.001 U	0.0005 U	0.0005 U
14808-79-8	Sulfate (SO4)	MG/L		4		4	4	5.5	5.2	5	5	4.8	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U			25 U	2.5
156-59-2	cis-1,2-Dichloroethene	MG/L														0.0005 U					0.001 U	0.001 U	0.0005 U	0.0005 U
156-60-5	trans-1,2-Dichloroethene	MG/L		0.0002 U	0.0002 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.001 U	0.001 U	0.0005 U	0.0005 U
1634-04-4	Methyl tert-butyl ether	MG/L																			0.001 U	0.001 U		
16887-00-6	Chloride (Cl-)	MG/L		6		6.7	6.3	6.7	6.9	7	8	7.6	6.3	6.3	5.5	5 U	5.7	5.9	6.3	7.4			5 U	6.2
16984-48-8	Fluoride (Fl-)	MG/L																						
191-24-2	Benzo(g,h,i)perylene	MG/L																				0.005 U		0.005 U
193-39-5	Indeno(1,2,3-cd)pyrene	MG/L																				0.005 U		0.005 U
205-99-2	Benzo(b)fluoranthene	MG/L																				0.005 U		0.005 U
206-44-0	Fluoranthene	MG/L																				0.005 U		0.005 U
207-08-9	Benzo(k)fluoranthene	MG/L																				0.005 U		0.005 U
208-96-8	Acenaphthylene	MG/L																				0.01 U		0.01 U
218-01-9	Chrysene	MG/L																				0.005 U		0.005 U
25551-13-7	Trimethyl Benzene	MG/L																						
309-00-2	Aldrin	MG/L	0.0001 U	0.0001 U		0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.00005 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U		0.00005 U		0.00005 U
319-84-6	alpha-BHC	MG/L	0.0001 U	0.0001 U		0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.00005 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U		0.00005 U		0.00005 U
319-85-7	beta-BHC	MG/L	0.0001 U	0.0001 U		0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.00005 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U		0.00005 U		0.00005 U
319-86-8	delta-BHC	MG/L	0.0001 U	0.0001 U		0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U		0.00005 U		0.00005 U
33213-65-9	Endosulfan II	MG/L	0.0001 U	0.0001 U		0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.00005 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U		0.0001 U		0.00005 U
50-29-3	2,4-DDT	MG/L																						
50-29-3	4,4'-DDT	MG/L	0.0001 U	0.0001 U		0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U		0.0001 U		0.00005 U

Appendix C-4
Groundwater Data (1984 - 2007)
Page Trowbridge Ranch Landfill

		Sample ID Well ID Sample Date/Time	MW-3 MW-3 10/28/1991	MW-3 MW-3 10/29/1991	MW-3 (Dup) MW-3 11/12/1991	MW-3 MW-3 4/21/1992	MW-3 MW-3 10/13/1992	MW-3 MW-3 4/20/1993	MW-3 (Dup) MW-3 4/20/1993	MW-3 MW-3 10/12/1993	MW-3 MW-3 4/12/1994	MW-3 MW-3 10/11/1994	MW-3 (Dup) MW-3 4/26/1995	MW-3 MW-3 4/26/1995	MW-3 MW-3 10/25/1995	MW-3 MW-3 2/21/1996	MW-3 MW-3 10/9/1996	MW-3 MW-3 3/26/1997	MW-3 (Dup) MW-3 3/26/1997	MW-3 MW-3 11/5/1997	MW-3 (Dup) MW-3 8/23/2000	MW-3 MW-3 8/23/2000	MW-3 MW-3 10/26/2001	MW #3 MW-3 4/23/2003 10:29:00 AM
50-29-3	DDT (p,p-DDT)	MG/L																						
50-32-8	Benzo(a)pyrene	MG/L																				0.005 U		0.005 U
5103-71-9	alpha-Chlordane	MG/L																				0.00005 U		
51-28-5	2,4-Dinitrophenol	MG/L		0.015 U		0.01 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.05 U	0.05 U	0.05 U	0.05 U	0.01 U	0.05 U	0.05 U	0.05 U	0.052 U		0.05 U		0.05 U
53-19-0	2,4-DDD	MG/L																						
534-52-1	2-Methyl-4,6-dinitrophenol	MG/L		0.015 U		0.01 U	0.02 U	0.02 U		0.02 U	0.02 U	0.03 U		0.03 U	0.03 U	0.005 U	0.03 U			0.031 U		0.05 U		0.05 U
53494-70-5	Endrin Ketone	MG/L																						
53-70-3	Dibenz(a,h)anthracene	MG/L																				0.005 U		0.005 U
540-59-0	Total-1,2-Dichloroethene	MG/L																						
541-73-1	1,3-Dichlorobenzene	MG/L		0.0005 U	0.0005 U	0.001 U	0.001 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.001 U	0.001 U	0.0005 U	0.0005 U
542-75-6	1,3-Dichloropropene, Total	MG/L																						
56-23-5	Carbon tetrachloride	MG/L		0.0002 U	0.0002 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.001 U	0.001 U	0.0005 U	0.0005 U
563-58-6	1,1-Dichloropropene	MG/L																			0.001 U	0.001 U	0.0005 U	0.0005 U
56-55-3	Benz(a)anthracene	MG/L																				0.01 U		0.01 U
57-74-2	gamma-Chlordane	MG/L																				0.00005 U		
57-74-9	Chlordane	MG/L	0.001 U	0.001 U		0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U				0.0005 U
57-74-9	Chlordane Technical	MG/L																				0.001 U		
58-89-9	gamma-BHC	MG/L	0.0001 U	0.0001 U		0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.00005 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U		0.00005 U		0.00005 U
591-78-6	2-Hexanone	MG/L																			0.005 U	0.005 U		
594-20-7	2,2-Dichloropropane	MG/L																			0.001 U	0.001 U	0.0005 U	0.0005 U
59-50-7	4-Chloro-3-methylphenol	MG/L		0.005 U		0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.003 U	0.005 U	0.005 U	0.005 U	0.0052 U		0.01 U		0.01 U
60-57-1	Dieldrin	MG/L	0.0001 U	0.0001 U		0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.00005 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U		0.0001 U		0.00005 U
606-20-2	2,6-Dinitrotoluene	MG/L																				0.005 U		0.005 U
621-64-7	N-Nitrosodi-n-propylamine	MG/L																				0.01 U		0.01 U
62-75-9	N-Nitrosodimethylamine	MG/L																				0.01 U		
630-20-6	1,1,1,2-Tetrachloroethane	MG/L																					0.0005 U	0.0005 U
634-90-2	1,2,3,5-Tetrachlorobenzene	MG/L																						
65-85-0	Benzoic acid	MG/L						0.05 U	0.05 U															0.05 U
67-64-1	Acetone	MG/L																			0.005 U	0.005 U		
67-66-3	Chloroform	MG/L		0.0002 U	0.0002 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.001 U	0.001 U	0.0005 U	0.0005 U
67-72-1	Hexachloroethane	MG/L																				0.01 U		0.01 U
7005-72-3	4-Chlorophenyl phenyl ether	MG/L																				0.01 U		0.01 U
71-43-2	Benzene	MG/L		0.0002 U	0.0002 U	0.0005 U	0.0005 U	0.001 U	0.001 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.001 U	0.001 U	0.0005 U	0.0005 U
71-55-6	1,1,1-Trichloroethane	MG/L		0.0002 U	0.0002 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.001 U	0.001 U	0.0005 U	0.0005 U
72-20-8	Endrin	MG/L	0.0001 U	0.0001 U		0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.00005 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U		0.0001 U		0.00005 U
72-43-5	Methoxychlor	MG/L	0.0005 U	0.0005 U		0.0005 U	0.0005 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.00005 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U		0.0005 U		0.0001 U
72-54-8	1,4-DDD	MG/L																						
72-54-8	2,4-DDD	MG/L																						
72-54-8	4,4'-DDD	MG/L	0.0001 U	0.0001 U		0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.00005 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U				0.00005 U
72-54-8	DDD (p,p-DDD)	MG/L																						
72-55-9	1,4-DDE	MG/L																						
72-55-9	4,4'-DDE	MG/L	0.0001 U	0.0001 U		0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.00005 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U		0.0001 U		0.00005 U
72-55-9	DDE (p,p-DDE)	MG/L																						
7421-93-4	Endrin aldehyde	MG/L	0.0001 U	0.0001 U		0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.00005 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U		0.0001 U		0.00005 U
7439-89-6	Iron (Fe)	MG/L																						
7439-92-1	Lead (Pb)	MG/L																						
7439-95-4	Magnesium (Mg)	MG/L																7.2	7.4					
7439-96-5	Manganese (Mn)	MG/L		0.29		0.28	0.27	0.35	0.35	0.38	7.72	0.37	0.59	0.58	0.4	0.47	0.4			0.31			0.19	0.19
7439-97-6	Mercury (Hg)	MG/L																						
7440-02-0	Nickel (Ni)	MG/L																						
7440-22-4	Silver (Ag)	MG/L																						
7440-23-5	Sodium (Na)	MG/L		40		52	36.9	29.6	29.2	28.8	40	32.1	30.7	30.7	17.1	34.9	35.8	26	20	31			36	31
7440-31-5	Tin (Sn)	MG/L																						
7440-38-2	Arsenic (As)	MG/L																						
7440-39-3	Barium (Ba)	MG/L																						
7440-43-9	Cadmium (Cd)	MG/L																						
7440-47-3	Chromium (Cr)	MG/L																						
7440-50-8	Copper (Cu)	MG/L																						
7440-66-6	Zinc (Zn)	MG/L																						
7440-70-2	Calcium (Ca)	MG/L																						
74-83-9	Bromomethane	MG/L		0.001 U	0.001 U	0 U	0 U	0 U	0 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.005 U	0.005 U	0.0005 U	0.0005 U
74-87-3	Chloromethane	MG/L		0.0005 U	0.0005 U	0.001 U	0.001 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.0005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.001 U	0.001 U	0.0005 U	0.0005 U
74-95-3	Dibromoethane	MG/L																						
74-95-3	Dibromomethane	MG/L																					0.0005 U	0.0005 U
74-97-5	Bromochloromethane	MG/L																			0.001 U	0.001 U	0.0005 U	0.0005 U
75-00-3	Chloroethane	MG/L		0.001 U	0.001 U	0 U	0 U	0 U	0 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.001 U	0.001 U	0.0005 U	0.0005 U
75-01-4	Vinyl chloride	MG/L		0.0002 U	0.0002 U	0.0005 U	0.0005 U	0.001 U	0.001 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.001 U	0.001 U	0.0005 U	0.0005 U
75-09-2	Methylene chloride	MG/L		0.002 U	0.002 U	0.026	0.0046	0.005 U	0.005 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.002 U	0.01 U	0.01 U	0.01 U	0.01 U	0.002 U	0.002 U	0.0005 U	0.0005 U
75-25-2	Bromoform	MG/L		0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.001 U	0.001 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.001 U	0.001 U	0.0005 U	0.0005 U
75-27-4	Bromodichloromethane	MG/L		0.0002 U	0.0002 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.001 U	0.001 U	0.0005 U	0.0005 U
75-34-3	1,1-Dichloroethane	MG/L		0.0002 U	0.0002 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.001 U	0.001 U	0.0005 U	0.0005 U
75-35-4	1,1-Dichloroethene	MG/L		0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.001 U	0.001 U	0.0005 U	0.0005 U
75-69-4	Trichlorofluoromethane	MG/L		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.001 U	0.001 U	0.0005 U	0.0005 U
75-71-8	Dichlorodifluoromethane	MG/L						0.001 U	0.001 U				0.005 U	0.005 U	0.005 U	0.0005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.001 U	0.001 U	0.0005 U	0.0005 U
76-13-1	1,1,2-Trichlorotrifluoroethane	MG/L																						
76-44-8	Heptachlor	MG/L	0.0001 U	0.0001 U		0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.00005 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U		0.00005 U		0.00005 U
77-47-4	Hexachlorocyclopentadiene	MG/L																				0.01 U		0.01 U
7782-49-2	Selenium (Se)	MG/L																						
78-59-1	Isophorone	MG/L																				0.01 U		0.01 U

Appendix C-4
Groundwater Data (1984 - 2007)
Page Trowbridge Ranch Landfill

		Sample ID Well ID Sample Date/Time	MW-3 MW-3 10/28/1991	MW-3 MW-3 10/29/1991	MW-3 (Dup) MW-3 11/12/1991	MW-3 MW-3 4/21/1992	MW-3 MW-3 10/13/1992	MW-3 MW-3 4/20/1993	MW-3 (Dup) MW-3 4/20/1993	MW-3 MW-3 10/12/1993	MW-3 MW-3 4/12/1994	MW-3 MW-3 10/11/1994	MW-3 (Dup) MW-3 4/26/1995	MW-3 MW-3 4/26/1995	MW-3 MW-3 10/25/1995	MW-3 MW-3 2/21/1996	MW-3 MW-3 10/9/1996	MW-3 MW-3 3/26/1997	MW-3 (Dup) MW-3 3/26/1997	MW-3 MW-3 11/5/1997	MW-3 (Dup) MW-3 8/23/2000	MW-3 MW-3 8/23/2000	MW-3 MW-3 10/26/2001	MW #3 MW-3 4/23/2003 10:29:00 AM
78-87-5	1,2-Dichloropropane	MG/L		0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.001 U	0.001 U	0.0005 U	0.0005 U
78-93-3	2-Butanone	MG/L																			0.005 U	0.005 U		
79-00-5	1,1,2-Trichloroethane	MG/L		0.0002 U	0.0002 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.001 U	0.001 U	0.0005 U	0.0005 U
79-01-6	Trichloroethene	MG/L		0.0002 U	0.0002 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.001 U	0.001 U	0.0005 U	0.0005 U
79-34-5	1,1,2,2-Tetrachloroethane	MG/L		0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.001 U	0.001 U	0.0005 U	0.0005 U
8001-35-2	Toxaphene	MG/L	0.001 U	0.001 U		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0005 U	0.001 U	0.001 U	0.001 U	0.001 U		0.002 U		0.001 U
8071-51-0	2-Methyl-4,6-dinitrophenol	MG/L						0.02 U	0.02 U	0.02 U	0.02 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U					
83-32-9	Acenaphthene	MG/L																				0.01 U		0.01 U
84-66-2	Diethyl phthalate	MG/L																				0.01 U		0.01 U
84-74-2	Di-n-butyl phthalate	MG/L																				0.01 U		0.01 U
85-01-8	Phenanthrene	MG/L																				0.005 U		0.005 U
85-68-7	Butyl benzyl phthalate	MG/L																				0.01 U		0.01 U
86-30-6	N-Nitrosodiphenylamine	MG/L																				0.005 U		0.005 U
86-73-7	Fluorene	MG/L																				0.01 U		0.01 U
87-61-6	1,2,3-Trichlorobenzene	MG/L																			0.005 U	0.005 U	0.0005 U	0.0005 U
87-68-3	Hexachlorobutadiene	MG/L																				0.01 U	0.0005 U	0.0005 U
87-86-5	Pentachlorophenol	MG/L		0.015 U		0.01 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.005 U	0.02 U	0.01 U	0.01 U	0.01 U		0.05 U		0.05 U
88-06-2	2,4,6-Trichlorophenol	MG/L		0.015 U		0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.003 U	0.005 U	0.005 U	0.005 U	0.0052 U		0.02 U		0.02 U
88-74-4	2-Nitroaniline	MG/L																						0.01 U
88-75-5	2-Nitrophenol	MG/L		0.005 U		0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.0052 U		0.015 U		0.015 U
90-13-1	Chloronaphthalene	MG/L																						
91-20-3	Naphthalene	MG/L																				0.01 U	0.0005 U	0.0005 U
91-57-6	2-Methylnaphthalene	MG/L																						0.01 U
91-58-7	2-Chloronaphthalene	MG/L																				0.01 U		0.01 U
91-94-1	3,3´-Dichlorobenzidine	MG/L																				0.01 U		0.01 U
92-87-5	Benzidine	MG/L																				0.15 U		
95-47-6	o-Xylene	MG/L		0.0005 U	0.0005 U			0.0005 U	0.0005 U							0.0005 U					0.001 U	0.001 U	0.0005 U	0.0005 U
95-48-7	2-Methylphenol	MG/L						0.01 U	0.01 U							0.003 U								0.01 U
95-49-8	2-Chlorotoluene	MG/L																			0.001 U	0.001 U	0.0005 U	0.0005 U
95-50-1	1,2-Dichlorobenzene	MG/L		0.0005 U	0.0005 U	0.001 U	0.001 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.001 U	0.001 U	0.0005 U	0.0005 U
95-57-8	2-Chlorophenol	MG/L		0.015 U		0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.003 U	0.005 U	0.005 U	0.005 U	0.0052 U		0.01 U		0.01 U
95-63-6	1,2,4-Trimethylbenzene	MG/L																			0.001 U	0.001 U	0.0005 U	0.0005 U
95-95-4	2,4,5-Trichlorophenol	MG/L						0.05 U	0.05 U							0.003 U								0.02 U
959-98-8	Endosulfan I	MG/L	0.0001 U	0.0001 U		0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.00005 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U		0.00005 U		0.00005 U
96-12-8	1,2-Dibromo-3-chloropropane	MG/L																						0.002 U
96-18-4	1,2,3-Trichloropropane	MG/L																			0.001 U	0.001 U	0.0005 U	0.0005 U
98-06-6	tert-Butylbenzene	MG/L																			0.001 U	0.001 U	0.0005 U	0.0005 U
98-82-8	Isopropylbenzene	MG/L																					0.0005 U	0.0005 U
98-95-3	Nitrobenzene	MG/L																				0.01 U		0.01 U
99-09-2	3-Nitroaniline	MG/L																						0.01 U
99-87-6	4-Isopropyltoluene	MG/L																			0.001 U	0.001 U	0.0005 U	0.0005 U
DDD	DDD	MG/L																				0.0001 U		
GIS-130-312	m,p-Xylenes	MG/L																						
NO3NO2N	Nitrate (NO3)	MG/L																						
NO3NO2N	Nitrite/Nitrate Total	MG/L																						
O&PXYLENE	O,P-Xylene	MG/L																						
THMs	Trihalomethanes, Total	MG/L																						0.0005 U
UNKNOWN	Acid Fraction	MG/L																						
UNKNOWN	B/N Fraction	MG/L																						
UNKNOWN	Dichlorobenzene	MG/L																						
UNKNOWN	Dinitro-2-Methylphenol	MG/L						0.05 U	0.05 U															
UNKNOWN	Total Trihalomethanes (THMs)	MG/L																						

Appendix C-4
Groundwater Data (1984 - 2007)
Page Trowbridge Ranch Landfill

		Sample ID	MW #3	MW #3	MW#3	MW#3 MW-3	MW #3	MW#3	MW#3	MW #3 Dup	MW #3	MW #3	MW-4	MW-4	MW-4	MW-4	MW-4
		Well ID	MW-3	MW-3	MW-3	10/13/2004	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-4	MW-4	MW-4	MW-4	MW-4
		Sample Date/Time	10/22/2003 10:40:00 AM	4/21/2004 10:32:00 AM	5/5/2004 10:24:00 AM	10:15:00 AM	4/13/2005 10:28:00 AM	4/12/2006 10:21:00 PM	10/12/2005 9:52:00 AM	10/11/2006 10:16:00 AM	10/11/2006 10:16:00 AM	4/11/2007 10:06:00 AM	4/8/1985	5/23/1985	6/6/1985	3/22/1985	9/20/1985
CAS_Number	**OGDEN_ANALYTE**	**FinalUnits**															
100-01-6	4-Nitroaniline	MG/L	0.01 U	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U					
100-02-7	4-Nitrophenol	MG/L	0.025 U	0.025 U		0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U					0 U
100-41-4	Ethylbenzene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U					
100-42-5	Styrene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U					
100-51-6	Benzyl alcohol	MG/L	0.01 U	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U					
10061-01-5	cis-1,3-Dichloropropene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0001 U	0.0002 U	0.0002 U	0.0001 U	0 U
10061-02-6	trans-1,3-Dichloropropene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0002 U	0.00034 U	0.00034 U	0.0002 U	0 U
101-55-3	4-Bromophenyl phenyl ether	MG/L	0.01 U	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U					
1024-57-3	Heptachlor epoxide	MG/L	0.00005 U	0.00005 U		0.00005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U		0.00005 U	0.00005 U		
1031-07-8	Endosulfan sulfate	MG/L	0.00005 U	0.00005 U		0.00005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U		0.0001 U	0.0001 U		
103-33-3	Azobenzene	MG/L	0.01 U	0.01 U		0.01 U	0.01 U										
103-65-1	n-Propylbenzene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U					
104-51-8	n-Butylbenzene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U					
105-67-9	2,4-Dimethylphenol	MG/L	0.01 U	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.003 U	0.003 U	0.003 U	0.003 U	0 U
106-43-4	4-Chlorotoluene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U					
106-44-5	3 & 4-Methylphenol	MG/L					0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U					
106-44-5	4-Methylphenol	MG/L	0.01 U	0.01 U		0.01 U											
106-46-7	1,4-Dichlorobenzene	MG/L	0.0005 U	0.01 U	0.0005 U	0.01 U	0.0005 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0005 U	0.00024 U	0.00024 U	0.0005 U	0 U
106-47-8	4-Chloroaniline	MG/L	0.01 U	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U					
106-93-4	1,2-Dibromoethane	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U					
107-06-2	1,2-Dichloroethane	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0001 U	0.00003 U	0.00003 U	0.0001 U	0 U
108-05-4	Vinyl Acetate	MG/L															
108-10-1	4-Methyl-2-Pentanone	MG/L															
108-38-3	M-Xylene	MG/L															
108-60-1	Bis(2-chloroisopropyl)ether	MG/L	0.01 U	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U					
108-67-8	1,3,5-Trimethylbenzene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U					
108-86-1	Bromobenzene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U					
108-88-3	Toluene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U					
108-90-7	Chlorobenzene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.00025 U	0.00025 U	0.0005 U	0 U
108-95-2	Phenol	MG/L	0.01 U	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.002 U	0.002 U	0.002 U	0.002 U	0 U
110-75-8	2-Chloroethyl Vinyl Ether	MG/L												0.00013 U	0.00013 U		0 U
11096-82-5	PCB-1260 (Aroclor)	MG/L															
11097-69-1	PCB-1254 (Aroclor)	MG/L															
11104-28-2	PCB-1221 (Aroclor)	MG/L															
11104-29-3	PCB-1242 (Aroclor)	MG/L															
11141-16-5	PCB-1232 (Aroclor)	MG/L															
111-44-4	Bis(2-chloroethyl)ether	MG/L	0.01 U	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U					
111-91-1	Bis(2-chloroethoxy)methane	MG/L	0.01 U	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U					
117-81-7	Bis(2-ethylhexyl)phthalate	MG/L	0.01 U	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.005 U	0.005 U	0.005 U					
117-84-0	Di-n-octyl phthalate	MG/L	0.01 U	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U					
118-74-1	Hexachlorobenzene	MG/L	0.01 U	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U					
120-12-7	Anthracene	MG/L	0.01 U	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U					
120-82-1	1,2,4-Trichlorobenzene	MG/L	0.0005 U	0.01 U	0.0005 U	0.01 U	0.0005 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U					
120-83-2	2,4-Dichlorophenol	MG/L	0.01 U	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.005 U	0.005 U	0.005 U	0.005 U	0 U
121-14-2	2,4-Dinitrotoluene	MG/L	0.01 U	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U					
122-66-7	1,2-Diphenylhydrazine (As Azobenzene)	MG/L						0.01 U	0.01 U	0.01 U	0.01 U	0.01 U					
124-48-1	Dibromochloromethane	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0001 U	0.00009 U	0.00009 U	0.0001 U	0 U
12672-29-6	PCB-1248 (Aroclor)	MG/L															
12674-11-2	PCB-1016 (Aroclor)	MG/L															
127-18-4	Tetrachloroethene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.00005 U	0.00003 U	0.00003 U	0.00005 U	0 U
129-00-0	Pyrene	MG/L	0.01 U	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U					
131-11-3	Dimethyl phthalate	MG/L	0.02 U	0.02 U		0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U					
132-64-9	Dibenzofuran	MG/L	0.01 U	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U					
1330-20-7	m,p-Xylene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U					
1330-20-7	Xylenes, Total	MG/L					0.001 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U					
135-98-8	sec-Butylbenzene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U					
142-28-9	1,3-Dichloropropane	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U					
14808-79-8	Sulfate (SO4)	MG/L	4	4.3		3.5	4.1	4.1	3.7	4	4	4	0.0871	4.24	3.06	0.00482	0.00305
156-59-2	cis-1,2-Dichloroethene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U					
156-60-5	trans-1,2-Dichloroethene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0 U
1634-04-4	Methyl tert-butyl ether	MG/L															
16887-00-6	Chloride (Cl-)	MG/L	5.6	5.5		6.3	4.8	4.3	6.6	6.2	6.2	6.3	0.00502	4.67	4.63	0.00482	0.00604
16984-48-8	Fluoride (Fl-)	MG/L											0.00082	0.796	0.76	0.000782	0.00081
191-24-2	Benzo(g,h,i)perylene	MG/L	0.01 U	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U					
193-39-5	Indeno(1,2,3-cd)pyrene	MG/L	0.01 U	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U					
205-99-2	Benzo(b)fluoranthene	MG/L	0.01 U	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U					
206-44-0	Fluoranthene	MG/L	0.01 U	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U					
207-08-9	Benzo(k)fluoranthene	MG/L	0.01 U	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U					
208-96-8	Acenaphthylene	MG/L	0.01 U	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U					
218-01-9	Chrysene	MG/L	0.01 U	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U					
25551-13-7	Trimethyl Benzene	MG/L															
309-00-2	Aldrin	MG/L	0.00005 U	0.00005 U		0.00005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U		0.0002	0.00005 U		
319-84-6	alpha-BHC	MG/L	0.00005 U	0.00005 U		0.00005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U		0.00001 U	0.00001 U		
319-85-7	beta-BHC	MG/L	0.00005 U	0.00005 U		0.00005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U		0.00001 U	0.00001 U		
319-86-8	delta-BHC	MG/L	0.00005 U	0.00005 U		0.00005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U		0.00001 U	0.00001 U		
33213-65-9	Endosulfan II	MG/L	0.00005 U	0.00005 U		0.00005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U					
50-29-3	2,4-DDT	MG/L															
50-29-3	4,4'-DDT	MG/L	0.00005 U	0.00005 U		0.00005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U		0.00005 U	0.00005 U		

Appendix C-4
Groundwater Data (1984 - 2007)
Page Trowbridge Ranch Landfill

		Sample ID Well ID Sample Date/Time	MW #3 MW-3 10/22/2003 10:40:00 AM	MW #3 MW-3 4/21/2004 10:32:00 AM	MW#3 MW-3 5/5/2004 10:24:00 AM	MW#3 MW-3 10/13/2004 10:15:00 AM	MW #3 MW-3 4/13/2005 10:28:00 AM	MW#3 MW-3 4/12/2006 10:21:00 PM	MW#3 MW-3 10/12/2005 9:52:00 AM	MW #3 Dup MW-3 10/11/2006 10:16:00 AM	MW #3 MW-3 10/11/2006 10:16:00 AM	MW #3 MW-3 4/11/2007 10:06:00 AM	MW-4 MW-4 4/8/1985	MW-4 MW-4 5/23/1985	MW-4 MW-4 6/6/1985	MW-4 MW-4 3/22/1985	MW-4 MW-4 9/20/1985
50-29-3	DDT (p,p-DDT)	MG/L															
50-32-8	Benzo(a)pyrene	MG/L	0.01 U	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U					
5103-71-9	alpha-Chlordane	MG/L															
51-28-5	2,4-Dinitrophenol	MG/L	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.1 U	0.1 U	0.1 U	0.1 U	0 U
53-19-0	2,4-DDD	MG/L															
534-52-1	2-Methyl-4,6-dinitrophenol	MG/L	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U					
53494-70-5	Endrin Ketone	MG/L															
53-70-3	Dibenz(a,h)anthracene	MG/L	0.01 U	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U					
540-59-0	Total-1,2-Dichloroethene	MG/L															
541-73-1	1,3-Dichlorobenzene	MG/L	0.0005 U	0.01 U	0.0005 U	0.01 U	0.0005 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0005 U	0.00032 U	0.00032 U	0.0005 U	0 U
542-75-6	1,3-Dichloropropene, Total	MG/L															
56-23-5	Carbon tetrachloride	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.00005 U	0.00012 U	0.00012 U	0.00005 U	0 U
563-58-6	1,1-Dichloropropene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U					
56-55-3	Benz(a)anthracene	MG/L	0.01 U	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U					
57-74-2	gamma-Chlordane	MG/L															
57-74-9	Chlordane	MG/L	0.0005 U	0.0005 U		0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U					
57-74-9	Chlordane Technical	MG/L															
58-89-9	gamma-BHC	MG/L	0.00005 U	0.00005 U		0.00005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U		0.00001 U	0.00001 U		
591-78-6	2-Hexanone	MG/L															
594-20-7	2,2-Dichloropropane	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U					
59-50-7	4-Chloro-3-methylphenol	MG/L	0.01 U	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0 U
60-57-1	Dieldrin	MG/L	0.00005 U	0.00005 U		0.00005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U		0.00015	0.00005 U		
606-20-2	2,6-Dinitrotoluene	MG/L	0.01 U	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U					
621-64-7	N-Nitrosodi-n-propylamine	MG/L	0.01 U	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U					
62-75-9	N-Nitrosodimethylamine	MG/L															
630-20-6	1,1,1,2-Tetrachloroethane	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U					
634-90-2	1,2,3,5-Tetrachlorobenzene	MG/L															
65-85-0	Benzoic acid	MG/L	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U	0.025 U	0.025 U	0.025 U					
67-64-1	Acetone	MG/L															
67-66-3	Chloroform	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U	0 U
67-72-1	Hexachloroethane	MG/L	0.01 U	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U					
7005-72-3	4-Chlorophenyl phenyl ether	MG/L	0.01 U	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U					
71-43-2	Benzene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U					
71-55-6	1,1,1-Trichloroethane	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.00005 U	0.00003 U	0.00003 U	0.00005 U	0 U
72-20-8	Endrin	MG/L	0.00005 U	0.00005 U		0.00005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U		0.00005 U	0.00005 U		
72-43-5	Methoxychlor	MG/L	0.0001 U	0.0001 U		0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U					
72-54-8	1,4-DDD	MG/L															
72-54-8	2,4-DDD	MG/L															
72-54-8	4,4'-DDD	MG/L	0.00005 U	0.00005 U		0.00005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U		0.00005 U	0.00005 U		
72-54-8	DDD (p,p-DDD)	MG/L															
72-55-9	1,4-DDE	MG/L															
72-55-9	4,4'-DDE	MG/L	0.00005 U	0.00005 U		0.00005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U		0.00005 U	0.00005 U		
72-55-9	DDE (p,p-DDE)	MG/L															
7421-93-4	Endrin aldehyde	MG/L	0.00005 U	0.00005 U		0.00005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U		0.0001 U	0.0001 U		
7439-89-6	Iron (Fe)	MG/L															0.00063
7439-92-1	Lead (Pb)	MG/L											0.00023 U	0.047 U	0.047 U	0.0002 U	0.00002 U
7439-95-4	Magnesium (Mg)	MG/L															
7439-96-5	Manganese (Mn)	MG/L	0.2	0.24		0.22	0.19	0.11	0.097	0.15	0.14	0.17					0.00018
7439-97-6	Mercury (Hg)	MG/L											0.000005 U	0.001 U	0.001 U	0.000005 U	0.000001 U
7440-02-0	Nickel (Ni)	MG/L											0.00023 U	0.042 U	0.023 U	0.00017 U	
7440-22-4	Silver (Ag)	MG/L											0.000063 U	0.003 U	0.014 U	0.00003 U	0.000005 U
7440-23-5	Sodium (Na)	MG/L	33	34		36	39	36	36	37	37	36					0.0346
7440-31-5	Tin (Sn)	MG/L															
7440-38-2	Arsenic (As)	MG/L											0.000004 U	0.005 U	0.005 U	0.000005	0.000003 U
7440-39-3	Barium (Ba)	MG/L											0.000507 U	0.076	0.49 U	0.00049 U	0.00045 U
7440-43-9	Cadmium (Cd)	MG/L											0.000022 U	0.003 U	0.003 U	0.00003 U	0.000002 U
7440-47-3	Chromium (Cr)	MG/L											0.00004 U	0.036	0.006	0.0001 U	0.00001 U
7440-50-8	Copper (Cu)	MG/L											0.000049 U	0.021 U	0.021 U	0.00003 U	
7440-66-6	Zinc (Zn)	MG/L											0.000355	0.324	0.265	0.00049	
7440-70-2	Calcium (Ca)	MG/L															
74-83-9	Bromomethane	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U		0.00118 U	0.00118 U		0 U
74-87-3	Chloromethane	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U		0.00008 U	0.00008 U		0 U
74-95-3	Dibromoethane	MG/L															
74-95-3	Dibromomethane	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U					
74-97-5	Bromochloromethane	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U					
75-00-3	Chloroethane	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U		0.00052 U	0.00052 U		0 U
75-01-4	Vinyl chloride	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U		0.00018 U	0.00018 U		0 U
75-09-2	Methylene chloride	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.00025 U	0.00024	0.0005 U	0.00107
75-25-2	Bromoform	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0001 U	0.0002 U	0.0002 U	0.0001 U	0 U
75-27-4	Bromodichloromethane	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.00005 U	0.0001 U	0.0001 U	0.00005 U	0 U
75-34-3	1,1-Dichloroethane	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0001 U	0.00007 U	0.00007 U	0.0001 U	0 U
75-35-4	1,1-Dichloroethene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0001 U	0.00013 U	0.00013 U	0.0001 U	0 U
75-69-4	Trichlorofluoromethane	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0 U-NDT	0 U-NDT	0.0005 U	0 U
75-71-8	Dichlorodifluoromethane	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U		0.00181 U	0.00181 U		0 U
76-13-1	1,1,2-Trichlorotrifluoroethane	MG/L															
76-44-8	Heptachlor	MG/L	0.00005 U	0.00005 U		0.00005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U		0.00005 U	0.00005 U		
77-47-4	Hexachlorocyclopentadiene	MG/L	0.01 U	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U					
7782-49-2	Selenium (Se)	MG/L											0.000005 U	0.005 U	0.004 U	0.000003 U	0.000005 U
78-59-1	Isophorone	MG/L	0.01 U	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U					

Appendix C-4
Groundwater Data (1984 - 2007)
Page Trowbridge Ranch Landfill

		Sample ID	MW #3	MW #3	MW#3	MW#3 MW-3	MW #3	MW#3	MW#3	MW #3 Dup	MW #3	MW #3	MW-4	MW-4	MW-4	MW-4	MW-4
		Well ID	MW-3	MW-3	MW-3	10/13/2004	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-4	MW-4	MW-4	MW-4	MW-4
		Sample Date/Time	10/22/2003 10:40:00 AM	4/21/2004 10:32:00 AM	5/5/2004 10:24:00 AM	10:15:00 AM	4/13/2005 10:28:00 AM	4/12/2006 10:21:00 PM	10/12/2005 9:52:00 AM	10/11/2006 10:16:00 AM	10/11/2006 10:16:00 AM	4/11/2007 10:06:00 AM	4/8/1985	5/23/1985	6/6/1985	3/22/1985	9/20/1985
78-87-5	1,2-Dichloropropane	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0001 U	0.00004 U	0.00004 U	0.0001 U	0 U
78-93-3	2-Butanone	MG/L															
79-00-5	1,1,2-Trichloroethane	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0001 U	0.00002 U	0.00002 U	0.0001 U	0 U
79-01-6	Trichloroethene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.00005 U	0.00012 U	0.00012 U	0.00005 U	0 U
79-34-5	1,1,2,2-Tetrachloroethane	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.00005 U	0.00003 U	0.00003 U	0.00005 U	0 U
8001-35-2	Toxaphene	MG/L	0.001 U	0.001 U		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U					
8071-51-0	2-Methyl-4,6-dinitrophenol	MG/L											0.1 U	0.1 U	0.1 U	0.1 U	0 U
83-32-9	Acenaphthene	MG/L	0.01 U	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U					
84-66-2	Diethyl phthalate	MG/L	0.01 U	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U					
84-74-2	Di-n-butyl phthalate	MG/L	0.01 U	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U					
85-01-8	Phenanthrene	MG/L	0.01 U	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U					
85-68-7	Butyl benzyl phthalate	MG/L	0.01 U	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U					
86-30-6	N-Nitrosodiphenylamine	MG/L	0.01 U	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U					
86-73-7	Fluorene	MG/L	0.01 U	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U					
87-61-6	1,2,3-Trichlorobenzene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U					
87-68-3	Hexachlorobutadiene	MG/L	0.0005 U	0.01 U	0.0005 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U					
87-86-5	Pentachlorophenol	MG/L	0.05 U	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.1 U	0.1 U	0.1 U	0.1 U	0 U
88-06-2	2,4,6-Trichlorophenol	MG/L	0.02 U	0.02 U		0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.005 U	0.005 U	0.005 U	0.005 U	0 U
88-74-4	2-Nitroaniline	MG/L	0.01 U	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U					
88-75-5	2-Nitrophenol	MG/L	0.015 U	0.015 U		0.015 U	0.015 U	0.015 U	0.015 U	0.015 U	0.015 U	0.015 U	0.003 U	0.003 U	0.003 U	0.003 U	0 U
90-13-1	Chloronaphthalene	MG/L															
91-20-3	Naphthalene	MG/L	0.0005 U	0.01 U	0.0005 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U					
91-57-6	2-Methylnaphthalene	MG/L	0.01 U	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U					
91-58-7	2-Chloronaphthalene	MG/L	0.01 U	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U					
91-94-1	3,3´-Dichlorobenzidine	MG/L	0.01 U	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U					
92-87-5	Benzidine	MG/L															
95-47-6	o-Xylene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U					
95-48-7	2-Methylphenol	MG/L	0.01 U	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U					
95-49-8	2-Chlorotoluene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U					
95-50-1	1,2-Dichlorobenzene	MG/L	0.0005 U	0.01 U	0.0005 U	0.01 U	0.0005 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0005 U	0.00015 U	0.00015 U	0.0005 U	0 U
95-57-8	2-Chlorophenol	MG/L	0.01 U	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.003 U	0.003 U	0.003 U	0.003 U	0 U
95-63-6	1,2,4-Trimethylbenzene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U					
95-95-4	2,4,5-Trichlorophenol	MG/L	0.02 U	0.02 U		0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U					
959-98-8	Endosulfan I	MG/L	0.00005 U	0.00005 U		0.00005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U					
96-12-8	1,2-Dibromo-3-chloropropane	MG/L	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U					
96-18-4	1,2,3-Trichloropropane	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U					
98-06-6	tert-Butylbenzene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U					
98-82-8	Isopropylbenzene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U					
98-95-3	Nitrobenzene	MG/L	0.01 U	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U					
99-09-2	3-Nitroaniline	MG/L	0.01 U	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U					
99-87-6	4-Isopropyltoluene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U					
DDD	DDD	MG/L															
GIS-130-312	m,p-Xylenes	MG/L															
NO3NO2N	Nitrate (NO3)	MG/L											0.00877	8.38	8.26	0.0109	0.00678
NO3NO2N	Nitrite/Nitrate Total	MG/L															
O&PXYLENE	O,P-Xylene	MG/L															
THMs	Trihalomethanes, Total	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.002 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U					
UNKNOWN	Acid Fraction	MG/L															
UNKNOWN	B/N Fraction	MG/L															
UNKNOWN	Dichlorobenzene	MG/L															
UNKNOWN	Dinitro-2-Methylphenol	MG/L															
UNKNOWN	Total Trihalomethanes (THMs)	MG/L															

Appendix C-4
Groundwater Data (1984 - 2007)
Page Trowbridge Ranch Landfill

		Sample ID	MW-4	MW-4	MW-4	MW-4 (Dup)	MW-4 (start of purge)	MW-4 (filtered)	MW-4 (purge filtered)	MW-4 (Dup)	MW-4	MW-4 (Dup)	MW-4	MW-4	MW-4 (Dup)	MW-4	MW-4	MW-4 (Dup)	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4 (Rerun Dup)
		Well ID	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4
		Sample Date/Time	7/24/1986	7/10/1987	3/6/1987	3/6/1987	7/10/1987	7/10/1987	7/10/1987	7/10/1987	10/21/1988	4/22/1988	4/22/1988	4/18/1989	10/31/1989	10/31/1989	4/18/1990	11/16/1990	11/16/1990	5/10/1991	5/6/1991	10/28/1991	10/29/1991	10/29/1991
CAS_Number	**OGDEN_ANALYTE**	**FinalUnits**																						
100-01-6	4-Nitroaniline	MG/L																						
100-02-7	4-Nitrophenol	MG/L		0.04 U	0.035 U	0.035 U				0.04 U	0.00523 U			0 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.01 U	0.01 U		0.01 U	
100-41-4	Ethylbenzene	MG/L	0 U	0.0005 U	0.0095 U	0.0095 U				0.0005 U	0.0002 U		0.0002 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		0.0005 U		0.0005 U	0.0005 U
100-42-5	Styrene	MG/L												0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U					
100-51-6	Benzyl alcohol	MG/L																						
10061-01-5	cis-1,3-Dichloropropene	MG/L	0 U	0.00001 U						0.00001 U	0.0002 U		0.0002 U	0.0005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		0.0005 U		0.0005 U	0.0005 U
10061-02-6	trans-1,3-Dichloropropene	MG/L	0 U	0.00003 U						0.00003 U	0.00034 U		0.00034 U	0.0005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		0.0005 U		0.0005 U	0.0005 U
101-55-3	4-Bromophenyl phenyl ether	MG/L																						
1024-57-3	Heptachlor epoxide	MG/L	0.00005 U	0.00001 U	0.00002 U						0.000083 U		0.000083 U	0.00005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		0.0001 U	0.0001 U	0.0001 U	
1031-07-8	Endosulfan sulfate	MG/L	0.0001 U	0.0001 U	0.00002 U						0.000066 U		0.000066 U	0.0001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		0.0001 U	0.0001 U	0.0001 U	
103-33-3	Azobenzene	MG/L																						
103-65-1	n-Propylbenzene	MG/L												0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U					
104-51-8	n-Butylbenzene	MG/L												0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U					
105-67-9	2,4-Dimethylphenol	MG/L		0.003 U	0.0009 U	0.0009 U				0.003 U	0.00104 U			0 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.005 U	0.005 U		0.005 U	
106-43-4	4-Chlorotoluene	MG/L															0.001 U	0.001 U	0.001 U					
106-44-5	3 & 4-Methylphenol	MG/L																						
106-44-5	4-Methylphenol	MG/L																						
106-46-7	1,4-Dichlorobenzene	MG/L	0 U	0.00005 U						0.00005 U	0.0002 U		0.0002 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		0.0005 U		0.0005 U	0.0005 U
106-47-8	4-Chloroaniline	MG/L																						
106-93-4	1,2-Dibromoethane	MG/L																						
107-06-2	1,2-Dichloroethane	MG/L	0 U	0.00001 U	0.0002 U	0.0002 U				0.00001 U	0.00003 U		0.00003 U	0.0005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		0.0002 U		0.0002 U	0.0002 U
108-05-4	Vinyl Acetate	MG/L																						
108-10-1	4-Methyl-2-Pentanone	MG/L																						
108-38-3	M-Xylene	MG/L									0.0002 U		0.0002 U											
108-60-1	Bis(2-chloroisopropyl)ether	MG/L																						
108-67-8	1,3,5-Trimethylbenzene	MG/L																						
108-86-1	Bromobenzene	MG/L																						
108-88-3	Toluene	MG/L	0 U	0.0005 U	0.0067 U	0.0067 U				0.0005 U	0.0002 U		0.0002 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		0.0002 U		0.0002 U	0.0002 U
108-90-7	Chlorobenzene	MG/L	0 U	0.00002 U	0.0003 U	0.0003 U				0.00002 U	0.0002 U		0.0002 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		0.0002 U		0.0002 U	0.0002 U
108-95-2	Phenol	MG/L	0.01 U	0.0025 U	0.0006 U	0.0006 U				0.0025 U	0.00128 U	0.003 U	0.012	0 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.005 U	0.005 U		0.005 U	
110-75-8	2-Chloroethyl Vinyl Ether	MG/L	0 U	0.0005 U	0.001 U	0.001 U				0.0005 U	0.00013 U		0.00013 U	0.0005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		0.0005 U		0.0005 U	0.0005 U
11096-82-5	PCB-1260 (Aroclor)	MG/L	0.001 U	0.001 U							0.00007 U		0.00007 U	0.001 U							0.001 U	0.001 U	0.001 U	
11097-69-1	PCB-1254 (Aroclor)	MG/L	0.001 U	0.001 U							0.00007 U		0.00007 U	0.001 U							0.001 U	0.001 U	0.001 U	
11104-28-2	PCB-1221 (Aroclor)	MG/L	0.0005 U	0.001 U							0.00007 U		0.00007 U	0.0005 U							0.001 U	0.001 U	0.001 U	
11104-29-3	PCB-1242 (Aroclor)	MG/L	0.0005 U	0.001 U							0.00007 U		0.00007 U	0.0005 U							0.001 U	0.001 U	0.001 U	
11141-16-5	PCB-1232 (Aroclor)	MG/L	0.0005 U	0.001 U							0.00007 U		0.00007 U	0.0005 U							0.001 U	0.001 U	0.001 U	
111-44-4	Bis(2-chloroethyl)ether	MG/L																						
111-91-1	Bis(2-chloroethoxy)methane	MG/L																						
117-81-7	Bis(2-ethylhexyl)phthalate	MG/L																						
117-84-0	Di-n-octyl phthalate	MG/L																						
118-74-1	Hexachlorobenzene	MG/L																						
120-12-7	Anthracene	MG/L																						
120-82-1	1,2,4-Trichlorobenzene	MG/L																						
120-83-2	2,4-Dichlorophenol	MG/L		0.004 U	0.0016 U	0.0016 U				0.004 U	0.00193 U			0 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.005 U	0.005 U		0.005 U	
121-14-2	2,4-Dinitrotoluene	MG/L																						
122-66-7	1,2-Diphenylhydrazine (As Azobenzene)	MG/L																						
124-48-1	Dibromochloromethane	MG/L	0 U	0.00001 U						0.00001 U	0.00009 U		0.00009 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		0.0002 U		0.0002 U	0.0002 U
12672-29-6	PCB-1248 (Aroclor)	MG/L	0.0005 U	0.001 U										0.0005 U							0.001 U	0.001 U	0.001 U	
12674-11-2	PCB-1016 (Aroclor)	MG/L	0.0005 U	0.001 U							0.00007 U		0.00007 U	0.0005 U							0.001 U	0.001 U	0.001 U	
127-18-4	Tetrachloroethene	MG/L	0 U	0.00001 U						0.00001 U	0.00003 U		0.00003 U	0.0005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		0.0002 U		0.0002 U	0.0002 U
129-00-0	Pyrene	MG/L																						
131-11-3	Dimethyl phthalate	MG/L																						
132-64-9	Dibenzofuran	MG/L																						
1330-20-7	m,p-Xylene	MG/L																			0.0005 U		0.0005 U	0.0005 U
1330-20-7	Xylenes, Total	MG/L		0.0005 U						0.0005 U				0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U					
135-98-8	sec-Butylbenzene	MG/L												0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U					
142-28-9	1,3-Dichloropropane	MG/L												0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U					
14808-79-8	Sulfate (SO4)	MG/L	1 U	10 U			10 U				10 U		9	10 U	1.6	1.6	1 U	5 U	5 U		1 U		3	
156-59-2	cis-1,2-Dichloroethene	MG/L												0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U					
156-60-5	trans-1,2-Dichloroethene	MG/L	0 U	0.00001 U	0.0004 U	0.0004 U				0.00001 U	0.0001 U		0.0001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		0.0002 U		0.0002 U	0.0002 U
1634-04-4	Methyl tert-butyl ether	MG/L																						
16887-00-6	Chloride (Cl-)	MG/L	10	5.45			7.9				7.3		4.9	4.8	7.05	7.2	5.3	7.2	7.17		10		6	
16984-48-8	Fluoride (Fl-)	MG/L		0.78			0.6							0.81										
191-24-2	Benzo(g,h,i)perylene	MG/L																						
193-39-5	Indeno(1,2,3-cd)pyrene	MG/L																						
205-99-2	Benzo(b)fluoranthene	MG/L																						
206-44-0	Fluoranthene	MG/L																						
207-08-9	Benzo(k)fluoranthene	MG/L																						
208-96-8	Acenaphthylene	MG/L																						
218-01-9	Chrysene	MG/L																						
25551-13-7	Trimethyl Benzene	MG/L												0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U					
309-00-2	Aldrin	MG/L	0.00005 U	0.000005 U	0.000002 U						0.000004 U		0.000004 U	0.00005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		0.0001 U	0.0001 U	0.0001 U	
319-84-6	alpha-BHC	MG/L	0.00005 U	0.000005 U	0.000002 U						0.000003 U		0.000003 U	0.00005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		0.0001 U	0.0001 U	0.0001 U	
319-85-7	beta-BHC	MG/L	0.00005 U	0.000005 U	0.000004 U						0.000006 U		0.000006 U	0.00005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		0.0001 U	0.0001 U	0.0001 U	
319-86-8	delta-BHC	MG/L	0.00005 U	0.000005 U	0.000002 U						0.000009 U		0.000009 U	0.00005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		0.0001 U	0.0001 U	0.0001 U	
33213-65-9	Endosulfan II	MG/L	0.0001 U	0.00002 U	0.000012 U						0.000004 U		0.000004 U	0.0001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		0.0001 U	0.0001 U	0.0001 U	
50-29-3	2,4-DDT	MG/L												0.0001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U					
50-29-3	4,4'-DDT	MG/L	0.0001 U								0.000012 U		0.000012 U	0.0001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		0.0001 U	0.0001 U	0.0001 U	

Appendix C-4
Groundwater Data (1984 - 2007)
Page Trowbridge Ranch Landfill

		Sample ID	MW-4	MW-4	MW-4	MW-4 (Dup)	MW-4 (start of purge)	MW-4 (filtered)	MW-4 (purge filtered)	MW-4 (Dup)	MW-4	MW-4 (Dup)	MW-4	MW-4	MW-4 (Dup)	MW-4	MW-4	MW-4 (Dup)	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4 (Rerun Dup)
		Well ID	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4
		Sample Date/Time	7/24/1986	7/10/1987	3/6/1987	3/6/1987	7/10/1987	7/10/1987	7/10/1987	7/10/1987	10/21/1988	4/22/1988	4/22/1988	4/18/1989	10/31/1989	10/31/1989	4/18/1990	11/16/1990	11/16/1990	5/10/1991	5/6/1991	10/28/1991	10/29/1991	10/29/1991
50-29-3	DDT (p,p-DDT)	MG/L		0.00006 U	0.000012 U									0.0001 U										
50-32-8	Benzo(a)pyrene	MG/L																						
5103-71-9	alpha-Chlordane	MG/L																						
51-28-5	2,4-Dinitrophenol	MG/L		0.04 U	0.015 U	0.015 U				0.04 U	0.013 U			0 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.01 U	0.01 U		0.015 U	
53-19-0	2,4-DDD	MG/L															0.001 U		0.001 U					
534-52-1	2-Methyl-4,6-dinitrophenol	MG/L																		0.01 U	0.01 U		0.015 U	
53494-70-5	Endrin Ketone	MG/L	0.0001 U	0.0002 U																				
53-70-3	Dibenz(a,h)anthracene	MG/L																						
540-59-0	Total-1,2-Dichloroethene	MG/L		0.0005 U										0.0005 U										
541-73-1	1,3-Dichlorobenzene	MG/L	0 U	0.00005 U						0.00005 U	0.0002 U		0.0002 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		0.0005 U		0.0005 U	0.0005 U
542-75-6	1,3-Dichloropropene, Total	MG/L																						
56-23-5	Carbon tetrachloride	MG/L	0 U	0.00001 U	0.0001 U	0.0001 U				0.00001 U	0.00012 U		0.00012 U	0.0005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		0.0002 U		0.0002 U	0.0002 U
563-58-6	1,1-Dichloropropene	MG/L																						
56-55-3	Benz(a)anthracene	MG/L																						
57-74-2	gamma-Chlordane	MG/L																						
57-74-9	Chlordane	MG/L	0.0005 U	0.00002 U	0.00005						0.000014 U		0.000014 U	0.0001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		0.001 U	0.001 U	0.001 U	
57-74-9	Chlordane Technical	MG/L																						
58-89-9	gamma-BHC	MG/L	0.00005 U	0.000005 U	0.000002 U						0.000004 U		0.000004 U	0.00005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		0.0001 U	0.0001 U	0.0001 U	
591-78-6	2-Hexanone	MG/L																						
594-20-7	2,2-Dichloropropane	MG/L																						
59-50-7	4-Chloro-3-methylphenol	MG/L		0.005 U	0.0015 U	0.0015 U				0.005 U	0.00222 U			0 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.005 U	0.005 U		0.005 U	
60-57-1	Dieldrin	MG/L	0.0001 U	0.00002 U	0.000004 U						0.000002 U		0.000002 U	0.0001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		0.0001 U	0.0001 U	0.0001 U	
606-20-2	2,6-Dinitrotoluene	MG/L																						
621-64-7	N-Nitrosodi-n-propylamine	MG/L																						
62-75-9	N-Nitrosodimethylamine	MG/L																						
630-20-6	1,1,1,2-Tetrachloroethane	MG/L													1 U	1 U	0.001 U	1 U	0.001 U					
634-90-2	1,2,3,5-Tetrachlorobenzene	MG/L												0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U					
65-85-0	Benzoic acid	MG/L																						
67-64-1	Acetone	MG/L																						
67-66-3	Chloroform	MG/L	0 U	0.000005 U	0.0002 U	0.0002 U				0.000005 U	0.00005 U		0.00005 U	0.0005 U	0.001 U	0.001 U	0.003	0.001 U	0.001 U		0.0002 U		0.0002 U	0.0002 U
67-72-1	Hexachloroethane	MG/L																						
7005-72-3	4-Chlorophenyl phenyl ether	MG/L																						
71-43-2	Benzene	MG/L	0 U	0.0008 U	0.0065 U	0.0065 U				0.0008 U	0.0002 U		0.0002 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		0.0002 U		0.0002 U	0.0002 U
71-55-6	1,1,1-Trichloroethane	MG/L	0 U	0.00001 U	0.0002 U	0.0002 U				0.00001 U	0.00003 U		0.00003 U	0.0005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		0.0002 U		0.0002 U	0.0002 U
72-20-8	Endrin	MG/L	0.0001 U	0.00002 U	0.00001 U						0.000006 U		0.000006 U	0.0001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		0.0001 U	0.0001 U	0.0001 U	
72-43-5	Methoxychlor	MG/L	0.0005 U	0.0005 U							0.00005 U		0.00005 U	0.0005 U	0.001 U	0.0003	0.001 U	0.001 U	0.001 U		0.0005 U	0.0005 U	0.0005 U	
72-54-8	1,4-DDD	MG/L	0.0001 U																					
72-54-8	2,4-DDD	MG/L												0.0001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U					
72-54-8	4,4'-DDD	MG/L									0.000011 U		0.000011 U	0.0001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		0.0001 U	0.0001 U	0.0001 U	
72-54-8	DDD (p,p-DDD)	MG/L		0.00002 U	0.000012 U									0.0001 U										
72-55-9	1,4-DDE	MG/L	0.0001 U																					
72-55-9	4,4'-DDE	MG/L									0.000004 U		0.000004 U	0.0001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		0.0001 U	0.0001 U	0.0001 U	
72-55-9	DDE (p,p-DDE)	MG/L		0.00002 U	0.000004 U									0.0001 U										
7421-93-4	Endrin aldehyde	MG/L		0.00006 U	0.00002 U						0.000023 U		0.000023 U	0.0001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		0.0001 U	0.0001 U	0.0001 U	
7439-89-6	Iron (Fe)	MG/L	0.77	10.74	1.54		53.1	0.1 U	0.1 U					1.1										
7439-92-1	Lead (Pb)	MG/L		0.02 U			0.02 U	0.02 U	0.02 U					0.01 U										
7439-95-4	Magnesium (Mg)	MG/L		9.3			8.4								7.7	7.8								
7439-96-5	Manganese (Mn)	MG/L	0.34	0.29	0.44		0.44	0.27	0.13		0.183		0.21	0.21			0.126	0.168	0.162		0.23		0.32	
7439-97-6	Mercury (Hg)	MG/L		0.0005 U			0.0005 U							0.0005 U										
7440-02-0	Nickel (Ni)	MG/L		0.1 U			0.1 U	0.1 U	0.1 U															
7440-22-4	Silver (Ag)	MG/L		0.005 U			0.005 U							0.001 U										
7440-23-5	Sodium (Na)	MG/L		30.7			31.2				28.3		31.9	30.1	31.1	31.3	32	32.9	32.9		45		35	
7440-31-5	Tin (Sn)	MG/L		5 U			5 U	5 U	5 U															
7440-38-2	Arsenic (As)	MG/L		0.02 U			0.02 U							0.01 U										
7440-39-3	Barium (Ba)	MG/L		0.1 U			0.12							0.1 U										
7440-43-9	Cadmium (Cd)	MG/L					0.001 U	0.001 U	0.001 U					0.001 U										
7440-47-3	Chromium (Cr)	MG/L		0.01 U			0.012	0.01 U	0.01 U					0.01 U										
7440-50-8	Copper (Cu)	MG/L		0.1 U			0.1 U							0.1 U										
7440-66-6	Zinc (Zn)	MG/L		0.96			12.2	0.19	0.09					0.77										
7440-70-2	Calcium (Ca)	MG/L		29			18.7																	
74-83-9	Bromomethane	MG/L	0 U	0.0005 U							0.00118 U		0.00118 U	0.0005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		0.001 U		0.001 U	0.001 U
74-87-3	Chloromethane	MG/L	0 U	0.00002 U						0.00002 U	0.00008 U		0.00008 U	0.0005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		0.0005 U		0.0005 U	0.0005 U
74-95-3	Dibromoethane	MG/L												0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U					
74-95-3	Dibromomethane	MG/L																						
74-97-5	Bromochloromethane	MG/L												0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U					
75-00-3	Chloroethane	MG/L	0 U	0.00001 U	0.0006 U	0.0006 U				0.00001 U	0.00052 U		0.00052 U	0.0005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		0.001 U		0.001 U	0.001 U
75-01-4	Vinyl chloride	MG/L	0 U	0.00025 U						0.00025 U	0.00018 U		0.00018 U	0.0003 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		0.0002 U		0.0002 U	0.0002 U
75-09-2	Methylene chloride	MG/L	0 U	0.0005 U	0.0003 U	0.0003 U				0.0001	0.00025 U		0.00025 U	0.0005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		0.002 U		0.002 U	0.002 U
75-25-2	Bromoform	MG/L	0 U	0.0005 U	0.001 U	0.001 U				0.0005 U	0.0002 U		0.0002 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		0.0005 U		0.0005 U	0.0005 U
75-27-4	Bromodichloromethane	MG/L	0 U	0.00001 U						0.00001 U	0.0001 U		0.0001 U	0.0005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		0.0002 U		0.0002 U	0.0002 U
75-34-3	1,1-Dichloroethane	MG/L	0 U	0.00001 U	0.0004 U	0.0004 U				0.00001 U	0.00007 U		0.00007 U	0.0005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		0.0002 U		0.0002 U	0.0002 U
75-35-4	1,1-Dichloroethene	MG/L	0 U	0.00001 U						0.00001 U	0.00013 U		0.00013 U	0.0005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		0.0005 U		0.0005 U	0.0005 U
75-69-4	Trichlorofluoromethane	MG/L	0 U	0.00001 U	0.0003 U	0.0003 U				0.00001 U	0.0005 U		0.0005 U	0.0005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		0.001 U		0.001 U	0.001 U
75-71-8	Dichlorodifluoromethane	MG/L	0 U	0.0005 U							0.00181 U		0.00181 U	0.0005 U										
76-13-1	1,1,2-Trichlorotrifluoroethane	MG/L												0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U					
76-44-8	Heptachlor	MG/L	0.00005 U	0.000005 U	0.000002 U						0.000003 U		0.000003 U	0.00005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		0.0001 U	0.0001 U	0.0001 U	
77-47-4	Hexachlorocyclopentadiene	MG/L																						
7782-49-2	Selenium (Se)	MG/L		0.005 U			0.005 U							0.005 U										
78-59-1	Isophorone	MG/L																						

Appendix C-4
Groundwater Data (1984 - 2007)
Page Trowbridge Ranch Landfill

		Sample ID	MW-4	MW-4	MW-4	MW-4 (Dup)	MW-4 (start of purge)	MW-4 (filtered)	MW-4 (purge filtered)	MW-4 (Dup)	MW-4	MW-4 (Dup)	MW-4	MW-4	MW-4 (Dup)	MW-4	MW-4	MW-4 (Dup)	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4 (Rerun Dup)
		Well ID	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4
		Sample Date/Time	7/24/1986	7/10/1987	3/6/1987	3/6/1987	7/10/1987	7/10/1987	7/10/1987	7/10/1987	10/21/1988	4/22/1988	4/22/1988	4/18/1989	10/31/1989	10/31/1989	4/18/1990	11/16/1990	11/16/1990	5/10/1991	5/6/1991	10/28/1991	10/29/1991	10/29/1991
78-87-5	1,2-Dichloropropane	MG/L	0 U	0.00001 U	0.0002 U	0.0002 U				0.00001 U	0.00004 U		0.00004 U	0.0005 U							0.0005 U		0.0005 U	0.0005 U
78-93-3	2-Butanone	MG/L																						
79-00-5	1,1,2-Trichloroethane	MG/L	0 U	0.00001 U	0.0001 U	0.0001 U				0.00001 U	0.00002 U		0.00002 U	0.0005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		0.0002 U		0.0002 U	0.0002 U
79-01-6	Trichloroethene	MG/L	0 U	0.000005 U	0.0001 U	0.0001 U				0.000005 U	0.00012 U		0.00012 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		0.0002 U		0.0002 U	0.0002 U
79-34-5	1,1,2,2-Tetrachloroethane	MG/L	0 U	0.00001 U	0.0004 U	0.0004 U				0.00001 U	0.00003 U		0.00003 U	0.0005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		0.0005 U		0.0005 U	0.0005 U
8001-35-2	Toxaphene	MG/L	0.001 U	0.0002 U	0.0002 U						0.00024 U		0.00024 U	0.0001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		0.001 U	0.001 U	0.001 U	
8071-51-0	2-Methyl-4,6-dinitrophenol	MG/L		0.03 U	0.015 U	0.015 U				0.03 U	0.016 U			0 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U					
83-32-9	Acenaphthene	MG/L																						
84-66-2	Diethyl phthalate	MG/L																						
84-74-2	Di-n-butyl phthalate	MG/L																						
85-01-8	Phenanthrene	MG/L																						
85-68-7	Butyl benzyl phthalate	MG/L																						
86-30-6	N-Nitrosodiphenylamine	MG/L																						
86-73-7	Fluorene	MG/L																						
87-61-6	1,2,3-Trichlorobenzene	MG/L																						
87-68-3	Hexachlorobutadiene	MG/L																						
87-86-5	Pentachlorophenol	MG/L		0.015 U	0.009 U	0.009 U				0.015 U	0.0074 U			0 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.005 U	0.005 U		0.015 U	
88-06-2	2,4,6-Trichlorophenol	MG/L		0.005 U	0.002 U	0.002 U				0.005 U	0.00111 U			0 U	0.002 U	0.002 U	0.002 U	0.01	0.03	0.005 U	0.005 U		0.015 U	
88-74-4	2-Nitroaniline	MG/L																						
88-75-5	2-Nitrophenol	MG/L		0.005 U	0.0007 U	0.0007 U				0.005 U	0.00208 U			0 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.01 U	0.01 U		0.005 U	
90-13-1	Chloronaphthalene	MG/L												0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U					
91-20-3	Naphthalene	MG/L													0.001 U	0.001 U	0.001 U	0.001 U	0.001 U					
91-57-6	2-Methylnaphthalene	MG/L																						
91-58-7	2-Chloronaphthalene	MG/L																						
91-94-1	3,3´-Dichlorobenzidine	MG/L																						
92-87-5	Benzidine	MG/L																						
95-47-6	o-Xylene	MG/L																			0.0005 U		0.0005 U	0.0005 U
95-48-7	2-Methylphenol	MG/L																						
95-49-8	2-Chlorotoluene	MG/L												0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U					
95-50-1	1,2-Dichlorobenzene	MG/L	0 U	0.00007 U						0.00007 U	0.0002 U		0.0002 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		0.0005 U		0.0005 U	0.0005 U
95-57-8	2-Chlorophenol	MG/L		0.003 U	0.0007 U	0.0007 U				0.003 U	0.00055 U			0 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.005 U	0.005 U		0.015 U	
95-63-6	1,2,4-Trimethylbenzene	MG/L																						
95-95-4	2,4,5-Trichlorophenol	MG/L																						
959-98-8	Endosulfan I	MG/L	0.00005 U	0.00001 U	0.000004 U						0.000014 U		0.000014 U	0.00005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		0.0001 U	0.0001 U	0.0001 U	
96-12-8	1,2-Dibromo-3-chloropropane	MG/L												0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U					
96-18-4	1,2,3-Trichloropropane	MG/L																						
98-06-6	tert-Butylbenzene	MG/L												0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U					
98-82-8	Isopropylbenzene	MG/L												0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U					
98-95-3	Nitrobenzene	MG/L																						
99-09-2	3-Nitroaniline	MG/L																						
99-87-6	4-Isopropyltoluene	MG/L																						
DDD	DDD	MG/L																						
GIS-130-312	m,p-Xylenes	MG/L																						
NO3NO2N	Nitrate (NO3)	MG/L																						
NO3NO2N	Nitrite/Nitrate Total	MG/L		1.48			0.21							1.31										
O&PXYLENE	O,P-Xylene	MG/L									0.0002 U		0.0002 U	0 U										
THMs	Trihalomethanes, Total	MG/L																						
UNKNOWN	Acid Fraction	MG/L		0 U										0 U										
UNKNOWN	B/N Fraction	MG/L		0 U										0 U										
UNKNOWN	Dichlorobenzene	MG/L			0.0014 U	0.0014 U																		
UNKNOWN	Dinitro-2-Methylphenol	MG/L																						
UNKNOWN	Total Trihalomethanes (THMs)	MG/L												0.005 U										

Appendix C-4
Groundwater Data (1984 - 2007)
Page Trowbridge Ranch Landfill

		Sample ID	MW-4 (Dup)	MW-4 (Rerun)	MW-4	MW-4	MW-4	MW-4	MW-4 (Dup)	MW-4	MW-4	MW-4	MW-4 (Dup)	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4 (Dup)	MW-4	MW-4 (DUP)	MW-4	MW #4	MW #4
		Well ID	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4
		Sample Date/Time	10/29/1991	10/29/1991	4/21/1992	10/13/1992	4/20/1993	10/12/1993	10/12/1993	10/11/1994	4/12/1994	4/26/1995	10/25/1995	10/25/1995	2/21/1996	10/9/1996	11/5/1997	3/26/1997	8/23/2000	8/23/2000	10/26/2001	10/26/2001	4/23/2003 12:15:00 PM	10/22/2003 12:23:00 PM
CAS_Number	**OGDEN_ANALYTE**	**FinalUnits**																						
100-01-6	4-Nitroaniline	MG/L																					0.01 U	0.01 U
100-02-7	4-Nitrophenol	MG/L	0.01 U		0.01 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.005 U	0.02 U	0.021 U	0.02 U	0.025 U	0.025 U			0.025 U	0.025 U
100-41-4	Ethylbenzene	MG/L	0.005 U	0.0005 U	0.001 U	0.001 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.001 U	0.001 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
100-42-5	Styrene	MG/L																	0.001 U	0.001 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
100-51-6	Benzyl alcohol	MG/L																					0.01 U	0.01 U
10061-01-5	cis-1,3-Dichloropropene	MG/L	0.005 U	0.0005 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.001 U	0.001 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
10061-02-6	trans-1,3-Dichloropropene	MG/L	0.005 U	0.0005 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.001 U	0.001 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
101-55-3	4-Bromophenyl phenyl ether	MG/L																	0.005 U	0.005 U			0.005 U	0.01 U
1024-57-3	Heptachlor epoxide	MG/L	0.0001 U		0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.00005 U	0.0001 U	0.0001 U	0.0001 U		0.00005 U			0.00005 U	0.00005 U
1031-07-8	Endosulfan sulfate	MG/L	0.0001 U		0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.00005 U	0.0001 U	0.0001 U	0.0001 U		0.0001 U			0.00005 U	0.00005 U
103-33-3	Azobenzene	MG/L																					0.005 U	0.01 U
103-65-1	n-Propylbenzene	MG/L																	0.001 U	0.001 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
104-51-8	n-Butylbenzene	MG/L																	0.001 U	0.001 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
105-67-9	2,4-Dimethylphenol	MG/L	0.005 U		0.005 U	0.005 U	0.005 U	0.005 U	0.005 U		0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.0052 U	0.005 U	0.01 U	0.01 U			0.01 U	0.01 U
106-43-4	4-Chlorotoluene	MG/L																	0.001 U	0.001 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
106-44-5	3 & 4-Methylphenol	MG/L																						
106-44-5	4-Methylphenol	MG/L													0.003 U								0.01 U	0.01 U
106-46-7	1,4-Dichlorobenzene	MG/L	0.005 U	0.0005 U	0.001 U	0.001 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.001 U	0.001 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
106-47-8	4-Chloroaniline	MG/L																					0.01 U	0.01 U
106-93-4	1,2-Dibromoethane	MG/L																	0.001 U	0.001 U			0.0005 U	0.0005 U
107-06-2	1,2-Dichloroethane	MG/L	0.002 U	0.0002 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.001 U	0.001 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
108-05-4	Vinyl Acetate	MG/L																	0.001 U	0.001 U				
108-10-1	4-Methyl-2-Pentanone	MG/L																	0.005 U	0.005 U				
108-38-3	M-Xylene	MG/L																						
108-60-1	Bis(2-chloroisopropyl)ether	MG/L																	0.01 U	0.01 U			0.01 U	0.01 U
108-67-8	1,3,5-Trimethylbenzene	MG/L																	0.001 U	0.001 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
108-86-1	Bromobenzene	MG/L																	0.001 U	0.001 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
108-88-3	Toluene	MG/L	0.002 U	0.0002 U	0.001 U	0.001 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.001 U	0.001 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
108-90-7	Chlorobenzene	MG/L	0.002 U	0.0002 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.001 U	0.001 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
108-95-2	Phenol	MG/L	0.005 U		0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.003 U	0.005 U	0.0052 U	0.005 U	0.01 U	0.01 U			0.01 U	0.01 U
110-75-8	2-Chloroethyl Vinyl Ether	MG/L	0.005 U	0.0005 U	0.005 U	0.005 U	0.01 U	0.01 U	0.01 U		0.01 U				0.001 U				0.005 U	0.005 U				
11096-82-5	PCB-1260 (Aroclor)	MG/L	0.001 U		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0005 U	0.001 U	0.001 U	0.001 U		0.001 U				
11097-69-1	PCB-1254 (Aroclor)	MG/L	0.001 U		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0005 U	0.001 U	0.001 U	0.001 U		0.001 U				
11104-28-2	PCB-1221 (Aroclor)	MG/L	0.001 U		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0005 U	0.001 U	0.001 U	0.001 U		0.001 U				
11104-29-3	PCB-1242 (Aroclor)	MG/L	0.001 U		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0005 U	0.001 U	0.001 U	0.001 U		0.001 U				
11141-16-5	PCB-1232 (Aroclor)	MG/L	0.001 U		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0005 U	0.001 U	0.001 U	0.001 U		0.001 U				
111-44-4	Bis(2-chloroethyl)ether	MG/L																	0.01 U	0.01 U			0.01 U	0.01 U
111-91-1	Bis(2-chloroethoxy)methane	MG/L																	0.01 U	0.01 U			0.01 U	0.01 U
117-81-7	Bis(2-ethylhexyl)phthalate	MG/L																	0.007	0.017			0.01 U	0.01 U
117-84-0	Di-n-octyl phthalate	MG/L																	0.01 U	0.01 U			0.01 U	0.01 U
118-74-1	Hexachlorobenzene	MG/L																	0.005 U	0.005 U			0.005 U	0.01 U
120-12-7	Anthracene	MG/L																	0.005 U	0.005 U			0.005 U	0.01 U
120-82-1	1,2,4-Trichlorobenzene	MG/L																	0.01 U	0.01 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
120-83-2	2,4-Dichlorophenol	MG/L	0.005 U		0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.003 U	0.005 U	0.0052 U	0.005 U	0.01 U	0.01 U			0.01 U	0.01 U
121-14-2	2,4-Dinitrotoluene	MG/L																	0.005 U	0.005 U			0.005 U	0.01 U
122-66-7	1,2-Diphenylhydrazine (As Azobenzene)	MG/L																	0.005 U	0.005 U				
124-48-1	Dibromochloromethane	MG/L	0.002 U	0.0002 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.001 U	0.001 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
12672-29-6	PCB-1248 (Aroclor)	MG/L	0.001 U		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0005 U	0.001 U	0.001 U	0.001 U		0.001 U				
12674-11-2	PCB-1016 (Aroclor)	MG/L	0.001 U		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0005 U	0.001 U	0.001 U	0.001 U		0.001 U				
127-18-4	Tetrachloroethene	MG/L	0.002 U	0.0002 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.001 U	0.001 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
129-00-0	Pyrene	MG/L																	0.005 U	0.005 U			0.005 U	0.01 U
131-11-3	Dimethyl phthalate	MG/L																	0.02 U	0.02 U			0.02 U	0.02 U
132-64-9	Dibenzofuran	MG/L																					0.01 U	0.01 U
1330-20-7	m,p-Xylene	MG/L	0.005 U	0.0005 U											0.001 U				0.001 U	0.001 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
1330-20-7	Xylenes, Total	MG/L			0.001 U	0.001 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U						
135-98-8	sec-Butylbenzene	MG/L																	0.001 U	0.001 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
142-28-9	1,3-Dichloropropane	MG/L																	0.001 U	0.001 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
14808-79-8	Sulfate (SO4)	MG/L	10		3.7	3.3	4.8	11	5	4.4	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U			25 U	25 U	2 U	3.6
156-59-2	cis-1,2-Dichloroethene	MG/L													0.0005 U				0.001 U	0.001 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
156-60-5	trans-1,2-Dichloroethene	MG/L	0.002 U	0.0002 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.001 U	0.001 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
1634-04-4	Methyl tert-butyl ether	MG/L																	0.001 U	0.001 U				
16887-00-6	Chloride (Cl-)	MG/L	6		6.7	6.1	6.7	7	7	8.5	8	6.9	5.4	5.4	5.4	6.5	7.1	5.5			5 U	5 U	4.6	4.1
16984-48-8	Fluoride (Fl-)	MG/L																						
191-24-2	Benzo(g,h,i)perylene	MG/L																	0.005 U	0.005 U			0.005 U	0.01 U
193-39-5	Indeno(1,2,3-cd)pyrene	MG/L																	0.005 U	0.005 U			0.005 U	0.01 U
205-99-2	Benzo(b)fluoranthene	MG/L																	0.005 U	0.005 U			0.005 U	0.01 U
206-44-0	Fluoranthene	MG/L																	0.005 U	0.005 U			0.005 U	0.01 U
207-08-9	Benzo(k)fluoranthene	MG/L																	0.005 U	0.005 U			0.005 U	0.01 U
208-96-8	Acenaphthylene	MG/L																	0.01 U	0.01 U			0.01 U	0.01 U
218-01-9	Chrysene	MG/L																	0.005 U	0.005 U			0.005 U	0.01 U
25551-13-7	Trimethyl Benzene	MG/L																						
309-00-2	Aldrin	MG/L	0.0001 U		0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.00005 U	0.0001 U	0.0001 U	0.0001 U		0.00005 U			0.00005 U	0.00005 U
319-84-6	alpha-BHC	MG/L	0.0001 U		0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U		0.00005 U			0.00005 U	0.00005 U
319-85-7	beta-BHC	MG/L	0.0001 U		0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.00005 U	0.0001 U	0.0001 U	0.0001 U		0.00005 U			0.00005 U	0.00005 U
319-86-8	delta-BHC	MG/L	0.0001 U		0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.00005 U	0.0001 U	0.0001 U	0.0001 U		0.00005 U			0.00005 U	0.00005 U
33213-65-9	Endosulfan II	MG/L	0.0001 U		0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.00005 U	0.0001 U	0.0001 U	0.0001 U		0.0001 U			0.00005 U	0.00005 U
50-29-3	2,4-DDT	MG/L																						
50-29-3	4,4'-DDT	MG/L	0.0001 U		0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.00005 U	0.0001 U	0.0001 U	0.0001 U		0.0001 U			0.00005 U	0.00005 U

Appendix C-4
Groundwater Data (1984 - 2007)
Page Trowbridge Ranch Landfill

		Sample ID	MW-4 (Dup)	MW-4 (Rerun)	MW-4	MW-4	MW-4	MW-4	MW-4 (Dup)	MW-4	MW-4	MW-4	MW-4 (Dup)	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4 (Dup)	MW-4	MW-4 (DUP)	MW-4	MW #4	MW #4
		Well ID	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4
		Sample Date/Time	10/29/1991	10/29/1991	4/21/1992	10/13/1992	4/20/1993	10/12/1993	10/12/1993	10/11/1994	4/12/1994	4/26/1995	10/25/1995	10/25/1995	2/21/1996	10/9/1996	11/5/1997	3/26/1997	8/23/2000	8/23/2000	10/26/2001	10/26/2001	4/23/2003 12:15:00 PM	10/22/2003 12:23:00 PM
50-29-3	DDT (p,p-DDT)	MG/L																						
50-32-8	Benzo(a)pyrene	MG/L																	0.005 U	0.005 U			0.005 U	0.01 U
5103-71-9	alpha-Chlordane	MG/L																		0.00005 U				
51-28-5	2,4-Dinitrophenol	MG/L	0.015 U		0.01 U	0.02 U	0.02 U	0.02 U	0.02 U	0.05 U	0.02 U	0.05 U	0.05 U	0.05 U	0.01 U	0.05 U	0.052 U	0.05 U	0.05 U	0.05 U			0.05 U	0.05 U
53-19-0	2,4-DDD	MG/L																						
534-52-1	2-Methyl-4,6-dinitrophenol	MG/L	0.015 U		0.01 U	0.02 U	0.02 U	0.02 U		0.03 U	0.02 U	0.03 U		0.03 U	0.03 U	0.03 U	0.031 U		0.05 U	0.05 U			0.05 U	0.05 U
53494-70-5	Endrin Ketone	MG/L																						
53-70-3	Dibenz(a,h)anthracene	MG/L																	0.005 U	0.005 U			0.005 U	0.01 U
540-59-0	Total-1,2-Dichloroethene	MG/L																						
541-73-1	1,3-Dichlorobenzene	MG/L	0.005 U	0.0005 U	0.001 U	0.001 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.001 U	0.001 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
542-75-6	1,3-Dichloropropene, Total	MG/L																						
56-23-5	Carbon tetrachloride	MG/L	0.002 U	0.0002 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.001 U	0.001 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
563-58-6	1,1-Dichloropropene	MG/L																	0.001 U	0.001 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
56-55-3	Benz(a)anthracene	MG/L																	0.01 U	0.01 U			0.01 U	0.01 U
57-74-2	gamma-Chlordane	MG/L																		0.00005 U				
57-74-9	Chlordane	MG/L	0.001 U		0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U					0.0005 U	0.0005 U
57-74-9	Chlordane Technical	MG/L																		0.001 U				
58-89-9	gamma-BHC	MG/L	0.0001 U		0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.00005 U	0.0001 U	0.0001 U	0.0001 U		0.00005 U			0.00005 U	0.00005 U
591-78-6	2-Hexanone	MG/L																	0.005 U	0.005 U				
594-20-7	2,2-Dichloropropane	MG/L																	0.001 U	0.001 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
59-50-7	4-Chloro-3-methylphenol	MG/L	0.005 U		0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.003 U	0.005 U	0.0052 U	0.005 U	0.01 U	0.01 U			0.01 U	0.01 U
60-57-1	Dieldrin	MG/L	0.0001 U		0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.00005 U	0.0001 U	0.0001 U	0.0001 U		0.0001 U			0.00005 U	0.00005 U
606-20-2	2,6-Dinitrotoluene	MG/L																	0.005 U	0.005 U			0.005 U	0.01 U
621-64-7	N-Nitrosodi-n-propylamine	MG/L																	0.01 U	0.01 U			0.01 U	0.01 U
62-75-9	N-Nitrosodimethylamine	MG/L																	0.01 U	0.01 U				
630-20-6	1,1,1,2-Tetrachloroethane	MG/L																			0.0005 U	0.0005 U	0.0005 U	0.0005 U
634-90-2	1,2,3,5-Tetrachlorobenzene	MG/L																						
65-85-0	Benzoic acid	MG/L																					0.05 U	0.05 U
67-64-1	Acetone	MG/L																	0.005 U	0.005 U				
67-66-3	Chloroform	MG/L	0.0058	0.0002 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.001 U	0.001 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
67-72-1	Hexachloroethane	MG/L																	0.01 U	0.01 U			0.01 U	0.01 U
7005-72-3	4-Chlorophenyl phenyl ether	MG/L																	0.01 U	0.01 U			0.01 U	0.01 U
71-43-2	Benzene	MG/L	0.002 U	0.0002 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.001 U	0.001 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
71-55-6	1,1,1-Trichloroethane	MG/L	0.002 U	0.0002 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.001 U	0.001 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
72-20-8	Endrin	MG/L	0.0001 U		0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.00005 U	0.0001 U	0.0001 U	0.0001 U		0.0001 U			0.00005 U	0.00005 U
72-43-5	Methoxychlor	MG/L	0.0005 U		0.0005 U	0.0005 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.00005 U	0.0001 U	0.0001 U	0.0001 U		0.0005 U			0.0001 U	0.0001 U
72-54-8	1,4-DDD	MG/L																						
72-54-8	2,4-DDD	MG/L																						
72-54-8	4,4'-DDD	MG/L	0.0001 U		0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.00005 U	0.0001 U	0.0001 U	0.0001 U					0.00005 U	0.00005 U
72-54-8	DDD (p,p-DDD)	MG/L																						
72-55-9	1,4-DDE	MG/L																						
72-55-9	4,4'-DDE	MG/L	0.0001 U		0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.00005 U	0.0001 U	0.0001 U	0.0001 U		0.0001 U			0.00005 U	0.00005 U
72-55-9	DDE (p,p-DDE)	MG/L																						
7421-93-4	Endrin aldehyde	MG/L	0.0001 U		0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.00005 U	0.0001 U	0.0001 U	0.0001 U		0.0001 U			0.00005 U	0.00005 U
7439-89-6	Iron (Fe)	MG/L																						
7439-92-1	Lead (Pb)	MG/L																						
7439-95-4	Magnesium (Mg)	MG/L																7.5						
7439-96-5	Manganese (Mn)	MG/L	0.32		0.23	0.21	0.22	0.23	0.21	0.23	0.21	0.28	0.3	0.3	0.26	0.37	0.3				0.29	0.3	0.26	0.24
7439-97-6	Mercury (Hg)	MG/L																						
7440-02-0	Nickel (Ni)	MG/L																						
7440-22-4	Silver (Ag)	MG/L																						
7440-23-5	Sodium (Na)	MG/L	36		45	35.6	29	28.3	29.1	30.8	39	28.6	15.8	16.3	30	34.3	30	20			32	32	28	29
7440-31-5	Tin (Sn)	MG/L																						
7440-38-2	Arsenic (As)	MG/L																						
7440-39-3	Barium (Ba)	MG/L																						
7440-43-9	Cadmium (Cd)	MG/L																						
7440-47-3	Chromium (Cr)	MG/L																						
7440-50-8	Copper (Cu)	MG/L																						
7440-66-6	Zinc (Zn)	MG/L																						
7440-70-2	Calcium (Ca)	MG/L																						
74-83-9	Bromomethane	MG/L	0.01 U	0.001 U	0 U	0 U	0 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.005 U	0.005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
74-87-3	Chloromethane	MG/L	0.005 U	0.0005 U	0.001 U	0.001 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.0005 U	0.005 U	0.005 U	0.005 U	0.001 U	0.001 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
74-95-3	Dibromoethane	MG/L																						
74-95-3	Dibromomethane	MG/L																			0.0005 U	0.0005 U	0.0005 U	0.0005 U
74-97-5	Bromochloromethane	MG/L																	0.001 U	0.001 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
75-00-3	Chloroethane	MG/L	0.01 U	0.001 U	0 U	0 U	0 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.001 U	0.001 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
75-01-4	Vinyl chloride	MG/L	0.002 U	0.0002 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.001 U	0.001 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
75-09-2	Methylene chloride	MG/L	0.02 U	0.002 U	0.025	0.0034	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.002 U	0.01 U	0.01 U	0.01 U	0.002 U	0.002 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
75-25-2	Bromoform	MG/L	0.005 U	0.0005 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.001 U	0.001 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
75-27-4	Bromodichloromethane	MG/L	0.002 U	0.0002 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.001 U	0.001 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
75-34-3	1,1-Dichloroethane	MG/L	0.002 U	0.0002 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.001 U	0.001 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
75-35-4	1,1-Dichloroethene	MG/L	0.005 U	0.0005 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.001 U	0.001 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
75-69-4	Trichlorofluoromethane	MG/L	0.01 U	0.001 U	0.001 U	0.001 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.001 U	0.001 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
75-71-8	Dichlorodifluoromethane	MG/L										0.005 U	0.005 U	0.005 U	0.0005 U	0.005 U	0.005 U	0.005 U	0.001 U	0.001 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
76-13-1	1,1,2-Trichlorotrifluoroethane	MG/L																						
76-44-8	Heptachlor	MG/L	0.0001 U		0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.00005 U	0.0001 U	0.0001 U	0.0001 U		0.00005 U			0.00005 U	0.00005 U
77-47-4	Hexachlorocyclopentadiene	MG/L																	0.01 U	0.01 U			0.01 U	0.01 U
7782-49-2	Selenium (Se)	MG/L																						
78-59-1	Isophorone	MG/L																	0.01 U	0.01 U			0.01 U	0.01 U

Appendix C-4
Groundwater Data (1984 - 2007)
Page Trowbridge Ranch Landfill

		Sample ID	MW-4 (Dup)	MW-4 (Rerun)	MW-4	MW-4	MW-4	MW-4	MW-4 (Dup)	MW-4	MW-4	MW-4	MW-4 (Dup)	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4 (Dup)	MW-4	MW-4 (DUP)	MW-4	MW #4	MW #4
		Well ID	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4
		Sample Date/Time	10/29/1991	10/29/1991	4/21/1992	10/13/1992	4/20/1993	10/12/1993	10/12/1993	10/11/1994	4/12/1994	4/26/1995	10/25/1995	10/25/1995	2/21/1996	10/9/1996	11/5/1997	3/26/1997	8/23/2000	8/23/2000	10/26/2001	10/26/2001	4/23/2003 12:15:00 PM	10/22/2003 12:23:00 PM
78-87-5	1,2-Dichloropropane	MG/L	0.005 U	0.0005 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.001 U	0.001 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
78-93-3	2-Butanone	MG/L																	0.005 U	0.005 U				
79-00-5	1,1,2-Trichloroethane	MG/L	0.002 U	0.0002 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.001 U	0.001 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
79-01-6	Trichloroethene	MG/L	0.002 U	0.0002 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.001 U	0.001 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
79-34-5	1,1,2,2-Tetrachloroethane	MG/L	0.005 U	0.0005 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.001 U	0.001 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
8001-35-2	Toxaphene	MG/L	0.001 U		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0005 U	0.001 U	0.001 U	0.001 U		0.002 U			0.001 U	0.001 U
8071-51-0	2-Methyl-4,6-dinitrophenol	MG/L					0.02 U	0.02 U	0.02 U	0.03 U	0.02 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U		0.03 U						
83-32-9	Acenaphthene	MG/L																	0.01 U	0.01 U			0.01 U	0.01 U
84-66-2	Diethyl phthalate	MG/L																	0.01 U	0.01 U			0.01 U	0.01 U
84-74-2	Di-n-butyl phthalate	MG/L																	0.01 U	0.01 U			0.01 U	0.01 U
85-01-8	Phenanthrene	MG/L																	0.005 U	0.005 U			0.005 U	0.01 U
85-68-7	Butyl benzyl phthalate	MG/L																	0.01 U	0.01 U			0.01 U	0.01 U
86-30-6	N-Nitrosodiphenylamine	MG/L																	0.005 U	0.005 U			0.005 U	0.01 U
86-73-7	Fluorene	MG/L																	0.01 U	0.01 U			0.01 U	0.01 U
87-61-6	1,2,3-Trichlorobenzene	MG/L																	0.005 U	0.005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
87-68-3	Hexachlorobutadiene	MG/L																	0.01 U	0.01 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
87-86-5	Pentachlorophenol	MG/L	0.015 U		0.01 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.005 U	0.02 U	0.01 U	0.01 U	0.05 U	0.05 U			0.05 U	0.05 U
88-06-2	2,4,6-Trichlorophenol	MG/L	0.015 U		0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.003 U	0.005 U	0.0052 U	0.005 U	0.02 U	0.02 U			0.02 U	0.02 U
88-74-4	2-Nitroaniline	MG/L																					0.01 U	0.01 U
88-75-5	2-Nitrophenol	MG/L	0.005 U		0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.0052 U	0.005 U	0.015 U	0.015 U			0.015 U	0.015 U
90-13-1	Chloronaphthalene	MG/L																						
91-20-3	Naphthalene	MG/L																	0.01 U	0.01 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
91-57-6	2-Methylnaphthalene	MG/L																					0.01 U	0.01 U
91-58-7	2-Chloronaphthalene	MG/L																	0.01 U	0.01 U			0.01 U	0.01 U
91-94-1	3,3'-Dichlorobenzidine	MG/L																	0.01 U	0.01 U			0.01 U	0.01 U
92-87-5	Benzidine	MG/L																	0.15 U	0.15 U				
95-47-6	o-Xylene	MG/L	0.005 U	0.0005 U											0.0005 U				0.001 U	0.001 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
95-48-7	2-Methylphenol	MG/L													0.003 U								0.01 U	0.01 U
95-49-8	2-Chlorotoluene	MG/L																	0.001 U	0.001 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
95-50-1	1,2-Dichlorobenzene	MG/L	0.005 U	0.0005 U	0.001 U	0.001 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.001 U	0.001 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
95-57-8	2-Chlorophenol	MG/L	0.015 U		0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.003 U	0.005 U	0.0052 U	0.005 U	0.01 U	0.01 U			0.01 U	0.01 U
95-63-6	1,2,4-Trimethylbenzene	MG/L																	0.001 U	0.001 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
95-95-4	2,4,5-Trichlorophenol	MG/L													0.003 U								0.02 U	0.02 U
959-98-8	Endosulfan I	MG/L	0.0001 U		0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.00005 U	0.0001 U	0.0001 U	0.0001 U		0.00005 U			0.00005 U	0.00005 U
96-12-8	1,2-Dibromo-3-chloropropane	MG/L																					0.002 U	0.002 U
96-18-4	1,2,3-Trichloropropane	MG/L																	0.001 U	0.001 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
98-06-6	tert-Butylbenzene	MG/L																	0.001 U	0.001 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
98-82-8	Isopropylbenzene	MG/L																			0.0005 U	0.0005 U	0.0005 U	0.0005 U
98-95-3	Nitrobenzene	MG/L																	0.01 U	0.01 U			0.01 U	0.01 U
99-09-2	3-Nitroaniline	MG/L																					0.01 U	0.01 U
99-87-6	4-Isopropyltoluene	MG/L																	0.001 U	0.001 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
DDD	DDD	MG/L																		0.0001 U				
GIS-130-312	m,p-Xylenes	MG/L																						
NO3NO2N	Nitrate (NO3)	MG/L																						
NO3NO2N	Nitrite/Nitrate Total	MG/L																						
O&PXYLENE	O,P-Xylene	MG/L																						
THMs	Trihalomethanes, Total	MG/L																					0.0005 U	0.0005 U
UNKNOWN	Acid Fraction	MG/L																						
UNKNOWN	B/N Fraction	MG/L																						
UNKNOWN	Dichlorobenzene	MG/L																						
UNKNOWN	Dinitro-2-Methylphenol	MG/L																						
UNKNOWN	Total Trihalomethanes (THMs)	MG/L																						

Appendix C-4
Groundwater Data (1984 - 2007)
Page Trowbridge Ranch Landfill

		Sample ID	MW #4	MW#4	MW#4	MW #4	MW#4	MW #4 Dup	MW #4	MW#4	MW #4 (07100987)	MW #4 Dup (07100987)	MW #4
		Well ID	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4
		Sample Date/Time	4/21/2004 12:05:00 PM	5/5/2004 8:55:00 AM	10/13/2004 11:55:00 AM	4/13/2005 1:12:00 PM	10/12/2005 11:27:00 AM	10/11/2006 11:33:00 AM	10/11/2006 11:33:00 AM	4/12/2006 12:06:00 PM	10/24/2007 12:14:00 PM	10/24/2007 12:14:00 PM	4/11/2007 11:45:00 AM
CAS_Number	**OGDEN_ANALYTE**	**FinalUnits**											
100-01-6	4-Nitroaniline	MG/L	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U			0.01 U
100-02-7	4-Nitrophenol	MG/L	0.025 U		0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U			0.025 U
100-41-4	Ethylbenzene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U
100-42-5	Styrene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U
100-51-6	Benzyl alcohol	MG/L	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U			0.01 U
10061-01-5	cis-1,3-Dichloropropene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U
10061-02-6	trans-1,3-Dichloropropene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U
101-55-3	4-Bromophenyl phenyl ether	MG/L	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U			0.01 U
1024-57-3	Heptachlor epoxide	MG/L	0.00005 U		0.00005 U	0.000052 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U			0.00005 U
1031-07-8	Endosulfan sulfate	MG/L	0.00005 U		0.00005 U	0.000052 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U			0.00005 U
103-33-3	Azobenzene	MG/L	0.01 U		0.01 U	0.01 U							
103-65-1	n-Propylbenzene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U
104-51-8	n-Butylbenzene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U
105-67-9	2,4-Dimethylphenol	MG/L	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U			0.01 U
106-43-4	4-Chlorotoluene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U
106-44-5	3 & 4-Methylphenol	MG/L				0.01 U	0.01 U	0.01 U	0.01 U	0.01 U			0.01 U
106-44-5	4-Methylphenol	MG/L	0.01 U		0.01 U								
106-46-7	1,4-Dichlorobenzene	MG/L	0.0005 U	0.0005 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0005 U	0.01 U			0.01 U
106-47-8	4-Chloroaniline	MG/L	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U			0.01 U
106-93-4	1,2-Dibromoethane	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U
107-06-2	1,2-Dichloroethane	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U
108-05-4	Vinyl Acetate	MG/L											
108-10-1	4-Methyl-2-Pentanone	MG/L											
108-38-3	M-Xylene	MG/L											
108-60-1	Bis(2-chloroisopropyl)ether	MG/L	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U			0.01 U
108-67-8	1,3,5-Trimethylbenzene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U
108-86-1	Bromobenzene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U
108-88-3	Toluene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U
108-90-7	Chlorobenzene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U
108-95-2	Phenol	MG/L	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U			0.01 U
110-75-8	2-Chloroethyl Vinyl Ether	MG/L											
11096-82-5	PCB-1260 (Aroclor)	MG/L											
11097-69-1	PCB-1254 (Aroclor)	MG/L											
11104-28-2	PCB-1221 (Aroclor)	MG/L											
11104-29-3	PCB-1242 (Aroclor)	MG/L											
11141-16-5	PCB-1232 (Aroclor)	MG/L											
111-44-4	Bis(2-chloroethyl)ether	MG/L	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U			0.01 U
111-91-1	Bis(2-chloroethoxy)methane	MG/L	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U			0.01 U
117-81-7	Bis(2-ethylhexyl)phthalate	MG/L	0.01 U		0.01 U	0.01 U	0.01 U	0.005 U	0.005 U	0.01 U			0.005 U
117-84-0	Di-n-octyl phthalate	MG/L	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U			0.01 U
118-74-1	Hexachlorobenzene	MG/L	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U			0.01 U
120-12-7	Anthracene	MG/L	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U			0.01 U
120-82-1	1,2,4-Trichlorobenzene	MG/L	0.0005 U	0.0005 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0005 U	0.01 U			0.01 U
120-83-2	2,4-Dichlorophenol	MG/L	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U			0.01 U
121-14-2	2,4-Dinitrotoluene	MG/L	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U			0.01 U
122-66-7	1,2-Diphenylhydrazine (As Azobenzene)	MG/L					0.01 U	0.01 U	0.01 U	0.01 U			0.01 U
124-48-1	Dibromochloromethane	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U
12672-29-6	PCB-1248 (Aroclor)	MG/L											
12674-11-2	PCB-1016 (Aroclor)	MG/L											
127-18-4	Tetrachloroethene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U
129-00-0	Pyrene	MG/L	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U			0.01 U
131-11-3	Dimethyl phthalate	MG/L	0.02 U		0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U			0.02 U
132-64-9	Dibenzofuran	MG/L	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U			0.01 U
1330-20-7	m,p-Xylene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U
1330-20-7	Xylenes, Total	MG/L				0.001 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U
135-98-8	sec-Butylbenzene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U
142-28-9	1,3-Dichloropropane	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U
14808-79-8	Sulfate (SO4)	MG/L	3.7		2.9	3.1	3	3.4	3.4	3.6	2	2.1	3.7
156-59-2	cis-1,2-Dichloroethene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U
156-60-5	trans-1,2-Dichloroethene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U
1634-04-4	Methyl tert-butyl ether	MG/L											
16887-00-6	Chloride (Cl-)	MG/L	3.7		4.8	2.6	4.6	5	5	2.7	4.4	4.3	5.8
16984-48-8	Fluoride (Fl-)	MG/L											
191-24-2	Benzo(g,h,i)perylene	MG/L	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U			0.01 U
193-39-5	Indeno(1,2,3-cd)pyrene	MG/L	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U			0.01 U
205-99-2	Benzo(b)fluoranthene	MG/L	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U			0.01 U
206-44-0	Fluoranthene	MG/L	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U			0.01 U
207-08-9	Benzo(k)fluoranthene	MG/L	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U			0.01 U
208-96-8	Acenaphthylene	MG/L	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U			0.01 U
218-01-9	Chrysene	MG/L	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U			0.01 U
25551-13-7	Trimethyl Benzene	MG/L											
309-00-2	Aldrin	MG/L	0.00005 U		0.00005 U	0.000052 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U			0.00005 U
319-84-6	alpha-BHC	MG/L	0.00005 U		0.00005 U	0.000052 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U			0.00005 U
319-85-7	beta-BHC	MG/L	0.00005 U		0.00005 U	0.000052 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U			0.00005 U
319-86-8	delta-BHC	MG/L	0.00005 U		0.00005 U	0.000052 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U			0.00005 U
33213-65-9	Endosulfan II	MG/L	0.00005 U		0.00005 U	0.000052 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U			0.00005 U
50-29-3	2,4-DDT	MG/L											
50-29-3	4,4'-DDT	MG/L	0.00005 U		0.00005 U	0.000052 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U			0.00005 U

Appendix C-4
Groundwater Data (1984 - 2007)
Page Trowbridge Ranch Landfill

		Sample ID Well ID Sample Date/Time	MW #4 MW-4 4/21/2004 12:05:00 PM	MW#4 MW-4 5/5/2004 8:55:00 AM	MW#4 MW-4 10/13/2004 11:55:00 AM	MW #4 MW-4 4/13/2005 1:12:00 PM	MW#4 MW-4 10/12/2005 11:27:00 AM	MW #4 Dup MW-4 10/11/2006 11:33:00 AM	MW #4 MW-4 10/11/2006 11:33:00 AM	MW#4 MW-4 4/12/2006 12:06:00 PM	MW #4 (07100987) MW-4 10/24/2007 12:14:00 PM	MW #4 Dup (07100987) MW-4 10/24/2007 12:14:00 PM	MW #4 MW-4 4/11/2007 11:45:00 AM
50-29-3	DDT (p,p-DDT)	MG/L											
50-32-8	Benzo(a)pyrene	MG/L	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U			0.01 U
5103-71-9	alpha-Chlordane	MG/L											
51-28-5	2,4-Dinitrophenol	MG/L	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U			0.05 U
53-19-0	2,4-DDD	MG/L											
534-52-1	2-Methyl-4,6-dinitrophenol	MG/L	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U			0.05 U
53494-70-5	Endrin Ketone	MG/L											
53-70-3	Dibenz(a,h)anthracene	MG/L	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U			0.01 U
540-59-0	Total-1,2-Dichloroethene	MG/L											
541-73-1	1,3-Dichlorobenzene	MG/L	0.0005 U	0.0005 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0005 U	0.01 U			0.01 U
542-75-6	1,3-Dichloropropene, Total	MG/L											
56-23-5	Carbon tetrachloride	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U
563-58-6	1,1-Dichloropropene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U
56-55-3	Benz(a)anthracene	MG/L	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U			0.01 U
57-74-2	gamma-Chlordane	MG/L											
57-74-9	Chlordane	MG/L	0.0005 U		0.0005 U	0.00052 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U
57-74-9	Chlordane Technical	MG/L											
58-89-9	gamma-BHC	MG/L	0.00005 U		0.00005 U	0.000052 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U			0.00005 U
591-78-6	2-Hexanone	MG/L											
594-20-7	2,2-Dichloropropane	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U
59-50-7	4-Chloro-3-methylphenol	MG/L	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U			0.01 U
60-57-1	Dieldrin	MG/L	0.00005 U		0.00005 U	0.000052 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U			0.00005 U
606-20-2	2,6-Dinitrotoluene	MG/L	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U			0.01 U
621-64-7	N-Nitrosodi-n-propylamine	MG/L	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U			0.01 U
62-75-9	N-Nitrosodimethylamine	MG/L											
630-20-6	1,1,1,2-Tetrachloroethane	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U
634-90-2	1,2,3,5-Tetrachlorobenzene	MG/L											
65-85-0	Benzoic acid	MG/L	0.05 U		0.05 U	0.05 U	0.05 U	0.025 U	0.025 U	0.05 U			0.025 U
67-64-1	Acetone	MG/L											
67-66-3	Chloroform	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.00056	0.0005 U			0.0005 U
67-72-1	Hexachloroethane	MG/L	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U			0.01 U
7005-72-3	4-Chlorophenyl phenyl ether	MG/L	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U			0.01 U
71-43-2	Benzene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U
71-55-6	1,1,1-Trichloroethane	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U
72-20-8	Endrin	MG/L	0.00005 U		0.00005 U	0.000052 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U			0.00005 U
72-43-5	Methoxychlor	MG/L	0.0001 U		0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U			0.0001 U
72-54-8	1,4-DDD	MG/L											
72-54-8	2,4-DDD	MG/L											
72-54-8	4,4'-DDD	MG/L	0.00005 U		0.00005 U	0.000052 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U			0.00005 U
72-54-8	DDD (p,p-DDD)	MG/L											
72-55-9	1,4-DDE	MG/L											
72-55-9	4,4'-DDE	MG/L	0.00005 U		0.00005 U	0.000052 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U			0.00005 U
72-55-9	DDE (p,p-DDE)	MG/L											
7421-93-4	Endrin aldehyde	MG/L	0.00005 U		0.00005 U	0.000052 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U			0.00005 U
7439-89-6	Iron (Fe)	MG/L											
7439-92-1	Lead (Pb)	MG/L											
7439-95-4	Magnesium (Mg)	MG/L											
7439-96-5	Manganese (Mn)	MG/L	0.24		0.21	0.21	0.14	0.07	0.071	0.098			0.13
7439-97-6	Mercury (Hg)	MG/L											
7440-02-0	Nickel (Ni)	MG/L											
7440-22-4	Silver (Ag)	MG/L											
7440-23-5	Sodium (Na)	MG/L	32		32	34	33	34	33	34			32
7440-31-5	Tin (Sn)	MG/L											
7440-38-2	Arsenic (As)	MG/L											
7440-39-3	Barium (Ba)	MG/L											
7440-43-9	Cadmium (Cd)	MG/L											
7440-47-3	Chromium (Cr)	MG/L											
7440-50-8	Copper (Cu)	MG/L											
7440-66-6	Zinc (Zn)	MG/L											
7440-70-2	Calcium (Ca)	MG/L											
74-83-9	Bromomethane	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U
74-87-3	Chloromethane	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U
74-95-3	Dibromoethane	MG/L											
74-95-3	Dibromomethane	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U
74-97-5	Bromochloromethane	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U
75-00-3	Chloroethane	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U
75-01-4	Vinyl chloride	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U
75-09-2	Methylene chloride	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U
75-25-2	Bromoform	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U
75-27-4	Bromodichloromethane	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U
75-34-3	1,1-Dichloroethane	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U
75-35-4	1,1-Dichloroethene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U
75-69-4	Trichlorofluoromethane	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U
75-71-8	Dichlorodifluoromethane	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U
76-13-1	1,1,2-Trichlorotrifluoroethane	MG/L											
76-44-8	Heptachlor	MG/L	0.00005 U		0.00005 U	0.000052 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U			0.00005 U
77-47-4	Hexachlorocyclopentadiene	MG/L	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U			0.01 U
7782-49-2	Selenium (Se)	MG/L											
78-59-1	Isophorone	MG/L	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U			0.01 U

Appendix C-4
Groundwater Data (1984 - 2007)
Page Trowbridge Ranch Landfill

		Sample ID Well ID Sample Date/Time	MW #4 MW-4 4/21/2004 12:05:00 PM	MW#4 MW-4 5/5/2004 8:55:00 AM	MW#4 MW-4 10/13/2004 11:55:00 AM	MW #4 MW-4 4/13/2005 1:12:00 PM	MW#4 MW-4 10/12/2005 11:27:00 AM	MW #4 Dup MW-4 10/11/2006 11:33:00 AM	MW #4 MW-4 10/11/2006 11:33:00 AM	MW#4 MW-4 4/12/2006 12:06:00 PM	MW #4 (07100987) MW-4 10/24/2007 12:14:00 PM	MW #4 Dup (07100987) MW-4 10/24/2007 12:14:00 PM	MW #4 MW-4 4/11/2007 11:45:00 AM
78-87-5	1,2-Dichloropropane	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U
78-93-3	2-Butanone	MG/L											
79-00-5	1,1,2-Trichloroethane	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U
79-01-6	Trichloroethene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U
79-34-5	1,1,2,2-Tetrachloroethane	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U
8001-35-2	Toxaphene	MG/L	0.001 U		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U			0.001 U
8071-51-0	2-Methyl-4,6-dinitrophenol	MG/L											
83-32-9	Acenaphthene	MG/L	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U			0.01 U
84-66-2	Diethyl phthalate	MG/L	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U			0.01 U
84-74-2	Di-n-butyl phthalate	MG/L	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U			0.01 U
85-01-8	Phenanthrene	MG/L	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U			0.01 U
85-68-7	Butyl benzyl phthalate	MG/L	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U			0.01 U
86-30-6	N-Nitrosodiphenylamine	MG/L	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U			0.01 U
86-73-7	Fluorene	MG/L	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U			0.01 U
87-61-6	1,2,3-Trichlorobenzene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U
87-68-3	Hexachlorobutadiene	MG/L	0.01 U	0.0005 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U			0.01 U
87-86-5	Pentachlorophenol	MG/L	0.05 U		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U			0.05 U
88-06-2	2,4,6-Trichlorophenol	MG/L	0.02 U		0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U			0.02 U
88-74-4	2-Nitroaniline	MG/L	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U			0.01 U
88-75-5	2-Nitrophenol	MG/L	0.015 U		0.015 U	0.015 U	0.015 U	0.015 U	0.015 U	0.015 U			0.015 U
90-13-1	Chloronaphthalene	MG/L											
91-20-3	Naphthalene	MG/L	0.01 U	0.0005 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U			0.01 U
91-57-6	2-Methylnaphthalene	MG/L	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U			0.01 U
91-58-7	2-Chloronaphthalene	MG/L	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U			0.01 U
91-94-1	3,3´-Dichlorobenzidine	MG/L	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U			0.01 U
92-87-5	Benzidine	MG/L											
95-47-6	o-Xylene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U
95-48-7	2-Methylphenol	MG/L	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U			0.01 U
95-49-8	2-Chlorotoluene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U
95-50-1	1,2-Dichlorobenzene	MG/L	0.0005 U	0.0005 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0005 U	0.01 U			0.01 U
95-57-8	2-Chlorophenol	MG/L	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U			0.01 U
95-63-6	1,2,4-Trimethylbenzene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U
95-95-4	2,4,5-Trichlorophenol	MG/L	0.02 U		0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U			0.02 U
959-98-8	Endosulfan I	MG/L	0.00005 U		0.00005 U	0.000052 U	0.00005 U	0.00005 U	0.00005 U	0.00005 U			0.00005 U
96-12-8	1,2-Dibromo-3-chloropropane	MG/L	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U			0.002 U
96-18-4	1,2,3-Trichloropropane	MG/L	0.0005 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U			0.002 U
98-06-6	tert-Butylbenzene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U
98-82-8	Isopropylbenzene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U
98-95-3	Nitrobenzene	MG/L	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U			0.01 U
99-09-2	3-Nitroaniline	MG/L	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U			0.01 U
99-87-6	4-Isopropyltoluene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U
DDD	DDD	MG/L											
GIS-130-312	m,p-Xylenes	MG/L											
NO3NO2N	Nitrate (NO3)	MG/L											
NO3NO2N	Nitrite/Nitrate Total	MG/L											
O&PXYLENE	O,P-Xylene	MG/L											
THMs	Trihalomethanes, Total	MG/L	0.0005 U	0.0005 U	0.0005 U	0.002 U	0.0005 U	0.0005 U	0.00056	0.0005 U			0.0005 U
UNKNOWN	Acid Fraction	MG/L											
UNKNOWN	B/N Fraction	MG/L											
UNKNOWN	Dichlorobenzene	MG/L											
UNKNOWN	Dinitro-2-Methylphenol	MG/L											
UNKNOWN	Total Trihalomethanes (THMs)	MG/L											

Appendix C-4
Groundwater Data (1984 - 2007)
Page Trowbridge Ranch Landfill

		Sample ID	MW#4 (07-10-0987-01)	MW#4 Dup (07-10-0987-02)	MW#4 Dup	MW#4	MW-5	MW-5	MW-5	MW-5 (Dup)	MW-5 (Rerun)	MW-5	MW-5	MW-5 (Dup)	MW-5 (Dup)	MW-5	MW-5	MW-5	MW-5	MW-5 (Dup)	MW-5	MW-5
		Well ID	MW-4	MW-4	MW-4	MW-4	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5
		Sample Date/Time	10/24/2007 12:14:00 PM	10/24/2007 12:14:00 PM	10/24/2007	10/24/2007 12:14:00 PM	4/18/1990	5/10/1991	5/6/1991	10/29/1991	10/29/1991	10/28/1991	10/29/1991	11/12/1991	4/21/1992	4/21/1992	10/13/1992	4/20/1993	10/12/1993	4/12/1994	4/12/1994	10/11/1994
CAS_Number	**OGDEN_ANALYTE**	**FinalUnits**																				
100-01-6	4-Nitroaniline	MG/L			0.01 U	0.01 U																
100-02-7	4-Nitrophenol	MG/L			0.025 U	0.025 U	0.005 U	0.01 U	0.01 U				0.01 U		0.01 U	0.01 U	0.02 U	0.02 U	0.02 U	0.1 U	0.02 U	0.02 U
100-41-4	Ethylbenzene	MG/L	0.0005 U	0.0005 U			0.001 U		0.0005 U	0.0005 U	0.0005 U		0.0005 U	0.0005 U	0.001 U	0.001 U	0.001 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
100-42-5	Styrene	MG/L	0.0005 U	0.0005 U			0.001 U															
100-51-6	Benzyl alcohol	MG/L			0.01 U	0.01 U																
10061-01-5	cis-1,3-Dichloropropene	MG/L					0.001 U		0.0005 U	0.0005 U	0.0005 U		0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
10061-02-6	trans-1,3-Dichloropropene	MG/L					0.001 U		0.0005 U	0.0005 U	0.0005 U		0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
101-55-3	4-Bromophenyl phenyl ether	MG/L			0.01 U	0.01 U																
1024-57-3	Heptachlor epoxide	MG/L				0.00005 U	0.001 U		0.0001 U			0.0001 U	0.0001 U		0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U
1031-07-8	Endosulfan sulfate	MG/L				0.00005 U	0.001 U		0.0001 U			0.0001 U	0.0001 U		0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U
103-33-3	Azobenzene	MG/L																				
103-65-1	n-Propylbenzene	MG/L					0.001 U															
104-51-8	n-Butylbenzene	MG/L					0.001 U															
105-67-9	2,4-Dimethylphenol	MG/L			0.01 U	0.01 U	0.002 U	0.005 U	0.005 U				0.005 U		0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.025 U	0.005 U	
106-43-4	4-Chlorotoluene	MG/L	0.0005 U	0.0005 U			0.001 U															
106-44-5	3 & 4-Methylphenol	MG/L			0.01 U	0.01 U																
106-44-5	4-Methylphenol	MG/L																				
106-46-7	1,4-Dichlorobenzene	MG/L	0.0005 U	0.0005 U	0.01 U	0.01 U	0.001 U		0.0005 U	0.0005 U	0.0005 U		0.0005 U	0.0005 U	0.001 U	0.001 U	0.001 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
106-47-8	4-Chloroaniline	MG/L			0.01 U	0.01 U																
106-93-4	1,2-Dibromoethane	MG/L																				
107-06-2	1,2-Dichloroethane	MG/L	0.0005 U	0.0005 U			0.001 U		0.0002 U	0.0002 U	0.0002 U		0.0002 U	0.0002 U	0.0005 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
108-05-4	Vinyl Acetate	MG/L																				
108-10-1	4-Methyl-2-Pentanone	MG/L																				
108-38-3	M-Xylene	MG/L																				
108-60-1	Bis(2-chloroisopropyl)ether	MG/L			0.01 U	0.01 U																
108-67-8	1,3,5-Trimethylbenzene	MG/L																				
108-86-1	Bromobenzene	MG/L	0.0005 U	0.0005 U																		
108-88-3	Toluene	MG/L	0.0005 U	0.0005 U			0.001 U		0.0002 U	0.0002 U	0.0002 U		0.0002 U	0.0002 U	0.001 U	0.001 U	0.001 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
108-90-7	Chlorobenzene	MG/L	0.0005 U	0.0005 U			0.001 U		0.0002 U	0.0002 U	0.0002 U		0.0002 U	0.0002 U	0.0005 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
108-95-2	Phenol	MG/L			0.01 U	0.01 U	0.002 U	0.005 U	0.005 U				0.005 U		0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.025 U	0.005 U	0.005 U
110-75-8	2-Chloroethyl Vinyl Ether	MG/L					0.001 U		0.0005 U	0.0005 U	0.0005 U		0.0005 U	0.0005 U	0.005 U	0.005 U	0.005 U	0.01 U	0.01 U	0.01 U	0.01 U	
11096-82-5	PCB-1260 (Aroclor)	MG/L							0.001 U			0.001 U	0.001 U		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
11097-69-1	PCB-1254 (Aroclor)	MG/L							0.001 U			0.001 U	0.001 U		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
11104-28-2	PCB-1221 (Aroclor)	MG/L							0.001 U			0.001 U	0.001 U		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
11104-29-3	PCB-1242 (Aroclor)	MG/L							0.001 U			0.001 U	0.001 U		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
11141-16-5	PCB-1232 (Aroclor)	MG/L							0.001 U			0.001 U	0.001 U		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
111-44-4	Bis(2-chloroethyl)ether	MG/L			0.01 U	0.01 U																
111-91-1	Bis(2-chloroethoxy)methane	MG/L			0.01 U	0.01 U																
117-81-7	Bis(2-ethylhexyl)phthalate	MG/L			0.005 U	0.005 U																
117-84-0	Di-n-octyl phthalate	MG/L			0.01 U	0.01 U																
118-74-1	Hexachlorobenzene	MG/L			0.01 U	0.01 U																
120-12-7	Anthracene	MG/L			0.01 U	0.01 U																
120-82-1	1,2,4-Trichlorobenzene	MG/L	0.0005 U	0.0005 U	0.01 U	0.01 U																
120-83-2	2,4-Dichlorophenol	MG/L			0.01 U	0.01 U	0.002 U	0.005 U	0.005 U				0.005 U		0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.025 U	0.005 U	0.005 U
121-14-2	2,4-Dinitrotoluene	MG/L			0.01 U	0.01 U																
122-66-7	1,2-Diphenylhydrazine (As Azobenzene)	MG/L			0.01 U	0.01 U																
124-48-1	Dibromochloromethane	MG/L	0.0005 U	0.0005 U			0.001 U		0.0002 U	0.0002 U	0.0002 U		0.0002 U	0.0002 U	0.0005 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
12672-29-6	PCB-1248 (Aroclor)	MG/L							0.001 U			0.001 U	0.001 U		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
12674-11-2	PCB-1016 (Aroclor)	MG/L							0.001 U			0.001 U	0.001 U		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
127-18-4	Tetrachloroethene	MG/L	0.0005 U	0.0005 U			0.001 U		0.0002 U	0.0002 U	0.0002 U		0.0002 U	0.0002 U	0.0005 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
129-00-0	Pyrene	MG/L			0.01 U	0.01 U																
131-11-3	Dimethyl phthalate	MG/L			0.02 U	0.02 U																
132-64-9	Dibenzofuran	MG/L			0.01 U	0.01 U																
1330-20-7	m,p-Xylene	MG/L							0.0005 U	0.0005 U	0.0005 U		0.0005 U	0.0005 U								
1330-20-7	Xylenes, Total	MG/L	0.0015 U	0.0015 U			0.001 U								0.001 U	0.001 U	0.001 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
135-98-8	sec-Butylbenzene	MG/L					0.001 U															
142-28-9	1,3-Dichloropropane	MG/L	0.0005 U	0.0005 U			0.001 U															
14808-79-8	Sulfate (SO4)	MG/L					1 U		1 U				4		4.6	4.6	4.2	5.1	6	6	6	5.1
156-59-2	cis-1,2-Dichloroethene	MG/L	0.0005 U	0.0005 U			0.001 U															
156-60-5	trans-1,2-Dichloroethene	MG/L	0.0005 U	0.0005 U			0.001 U		0.0002 U	0.0002 U	0.0002 U		0.0002 U	0.0002 U	0.0005 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
1634-04-4	Methyl tert-butyl ether	MG/L																				
16887-00-6	Chloride (Cl-)	MG/L					5.6		10				6		6.8	6.8	6.3	6.8	8	9	8	7.9
16984-48-8	Fluoride (Fl-)	MG/L																				
191-24-2	Benzo(g,h,i)perylene	MG/L			0.01 U	0.01 U																
193-39-5	Indeno(1,2,3-cd)pyrene	MG/L			0.01 U	0.01 U																
205-99-2	Benzo(b)fluoranthene	MG/L			0.01 U	0.01 U																
206-44-0	Fluoranthene	MG/L			0.01 U	0.01 U																
207-08-9	Benzo(k)fluoranthene	MG/L			0.01 U	0.01 U																
208-96-8	Acenaphthylene	MG/L			0.01 U	0.01 U																
218-01-9	Chrysene	MG/L			0.01 U	0.01 U																
25551-13-7	Trimethyl Benzene	MG/L					0.001 U															
309-00-2	Aldrin	MG/L				0.00005 U	0.001 U		0.0001 U			0.0001 U	0.0001 U		0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U
319-84-6	alpha-BHC	MG/L				0.00005 U	0.001 U		0.0001 U			0.0001 U	0.0001 U		0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U
319-85-7	beta-BHC	MG/L				0.00005 U	0.001 U		0.0001 U			0.0001 U	0.0001 U		0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U
319-86-8	delta-BHC	MG/L				0.00005 U	0.001 U		0.0001 U			0.0001 U	0.0001 U		0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U
33213-65-9	Endosulfan II	MG/L				0.00005 U	0.001 U		0.0001 U			0.0001 U	0.0001 U		0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U
50-29-3	2,4-DDT	MG/L					0.001 U															
50-29-3	4,4'-DDT	MG/L				0.00005 U	0.001 U		0.0001 U			0.0001 U	0.0001 U		0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U

Appendix C-4
Groundwater Data (1984 - 2007)
Page Trowbridge Ranch Landfill

		Sample ID Well ID Sample Date/Time	MW#4 (07-10-0987-01) MW-4 10/24/2007 12:14:00 PM	MW#4 Dup (07-10-0987-02) MW-4 10/24/2007 12:14:00 PM	MW#4 Dup MW-4 10/24/2007	MW#4 MW-4 10/24/2007 12:14:00 PM	MW-5 MW-5 4/18/1990	MW-5 MW-5 5/10/1991	MW-5 MW-5 5/6/1991	MW-5 (Dup) MW-5 10/29/1991	MW-5 (Rerun) MW-5 10/29/1991	MW-5 MW-5 10/28/1991	MW-5 MW-5 10/29/1991	MW-5 (Dup) MW-5 11/12/1991	MW-5 (Dup) MW-5 4/21/1992	MW-5 MW-5 4/21/1992	MW-5 MW-5 10/13/1992	MW-5 MW-5 4/20/1993	MW-5 MW-5 10/12/1993	MW-5 (Dup) MW-5 4/12/1994	MW-5 MW-5 4/12/1994	MW-5 MW-5 10/11/1994
50-29-3	DDT (p,p-DDT)	MG/L																				
50-32-8	Benzo(a)pyrene	MG/L			0.01 U	0.01 U																
5103-71-9	alpha-Chlordane	MG/L																				
51-28-5	2,4-Dinitrophenol	MG/L			0.05 U	0.05 U	0.02 U	0.01 U	0.01 U				0.015 U		0.01 U	0.01 U	0.02 U	0.02 U	0.02 U	0.1 U	0.02 U	0.05 U
53-19-0	2,4-DDD	MG/L					0.001 U															
534-52-1	2-Methyl-4,6-dinitrophenol	MG/L			0.05 U	0.05 U		0.01 U	0.01 U				0.015 U		0.01 U	0.01 U	0.02 U	0.02 U	0.02 U		0.02 U	
53494-70-5	Endrin Ketone	MG/L																				
53-70-3	Dibenz(a,h)anthracene	MG/L			0.01 U	0.01 U																
540-59-0	Total-1,2-Dichloroethene	MG/L																				
541-73-1	1,3-Dichlorobenzene	MG/L	0.0005 U	0.0005 U	0.01 U	0.01 U	0.001 U		0.0005 U	0.0005 U	0.0005 U		0.0005 U	0.0005 U	0.001 U	0.001 U	0.001 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
542-75-6	1,3-Dichloropropene, Total	MG/L	0.0005 U	0.0005 U																		
56-23-5	Carbon tetrachloride	MG/L	0.0005 U	0.0005 U			0.001 U		0.0002 U	0.0002 U	0.0002 U		0.0002 U	0.0002 U	0.0005 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
563-58-6	1,1-Dichloropropene	MG/L	0.0005 U	0.0005 U																		
56-55-3	Benz(a)anthracene	MG/L			0.01 U	0.01 U																
57-74-2	gamma-Chlordane	MG/L																				
57-74-9	Chlordane	MG/L				0.0005 U	0.001 U		0.001 U			0.001 U	0.001 U		0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
57-74-9	Chlordane Technical	MG/L																				
58-89-9	gamma-BHC	MG/L				0.00005 U	0.001 U		0.0001 U			0.0001 U	0.0001 U		0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U
591-78-6	2-Hexanone	MG/L																				
594-20-7	2,2-Dichloropropane	MG/L	0.0005 U	0.0005 U																		
59-50-7	4-Chloro-3-methylphenol	MG/L			0.01 U	0.01 U	0.002 U	0.005 U	0.005 U				0.005 U		0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.025 U	0.005 U	0.005 U
60-57-1	Dieldrin	MG/L				0.00005 U	0.001 U		0.0001 U			0.0001 U	0.0001 U		0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U
606-20-2	2,6-Dinitrotoluene	MG/L			0.01 U	0.01 U																
621-64-7	N-Nitrosodi-n-propylamine	MG/L			0.01 U	0.01 U																
62-75-9	N-Nitrosodimethylamine	MG/L																				
630-20-6	1,1,1,2-Tetrachloroethane	MG/L	0.0005 U	0.0005 U			0.001 U															
634-90-2	1,2,3,5-Tetrachlorobenzene	MG/L					0.001 U															
65-85-0	Benzoic acid	MG/L			0.025 U	0.025 U																
67-64-1	Acetone	MG/L																				
67-66-3	Chloroform	MG/L	0.0005 U	0.0005 U			0.002		0.0002 U	0.0002 U	0.0002 U		0.0002 U	0.0002 U	0.0005 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
67-72-1	Hexachloroethane	MG/L			0.01 U	0.01 U																
7005-72-3	4-Chlorophenyl phenyl ether	MG/L			0.01 U	0.01 U																
71-43-2	Benzene	MG/L	0.0005 U	0.0005 U			0.001 U		0.0002 U	0.0002 U	0.0002 U		0.0002 U	0.0002 U	0.0005 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
71-55-6	1,1,1-Trichloroethane	MG/L	0.0005 U	0.0005 U			0.001 U		0.0002 U	0.0002 U	0.0002 U		0.0002 U	0.0002 U	0.0005 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
72-20-8	Endrin	MG/L				0.00005 U	0.001 U		0.0001 U			0.0001 U	0.0001 U		0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U
72-43-5	Methoxychlor	MG/L				0.0001 U	0.001 U		0.0005 U			0.0005 U	0.0005 U		0.0005 U	0.0005 U	0.0005 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U
72-54-8	1,4-DDD	MG/L																				
72-54-8	2,4-DDD	MG/L																				
72-54-8	4,4'-DDD	MG/L				0.00005 U	0.001 U		0.0001 U			0.0001 U	0.0001 U		0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U
72-54-8	DDD (p,p-DDD)	MG/L																				
72-55-9	1,4-DDE	MG/L																				
72-55-9	4,4'-DDE	MG/L				0.00005 U	0.001 U		0.0001 U			0.0001 U	0.0001 U		0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U
72-55-9	DDE (p,p-DDE)	MG/L																				
7421-93-4	Endrin aldehyde	MG/L				0.00005 U	0.001 U		0.0001 U			0.0001 U	0.0001 U		0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U
7439-89-6	Iron (Fe)	MG/L																				
7439-92-1	Lead (Pb)	MG/L																				
7439-95-4	Magnesium (Mg)	MG/L																				
7439-96-5	Manganese (Mn)	MG/L			0.14	0.075	0.35		0.3				0.52		0.72	0.71	0.75	0.88	0.7	0.62	0.6	0.49
7439-97-6	Mercury (Hg)	MG/L																				
7440-02-0	Nickel (Ni)	MG/L																				
7440-22-4	Silver (Ag)	MG/L																				
7440-23-5	Sodium (Na)	MG/L			32	32	31.2		44				31		54	41	38	30.1	28.5	39	40	32.7
7440-31-5	Tin (Sn)	MG/L																				
7440-38-2	Arsenic (As)	MG/L																				
7440-39-3	Barium (Ba)	MG/L																				
7440-43-9	Cadmium (Cd)	MG/L																				
7440-47-3	Chromium (Cr)	MG/L																				
7440-50-8	Copper (Cu)	MG/L																				
7440-66-6	Zinc (Zn)	MG/L																				
7440-70-2	Calcium (Ca)	MG/L																				
74-83-9	Bromomethane	MG/L	0.0005 U	0.0005 U			0.001 U		0.001 U	0.001 U	0.001 U		0.001 U	0.001 U	0 U	0 U	0 U	0 U	0.002 U	0.002 U	0.002 U	0.002 U
74-87-3	Chloromethane	MG/L	0.0005 U	0.0005 U			0.001 U		0.0005 U	0.0005 U	0.0005 U		0.0005 U	0.0005 U	0.001 U	0.001 U	0.001 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
74-95-3	Dibromoethane	MG/L					0.001 U															
74-95-3	Dibromomethane	MG/L	0.0005 U	0.0005 U																		
74-97-5	Bromochloromethane	MG/L					0.001 U															
75-00-3	Chloroethane	MG/L	0.0005 U	0.0005 U			0.001 U		0.001 U	0.001 U	0.001 U		0.001 U	0.001 U	0 U	0 U	0 U	0 U	0.002 U	0.002 U	0.002 U	0.002 U
75-01-4	Vinyl chloride	MG/L	0.0005 U	0.0005 U			0.001 U		0.0002 U	0.0002 U	0.0002 U		0.0002 U	0.0002 U	0.0005 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
75-09-2	Methylene chloride	MG/L	0.0005 U	0.0005 U			0.001 U		0.002 U	0.002 U	0.002 U		0.002 U	0.002 U	0.027	0.0069	0.0035	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
75-25-2	Bromoform	MG/L	0.0005 U	0.0005 U			0.001 U		0.0005 U	0.0005 U	0.0005 U		0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
75-27-4	Bromodichloromethane	MG/L	0.0005 U	0.0005 U			0.001 U		0.0002 U	0.0002 U	0.0002 U		0.0002 U	0.0002 U	0.0005 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
75-34-3	1,1-Dichloroethane	MG/L	0.0005 U	0.0005 U			0.001 U		0.0002 U	0.0002 U	0.0002 U		0.0002 U	0.0002 U	0.0005 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
75-35-4	1,1-Dichloroethene	MG/L	0.0005 U	0.0005 U			0.001 U		0.0005 U	0.0005 U	0.0005 U		0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
75-69-4	Trichlorofluoromethane	MG/L					0.001 U		0.001 U	0.001 U	0.001 U		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
75-71-8	Dichlorodifluoromethane	MG/L																				
76-13-1	1,1,2-Trichlorotrifluoroethane	MG/L					0.001 U															
76-44-8	Heptachlor	MG/L				0.00005 U	0.001 U		0.0001 U			0.0001 U	0.0001 U		0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U
77-47-4	Hexachlorocyclopentadiene	MG/L			0.01 U	0.01 U																
7782-49-2	Selenium (Se)	MG/L																				
78-59-1	Isophorone	MG/L			0.01 U	0.01 U																

Appendix C-4
Groundwater Data (1984 - 2007)
Page Trowbridge Ranch Landfill

		Sample ID Well ID Sample Date/Time	MW#4 (07-10-0987-01) MW-4 10/24/2007 12:14:00 PM	MW#4 Dup (07-10-0987-02) MW-4 10/24/2007 12:14:00 PM	MW#4 Dup MW-4 10/24/2007	MW#4 MW-4 10/24/2007 12:14:00 PM	MW-5 MW-5 4/18/1990	MW-5 MW-5 5/10/1991	MW-5 MW-5 5/6/1991	MW-5 (Dup) MW-5 10/29/1991	MW-5 (Rerun) MW-5 10/29/1991	MW-5 MW-5 10/28/1991	MW-5 MW-5 10/29/1991	MW-5 (Dup) MW-5 11/12/1991	MW-5 (Dup) MW-5 4/21/1992	MW-5 MW-5 4/21/1992	MW-5 MW-5 10/13/1992	MW-5 MW-5 4/20/1993	MW-5 MW-5 10/12/1993	MW-5 (Dup) MW-5 4/12/1994	MW-5 MW-5 4/12/1994	MW-5 MW-5 10/11/1994
78-87-5	1,2-Dichloropropane	MG/L	0.0005 U	0.0005 U					0.0005 U	0.0005 U	0.0005 U		0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
78-93-3	2-Butanone	MG/L																				
79-00-5	1,1,2-Trichloroethane	MG/L	0.0005 U	0.0005 U			0.001 U		0.0002 U	0.0002 U	0.0002 U		0.0002 U	0.0002 U	0.0005 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
79-01-6	Trichloroethene	MG/L	0.0005 U	0.0005 U			0.001 U		0.0002 U	0.0002 U	0.0002 U		0.0002 U	0.0002 U	0.0005 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
79-34-5	1,1,2,2-Tetrachloroethane	MG/L	0.0005 U	0.0005 U			0.001 U		0.0005 U	0.0005 U	0.0005 U		0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
8001-35-2	Toxaphene	MG/L				0.001 U	0.001 U		0.001 U			0.001 U	0.001 U		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
8071-51-0	2-Methyl-4,6-dinitrophenol	MG/L					0.02 U											0.02 U	0.02 U	0.1 U	0.02 U	0.03 U
83-32-9	Acenaphthene	MG/L			0.01 U	0.01 U																
84-66-2	Diethyl phthalate	MG/L			0.01 U	0.01 U																
84-74-2	Di-n-butyl phthalate	MG/L			0.01 U	0.01 U																
85-01-8	Phenanthrene	MG/L			0.01 U	0.01 U																
85-68-7	Butyl benzyl phthalate	MG/L			0.01 U	0.01 U																
86-30-6	N-Nitrosodiphenylamine	MG/L			0.01 U	0.01 U																
86-73-7	Fluorene	MG/L			0.01 U	0.01 U																
87-61-6	1,2,3-Trichlorobenzene	MG/L																				
87-68-3	Hexachlorobutadiene	MG/L			0.01 U	0.01 U																
87-86-5	Pentachlorophenol	MG/L			0.05 U	0.05 U	0.01 U	0.005 U	0.005 U				0.015 U		0.01 U	0.01 U	0.02 U	0.02 U	0.02 U	0.1 U	0.02 U	0.02 U
88-06-2	2,4,6-Trichlorophenol	MG/L			0.02 U	0.02 U	0.002 U	0.005 U	0.005 U				0.015 U		0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.025 U	0.005 U	0.005 U
88-74-4	2-Nitroaniline	MG/L			0.01 U	0.01 U																
88-75-5	2-Nitrophenol	MG/L			0.015 U	0.015 U	0.002 U	0.01 U	0.01 U				0.005 U		0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.025 U	0.005 U	0.005 U
90-13-1	Chloronaphthalene	MG/L					0.001 U															
91-20-3	Naphthalene	MG/L			0.01 U	0.01 U	0.001 U															
91-57-6	2-Methylnaphthalene	MG/L			0.01 U	0.01 U																
91-58-7	2-Chloronaphthalene	MG/L			0.01 U	0.01 U																
91-94-1	3,3´-Dichlorobenzidine	MG/L			0.01 U	0.01 U																
92-87-5	Benzidine	MG/L																				
95-47-6	o-Xylene	MG/L	0.0005 U	0.0005 U					0.0005 U	0.0005 U	0.0005 U		0.0005 U	0.0005 U								
95-48-7	2-Methylphenol	MG/L			0.01 U	0.01 U																
95-49-8	2-Chlorotoluene	MG/L	0.0005 U	0.0005 U			0.001 U															
95-50-1	1,2-Dichlorobenzene	MG/L	0.0005 U	0.0005 U	0.01 U	0.01 U	0.001 U		0.0005 U	0.0005 U	0.0005 U		0.0005 U	0.0005 U	0.001 U	0.001 U	0.001 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
95-57-8	2-Chlorophenol	MG/L			0.01 U	0.01 U	0.001 U	0.005 U	0.005 U				0.015 U		0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.025 U	0.005 U	0.005 U
95-63-6	1,2,4-Trimethylbenzene	MG/L																				
95-95-4	2,4,5-Trichlorophenol	MG/L			0.02 U	0.02 U																
959-98-8	Endosulfan I	MG/L				0.00005 U	0.001 U		0.0001 U			0.0001 U	0.0001 U		0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U
96-12-8	1,2-Dibromo-3-chloropropane	MG/L					0.001 U															
96-18-4	1,2,3-Trichloropropane	MG/L	0.0005 U	0.0005 U																		
98-06-6	tert-Butylbenzene	MG/L					0.001 U															
98-82-8	Isopropylbenzene	MG/L					0.001 U															
98-95-3	Nitrobenzene	MG/L			0.01 U	0.01 U																
99-09-2	3-Nitroaniline	MG/L			0.01 U	0.01 U																
99-87-6	4-Isopropyltoluene	MG/L																				
DDD	DDD	MG/L																				
GIS-130-312	m,p-Xylenes	MG/L	0.0005 U	0.0005 U																		
NO3NO2N	Nitrate (NO3)	MG/L																				
NO3NO2N	Nitrite/Nitrate Total	MG/L																				
O&PXYLENE	O,P-Xylene	MG/L																				
THMs	Trihalomethanes, Total	MG/L	0.0005 U	0.0005 U																		
UNKNOWN	Acid Fraction	MG/L																				
UNKNOWN	B/N Fraction	MG/L																				
UNKNOWN	Dichlorobenzene	MG/L																				
UNKNOWN	Dinitro-2-Methylphenol	MG/L																				
UNKNOWN	Total Trihalomethanes (THMs)	MG/L																				

Appendix C-4
Groundwater Data (1984 - 2007)
Page Trowbridge Ranch Landfill

		Sample ID	MW-5	MW-5	MW-5	MW-5 (Dup)	MW-5	MW-5	MW-5	MW-5	MW-5 (Dup)	MW-5 (DUP)	MW-5	MW #5	MW #5	MW#5	MW #5	MW#5	MW #5	MW#5
		Well ID	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5 10/13/2004	MW-5	MW-5	MW-5	MW-5
		Sample Date/Time	4/26/1995	10/25/1995	2/21/1996	2/21/1996	10/9/1996	11/5/1997	3/26/1997	8/23/2000	8/23/2000	10/26/2001	10/26/2001	4/23/2003 9:36:00 AM	10/22/2003 9:48:00 AM	9:18:00 AM	4/21/2004 9:41:00 AM	5/5/2004 9:43:00 AM	4/13/2005 10:16:00 AM	4/12/2006 9:30:00 AM
CAS_Number	**OGDEN_ANALYTE**	**FinalUnits**																		
100-01-6	4-Nitroaniline	MG/L												0.01 U	0.01 U	0.01 U	0.01 U		0.01 U	0.01 U
100-02-7	4-Nitrophenol	MG/L	0.02 U	0.02 U	0.005 U	0.005 U	0.02 U	0.021 U	0.02 U	0.025 U				0.025 U	0.025 U	0.025 U	0.025 U		0.025 U	0.025 U
100-41-4	Ethylbenzene	MG/L	0.002 U	0.002 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.001 U	0.001 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
100-42-5	Styrene	MG/L								0.001 U	0.001 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
100-51-6	Benzyl alcohol	MG/L												0.01 U	0.01 U	0.01 U	0.01 U		0.01 U	0.01 U
10061-01-5	cis-1,3-Dichloropropene	MG/L	0.002 U	0.002 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.001 U	0.001 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
10061-02-6	trans-1,3-Dichloropropene	MG/L	0.002 U	0.002 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.001 U	0.001 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
101-55-3	4-Bromophenyl phenyl ether	MG/L								0.005 U				0.005 U	0.01 U	0.01 U	0.01 U		0.01 U	0.01 U
1024-57-3	Heptachlor epoxide	MG/L	0.0001 U	0.0001 U	0.00005 U	0.00005 U	0.0001 U	0.0001 U	0.0001 U	0.00005 U				0.00005 U	0.00005 U	0.00005 U	0.00005 U		0.00005 U	0.00005 U
1031-07-8	Endosulfan sulfate	MG/L	0.0001 U	0.0001 U	0.00005 U	0.00005 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U				0.00005 U	0.00005 U	0.00005 U	0.00005 U		0.00005 U	0.00005 U
103-33-3	Azobenzene	MG/L												0.005 U	0.01 U	0.01 U	0.01 U		0.01 U	
103-65-1	n-Propylbenzene	MG/L								0.001 U	0.001 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
104-51-8	n-Butylbenzene	MG/L								0.001 U	0.001 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
105-67-9	2,4-Dimethylphenol	MG/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.0052 U	0.005 U	0.01 U				0.01 U	0.01 U	0.01 U	0.01 U		0.01 U	0.01 U
106-43-4	4-Chlorotoluene	MG/L								0.001 U	0.001 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
106-44-5	3 & 4-Methylphenol	MG/L																	0.01 U	0.01 U
106-44-5	4-Methylphenol	MG/L			0.003 U	0.003 U								0.01 U	0.01 U	0.01 U	0.01 U			
106-46-7	1,4-Dichlorobenzene	MG/L	0.002 U	0.002 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.001 U	0.001 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.01 U	0.01 U	0.0005 U	0.01 U	0.01 U
106-47-8	4-Chloroaniline	MG/L												0.01 U	0.01 U	0.01 U	0.01 U		0.01 U	0.01 U
106-93-4	1,2-Dibromoethane	MG/L								0.001 U	0.001 U			0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
107-06-2	1,2-Dichloroethane	MG/L	0.002 U	0.002 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.001 U	0.001 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
108-05-4	Vinyl Acetate	MG/L								0.001 U	0.001 U									
108-10-1	4-Methyl-2-Pentanone	MG/L								0.005 U	0.005 U									
108-38-3	M-Xylene	MG/L																		
108-60-1	Bis(2-chloroisopropyl)ether	MG/L								0.01 U				0.01 U	0.01 U	0.01 U	0.01 U		0.01 U	0.01 U
108-67-8	1,3,5-Trimethylbenzene	MG/L								0.001 U	0.001 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
108-86-1	Bromobenzene	MG/L								0.001 U	0.001 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
108-88-3	Toluene	MG/L	0.002 U	0.002 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.001 U	0.001 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
108-90-7	Chlorobenzene	MG/L	0.002 U	0.002 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.001 U	0.001 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
108-95-2	Phenol	MG/L	0.005 U	0.005 U	0.003 U	0.003 U	0.005 U	0.0052 U	0.005 U	0.01 U				0.01 U	0.01 U	0.01 U	0.01 U		0.01 U	0.01 U
110-75-8	2-Chloroethyl Vinyl Ether	MG/L			0.001 U	0.001 U				0.005 U	0.005 U									
11096-82-5	PCB-1260 (Aroclor)	MG/L	0.001 U	0.001 U	0.0005 U	0.0005 U	0.001 U	0.001 U	0.001 U	0.001 U										
11097-69-1	PCB-1254 (Aroclor)	MG/L	0.001 U	0.001 U	0.0005 U	0.0005 U	0.001 U	0.001 U	0.001 U	0.001 U										
11104-28-2	PCB-1221 (Aroclor)	MG/L	0.001 U	0.001 U	0.0005 U	0.0005 U	0.001 U	0.001 U	0.001 U	0.001 U										
11104-29-3	PCB-1242 (Aroclor)	MG/L	0.001 U	0.001 U	0.0005 U	0.0005 U	0.001 U	0.001 U	0.001 U	0.001 U										
11141-16-5	PCB-1232 (Aroclor)	MG/L	0.001 U	0.001 U	0.0005 U	0.0005 U	0.001 U	0.001 U	0.001 U	0.001 U										
111-44-4	Bis(2-chloroethyl)ether	MG/L								0.01 U				0.01 U	0.01 U	0.01 U	0.01 U		0.01 U	0.01 U
111-91-1	Bis(2-chloroethoxy)methane	MG/L								0.01 U				0.01 U	0.01 U	0.01 U	0.01 U		0.01 U	0.01 U
117-81-7	Bis(2-ethylhexyl)phthalate	MG/L								0.017				0.01 U	0.01 U	0.01 U	0.01 U		0.01 U	0.01 U
117-84-0	Di-n-octyl phthalate	MG/L								0.01 U				0.01 U	0.01 U	0.01 U	0.01 U		0.01 U	0.01 U
118-74-1	Hexachlorobenzene	MG/L								0.005 U				0.005 U	0.01 U	0.01 U	0.01 U		0.01 U	0.01 U
120-12-7	Anthracene	MG/L								0.005 U				0.005 U	0.01 U	0.01 U	0.01 U		0.01 U	0.01 U
120-82-1	1,2,4-Trichlorobenzene	MG/L								0.01 U		0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.01 U	0.0005 U	0.0005 U	0.01 U	0.01 U
120-83-2	2,4-Dichlorophenol	MG/L	0.005 U	0.005 U	0.003 U	0.003 U	0.005 U	0.0052 U	0.005 U	0.01 U				0.01 U	0.01 U	0.01 U	0.01 U		0.01 U	0.01 U
121-14-2	2,4-Dinitrotoluene	MG/L								0.005 U				0.005 U	0.01 U	0.01 U	0.01 U		0.01 U	0.01 U
122-66-7	1,2-Diphenylhydrazine (As Azobenzene)	MG/L								0.005 U										0.01 U
124-48-1	Dibromochloromethane	MG/L	0.002 U	0.002 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.001 U	0.001 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
12672-29-6	PCB-1248 (Aroclor)	MG/L	0.001 U	0.001 U	0.0005 U	0.0005 U	0.001 U	0.001 U	0.001 U	0.001 U										
12674-11-2	PCB-1016 (Aroclor)	MG/L	0.001 U	0.001 U	0.0005 U	0.0005 U	0.001 U	0.001 U	0.001 U	0.001 U										
127-18-4	Tetrachloroethene	MG/L	0.002 U	0.002 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.001 U	0.001 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
129-00-0	Pyrene	MG/L								0.005 U				0.005 U	0.01 U	0.01 U	0.01 U		0.01 U	0.01 U
131-11-3	Dimethyl phthalate	MG/L								0.02 U				0.02 U	0.02 U	0.02 U	0.02 U		0.02 U	0.02 U
132-64-9	Dibenzofuran	MG/L												0.01 U	0.01 U	0.01 U	0.01 U		0.01 U	0.01 U
1330-20-7	m,p-Xylene	MG/L			0.001 U	0.001 U				0.001 U	0.001 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
1330-20-7	Xylenes, Total	MG/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U										0.001 U	0.0005 U
135-98-8	sec-Butylbenzene	MG/L								0.001 U	0.001 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
142-28-9	1,3-Dichloropropane	MG/L								0.001 U	0.001 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
14808-79-8	Sulfate (SO4)	MG/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U			25 U	25 U	3.4	5.1	4.3	4.9		5.2	5.1
156-59-2	cis-1,2-Dichloroethene	MG/L			0.0005 U	0.0005 U				0.001 U	0.001 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
156-60-5	trans-1,2-Dichloroethene	MG/L	0.002 U	0.002 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.001 U	0.001 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
1634-04-4	Methyl tert-butyl ether	MG/L								0.001 U	0.001 U									
16887-00-6	Chloride (Cl-)	MG/L	7.1	6.4	6.5	5 U	6.7	8.9	7.1			5 U	5 U	7.2	6.9	7.1	6.2		6.1	6
16984-48-8	Fluoride (Fl-)	MG/L																		
191-24-2	Benzo(g,h,i)perylene	MG/L								0.005 U				0.005 U	0.01 U	0.01 U	0.01 U		0.01 U	0.01 U
193-39-5	Indeno(1,2,3-cd)pyrene	MG/L								0.005 U				0.005 U	0.01 U	0.01 U	0.01 U		0.01 U	0.01 U
205-99-2	Benzo(b)fluoranthene	MG/L								0.005 U				0.005 U	0.01 U	0.01 U	0.01 U		0.01 U	0.01 U
206-44-0	Fluoranthene	MG/L								0.005 U				0.005 U	0.01 U	0.01 U	0.01 U		0.01 U	0.01 U
207-08-9	Benzo(k)fluoranthene	MG/L								0.005 U				0.005 U	0.01 U	0.01 U	0.01 U		0.01 U	0.01 U
208-96-8	Acenaphthylene	MG/L								0.01 U				0.01 U	0.01 U	0.01 U	0.01 U		0.01 U	0.01 U
218-01-9	Chrysene	MG/L								0.005 U				0.005 U	0.01 U	0.01 U	0.01 U		0.01 U	0.01 U
25551-13-7	Trimethyl Benzene	MG/L																		
309-00-2	Aldrin	MG/L	0.0001 U	0.0001 U	0.00005 U	0.00005 U	0.0001 U	0.0001 U	0.0001 U	0.00005 U				0.00005 U	0.00005 U	0.00005 U	0.00005 U		0.00005 U	0.00005 U
319-84-6	alpha-BHC	MG/L	0.0001 U	0.0001 U	0.00005 U	0.00005 U	0.0001 U	0.0001 U	0.0001 U	0.00005 U				0.00005 U	0.00005 U	0.00005 U	0.00005 U		0.00005 U	0.00005 U
319-85-7	beta-BHC	MG/L	0.0001 U	0.0001 U	0.00005 U	0.00005 U	0.0001 U	0.0001 U	0.0001 U	0.00005 U				0.00005 U	0.00005 U	0.00005 U	0.00005 U		0.00005 U	0.00005 U
319-86-8	delta-BHC	MG/L	0.0001 U	0.0001 U	0.00005 U	0.00005 U	0.0001 U	0.0001 U	0.0001 U	0.00005 U				0.00005 U	0.00005 U	0.00005 U	0.00005 U		0.00005 U	0.00005 U
33213-65-9	Endosulfan II	MG/L	0.0001 U	0.0001 U	0.00005 U	0.00005 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U				0.00005 U	0.00005 U	0.00005 U	0.00005 U		0.00005 U	0.00005 U
50-29-3	2,4-DDT	MG/L																		
50-29-3	4,4'-DDT	MG/L	0.0001 U	0.0001 U	0.00005 U	0.00005 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U				0.00005 U	0.00005 U	0.00005 U	0.00005 U		0.00005 U	0.00005 U

Appendix C-4
Groundwater Data (1984 - 2007)
Page Trowbridge Ranch Landfill

		Sample ID	MW-5	MW-5	MW-5	MW-5 (Dup)	MW-5	MW-5	MW-5	MW-5	MW-5 (Dup)	MW-5 (DUP)	MW-5	MW #5	MW #5	MW#5	MW #5	MW#5	MW #5	MW#5
		Well ID	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5 10/13/2004	MW-5	MW-5	MW-5	MW-5
		Sample Date/Time	4/26/1995	10/25/1995	2/21/1996	2/21/1996	10/9/1996	11/5/1997	3/26/1997	8/23/2000	8/23/2000	10/26/2001	10/26/2001	4/23/2003 9:36:00 AM	10/22/2003 9:48:00 AM	9:18:00 AM	4/21/2004 9:41:00 AM	5/5/2004 9:43:00 AM	4/13/2005 10:16:00 AM	4/12/2006 9:30:00 AM
50-29-3	DDT (p,p-DDT)	MG/L																		
50-32-8	Benzo(a)pyrene	MG/L								0.005 U				0.005 U	0.01 U	0.01 U	0.01 U		0.01 U	0.01 U
5103-71-9	alpha-Chlordane	MG/L								0.00005 U										
51-28-5	2,4-Dinitrophenol	MG/L	0.05 U	0.05 U	0.01 U	0.01 U	0.05 U	0.052 U	0.05 U	0.05 U				0.05 U	0.05 U	0.05 U	0.05 U		0.05 U	0.05 U
53-19-0	2,4-DDD	MG/L																		
534-52-1	2-Methyl-4,6-dinitrophenol	MG/L	0.03 U	0.03 U	0.03 U	0.005 U	0.03 U	0.031 U		0.05 U				0.05 U	0.05 U	0.05 U	0.05 U		0.05 U	0.05 U
53494-70-5	Endrin Ketone	MG/L																		
53-70-3	Dibenz(a,h)anthracene	MG/L								0.005 U				0.005 U	0.01 U	0.01 U	0.01 U		0.01 U	0.01 U
540-59-0	Total-1,2-Dichloroethene	MG/L																		
541-73-1	1,3-Dichlorobenzene	MG/L	0.002 U	0.002 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.001 U	0.001 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.01 U	0.01 U	0.0005 U	0.01 U	0.01 U
542-75-6	1,3-Dichloropropene, Total	MG/L																		
56-23-5	Carbon tetrachloride	MG/L	0.002 U	0.002 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.001 U	0.001 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
563-58-6	1,1-Dichloropropene	MG/L								0.001 U	0.001 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
56-55-3	Benz(a)anthracene	MG/L								0.01 U				0.01 U	0.01 U	0.01 U	0.01 U		0.01 U	0.01 U
57-74-2	gamma-Chlordane	MG/L								0.00005 U										
57-74-9	Chlordane	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U					0.0005 U	0.0005 U	0.0005 U	0.0005 U		0.0005 U	0.0005 U
57-74-9	Chlordane Technical	MG/L								0.001 U										
58-89-9	gamma-BHC	MG/L	0.0001 U	0.0001 U	0.00005 U	0.00005 U	0.0001 U	0.0001 U	0.0001 U	0.00005 U				0.00005 U	0.00005 U	0.00005 U	0.00005 U		0.00005 U	0.00005 U
591-78-6	2-Hexanone	MG/L								0.005 U	0.005 U									
594-20-7	2,2-Dichloropropane	MG/L								0.001 U	0.001 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
59-50-7	4-Chloro-3-methylphenol	MG/L	0.005 U	0.005 U	0.003 U	0.003 U	0.005 U	0.0052 U	0.005 U	0.01 U				0.01 U	0.01 U	0.01 U	0.01 U		0.01 U	0.01 U
60-57-1	Dieldrin	MG/L	0.0001 U	0.0001 U	0.00005 U	0.00005 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U				0.00005 U	0.00005 U	0.00005 U	0.00005 U		0.00005 U	0.00005 U
606-20-2	2,6-Dinitrotoluene	MG/L								0.005 U				0.005 U	0.01 U	0.01 U	0.01 U		0.01 U	0.01 U
621-64-7	N-Nitrosodi-n-propylamine	MG/L								0.01 U				0.01 U	0.01 U	0.01 U	0.01 U		0.01 U	0.01 U
62-75-9	N-Nitrosodimethylamine	MG/L								0.01 U										
630-20-6	1,1,1,2-Tetrachloroethane	MG/L										0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
634-90-2	1,2,3,5-Tetrachlorobenzene	MG/L																		
65-85-0	Benzoic acid	MG/L												0.05 U	0.05 U	0.05 U	0.05 U		0.05 U	0.05 U
67-64-1	Acetone	MG/L								0.005 U	0.005 U									
67-66-3	Chloroform	MG/L	0.002 U	0.002 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.001 U	0.001 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
67-72-1	Hexachloroethane	MG/L								0.01 U				0.01 U	0.01 U	0.01 U	0.01 U		0.01 U	0.01 U
7005-72-3	4-Chlorophenyl phenyl ether	MG/L								0.01 U				0.01 U	0.01 U	0.01 U	0.01 U		0.01 U	0.01 U
71-43-2	Benzene	MG/L	0.002 U	0.002 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.001 U	0.001 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.00054
71-55-6	1,1,1-Trichloroethane	MG/L	0.002 U	0.002 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.001 U	0.001 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
72-20-8	Endrin	MG/L	0.0001 U	0.0001 U	0.00005 U	0.00005 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U				0.00005 U	0.00005 U	0.00005 U	0.00005 U		0.00005 U	0.00005 U
72-43-5	Methoxychlor	MG/L	0.0001 U	0.0001 U	0.00005 U	0.00005 U	0.0001 U	0.0001 U	0.0001 U	0.0005 U				0.0001 U	0.0001 U	0.0001 U	0.0001 U		0.0001 U	0.0001 U
72-54-8	1,4-DDD	MG/L																		
72-54-8	2,4-DDD	MG/L																		
72-54-8	4,4'-DDD	MG/L	0.0001 U	0.0001 U	0.00005 U	0.00005 U	0.0001 U	0.0001 U	0.0001 U					0.00005 U	0.00005 U	0.00005 U	0.00005 U		0.00005 U	0.00005 U
72-54-8	DDD (p,p-DDD)	MG/L																		
72-55-9	1,4-DDE	MG/L																		
72-55-9	4,4'-DDE	MG/L	0.0001 U	0.0001 U	0.00005 U	0.00005 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U				0.00005 U	0.00005 U	0.00005 U	0.00005 U		0.00005 U	0.00005 U
72-55-9	DDE (p,p-DDE)	MG/L																		
7421-93-4	Endrin aldehyde	MG/L	0.0001 U	0.0001 U	0.00005 U	0.00005 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U				0.00005 U	0.00005 U	0.00005 U	0.00005 U		0.00005 U	0.00005 U
7439-89-6	Iron (Fe)	MG/L																		
7439-92-1	Lead (Pb)	MG/L																		
7439-95-4	Magnesium (Mg)	MG/L							9.1											
7439-96-5	Manganese (Mn)	MG/L	0.45	0.4	0.28	0.22	0.19	0.09				0.046	0.046	0.24	0.24	0.1	0.21		0.1	0.16
7439-97-6	Mercury (Hg)	MG/L																		
7440-02-0	Nickel (Ni)	MG/L																		
7440-22-4	Silver (Ag)	MG/L																		
7440-23-5	Sodium (Na)	MG/L	28.6	16.6	34.5	32	35.8	33	26			35	35	30	31	34	32		36	33
7440-31-5	Tin (Sn)	MG/L																		
7440-38-2	Arsenic (As)	MG/L																		
7440-39-3	Barium (Ba)	MG/L																		
7440-43-9	Cadmium (Cd)	MG/L																		
7440-47-3	Chromium (Cr)	MG/L																		
7440-50-8	Copper (Cu)	MG/L																		
7440-66-6	Zinc (Zn)	MG/L																		
7440-70-2	Calcium (Ca)	MG/L																		
74-83-9	Bromomethane	MG/L	0.002 U	0.002 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.005 U	0.005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
74-87-3	Chloromethane	MG/L	0.005 U	0.005 U	0.0005 U	0.0005 U	0.005 U	0.005 U	0.005 U	0.001 U	0.001 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
74-95-3	Dibromoethane	MG/L																		
74-95-3	Dibromomethane	MG/L										0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
74-97-5	Bromochloromethane	MG/L								0.001 U	0.001 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
75-00-3	Chloroethane	MG/L	0.002 U	0.002 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.001 U	0.001 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
75-01-4	Vinyl chloride	MG/L	0.002 U	0.002 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.001 U	0.001 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
75-09-2	Methylene chloride	MG/L	0.01 U	0.01 U	0.002 U	0.002 U	0.01 U	0.01 U	0.01 U	0.002 U	0.002 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
75-25-2	Bromoform	MG/L	0.002 U	0.002 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.001 U	0.001 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
75-27-4	Bromodichloromethane	MG/L	0.002 U	0.002 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.001 U	0.001 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
75-34-3	1,1-Dichloroethane	MG/L	0.002 U	0.002 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.001 U	0.001 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
75-35-4	1,1-Dichloroethene	MG/L	0.002 U	0.002 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.001 U	0.001 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
75-69-4	Trichlorofluoromethane	MG/L	0.002 U	0.002 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.001 U	0.001 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
75-71-8	Dichlorodifluoromethane	MG/L	0.005 U	0.005 U	0.0005 U	0.0005 U	0.005 U	0.005 U	0.005 U	0.001 U	0.001 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
76-13-1	1,1,2-Trichlorotrifluoroethane	MG/L																		
76-44-8	Heptachlor	MG/L	0.0001 U	0.0001 U	0.00005 U	0.00005 U	0.0001 U	0.0001 U	0.0001 U	0.00005 U				0.00005 U	0.00005 U	0.00005 U	0.00005 U		0.00005 U	0.00005 U
77-47-4	Hexachlorocyclopentadiene	MG/L								0.01 U				0.01 U	0.01 U	0.01 U	0.01 U		0.01 U	0.01 U
7782-49-2	Selenium (Se)	MG/L																		
78-59-1	Isophorone	MG/L								0.01 U				0.01 U	0.01 U	0.01 U	0.01 U		0.01 U	0.01 U

Appendix C-4
Groundwater Data (1984 - 2007)
Page Trowbridge Ranch Landfill

		Sample ID	MW-5	MW-5	MW-5	MW-5 (Dup)	MW-5	MW-5	MW-5	MW-5	MW-5 (Dup)	MW-5 (DUP)	MW-5	MW #5	MW #5	MW#5	MW #5	MW#5	MW #5	MW#5
		Well ID	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5 10/13/2004	MW-5	MW-5	MW-5	MW-5
		Sample Date/Time	4/26/1995	10/25/1995	2/21/1996	2/21/1996	10/9/1996	11/5/1997	3/26/1997	8/23/2000	8/23/2000	10/26/2001	10/26/2001	4/23/2003 9:36:00 AM	10/22/2003 9:48:00 AM	9:18:00 AM	4/21/2004 9:41:00 AM	5/5/2004 9:43:00 AM	4/13/2005 10:16:00 AM	4/12/2006 9:30:00 AM
78-87-5	1,2-Dichloropropane	MG/L	0.002 U	0.002 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.001 U	0.001 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
78-93-3	2-Butanone	MG/L								0.005 U	0.005 U									
79-00-5	1,1,2-Trichloroethane	MG/L	0.002 U	0.002 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.001 U	0.001 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
79-01-6	Trichloroethene	MG/L	0.002 U	0.002 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.001 U	0.001 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
79-34-5	1,1,2,2-Tetrachloroethane	MG/L	0.002 U	0.002 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.001 U	0.001 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
8001-35-2	Toxaphene	MG/L	0.001 U	0.001 U	0.0005 U	0.0005 U	0.001 U	0.001 U	0.001 U	0.002 U				0.001 U	0.001 U	0.001 U	0.001 U		0.001 U	0.001 U
8071-51-0	2-Methyl-4,6-dinitrophenol	MG/L	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U		0.03 U											
83-32-9	Acenaphthene	MG/L								0.01 U				0.01 U	0.01 U	0.01 U	0.01 U		0.01 U	0.01 U
84-66-2	Diethyl phthalate	MG/L								0.01 U				0.01 U	0.01 U	0.01 U	0.01 U		0.01 U	0.01 U
84-74-2	Di-n-butyl phthalate	MG/L								0.01 U				0.01 U	0.01 U	0.01 U	0.01 U		0.01 U	0.01 U
85-01-8	Phenanthrene	MG/L								0.005 U				0.005 U	0.01 U	0.01 U	0.01 U		0.01 U	0.01 U
85-68-7	Butyl benzyl phthalate	MG/L								0.01 U				0.01 U	0.01 U	0.01 U	0.01 U		0.01 U	0.01 U
86-30-6	N-Nitrosodiphenylamine	MG/L								0.005 U				0.005 U	0.01 U	0.01 U	0.01 U		0.01 U	0.01 U
86-73-7	Fluorene	MG/L								0.01 U				0.01 U	0.01 U	0.01 U	0.01 U		0.01 U	0.01 U
87-61-6	1,2,3-Trichlorobenzene	MG/L								0.005 U	0.005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
87-68-3	Hexachlorobutadiene	MG/L								0.01 U		0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.01 U	0.01 U	0.0005 U	0.01 U	0.01 U
87-86-5	Pentachlorophenol	MG/L	0.02 U	0.02 U	0.005 U	0.005 U	0.02 U	0.01 U	0.01 U	0.05 U				0.05 U	0.05 U	0.05 U	0.05 U		0.05 U	0.05 U
88-06-2	2,4,6-Trichlorophenol	MG/L	0.005 U	0.005 U	0.003 U	0.003 U	0.005 U	0.0052 U	0.005 U	0.02 U				0.02 U	0.02 U	0.02 U	0.02 U		0.02 U	0.02 U
88-74-4	2-Nitroaniline	MG/L												0.01 U	0.01 U	0.01 U	0.01 U		0.01 U	0.01 U
88-75-5	2-Nitrophenol	MG/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.0052 U	0.005 U	0.015 U				0.015 U	0.015 U	0.015 U	0.015 U		0.015 U	0.015 U
90-13-1	Chloronaphthalene	MG/L																		
91-20-3	Naphthalene	MG/L								0.01 U		0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.01 U	0.01 U	0.0005 U	0.01 U	0.01 U
91-57-6	2-Methylnaphthalene	MG/L												0.01 U	0.01 U	0.01 U	0.01 U		0.01 U	0.01 U
91-58-7	2-Chloronaphthalene	MG/L								0.01 U				0.01 U	0.01 U	0.01 U	0.01 U		0.01 U	0.01 U
91-94-1	3,3´-Dichlorobenzidine	MG/L								0.01 U				0.01 U	0.01 U	0.01 U	0.01 U		0.01 U	0.01 U
92-87-5	Benzidine	MG/L								0.15 U										
95-47-6	o-Xylene	MG/L			0.0005 U	0.0005 U				0.001 U	0.001 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
95-48-7	2-Methylphenol	MG/L			0.003 U	0.003 U								0.01 U	0.01 U	0.01 U	0.01 U		0.01 U	0.01 U
95-49-8	2-Chlorotoluene	MG/L								0.001 U	0.001 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
95-50-1	1,2-Dichlorobenzene	MG/L	0.002 U	0.002 U	0.0005 U	0.0005 U	0.002 U	0.002 U	0.002 U	0.001 U	0.001 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.01 U	0.01 U	0.0005 U	0.01 U	0.01 U
95-57-8	2-Chlorophenol	MG/L	0.005 U	0.005 U	0.003 U	0.003 U	0.005 U	0.0052 U	0.005 U	0.01 U				0.01 U	0.01 U	0.01 U	0.01 U		0.01 U	0.01 U
95-63-6	1,2,4-Trimethylbenzene	MG/L								0.001 U	0.001 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
95-95-4	2,4,5-Trichlorophenol	MG/L			0.003 U	0.003 U								0.02 U	0.02 U	0.02 U	0.02 U		0.02 U	0.02 U
959-98-8	Endosulfan I	MG/L	0.0001 U	0.0001 U	0.00005 U	0.00005 U	0.0001 U	0.0001 U	0.0001 U	0.00005 U				0.00005 U	0.00005 U	0.00005 U	0.00005 U		0.00005 U	0.00005 U
96-12-8	1,2-Dibromo-3-chloropropane	MG/L												0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
96-18-4	1,2,3-Trichloropropane	MG/L								0.001 U	0.001 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.002 U	0.002 U
98-06-6	tert-Butylbenzene	MG/L								0.001 U	0.001 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
98-82-8	Isopropylbenzene	MG/L										0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
98-95-3	Nitrobenzene	MG/L								0.01 U				0.01 U	0.01 U	0.01 U	0.01 U		0.01 U	0.01 U
99-09-2	3-Nitroaniline	MG/L												0.01 U	0.01 U	0.01 U	0.01 U		0.01 U	0.01 U
99-87-6	4-Isopropyltoluene	MG/L								0.001 U	0.001 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
DDD	DDD	MG/L								0.0001 U										
GIS-130-312	m,p-Xylenes	MG/L																		
NO3NO2N	Nitrate (NO3)	MG/L																		
NO3NO2N	Nitrite/Nitrate Total	MG/L																		
O&PXYLENE	O,P-Xylene	MG/L																		
THMs	Trihalomethanes, Total	MG/L												0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.002 U	0.0005 U
UNKNOWN	Acid Fraction	MG/L																		
UNKNOWN	B/N Fraction	MG/L																		
UNKNOWN	Dichlorobenzene	MG/L																		
UNKNOWN	Dinitro-2-Methylphenol	MG/L																		
UNKNOWN	Total Trihalomethanes (THMs)	MG/L																		

Appendix C-4
Groundwater Data (1984 - 2007)
Page Trowbridge Ranch Landfill

		Sample ID	MW #5 DUP	MW #5	MW#5	MW#5	MW #5 (07100988)	MW #5 Dup (07100988)	MW #5
		Well ID	MW-5	MW-5	Dup MW-5	MW-5	MW-5	MW-5	MW-5
		Sample Date/Time	11/7/2006 9:35:00 AM	11/7/2006 9:35:00 AM	10/24/2007	10/24/2007 9:22:00 AM	10/24/2007 9:22:00 AM	10/24/2007 9:22:00 AM	4/11/2007 9:13:00 AM
CAS_Number	**OGDEN_ANALYTE**	**FinalUnits**							
100-01-6	4-Nitroaniline	MG/L		0.01 U	0.01 U	0.01 U			0.01 U
100-02-7	4-Nitrophenol	MG/L		0.025 U	0.025 U	0.025 U			0.025 U
100-41-4	Ethylbenzene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U
100-42-5	Styrene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U
100-51-6	Benzyl alcohol	MG/L		0.01 U	0.01 U	0.01 U			0.01 U
10061-01-5	cis-1,3-Dichloropropene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U
10061-02-6	trans-1,3-Dichloropropene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U
101-55-3	4-Bromophenyl phenyl ether	MG/L		0.01 U	0.01 U	0.01 U			0.01 U
1024-57-3	Heptachlor epoxide	MG/L		0.00005 U		0.00005 U			0.00005 U
1031-07-8	Endosulfan sulfate	MG/L		0.00005 U		0.00005 U			0.00005 U
103-33-3	Azobenzene	MG/L							
103-65-1	n-Propylbenzene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U
104-51-8	n-Butylbenzene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U
105-67-9	2,4-Dimethylphenol	MG/L		0.01 U	0.01 U	0.01 U			0.01 U
106-43-4	4-Chlorotoluene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U
106-44-5	3 & 4-Methylphenol	MG/L		0.01 U	0.01 U	0.01 U			0.01 U
106-44-5	4-Methylphenol	MG/L							
106-46-7	1,4-Dichlorobenzene	MG/L	0.0005 U	0.01 U	0.01 U	0.01 U			0.01 U
106-47-8	4-Chloroaniline	MG/L		0.01 U	0.01 U	0.01 U			0.01 U
106-93-4	1,2-Dibromoethane	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U
107-06-2	1,2-Dichloroethane	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U
108-05-4	Vinyl Acetate	MG/L							
108-10-1	4-Methyl-2-Pentanone	MG/L							
108-38-3	M-Xylene	MG/L							
108-60-1	Bis(2-chloroisopropyl)ether	MG/L		0.01 U	0.01 U	0.01 U			0.01 U
108-67-8	1,3,5-Trimethylbenzene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U
108-86-1	Bromobenzene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U
108-88-3	Toluene	MG/L	0.0026	0.0054	0.0005 U	0.0005 U			0.0005 U
108-90-7	Chlorobenzene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U
108-95-2	Phenol	MG/L		0.01 U	0.01 U	0.01 U			0.01 U
110-75-8	2-Chloroethyl Vinyl Ether	MG/L							
11096-82-5	PCB-1260 (Aroclor)	MG/L							
11097-69-1	PCB-1254 (Aroclor)	MG/L							
11104-28-2	PCB-1221 (Aroclor)	MG/L							
11104-29-3	PCB-1242 (Aroclor)	MG/L							
11141-16-5	PCB-1232 (Aroclor)	MG/L							
111-44-4	Bis(2-chloroethyl)ether	MG/L		0.01 U	0.01 U	0.01 U			0.01 U
111-91-1	Bis(2-chloroethoxy)methane	MG/L		0.01 U	0.01 U	0.01 U			0.01 U
117-81-7	Bis(2-ethylhexyl)phthalate	MG/L		0.005 U	0.005 U	0.005 U			0.005 U
117-84-0	Di-n-octyl phthalate	MG/L		0.01 U	0.01 U	0.01 U			0.01 U
118-74-1	Hexachlorobenzene	MG/L		0.01 U	0.01 U	0.01 U			0.01 U
120-12-7	Anthracene	MG/L		0.01 U	0.01 U	0.01 U			0.01 U
120-82-1	1,2,4-Trichlorobenzene	MG/L	0.0005 U	0.01 U	0.01 U	0.01 U			0.01 U
120-83-2	2,4-Dichlorophenol	MG/L		0.01 U	0.01 U	0.01 U			0.01 U
121-14-2	2,4-Dinitrotoluene	MG/L		0.01 U	0.01 U	0.01 U			0.01 U
122-66-7	1,2-Diphenylhydrazine (As Azobenzene)	MG/L		0.01 U	0.01 U	0.01 U			0.01 U
124-48-1	Dibromochloromethane	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U
12672-29-6	PCB-1248 (Aroclor)	MG/L							
12674-11-2	PCB-1016 (Aroclor)	MG/L							
127-18-4	Tetrachloroethene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U
129-00-0	Pyrene	MG/L		0.01 U	0.01 U	0.01 U			0.01 U
131-11-3	Dimethyl phthalate	MG/L		0.02 U	0.02 U	0.02 U			0.02 U
132-64-9	Dibenzofuran	MG/L		0.01 U	0.01 U	0.01 U			0.01 U
1330-20-7	m,p-Xylene	MG/L	0.0005 U	0.0005 U	0.001 U	0.001 U			0.0005 U
1330-20-7	Xylenes, Total	MG/L	0.0005 U	0.0005 U	0.0015 U	0.0015 U			0.0005 U
135-98-8	sec-Butylbenzene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U
142-28-9	1,3-Dichloropropane	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U
14808-79-8	Sulfate (SO4)	MG/L		4.3			2.5	2.6	4
156-59-2	cis-1,2-Dichloroethene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U
156-60-5	trans-1,2-Dichloroethene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U
1634-04-4	Methyl tert-butyl ether	MG/L							
16887-00-6	Chloride (Cl-)	MG/L		6.7			6.7	6.7	7.1
16984-48-8	Fluoride (Fl-)	MG/L							
191-24-2	Benzo(g,h,i)perylene	MG/L		0.01 U	0.01 U	0.01 U			0.01 U
193-39-5	Indeno(1,2,3-cd)pyrene	MG/L		0.01 U	0.01 U	0.01 U			0.01 U
205-99-2	Benzo(b)fluoranthene	MG/L		0.01 U	0.01 U	0.01 U			0.01 U
206-44-0	Fluoranthene	MG/L		0.01 U	0.01 U	0.01 U			0.01 U
207-08-9	Benzo(k)fluoranthene	MG/L		0.01 U	0.01 U	0.01 U			0.01 U
208-96-8	Acenaphthylene	MG/L		0.01 U	0.01 U	0.01 U			0.01 U
218-01-9	Chrysene	MG/L		0.01 U	0.01 U	0.01 U			0.01 U
25551-13-7	Trimethyl Benzene	MG/L							
309-00-2	Aldrin	MG/L		0.00005 U		0.00005 U			0.00005 U
319-84-6	alpha-BHC	MG/L		0.00005 U		0.00005 U			0.00005 U
319-85-7	beta-BHC	MG/L		0.00005 U		0.00005 U			0.00005 U
319-86-8	delta-BHC	MG/L		0.00005 U		0.00005 U			0.00005 U
33213-65-9	Endosulfan II	MG/L		0.00005 U		0.00005 U			0.00005 U
50-29-3	2,4-DDT	MG/L							
50-29-3	4,4'-DDT	MG/L		0.00005 U		0.00005 U			0.00005 U

Appendix C-4
Groundwater Data (1984 - 2007)
Page Trowbridge Ranch Landfill

		Sample ID Well ID Sample Date/Time	MW #5 DUP MW-5 11/7/2006 9:35:00 AM	MW #5 MW-5 11/7/2006 9:35:00 AM	MW#5 Dup MW-5 10/24/2007	MW#5 MW-5 10/24/2007 9:22:00 AM	MW #5 (07100988) MW-5 10/24/2007 9:22:00 AM	MW #5 Dup (07100988) MW-5 10/24/2007 9:22:00 AM	MW #5 MW-5 4/11/2007 9:13:00 AM
50-29-3	DDT (p,p-DDT)	MG/L							
50-32-8	Benzo(a)pyrene	MG/L		0.01 U	0.01 U	0.01 U			0.01 U
5103-71-9	alpha-Chlordane	MG/L							
51-28-5	2,4-Dinitrophenol	MG/L		0.05 U	0.05 U	0.05 U			0.05 U
53-19-0	2,4-DDD	MG/L							
534-52-1	2-Methyl-4,6-dinitrophenol	MG/L		0.05 U	0.05 U	0.05 U			0.05 U
53494-70-5	Endrin Ketone	MG/L							
53-70-3	Dibenz(a,h)anthracene	MG/L		0.01 U	0.01 U	0.01 U			0.01 U
540-59-0	Total-1,2-Dichloroethene	MG/L							
541-73-1	1,3-Dichlorobenzene	MG/L	0.0005 U	0.01 U	0.01 U	0.01 U			0.01 U
542-75-6	1,3-Dichloropropene, Total	MG/L							
56-23-5	Carbon tetrachloride	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U
563-58-6	1,1-Dichloropropene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U
56-55-3	Benz(a)anthracene	MG/L		0.01 U	0.01 U	0.01 U			0.01 U
57-74-2	gamma-Chlordane	MG/L							
57-74-9	Chlordane	MG/L		0.0005 U		0.0005 U			0.0005 U
57-74-9	Chlordane Technical	MG/L							
58-89-9	gamma-BHC	MG/L		0.00005 U		0.00005 U			0.00005 U
591-78-6	2-Hexanone	MG/L							
594-20-7	2,2-Dichloropropane	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U
59-50-7	4-Chloro-3-methylphenol	MG/L		0.01 U	0.01 U	0.01 U			0.01 U
60-57-1	Dieldrin	MG/L		0.00005 U		0.00005 U			0.00005 U
606-20-2	2,6-Dinitrotoluene	MG/L		0.01 U	0.01 U	0.01 U			0.01 U
621-64-7	N-Nitrosodi-n-propylamine	MG/L		0.01 U	0.01 U	0.01 U			0.01 U
62-75-9	N-Nitrosodimethylamine	MG/L							
630-20-6	1,1,1,2-Tetrachloroethane	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U
634-90-2	1,2,3,5-Tetrachlorobenzene	MG/L							
65-85-0	Benzoic acid	MG/L		0.025 U	0.025 U	0.025 U			0.025 U
67-64-1	Acetone	MG/L							
67-66-3	Chloroform	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U
67-72-1	Hexachloroethane	MG/L		0.01 U	0.01 U	0.01 U			0.01 U
7005-72-3	4-Chlorophenyl phenyl ether	MG/L		0.01 U	0.01 U	0.01 U			0.01 U
71-43-2	Benzene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U
71-55-6	1,1,1-Trichloroethane	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U
72-20-8	Endrin	MG/L		0.00005 U		0.00005 U			0.00005 U
72-43-5	Methoxychlor	MG/L		0.0001 U		0.0001 U			0.0001 U
72-54-8	1,4-DDD	MG/L							
72-54-8	2,4-DDD	MG/L							
72-54-8	4,4'-DDD	MG/L		0.00005 U		0.00005 U			0.00005 U
72-54-8	DDD (p,p-DDD)	MG/L							
72-55-9	1,4-DDE	MG/L							
72-55-9	4,4'-DDE	MG/L		0.00005 U		0.00005 U			0.00005 U
72-55-9	DDE (p,p-DDE)	MG/L							
7421-93-4	Endrin aldehyde	MG/L		0.00005 U		0.00005 U			0.00005 U
7439-89-6	Iron (Fe)	MG/L							
7439-92-1	Lead (Pb)	MG/L							
7439-95-4	Magnesium (Mg)	MG/L							
7439-96-5	Manganese (Mn)	MG/L		0.14	0.13	0.14			0.18
7439-97-6	Mercury (Hg)	MG/L							
7440-02-0	Nickel (Ni)	MG/L							
7440-22-4	Silver (Ag)	MG/L							
7440-23-5	Sodium (Na)	MG/L		38	34	32			32
7440-31-5	Tin (Sn)	MG/L							
7440-38-2	Arsenic (As)	MG/L							
7440-39-3	Barium (Ba)	MG/L							
7440-43-9	Cadmium (Cd)	MG/L							
7440-47-3	Chromium (Cr)	MG/L							
7440-50-8	Copper (Cu)	MG/L							
7440-66-6	Zinc (Zn)	MG/L							
7440-70-2	Calcium (Ca)	MG/L							
74-83-9	Bromomethane	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U
74-87-3	Chloromethane	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U
74-95-3	Dibromoethane	MG/L							
74-95-3	Dibromomethane	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U
74-97-5	Bromochloromethane	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U
75-00-3	Chloroethane	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U
75-01-4	Vinyl chloride	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U
75-09-2	Methylene chloride	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U
75-25-2	Bromoform	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U
75-27-4	Bromodichloromethane	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U
75-34-3	1,1-Dichloroethane	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U
75-35-4	1,1-Dichloroethene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U
75-69-4	Trichlorofluoromethane	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U
75-71-8	Dichlorodifluoromethane	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U
76-13-1	1,1,2-Trichlorotrifluoroethane	MG/L							
76-44-8	Heptachlor	MG/L		0.00005 U		0.00005 U			0.00005 U
77-47-4	Hexachlorocyclopentadiene	MG/L		0.01 U	0.01 U	0.01 U			0.01 U
7782-49-2	Selenium (Se)	MG/L							
78-59-1	Isophorone	MG/L		0.01 U	0.01 U	0.01 U			0.01 U

Appendix C-4
Groundwater Data (1984 - 2007)
Page Trowbridge Ranch Landfill

		Sample ID	MW #5 DUP	MW #5	MW#5	MW#5	MW #5 (07100988)	MW #5 Dup (07100988)	MW #5
		Well ID	MW-5	MW-5	Dup MW-5	MW-5	MW-5	MW-5	MW-5
		Sample Date/Time	11/7/2006 9:35:00 AM	11/7/2006 9:35:00 AM	10/24/2007	10/24/2007 9:22:00 AM	10/24/2007 9:22:00 AM	10/24/2007 9:22:00 AM	4/11/2007 9:13:00 AM
78-87-5	1,2-Dichloropropane	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U
78-93-3	2-Butanone	MG/L							
79-00-5	1,1,2-Trichloroethane	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U
79-01-6	Trichloroethene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U
79-34-5	1,1,2,2-Tetrachloroethane	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U
8001-35-2	Toxaphene	MG/L		0.001 U		0.001 U			0.001 U
8071-51-0	2-Methyl-4,6-dinitrophenol	MG/L							
83-32-9	Acenaphthene	MG/L		0.01 U	0.01 U	0.01 U			0.01 U
84-66-2	Diethyl phthalate	MG/L		0.01 U	0.01 U	0.01 U			0.01 U
84-74-2	Di-n-butyl phthalate	MG/L		0.01 U	0.01 U	0.01 U			0.01 U
85-01-8	Phenanthrene	MG/L		0.01 U	0.01 U	0.01 U			0.01 U
85-68-7	Butyl benzyl phthalate	MG/L		0.01 U	0.01 U	0.01 U			0.01 U
86-30-6	N-Nitrosodiphenylamine	MG/L		0.01 U	0.01 U	0.01 U			0.01 U
86-73-7	Fluorene	MG/L		0.01 U	0.01 U	0.01 U			0.01 U
87-61-6	1,2,3-Trichlorobenzene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U
87-68-3	Hexachlorobutadiene	MG/L	0.0005 U	0.01 U	0.01 U	0.01 U			0.01 U
87-86-5	Pentachlorophenol	MG/L		0.05 U	0.05 U	0.05 U			0.05 U
88-06-2	2,4,6-Trichlorophenol	MG/L		0.02 U	0.02 U	0.02 U			0.02 U
88-74-4	2-Nitroaniline	MG/L		0.01 U	0.01 U	0.01 U			0.01 U
88-75-5	2-Nitrophenol	MG/L		0.015 U	0.015 U	0.015 U			0.015 U
90-13-1	Chloronaphthalene	MG/L							
91-20-3	Naphthalene	MG/L	0.0005 U	0.01 U	0.01 U	0.01 U			0.01 U
91-57-6	2-Methylnaphthalene	MG/L		0.01 U	0.01 U	0.01 U			0.01 U
91-58-7	2-Chloronaphthalene	MG/L		0.01 U	0.01 U	0.01 U			0.01 U
91-94-1	3,3´-Dichlorobenzidine	MG/L		0.01 U	0.01 U	0.01 U			0.01 U
92-87-5	Benzidine	MG/L							
95-47-6	o-Xylene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U
95-48-7	2-Methylphenol	MG/L		0.01 U	0.01 U	0.01 U			0.01 U
95-49-8	2-Chlorotoluene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U
95-50-1	1,2-Dichlorobenzene	MG/L	0.0005 U	0.01 U	0.01 U	0.01 U			0.01 U
95-57-8	2-Chlorophenol	MG/L		0.01 U	0.01 U	0.01 U			0.01 U
95-63-6	1,2,4-Trimethylbenzene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U
95-95-4	2,4,5-Trichlorophenol	MG/L		0.02 U	0.02 U	0.02 U			0.02 U
959-98-8	Endosulfan I	MG/L		0.00005 U		0.00005 U			0.00005 U
96-12-8	1,2-Dibromo-3-chloropropane	MG/L	0.002 U	0.002 U	0.002 U	0.002 U			0.002 U
96-18-4	1,2,3-Trichloropropane	MG/L	0.002 U	0.002 U	0.002 U	0.002 U			0.002 U
98-06-6	tert-Butylbenzene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U
98-82-8	Isopropylbenzene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U
98-95-3	Nitrobenzene	MG/L		0.01 U	0.01 U	0.01 U			0.01 U
99-09-2	3-Nitroaniline	MG/L		0.01 U	0.01 U	0.01 U			0.01 U
99-87-6	4-Isopropyltoluene	MG/L	0.0005 U	0.0005 U	0.0005 U	0.0005 U			0.0005 U
DDD	DDD	MG/L							
GIS-130-312	m,p-Xylenes	MG/L							
NO3NO2N	Nitrate (NO3)	MG/L							
NO3NO2N	Nitrite/Nitrate Total	MG/L							
O&PXYLENE	O,P-Xylene	MG/L							
THMs	Trihalomethanes, Total	MG/L	0.0005 U	0.0005 U	0.002 U	0.002 U			0.0005 U
UNKNOWN	Acid Fraction	MG/L							
UNKNOWN	B/N Fraction	MG/L							
UNKNOWN	Dichlorobenzene	MG/L							
UNKNOWN	Dinitro-2-Methylphenol	MG/L							
UNKNOWN	Total Trihalomethanes (THMs)	MG/L							

Appendix Table C5
Registered Wells[1] within Four-Mile Radius of Page Trowbridge Ranch Landfill
Page Trowbridge Ranch Landfill

WELL ID (From Well 55 Database[1])	NAME	COUNTY	LOCATION	LATITUDE	LONGITUDE	WELL DEPTH	WATER LEVEL	WELL TYPE	DATE APPROVED	DATE INSTALLED	Distance From Page Trowbridge Ranch Landfill			
											Within 1-Mile Radius	Within 2-Mile	Within 3-Mile	Within 4-Mile Radius
200920	ARIZONA BOARD OF REGENTS - UNIVERSITY OF ARIZONA (Well Use: Observation; Water Use: Monitoring)	PINAL	D09014034BCC	NA	NA	220.0	0.0	MONITOR	10/28/2003	NA	**Yes**	Yes	Yes	Yes
200921	ARIZONA BOARD OF REGENTS - UNIVERSITY OF ARIZONA (Well Use: Observation; Water Use: Monitoring)	PINAL	D09014034BCC	NA	NA	600.0	0.0	MONITOR	10/28/2003	NA	**Yes**	Yes	Yes	Yes
206038	(Well Use: Water Production, Recover; Water Use: Test, Industrial)	PINAL	D09014033CBB	32.6106	-110.9139	1500.0	0.0	WITHDRAWAL PERMIT	01/24/2005	3/22/2005	**Yes**	Yes	Yes	Yes
508881	UNIVERSITY OF ARIZ, (Well Use: Observation; Water Use: Monitoring)	PINAL	D09014034BCC	NA	NA	842.0	775.0	MONITOR OR PIEZOMETER	NA	09/26/1984	**Yes**	Yes	Yes	Yes
508882	UNIVERSITY OF ARIZ, (Well Use: Observation; Water Use: Monitoring)	PINAL	D09014034CBB	NA	NA	800.0	647.0	MONITOR OR PIEZOMETER	NA	03/04/1985	**Yes**	Yes	Yes	Yes
508883	UNIVERSITY OF ARIZ, (Well Use: Observation; Water Use: Monitoring)	PINAL	D09014033DAA	NA	NA	801.0	750.0	MONITOR OR PIEZOMETER	NA	01/12/1985	**Yes**	Yes	Yes	Yes
508884	UNIVERSITY OF ARIZ, (Well Use: Observation; Water Use: Monitoring)	PINAL	D09014034BCC	NA	NA	801.0	750.0	MONITOR OR PIEZOMETER	NA	01/19/1985	**Yes**	Yes	Yes	Yes
528374	UNIVERSITY OF ARIZONA (Well Use: Observation; Water Use: Monitoring)	PINAL	D09014034BCC	NA	NA	755.0	654.0	MONITOR OR PIEZOMETER	NA	09/12/1990	**Yes**	Yes	Yes	Yes
593955	UNIVERSITY OF ARIZONA (Well Use: Geotechnical; Water Use: Test)	PINAL	D09014034000	NA	NA	200.0	0.0	GEOTECHNICAL	08/06/2002	NA	**Yes**	Yes	Yes	Yes
595243	[illegible] (Well Use: Water Production/Recover; Water Use: Test/Industrial	PINAL	D09014033DBD	32.6041	-110.9039	1390.0	620.0	WITHDRAWAL PERMIT	04/15/2003	06/30/2003	**Yes**	Yes	Yes	Yes
209389	ARIZONA WATER COMPANY (Well Use: Water Production; Water Use: Utility/Water Co.)	PINAL	D10014008AAA	NA	NA	1200.0	520.0	SERVICE	12/28/2005	03/09/2006	No	**Yes**	Yes	Yes
201660	FALCON VALLEY RANCH INC (Well Use: Water Production; Water Use: Domestic)	PINAL	D09014023BBB	NA	NA	980.0	780.0	EXEMPT	12/16/2003	NA	No	No	**Yes**	Yes
202397	CDO RANCHING & DEVELOPMENT LLC (Well Use: Water Production; Water Use: Test)	PINAL	D10014012BBC	32.5711	-110.8614	1200.0	770.0	NON-SERVICE	NA	04/06/2005	No	No	**Yes**	Yes
210547	JUDY MCCLUNG (Well Use: Water Production; Water Use: Domestic)	PINAL	D10014006ADC	NA	NA	620.0	430.0	EXEMPT	12/30/2005	10/16/2006	No	No	**Yes**	Yes
547316	ARIZONA WATER COMPANY (Well Use: Water Production; Water Use: Test; Municipal)	PINAL	D10014005BCB	32.5889	-110.9194	1140.0	395.0	SERVICE	NA	03/07/1995	No	No	**Yes**	Yes
590585	FALCON VALLEY RANCH INC (Well Use: Water Production; Water Use: Domestic)	PINAL	D10014006CDA	32.5834	-110.9334	610	431	EXEMPT	37279	6/23/2002	No	No	**Yes**	Yes
615651	AZ STATE LAND DEPT, (Well Use: Water Production; Water Use: Stock)	PINAL	D09014020ADB	32.6396	-110.9160	660.0	517.0	EXEMPT	NA	01/01/1960	No	No	**Yes**	Yes
629347	FALCON VALLEY RANCH (Well Use: Water Production; Water Use: Domestic, Stock)	PINAL	D10014006DCA	32.5881	-110.9364	535	429	EXEMPT	NA	NA	No	No	**Yes**	Yes
202396	CDO RANCHING & DEVELOPMENT LLC (Well Use: Water Production; Water Use: Test)	PINAL	D10014012CCC	32.5828	-110.8617	1200.0	759.0	NON-SERVICE	NA	07/16/2004	No	No	No	**Yes**
532237	CDO RANCHING & DEVELOPMENT LLC (Well Use: Water Production; Water Use: Industrial, Domestic)	PINAL	D10014014CBA	NA	NA	1000	668	NON-EXEMPT	NA	4/8/1992	No	No	No	**Yes**
544083	CAMBIOR EXPLORATION, (Well Use: Mineral Exploration; Water Use: None)	PINAL	D10015005000	NA	NA	170.0	0.0	EXPLORATION	NA	10/19/1994	No	No	No	**Yes**
615717	AZ STATE LAND DEPT, (Well Use: Water Production; Water Use: Stock)	PINAL	D10013012DDA	32.5726	-110.9489	546	452	EXEMPT	NA	NA	No	No	No	**Yes**
615720	CDO RANCHING & DEVELOPMENT LLC (Well Use: Water Production; Water Use: Domestic)	PINAL	D10014014CBA	32.5597	-110.8778	975	0	NON-EXEMPT	NA	12/12/1969	No	No	No	**Yes**
615721	AZ STATE LAND DEPT, (Well Use: Water Production; Water Use: Stock)	PINAL	D10014017ABB	32.5689	-110.9218	350	443	EXEMPT	NA	NA	No	No	No	**Yes**
633715	GOODMANS RANCHES INC (Well Use: Water Production; Water Use: Domestic, Stock)	PINAL	D10015008BBA	NA	NA	200.0	120.0	EXEMPT	NA	01/01/1950	No	No	No	**Yes**
801251	CDO RANCHING & DEVELOPMENT LLC (Well Use: Water Production; Water Use: Irrigation, Domestic)	PINAL	D10014014CBA	32.5621	-110.8764	975	665	NON-EXEMPT	NA	12/30/1969	No	No	No	**Yes**
805003	CORONADO NATL FOREST, (Well Use: Water Production; Water Use: Domestic)	PINAL	D10015008BBA	32.5789	-110.8389	0.0	0.0	EXEMPT	NA	01/01/1964	No	No	No	**Yes**
805056	DAVE MCGEE (Well Use: Water Production; Water Use: Domestic/Stock)	PINAL	D10015005C00	NA	NA	250.0	160.0	EXEMPT	NA	NA	No	No	No	**Yes**

Appendix Table C5
Registered Wells[1] within Four-Mile Radius of Page Trowbridge Ranch Landfill
Page Trowbridge Ranch Landfill

WELL ID (From Well 55 Database[1])	NAME	COUNTY	LOCATION	LATITUDE	LONGITUDE	WELL DEPTH	WATER LEVEL	WELL TYPE	DATE APPROVED	DATE INSTALLED	Distance From Page Trowbridge Ranch Landfill: Within 1-Mile Radius	Within 2-Mile	Within 3-Mile	Within 4-Mile Radius
WELL ID (From GWSI Database[1])	**WELLS 55 Database ID**	**NAME**	**COUNTY**	**LOCATION**	**LAT**	**LON**	**WELL DEPTH**	**WATER LEVEL**	**WELL TYPE**	**DATE APPROVED**	**DATE INSTALLED**	**Distance From Page Trowbridge Ranch Landfill: Within 1-Mile Radius**	**Within 2-Mile Radius**	**Within 3-Mile Radius**	**Within 4-Mile Radius**
322622110525001	N/A	FALCON VAL RANCH (Well Use: None; Water Use: None)	PINAL	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**Yes**	Yes	Yes	Yes
323822110545301	615651	ARIZONA STATE LAND DEPT	PINAL	See information above for Id# 615651								No	No	**Yes**	Yes
323512110562001	629347	FALCON VALLEY RANCH	PINAL	See information above for Id# 629347								No	No	**Yes**	Yes
323144110523501	801251	SPACE BIOVENTURES	PINAL	See information above for Id# 801251								No	No	No	**Yes**
323335110524001	615720	DECISIONS INVESTMENT	PINAL	See information above for Id# 615720								No	No	No	**Yes**
323408110551801	615721	FALCON VALLEY RANCH	PINAL	See information above for Id# 615721								No	No	No	**Yes**
323418110565401	615717	520.825.9883 FALCON VLY. RANCH - JAN WILSON (OWNER)	PINAL	See information above for Id# 615717								No	No	No	**Yes**
323444110502001	805003	USFS	PINAL	See information above for Id# 805003								No	No	No	**Yes**

Notes:
[1] Information from Wells 55 and GWSI databases from http://www.sahra.arizona.edu/wells/. Searched 09/15/09. NA indicate information not provided.
NA = Not Available

APPENDIX D

RAGS Part D Standard Tables

Appendix D

USEPA RAGS Part D Standard Table List

Table 1	Selection of Exposure Pathways
Table 2.1	Occurrence, Distribution and Selection of Chemicals of Potential Concern (Groundwater)
Table 3.1 RME	Exposure Point Concentration Summary (Groundwater)
Dermal Worksheet	
Table 4.1 RME	Values used for Daily Intake Calculations (Ingestion & Dermal, Groundwater)
Table 5.1	Non-Cancer Toxicity Data – Oral/Dermal
Table 5.2	Non-Cancer Toxicity Data – Inhalation
Table 6.1	Cancer Toxicity Data – Oral/Dermal
Table 6.2	Cancer Toxicity data – Inhalation
Table 7.1 RME	Calculation of Chemical Cancer Risks and Non-Cancer Hazards (Future Hypothetical Off-Property Resident)
Table 9.1 RME	Summary of Receptor Risks and Hazards for COPCs (Future Hypothetical Off-Property Resident)

TABLE 1

SELECTION OF EXPOSURE PATHWAYS

PAGE TROWBRIDGE RANCH LANDFILL

Scenario Timeframe	Medium	Exposure Medium	Exposure Point	Receptor Population	Receptor Age	Exposure Route	Type of Analysis	Rationale for Selection or Exclusion of Exposure Pathway
CURRENT	Soil	Surface and Subsurface Soil	Landfill Property	Landfill Worker	Adult	Dermal	None	No exposures to landfill soil due to presence of cover and restricted access to site.
						Ingestion	None	
		Soil Vapor--> Ambient Air	Landfill Property	Landfill Worker	Adult	Inhalation	None	Low level of volatiles potentially migrating from subsurface to ambient air likely dissipates rapidly due to prevailing winds, resulting in little potential for exposure. No receptor identified that would be at the landfill or surrounding property at frequency other than occassional sporadic basis. No buildings exist at landfill or surrounding properties.
		Soil Vapor--> Ambient Air	Off Landfill Property (State Property)	Recreational User of State Property	Adult	Inhalation	None	
					Child	Inhalation	None	
		Soil Vapor--> Ambient Air	Off Landfill Property (Private Property)	None	None	Inhalation	None	
		Soil Vapor--> Indoor Air	Off Landfill Property (Private Property)	None	None	Inhalation	None	
	Groundwater	Groundwater	Landfill Property	Landfill Worker	Adult	Dermal	None	Groundwater is not currently used as source of drinking water. No other direct exposure considered likely to groundwater, which is located at signficant depth below ground surface (650 feet).
						Ingestion	None	
		Groundwater	Off Landfill Property (State Property)	Recreational User of State Property	Adult	Dermal	None	
						Ingestion	None	
					Child	Dermal	None	
						Ingestion	None	
		Groundwater	Off Landfill Property (Private Property)	None	None	Dermal	None	
						Ingestion	None	
FUTURE	Soil	Surface and Subsurface Soil	Landfill Property	Landfill Worker	Adult	Dermal	None	No exposures to landfill soil due to presence of cover and restricted access to site. Site conditions are not likely to change in future. The conditions of the Final Post-Closure Permit prevent any change at the landfill relative to current site use until 2031 (30 years beyond date of permit). Any future use requires approval.
						Ingestion	None	
		Soil Vapor--> Ambient Air	Landfill Property	Landfill Worker	Adult	Inhalation	None	
		Soil Vapor--> Ambient Air	Off Landfill Property (State Property)	Recreational User of State Property	Adult	Inhalation	None	Same as current
					Child	Inhalation	None	
		Soil Vapor--> Ambient Air	Off Landfill Property	Hypothetical Resident	Adult	Inhalation	None	Ambient Air exposures are not considered to be signficant if at all due immediate dispersal by prevailing wind.
					Child	Inhalation	None	
		Soil Vapor--> Indoor Air	Off Landfill Property	Hypothetical Resident	Adult	Inhalation	Quant	Future reuse of either State owned property or Privately owned property to South of Landfill could include residential use. Current information regarding shallow soil vapors at property edge is used to estimate future exposures associated with inhalation of indoor air.
					Child	Inhalation	Quant	
	Groundwater	Groundwater	Landfill Property	Landfill Worker	Adult	Dermal	None	No exposures to groundwater at the landfill given the extreme depth to groundwater beneath ground surface.
						Ingestion	None	
		Groundwater	Off Landfill Property (State Property)	Recreational User of State Property	Adult	Dermal	None	Same as current
						Ingestion	None	
					Child	Dermal	None	
						Ingestion	None	
		Groundwater	Off Landfill Property	Hypothetical Resident	Adult	Dermal	Quant	Future reuse of either State owned property or Privately owned property to South of Landfill could include residential use. Groundwater use a source of potable water is considered a possible future use.
						Ingestion	Quant	
						Inhalation (bath/shower)	Quant	
					Child	Dermal	Quant	
						Ingestion	Quant	
						Inhalation (bath/shower)	Quant	

TABLE 2.1

OCCURRENCE, DISTRIBUTION, AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN

PAGE TROWBRIDGE RANCH LANDFILL

Scenario Timeframe: Current and Future
Medium: Groundwater
Exposure Medium: Groundwater

Exposure Point	CAS Number	Chemical	Minimum Concentration	Maximum Concentration	Units	Date of Maximum Detected Concentration	Detection Frequency (1)	Range of Detection Limits		Concentration Used for Screening	Background Value	Screening Toxicity Value	Potential ARAR/TC Value (3)	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion (2)
MW-1	NA	Chloride (Cl-)	2.7E+00	7.1E+00	mg/L	10/13/2004	9 / 10	5.0E+00	5.0E+00	NA					N	see text
MW-1	7439-96-5	Manganese (Mn)	8.9E-02	2.2E-01	mg/L	4/21/2004	10 / 10			NA					Y	
MW-1	NA	Sodium (Na)	3.0E+01	3.9E+01	mg/L	4/13/2005	10 / 10			NA					N	NUT
MW-1	NA	Sulfate (SO4)	2.9E+00	4.3E+00	mg/L	4/11/2007	9 / 10	2.5E+01	2.5E+01	NA					N	see text
MW-1	108-88-3	Toluene	4.8E-03	4.8E-03	mg/L	11/7/2006	1 / 11	5.0E-04	5.0E-04	NA			1.0E+00	MCL (3)	Y	
MW-2	NA	Chloride (Cl-)	6.0E+00	7.7E+00	mg/L	10/12/2005	10 / 11	5.0E+00	5.0E+00	NA					N	see text
MW-2	74-87-3	Chloromethane	7.9E-04	7.9E-04	mg/L	10/12/2005	1 / 13	5.0E-04	5.0E-04	NA					Y	
MW-2	7439-96-5	Manganese (Mn)	1.1E-01	2.3E-01	mg/L	10/26/2001	11 / 11			NA					Y	
MW-2	NA	Sodium (Na)	3.0E+01	3.9E+01	mg/L	4/13/2005	11 / 11			NA					N	NUT
MW-2	NA	Sulfate (SO4)	2.8E+00	4.6E+00	mg/L	4/13/2005	10 / 11	2.5E+01	2.5E+01	NA					N	see text
MW-2	7440-66-6	Toluene	1.4E-02	1.4E-02	mg/L	11/7/2006	1 / 13	5.0E-04	5.0E-04	NA			1.0E+00	MCL (3)	Y	
MW-3	NA	Chloride (Cl-)	4.3E+00	6.6E+00	mg/L	10/12/2005	9 / 10	5.0E+00	5.0E+00	NA					N	see text
MW-3	7439-96-5	Manganese (Mn)	9.7E-02	2.4E-01	mg/L	4/21/2004	10 / 10			NA					Y	
MW-3	NA	Sodium (Na)	3.1E+01	3.9E+01	mg/L	4/13/2005	10 / 10			NA					N	NUT
MW-3	NA	Sulfate (SO4)	2.5E+00	4.3E+00	mg/L	4/21/2004	9 / 10	2.5E+01	2.5E+01	NA					N	see text
MW-4	NA	Chloride (Cl-)	2.6E+00	5.8E+00	mg/L	4/11/2007	10 / 11	5.0E+00	5.0E+00	NA					N	see text
MW-4	67-66-3	Chloroform	5.6E-04	5.6E-04	mg/L	10/11/2006	1 / 12	5.0E-04	5.0E-04	NA			8.0E-02	MCL (Trihalomethanes) (3)	Y	
MW-4	7439-96-5	Manganese (Mn)	7.1E-02	3.0E-01	mg/L	10/26/2001	11 / 11			NA					Y	
MW-4	NA	Sodium (Na)	2.8E+01	3.4E+01	mg/L	4/12/2006	11 / 11			NA					N	NUT
MW-4	NA	Sulfate (SO4)	2.1E+00	3.7E+00	mg/L	4/11/2007	9 / 11	2.0E+00	2.5E+01	NA					N	see text
MW-4	NA	Trihalomethanes, Total	5.6E-04	5.6E-04	mg/L	10/11/2006	1 / 11	5.0E-04	2.0E-03	NA			8.0E-02	MCL (3)	N	see text
MW-5	71-43-2	Benzene	5.4E-04	5.4E-04	mg/L	4/12/2006	1 / 11	5.0E-04	5.0E-04	NA			5.0E-03	MCL (3)	Y	
MW-5	NA	Chloride (Cl-)	6.0E+00	7.2E+00	mg/L	4/23/2003	9 / 10	5.0E+00	5.0E+00	NA					N	see text
MW-5	7439-96-5	Manganese (Mn)	4.6E-02	2.4E-01	mg/L	10/22/2003	10 / 10			NA					Y	
MW-5	NA	Sodium (Na)	3.0E+01	3.8E+01	mg/L	11/7/2006	10 / 10			NA					N	NUT
MW-5	NA	Sulfate (SO4)	2.6E+00	5.2E+00	mg/L	4/13/2005	9 / 10	2.5E+01	2.5E+01	NA					N	see text
MW-5	108-88-3	Toluene	4.0E-03	4.0E-03	mg/L	11/7/2006	1 / 11	5.0E-04	5.0E-04	NA			1.0E+00	MCL (3)	Y	

Notes:

(1) Data represent detected analytes in the groundwater samples from each groundwater monitoring well over the total number of samples analyzed between January 2001 and October 2007. The dataset represents a subset of the entire dataset to reflect current site conditions Appendix C contains the entire groundwater dataset (1984 to 2007). MW-5 was installed to replace MW-1 in 1991 (EEC, 1991).

(2) Detected analytes were identified as COPCs with the exception of those noted.

(3) Drinking Water Standards (MCL) is presented for informational purposes only. Source: National Primary Drinking Water Standards (August 2006; EPA 822-R-06-013; accessed via http://www.epa.gov/waterscience/criteria/drinking/dwstandards.html).

Abbreviations:
COPC = Compound of Potential Concern
NA = Not Applicable
MCL = Maximum Contaminant Level
mg/L = milligram per liter

TABLE 3.1 RME

EXPOSURE POINT CONCENTRATION SUMMARY

REASONABLE MAXIMUM EXPOSURE

PAGE TROWBRIDGE RANCH LANDFILL

Scenario Timeframe: Current and Future
Medium: Groundwater
Exposure Medium: Groundwater

Exposure Point (1)	Chemical of Potential Concern	Units	Arithmetic Mean (2)	95% UCL (3)	Maximum Concentration	Exposure Point Concentration			
						Value	Units	Statistic (3)	Rationale
Tap Water	BENZENE	mg/L	2.8E-04	NA	5.4E-04	2.8E-04	mg/L	Arithmetic Average	(2)
(future)	CHLOROFORM	mg/L	2.8E-04	NA	5.6E-04	2.8E-04	mg/L	Arithmetic Average	(2)
	CHLOROMETHANE	mg/L	2.9E-04	NA	7.9E-04	2.9E-04	mg/L	Arithmetic Average	(2)
	MANGANESE	mg/L	1.8E-01	NA	3.0E-01	1.8E-01	mg/L	Arithmetic Average	(2)
	TOLUENE	mg/L	1.3E-03	NA	1.4E-02	1.3E-03	mg/L	Arithmetic Average	(2)

Notes:

(1) Exposure points for future hypothetical residents are based on highest temporal average among current monitoring wells.
(2) Value represents the highest of the temporal arithmetic average concentration among all relevant well locations for that exposure point locations; see below. For each COPC and monitoring well, the average concentration is based on the detected concentrations and one-half laboratory reporting limit of non-detected concentrations over multiple sampling events.

Benzene	MW-5
Chloroform	MW-4
Chloromethane	MW-2
Manganese (Mn)	MW-4
Toluene	MW-2

(3) Statistic other than temporal arithmetic average is not applied to groundwater data

NA = Not Analyzed

Dermal Worksheet
Intermediate Variables for Calculating DA(event) based on Future Scenario
PAGE TROWBRIDGE RANCH LANDFILL

Chemical of Potential Concern	Media	EPC mg/L	Chemicals to be assessed	DA-event child mg/cm2-event	DA-event adult mg/cm2-event	Dermal Absorption Fraction (gw)	FA	Kp		T(event) - Child		Tau - Child		T* - Child		B - Child	T(event) - Adult		Tau - Adult		T* - Adult		B - Adult
							Value (1)	Value (2)	Units	Value	Units	Value	Units	Value	Units	Value	Value	Units	Value	Units	Value	Units	Value
Benzene	Groundwater	2.8E-04	Yes	5.1E-09	3.7E-09	NA	NA	7.1E+04	cm/hr	1	hr/event	2.9E-01	hr	7.0E-01	hr	5.1E-02	0.58	hr/event	2.9E-01	hr	7.0E-01	hr	5.1E-02
Chloroform	Groundwater	2.8E-04	No	2.9E-09	2.2E-09	NA	NA	6.8E+04	cm/hr	1	hr/event	5.0E-01	hr	1.2E+00	hr	2.9E-02	0.58	hr/event	5.0E-01	hr	1.2E+00	hr	2.9E-02
Chloromethane	Groundwater	2.9E-04	No	1.1E-09	7.6E-10	NA	NA	7.5E+04	cm/hr	1	hr/event	2.0E-01	hr	4.9E-01	hr	9.0E-03	0.58	hr/event	2.0E-01	hr	4.9E-01	hr	9.0E-03
Toluene	Groundwater	1.3E-03	Yes	5.4E-08	4.1E-08	NA	NA	1.1E+05	cm/hr	1	hr/event	3.5E-01	hr	8.4E-01	hr	1.1E-01	0.58	hr/event	3.5E-01	hr	8.4E-01	hr	1.1E-01
Manganese	Groundwater	1.8E-01	No	5.8E-06	1.6E-05	NA	NA	1.1E-05	cm/hr	1	hr/event	NA		NA		NA	0.58	hr/event	NA		NA		NA

FA = Fraction Absorbed Water
Kp = Dermal Permeability Coefficient of Chemical of Potential Concern (COPC)
T(event) = Event Duration; default values from EPA 2004

Tau = Lag Time

T* = Time to Reach Steady-State
B = Dimensionless Ratio of the Permeability Coefficient of a Compound Through the Stratum Corneum Relative to its Permeability Coefficient Across the Viable Epidermis

* Dermal assessment not recommended because screening evaluation indicates dermal dose is less than 10% of ingested dose (RAGS Part E Appendix B; U.S. EPA 2004).
-- No information

(1) Equation for estimating dermally absorbed dose (DA) for organic chemicals when the shower duration (Ds) is less than or equal to the time to reach steady state (

$$DA = 2 * FA * C * Kp * Cw * \sqrt{\frac{6 * \tau * D_S}{\pi}}$$

Equation for estimating DA for organic chemicals when Ds is greater than the time to reach t*.

$$DA = FA * C * Kp * Cw * \left[\left(\frac{D_s}{1+B} \right) + 2 * \tau * \left(\frac{1 + 3B + 3B^2}{(1+B)^2} \right) \right]$$

Equation for estimating DA for inorganic chemicals in water.

$$DA = C * Kp * Cw * D_s$$

TABLE 4.1 RME
VALUES USED FOR DAILY INTAKE CALCULATIONS
REASONABLE MAXIMUM EXPOSURE
PAGE TROWBRIDGE RANCH LANDFILL

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name (1)
Ingestion	Resident	Child	Tap Water	CW	Chemical Concentration in Water	Chem-specific	mg/L	Exposure Point Concentration	Drinking Water Ingestion
				IRW c	Ingestion Rate of Water (child)	1000	mL/day	EPA Region IX (2004b)	For Noncarcinogenic endpoints:
				RAF Ing	Relative Absorption Factor Ingestion	1	unitless	RAGS, Part A (EPA 1989)	Daily Intake (mg/kg-day) =
				EF	Exposure Frequency	350	days/yr	EPA Region IX (2004b)	CW x IR x EF x ED x CF1 x 1/BWx 1/AT-NC
				ED c	Exposure Duration (child)	6	yr	EPA 1989	Daily Intake = CW x 0.0639269406392694
				CF1	Conversion Factor	0.001	L/mL	Calculated	
				BW	Body Weight (child)	15	kg	EPA 1989	For Carcinogenic endpoints, an age-adjusted equation representing cumulative exposure
				AT-NC	Averaging Time (noncancer)	2190	days	EPA 1989	is used for residents (child and adults); see "Adult."
				AT-C	Averaging Time (cancer)	25550	days	Combined Child/Adult Exposure	
		Adult	Tap Water	CW	Chemical Concentration in Water	Chem-specific	mg/L	Exposure Point Concentration	Drinking Water Ingestion
				IRW a	Ingestion Rate of Water (adult)	2000	mL/day	EPA Region IX (2004b)	For Noncarcinogenic Endpoints:
				RAF Ing	Relative Absorption Factor Ingestion	1	unitless	EPA 1989	A resident child receptor represents the residential receptor with greatest potential
				EF	Exposure Frequency	350	days/yr	EPA Region IX (2004b)	exposure. Resident Adult not evaluated. See "Child"
				ED a	Exposure Duration (adult)	24	yr	EPA 1989	
				CF1	Conversion Factor	0.001	L/mL	Calculated	For Carcinogenic Endpoints:
				BW	Body Weight (adult)	70	kg	EPA 1989	Daily Intake (mg/kg-day) =
				AT-NC	Averaging Time (noncancer)	8760	days	EPA 1989	CW x ((IRc x EF x EDc x 1/BWc) + (IRa x EF x EDa x 1/BWa)) x CF1 x 1/AT
				AT-C	Averaging Time (cancer)	25550	days	Combined Child/Adult Exposure	Daily Intake = CW x 0.0148727984344423
Dermal Absorption	Resident	Child	Tap Water	CW	Chemical Concentration in Water	Chem-specific	mg/L	Exposure Point Concentration	Water Dermal Absorption
				DAevent	Absorbed Dermal Dose per event	Chem-specific	mg/cm^2-event	Chemical Specific (1)	For Noncarcinogenic endpoints:
				SAc	Surface Area (child)	6600	cm2	EPA 2004a	Dermally Absorbed Dose (DAD) (mg/kg-day) =
				EV	Event Frequency	1	event/d	EPA 2004a	DAevent x SAc x EV x EF x EDc x (1 / (BWc * AT-NC))
				EF	Exposure Frequency	350	days/year	EPA 2004a	DAD = DAevent x 421.917808219178
				ED c	Exposure Duration (child)	6	yr	EPA 1989	
				BW c	Body Weight (child)	15	kg	EPA 1989	For Carcinogenic endpoints, see "Adult Resident"
				AT-NC	Averaging Time (noncancer)	2190	days	EPA 1989	
				AT-C	Averaging Time (cancer)	25550	days	EPA 1989	
		Adult	Tap Water	CW	Chemical Concentration in Water	Chem-specific	mg/L	Exposure Point Concentration	Water Dermal Absorption
				DAevent	Absorbed Dermal Dose per event	Chem-specific	mg/cm^2-event	Chemical Specific (1)	For Noncarcinogenic Endpoints:
				SAa	Surface Area (adult)	18000	cm2	EPA 2004a	A child receptor represents the residential receptor with greatest potential exposure.
				EV	Event Frequency	1	event/d	EPA 2004a	Adult resident not evaluated. See "Child Resident"
				EF	Exposure Frequency	350	days/year	EPA 2004a	
				ED a	Exposure Duration (adult)	24	yr	EPA 1989	For Carcinogenic Endpoints:
				BW a	Body Weight (adult)	70	kg	EPA 1989	Dermally Absorbed Dose (DAD) (mg/kg-day) =
				AT-NC	Averaging Time (noncancer)	8760	days	EPA 1989	DAevent x SAa x EV x EF x EDa x (1 / (BWa * AT-C))
				AT-C	Averaging Time (cancer)	25550	days	EPA 1989	DAD = DAevent x 84.5401174168297

TABLE 4.1 RME
VALUES USED FOR DAILY INTAKE CALCULATIONS
REASONABLE MAXIMUM EXPOSURE
PAGE TROWBRIDGE RANCH LANDFILL

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name (1)
Inhalation Shower/Bathing	Resident	Child	Tap Water	CW	Chemical Concentration in Water	Chem-specific	mg/L	Exposure Point Concentration	Inhalation of volatile compounds in tap water
				VF	Volatilization Factor	0.5	L/m3	EPA Region IX (2004b)	For Noncarcinogenic endpoints:
				IRc	Inhalation Rate (child)	10	m3/day	EPA Region IX (2004b)	A resident child receptor represents the residential receptor with greatest potential
				EF	Exposure Frequency	350	days/year	EPA Region IX (2004b)	CW x InRc x EF x EDc x 1/BWc x 1/AT-NC
				ED c	Exposure Duration (child)	6	yr	EPA 1989	Daily Intake = CW x 0.319634703196347
				BW c	Body Weight (child)	15	kg	EPA 1989	For Carcinogenic endpoints, an age-adjusted equation representing cumulative exposure
				AT-NC	Averaging Time (noncancer)	2190	days	EPA 1989	is used for residents (child and adults); see "Adult."
				AT-C	Averaging Time (cancer)	25550	days	EPA 1989	
		Adult	Tap Water	CW	Chemical Concentration in Water	Chem-specific	mg/L	Exposure Point Concentration	Water Dermal Absorption
				VF	Volatilization Factor	0.5	L/m3	EPA Region IX (2004b)	For Noncarcinogenic Endpoints:
				IRa	Inhalation Rate (adult)	20	m3/day	EPA Region IX (2004b)	A child receptor represents the residential receptor with greatest potential exposure.
				EF	Exposure Frequency	350	days/year	EPA Region IX (2004b)	Adult resident not evaluated. See "Child Resident"
				ED a	Exposure Duration (adult)	24	yr	EPA 1989	For Carcinogenic Endpoints:
				BW a	Body Weight (adult)	70	kg	EPA 1989	Daily Intake (mg/kg-day) =
				AT-NC	Averaging Time (noncancer)	8760	days	EPA 1989	CW x ((Inhc x EF x EDc x 1/BWc) + (Inha x EF x EDa x 1/BWa)) x 1/AT
				AT-C	Averaging Time (cancer)	25550	days	EPA 1989	Daily Intake = CW x 0.0743639921722113

Notes:
(1) See Dermal Worksheet presented in this Appendix for equations and chemical parameters for estimating Absorbed Dermal Dose per event (DAevent).

TABLE 5.1

NON-CANCER TOXICITY DATA -- ORAL/DERMAL

SHEPLEY HILL LANDFILL

Chemical of Potential Concern	Chronic/ Subchronic	Oral RfD		Oral Absorption Efficiency for Dermal	Absorbed RfD for Dermal		Primary Target Organ(s)	Combined Uncertainty/ Modifying Factors	RfD:Target Organ(s)	
		Value	Units	(1)	Value	Units			Source(s)	Date(s) (2) (MM/DD/YYYY)
BENZENE	Chronic	4E-03	mg/kg-day	1	4.00E-03	mg/kg-day	Hematologic	300	IRIS	3/30/2008
CHLOROFORM	Chronic	1E-02	mg/kg-day	1	1.00E-02	mg/kg-day	Liver	100	IRIS	4/3/2008
CHLOROMETHANE	Chronic	NA	mg/kg-day		NA	mg/kg-day	NA		IRIS	4/3/2008
MANGANESE	Chronic	1.40E-01	mg/kg-day	0.04	5.60E-03	mg/kg-day	Nervous System	1	IRIS	3/30/2008
TOLUENE	Chronic	8.00E-02	mg/kg-day	1	8.00E-02	mg/kg-day	Kidney	3000	IRIS	3/30/2008

Notes:

(1) Oral Reference Dose are adjusted by ABSGI values in accordance with USEPA (2004a) for use in Dermal Exposures. Where no ABSGI exists, no adjustment of the oral RfD is made for dermal exposures.

(2) Date represents date of source or date IRIS was searched.

IRIS = Integrated Risk Information System

NCEA = National Center for Environmental Assessment

PPRTV = Provisional Peer-Reviewed Toxicity Values

TABLE 5.2

NON-CANCER TOXICITY DATA -- INHALATION

SHEPLEY HILL LANDFILL

Chemical of Potential Concern	Chronic/ Subchronic	Inhalation RfC		Extrapolated RfD (2)		Primary Target Organ(s)	Combined Uncertainty/Modifying Factors	RfC : Target Organ(s)	
		Value	Units	Value	Units			Source(s)	Date(s) (1) (MM/DD/YYYY)
BENZENE	Chronic	3.00E-02	mg/m^3	8.57E-03	mg/kg-day	Hematologic	300	IRIS	3/30/2008
CHLOROFORM	Chronic	4.50E-02	mg/m^3	1.29E-02	mg/kg-day	NA	NA	PPRTV (3)	3/1/2008
CHLOROMETHANE	Chronic	9.00E-02	mg/m^3	2.57E-02	mg/kg-day	CNS	1000	IRIS	4/3/2008
MANGANESE	Chronic	5.00E-05	mg/m^3	1.43E-05	mg/kg-day	Nervous System	1000	IRIS	3/30/2008
TOLUENE	Chronic	5.00E+00	mg/m^3	1.43E+00	mg/kg-day	Nervous System	10	IRIS	3/30/2008

Notes:

(1) For IRIS, date represents the date IRIS was searched.

(2) Adjustment factor applied to Reference Concentration (RfC) to calculate Reference Dose (RfD) for Inhalation as follows:

RfD = RfC x 20 m3/day x 1/70 kg.

(3) As cited in Region 6 Human Health Medium-Specific Screening Levels; March 2008 (http://www.epa.gov.Region6/rcra_c/pd-n/screen.htm)

IRIS = Integrated Risk Information System, U.S. Environmental Protection Agency online toxicity database.

NA = Not Available

PPRTV = Provisional Peer Reviewed Toxicity Values

TABLE 6.1

CANCER TOXICITY DATA -- ORAL/DERMAL

SHEPLEY HILL LANDFILL

Chemical of Potential Concern	Oral Cancer Slope Factor		Oral Absorption Efficiency for Dermal	Absorbed Cancer Slope Factor for Dermal		Weight of Evidence/ Cancer Guideline Description	Oral CSF	
	Value	Units	(1)	Value	Units		Source(s)	Date(s)(2) (MM/DD/YYYY)
BENZENE	5.50E-02	(mg/kg/day)-1	1	5.50E-02	(mg/kg/day)-1	A	IRIS	3/30/2008
CHLOROFORM	NA			NA		B2	IRIS (4)	4/3/2008
CHLOROMETHANE	NA			NA		D	IRIS	4/3/2008
MANGANESE	NA			NA		D	IRIS	3/30/2008
TOLUENE	NA			NA		IN	IRIS	3/30/2008

Notes:

(1) Oral Cancer Slope Factors are adjusted by ABSGI values in accordance with USEPA (2004a) for use in Dermal Exposures. Where no ABS exists, no adjustment of the oral CSF is made for dermal exposures.

(2) For IRIS values, date represents the date IRIS was searched.

(3) A dose of chloroform at 0.01 mg/kg/day (equal to the RfD) can be considered protective against cancer risk (USEPA 2008a)

IRIS = Integrated Risk Information System

NA = Not Available

Weight of Evidence (USEPA 1986):

EPA Group:

A - Human carcinogen

B1 - Probable human carcinogen - indicates that limited human data are available

B2 - Probable human carcinogen - indicates sufficient evidence in animals and inadequate or no evidence in humans

C - Possible human carcinogen

D - Not classifiable as a human carcinogen

E - Evidence of noncarcinogenicity

IN - Inadequate information to assess carcinogenic potential (under USEPA 2005 Guidelines for Carcinogen Risk Assessment).

TABLE 6.2

CANCER TOXICITY DATA -- INHALATION

SHEPLEY HILL LANDFILL

Chemical of Potential Concern	Unit Risk		Inhalation Cancer Slope Factor (1)		Weight of Evidence/ Cancer Guideline Description	Unit Risk : Inhalation CSF	
	Value	Units	Value	Units		Source(s)	Date(s) (2) (MM/DD/YYYY)
BENZENE	7.80E-06	(ug/m3)-1	2.70E-02	(mg/kg-d)-1	A	IRIS	3/30/2008
CHLOROFORM	2.30E-05	(ug/m3)-1	8.05E-02	(mg/kg-d)-1	B2	IRIS	4/3/2008
CHLOROMETHANE	NA		NA		D	IRIS	4/3/2008
MANGANESE	NA		NA		D	IRIS	3/30/2008
TOLUENE	NA		NA		IN	IRIS	3/30/2008

Notes:

(1) Adjustment factor applied to Unit Risk to calculate Inhalation Slope Factor as follows:

Cancer Slope Factor inhalation = Unit Risk x 70 kg x 1/20 m^3/day x 1000 ug/mg

Unit Risk = Cancer Slope Factor inhalation x 1/70 kg x 20 m^3/day x 0.001 mg/ug

(2) For IRIS values, represents the date IRIS was searched.

IRIS = Integrated Risk Information System

NA = Not Available

Weight of Evidence (USEPA 1986):

EPA Group:

A - Human carcinogen

B1 - Probable human carcinogen - indicates that limited human data are available

B2 - Probable human carcinogen - indicates sufficient evidence in animals and inadequate or no evidence in humans

C - Possible human carcinogen

D - Not classifiable as a human carcinogen

E - Evidence of noncarcinogenicity

IN - Inadequate information to assess carcinogenic potential (under USEPA 2005 Guidelines for Carcinogen Risk Assessment).

TABLE 7.1 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
PAGE TROWBRIDGE RANCH LANDFILL

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Adult + Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Groundwater	Groundwater	Tap Water	Ingestion	Benzene	2.8E-04	mg/L	4.1E-06	mg/kg-day	5.5E-02	(mg/kg/day)-1	2.3E-07	1.8E-05	mg/kg-day	4.0E-03	mg/kg/day	4.4E-03
				Chloroform	2.8E-04	mg/L	4.1E-06	mg/kg-day	NA		NA	1.8E-05	mg/kg-day	1.0E-02	mg/kg/day	1.8E-03
				Chloromethane	2.9E-04	mg/L	4.3E-06	mg/kg-day	NA		NA	1.9E-05	mg/kg-day	NA		NA
				Manganese	1.8E-01	mg/L	2.7E-03	mg/kg-day	NA		NA	1.2E-02	mg/kg-day	1.4E-01	mg/kg/day	8.3E-02
				Toluene	1.3E-03	mg/L	1.9E-05	mg/kg-day	NA		NA	8.4E-05	mg/kg-day	8.0E-02	mg/kg/day	1.0E-03
			Exp. Route Total								2.3E-07					9.0E-02
Groundwater	Groundwater	Tap Water	Dermal Absorption	Benzene	2.8E-04	mg/L	3.2E-07	mg/kg-d	5.5E-02	(mg/kg/day)-1	1.7E-08	2.2E-06	mg/kg-d	4.0E-03	mg/kg/day	5.4E-04
				Chloroform	NA		NA		NA		NC	NA		1.0E-02	mg/kg/day	NA
				Chloromethane	NA		NA		NA		NC	NA		NA		NA
				Manganese	NA		NA		NA		NC	NA		5.6E-03	mg/kg/day	NA
				Toluene	1.3E-03	mg/L	3.4E-06	mg/kg-d	NA		NC	2.3E-05	mg/kg-d	8.0E-02	mg/kg/day	2.9E-04
			Exp. Route Total								1.7E-08					8.3E-04
Groundwater	Groundwater	Tap Water	Inhalation (bathing/showering)	Benzene	2.8E-04	mg/L	2.1E-05	mg/kg-d	2.7E-02	(mg/kg/day)-1	5.5E-07	8.8E-05	mg/kg-d	8.6E-03	mg/kg/day	1.0E-02
				Chloroform	2.8E-04	mg/L	2.1E-05	mg/kg-d	8.1E-02	(mg/kg/day)-1	1.7E-06	8.8E-05	mg/kg-d	1.3E-02	mg/kg/day	6.9E-03
				Chloromethane	2.9E-04	mg/L	2.2E-05	mg/kg-d	NA		NC	9.3E-05	mg/kg-d	2.6E-02	mg/kg/day	3.6E-03
				Manganese	1.8E-01	mg/L	NV		NA		NA	NV		1.4E-05	mg/kg/day	NA
				Toluene	1.3E-03	mg/L	9.7E-05	mg/kg-d	NA		NC	4.2E-04	mg/kg-d	1.4E+00	mg/kg/day	2.9E-04
			Exp. Route Total								2.2E-06					2.1E-02
		Exposure Point Total									2.4E-07					1.1E-01
	Exposure Medium Total										2.4E-07					1.1E-01
Groundwater Total											2.4E-07					1.1E-01
										Total of Receptor Risks Across All Media	2.4E-07				Total of Receptor Hazards Across All Media	1.1E-01

TABLE 9.1 RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
PAGE TROWBRIDGE RANCH LANDFILL

Scenario Timeframe: Current/Future
Receptor Population: Resident
Receptor Age: Adult + Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
			Benzene	2.3E-07	5.5E-07	1.7E-08	NA	8.0E-07	Hematologic	4.4E-03	1E-02	5.4E-04	1.5E-02
			Chloroform	NA	1.7E-06	NC	NA	1.7E-06	Liver	1.8E-03	7E-03	NA	8.6E-03
			Chloromethane	NA	NC	NC	NA	NC	NA CNS	NA	4E-03	NA	3.6E-03
			Manganese	NA	NA	NC	NA	NC	Nervous System	8.3E-02	NA	NA	8.3E-02
			Toluene	NA	NC	NC	NA	NC	Kidney Nervous System	1.0E-03	3E-04	2.9E-04	1.6E-03
			Chemical Total	2.3E-07	2.2E-06	1.7E-08	--	2.4E-06		9.0E-02	2.1E-02	8.3E-04	1.1E-01
		Exposure Point Total						2.4E-06					1.1E-01
	Exposure Medium Total							2.4E-06					1.1E-01
Groundwater Total								2.4E-06					1.1E-01
Receptor Total							Receptor Risk Total	2.4E-06				Receptor HI Total	1.1E-01

Table 9.1 Footnotes:
NC = Not Carcinogenic
NA = Not Available/Not Applicable

Total NA (Chloromethane) HI	Across All Media =	3.6E-03
Total Liver HI	Across All Media =	8.6E-03
Total Kidney HI	Across All Media =	1.6E-03
Total Hematologic HI	Across All Media =	2E-02
Total Nervous System HI	Across All Media =	8.5E-02
Total CNS HI	Across All Media =	3.6E-03

APPENDIX E

Derivation of Exposure Point Concentrations for Soil Vapor

Appendix E
Table of Contents

Table E-1 Summary of Shallow Soil Vapor Data Used to Estimate Potential Indoor Air Exposure Concentrations

Table E-2 Summary of ProUCL Output (Version 4.00.04)

Appendix E
Table E-1 Summary of Shallow Soil Vapor Data Used to Estimate Potential Indoor Air Exposure Concentrations
Page Trowbridge Ranch Landfill

COMPOUND NAME	1,1-Dichloro ethene	D_1,1-Dichloro ethene	2-Butanone (Methyl Ethyl Ketone)	D_2-Butano ne (Methyl	4-Methyl-2-pent anone	D_4-Methyl-2-pent anone	Acetone	D_Aceton e	Benzene	D_Benzen e	Carbon Disulfide	D_Carbon Disulfide
SV-1-10	9.6	0	39	1	13	1	2200	1	13	1	7.5	0
SV-2-10 (&DUP)	4.8	0	42.5	1	11	1	235	1	39	1	16.5	1
SV-3-10	10	0	9.1	1	10	0	89	1	8.1	0	7.9	0
SV-5-10	5	0	20	1	10	1	210	1	14	1	11	1
SV-6-10	4.7	0	48	1	47	1	240	1	8.4	1	9.4	1
SV-7-10	5.1	0	35	1	12	1	220	1	14	1	24	1
SV-8-10 (& Dup)	5.1	0	6.7	1	5.3	0	103	1	9.25	1	4.9	1
UNITS are in ug/m3												
Maximum Detection (ug/m^3)	ND		48		47		2200		39		24	
95% UCL (ProUCL Output)	NC		40.8		27.14		3348		33.22		16.29	
Basis	ND		95% Student's-t UCL		95% KM (BCA) UCL		99% Chebyshev (Mean, Exceeds Max; Use Max		95% KM (Chebyshev) U		95% KM (t) UCL	
Final EPC (ug/m^3)	**NC**		**40.8**		**27.14**		**2200**		**33.22**		**16.29**	

Appendix E
Table E-1 Summary of Shallow Soil Vapor Data Used to Estimate Potential Indoor Air Exposure Concentrations
Page Trowbridge Ranch Landfill

COMPOUND NAME	Carbon Tetrachloride	D_Carbon Tetrachloride	Chloroform	D_Chloroform	Ethyl Benzene	D_Ethyl Benzene	m,p-Xylene	D_m,p-Xylene	o-Xylene	D_o-Xylene
SV-1-10	120	1	81	1	34	1	99	1	28	1
SV-2-10 (&DUP)	205	1	790	1	6.15	1	16	1	7.3	1
SV-3-10	610	1	3000	1	11	0	25	1	11	1
SV-5-10	160	1	1200	1	6.8	1	17	1	5.6	1
SV-6-10	220	1	1900	1	5.2	0	12	1	5.2	0
SV-7-10	450	1	2000	1	5.6	0	17	1	6.3	0
SV-8-10 (& Dup)	335	1	395	1	5.6	0	11	1	5.6	0
UNITS are in ug/m3										
Maximum Detection (ug/m^3)	610		3000		34		99		28	
95% UCL (ProUCL Output)	429.7		2091		18.97		80.16		15.97	
Basis	95% Student's-t UCL		95% Student's-t UCL		95% KM (t) UCL		95% Chebyshev (Mean, S		95% KM (Percentile Bootstra	
					ND		ND		ND	
Final EPC (ug/m^3)	**429.7**		**2091**		**18.97**		**80.16**		**15.97**	

Appendix E
Table E-1 Summary of Shallow Soil Vapor Data Used to Estimate Potential Indoor Air Exposure Concentrations
Page Trowbridge Ranch Landfill

COMPOUND NAME	Total Xylenes	D_Total Xylenes	Methylene Chloride	D_Methylene Chloride	Tetrachloro ethene	D_Tetrachloro ethene	Toluene	D_Toluene	Trichloro ethene	D_Trichloro ethene
SV-1-10	127	1	8.4	0	16	0	70	1	6.5	1
SV-2-10 (&DUP)	23.3	1	4.2	0	16	1	54.5	1	29	1
SV-3-10	30.5	1	8.8	0	49	1	26	1	88	1
SV-5-10	22.6	1	6.4	1	8.6	0	44	1	25	1
SV-6-10	14.6	1	4.1	0	8.1	0	22	1	43	1
SV-7-10	20.15	1	5	0	9.8	0	46	1	75	1
SV-8-10 (& Dup)	13.825	1	4.6	1	8.8	0	28	1	35	1
UNITS are in ug/m3										
Maximum Detection (ug/m^3)	127		8.8		49		70		88	
95% UCL (ProUCL Output)	102.8		5.845		32.71		54.26		64.2	
Basis	95% Chebyshev (Mean, ND		95% KM (t) UCL ND		95% KM (t) UCL ND		95% Student's-t UCL		95% Student's-t UCL	
Final EPC (ug/m^3)	**102.8**		**5.845**		**32.71**		**54.26**		**64.2**	

Appendix E
Table E-1 Summary of Shallow Soil Vapor Data Used to Estimate Potential Indoor Air Exposure Concentrations
Page Trowbridge Ranch Landfill

COMPOUND NAME	Freon 11 (Fluorotrichloromethane)	D_Freon 11 (Fluorotrichloromethane)	Freon 12 (Dichlorodifluoromethane)	D_Freon 12 (Dichlorodifluoromethane)	Freon 113 (1,1,2-Trichlorotrifluoroethane)	D_Freon 113 (1,1,2-Trichlorotrifluoroethane)
SV-1-10	930	1	50	1	160	1
SV-2-10 (&DUP)	625	1	75	1	145	1
SV-3-10	1400	1	370	1	360	1
SV-5-10	270	1	340	1	70	1
SV-6-10	220	1	350	1	55	1
SV-7-10	240	1	650	1	57	1
SV-8-10 (& Dup)	180	1	485	1	37	1
UNITS are in ug/m3						
Maximum Detection (ug/m^3)	1400		650		360	
95% UCL (ProUCL Output)	893.1		487.8		251.3	
Basis	95% Student's-t UCL		95% Student's-t UCL		95% Approximate Gamma UCL	
Final EPC (ug/m^3)	**893.1**		**487.8**		**251.3**	

Notes:

Column format as required by ProUCL Version 4.00.04. In column with "D_" preceeding the compound name, if value is 1 then compound was detected. If value is 0, then compound was not detected and value represent full detection limit.
All units in ug/m^3
All samples collected at 10 feet below ground surface.
ND = Not Detected in any sample
NC = Not Calculated

ProUCL Version 4.04	General UCL Statistics for Data Sets with Non-Detects
User Selected Options	
From File	E:\PTRL\RevisedUCL\RevVaprinputforProUCL_4_11_13.wst
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

2-Butanone (Methyl Ethyl Ketone)

General Statistics

Number of Valid Observations	7	Number of Distinct Observations	7
Raw Statistics		Log-transformed Statistics	
Minimum	6.7	Minimum of Log Data	1.902
Maximum	48	Maximum of Log Data	3.871
Mean	28.61	Mean of log Data	3.135
Median	35	SD of log Data	0.793
SD	16.6		
Coefficient of Variation	0.58		
Skewness	-0.37		

Warning: A sample size of 'n' = 7 may not adequate enough to compute meaningful and reliable test statistics and estimates!

It is suggested to collect at least 8 to 10 observations using these statistical methods!
If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.

Warning: There are only 7 Values in this data
Note: It should be noted that even though bootstrap methods may be performed on this data set,
the resulting calculations may not be reliable enough to draw conclusions

The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.

Relevant UCL Statistics

Normal Distribution Test		Lognormal Distribution Test	
Shapiro Wilk Test Statistic	0.898	Shapiro Wilk Test Statistic	0.847
Shapiro Wilk Critical Value	0.803	Shapiro Wilk Critical Value	0.803
Data appear Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	
Assuming Normal Distribution		Assuming Lognormal Distribution	
95% Student's-t UCL	40.8	95% H-UCL	86.95
95% UCLs (Adjusted for Skewness)		95% Chebyshev (MVUE) UCL	69.11
95% Adjusted-CLT UCL	37.99	97.5% Chebyshev (MVUE) UCL	86.1
95% Modified-t UCL	40.66	99% Chebyshev (MVUE) UCL	119.5
Gamma Distribution Test		Data Distribution	
k star (bias corrected)	1.489	Data appear Normal at 5% Significance Level	
Theta Star	19.22		
MLE of Mean	28.61		
MLE of Standard Deviation	23.45		
nu star	20.84		
Approximate Chi Square Value (.05)	11.48	Nonparametric Statistics	
Adjusted Level of Significance	0.0158	95% CLT UCL	38.93
Adjusted Chi Square Value	9.449	95% Jackknife UCL	40.8
		95% Standard Bootstrap UCL	38.34
Anderson-Darling Test Statistic	0.522	95% Bootstrap-t UCL	39.22
Anderson-Darling 5% Critical Value	0.714	95% Hall's Bootstrap UCL	36.3
Kolmogorov-Smirnov Test Statistic	0.276	95% Percentile Bootstrap UCL	37.64
Kolmogorov-Smirnov 5% Critical Value	0.314	95% BCA Bootstrap UCL	37.44
Data appear Gamma Distributed at 5% Significance Level		95% Chebyshev(Mean, Sd) UCL	55.96
		97.5% Chebyshev(Mean, Sd) UCL	67.79
Assuming Gamma Distribution		99% Chebyshev(Mean, Sd) UCL	91.03
95% Approximate Gamma UCL	51.97		
95% Adjusted Gamma UCL	63.12		
Potential UCL to Use		Use 95% Student's-t UCL	40.8

ProUCL Version 4.04	General UCL Statistics for Data Sets with Non-Detects
User Selected Options	
From File	E:\PTRL\RevisedUCL\RevVaprinputforProUCL_4_11_13.wst
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

4-Methyl-2-pentanone

General Statistics			
Number of Valid Data	7	Number of Detected Data	5
Number of Distinct Detected Data	5	Number of Non-Detect Data	2
		Percent Non-Detects	28.57%
Raw Statistics		Log-transformed Statistics	
Minimum Detected	10	Minimum Detected	2.303
Maximum Detected	47	Maximum Detected	3.85
Mean of Detected	18.6	Mean of Detected	2.72
SD of Detected	15.92	SD of Detected	0.639
Minimum Non-Detect	5.3	Minimum Non-Detect	1.668
Maximum Non-Detect	10	Maximum Non-Detect	2.303
Note: Data have multiple DLs - Use of KM Method is recommen		Number treated as Non-Detect	2
For all methods (except KM, DL/2, and ROS Methods),		Number treated as Detected	5
Observations < Largest ND are treated as NDs		Single DL Non-Detect Percentage	28.57%

Warning: There are only 5 Detected Values in this data
Note: It should be noted that even though bootstrap may be performed on this data set
the resulting calculations may not be reliable enough to draw conclusions

It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.

UCL Statistics			
Normal Distribution Test with Detected Values Only		Lognormal Distribution Test with Detected Values Only	
Shapiro Wilk Test Statistic	0.62	Shapiro Wilk Test Statistic	0.699
5% Shapiro Wilk Critical Value	0.762	5% Shapiro Wilk Critical Value	0.762
Data not Normal at 5% Significance Level		Data not Lognormal at 5% Significance Level	
Assuming Normal Distribution		Assuming Lognormal Distribution	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	14.38	Mean	2.312
SD	14.88	SD	0.89
95% DL/2 (t) UCL	25.3	95% H-Stat (DL/2) UCL	20.31
Maximum Likelihood Estimate(MLE) Method		Log ROS Method	
Mean	12.8	Mean in Log Scale	2.301
SD	15.89	SD in Log Scale	0.885
95% MLE (t) UCL	24.47	Mean in Original Scale	14.29
95% MLE (Tiku) UCL	24.82	SD in Original Scale	14.94
		95% Percentile Bootstrap UCL	24.29
		95% BCA Bootstrap UCL	25.79
Gamma Distribution Test with Detected Values Only		Data Distribution Test with Detected Values Only	
k star (bias corrected)	1.18	Data do not follow a Discernable Distribution (0.05)	
Theta Star	15.76		
nu star	11.8		
A-D Test Statistic	0.976	Nonparametric Statistics	
5% A-D Critical Value	0.683	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.683	Mean	16.14
5% K-S Critical Value	0.36	SD	12.64
Data not Gamma Distributed at 5% Significance Level		SE of Mean	5.342
		95% KM (t) UCL	26.52
Assuming Gamma Distribution		95% KM (z) UCL	24.93
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	26.01
Minimum	6.994	95% KM (bootstrap t) UCL	111
Maximum	47	95% KM (BCA) UCL	27.14
Mean	15.28	95% KM (Percentile Bootstrap) UCL	26.29
Median	11	95% KM (Chebyshev) UCL	39.43
SD	14.18	97.5% KM (Chebyshev) UCL	49.51
k star	1.435	99% KM (Chebyshev) UCL	69.3
Theta star	10.65		
Nu star	20.09	Potential UCLs to Use	
AppChi2	10.92	95% KM (BCA) UCL	27.14
95% Gamma Approximate UCL	28.12		
95% Adjusted Gamma UCL	34.31		

Note: DL/2 is not a recommended method.

ProUCL Version 4.04	General UCL Statistics for Data Sets with Non-Detects
User Selected Options	
From File	E:\PTRL\RevisedUCL\RevVaprinputforProUCL_4_11_13.wst
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

Acetone

General Statistics

Number of Valid Observations	7	Number of Distinct Observations	7
Raw Statistics		Log-transformed Statistics	
Minimum	89	Minimum of Log Data	4.489
Maximum	2200	Maximum of Log Data	7.696
Mean	471	Mean of log Data	5.5
Median	220	SD of log Data	1.051
SD	765		
Coefficient of Variation	1.624		
Skewness	2.608		

Warning: A sample size of 'n' = 7 may not adequate enough to compute meaningful and reliable test statistics and estimates!

It is suggested to collect at least 8 to 10 observations using these statistical methods!
If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.

Warning: There are only 7 Values in this data
Note: It should be noted that even though bootstrap methods may be performed on this data set,
the resulting calculations may not be reliable enough to draw conclusions

The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.

Relevant UCL Statistics

Normal Distribution Test		Lognormal Distribution Test	
Shapiro Wilk Test Statistic	0.527	Shapiro Wilk Test Statistic	0.778
Shapiro Wilk Critical Value	0.803	Shapiro Wilk Critical Value	0.803
Data not Normal at 5% Significance Level		Data not Lognormal at 5% Significance Level	
Assuming Normal Distribution		Assuming Lognormal Distribution	
95% Student's-t UCL	1033	95% H-UCL	2214
95% UCLs (Adjusted for Skewness)		95% Chebyshev (MVUE) UCL	1049
95% Adjusted-CLT UCL	1251	97.5% Chebyshev (MVUE) UCL	1337
95% Modified-t UCL	1080	99% Chebyshev (MVUE) UCL	1902
Gamma Distribution Test		Data Distribution	
k star (bias corrected)	0.606	Data do not follow a Discernable Distribution (0.05)	
Theta Star	777.4		
MLE of Mean	471		
MLE of Standard Deviation	605.1		
nu star	8.482		
Approximate Chi Square Value (.05)	3.017	Nonparametric Statistics	
Adjusted Level of Significance	0.0158	95% CLT UCL	946.6
Adjusted Chi Square Value	2.123	95% Jackknife UCL	1033
		95% Standard Bootstrap UCL	909.8
Anderson-Darling Test Statistic	1.183	95% Bootstrap-t UCL	4638
Anderson-Darling 5% Critical Value	0.731	95% Hall's Bootstrap UCL	5963
Kolmogorov-Smirnov Test Statistic	0.437	95% Percentile Bootstrap UCL	1036
Kolmogorov-Smirnov 5% Critical Value	0.321	95% BCA Bootstrap UCL	1076
Data not Gamma Distributed at 5% Significance Level		95% Chebyshev(Mean, Sd) UCL	1731
		97.5% Chebyshev(Mean, Sd) UCL	2277
Assuming Gamma Distribution		99% Chebyshev(Mean, Sd) UCL	3348
95% Approximate Gamma UCL	1324		
95% Adjusted Gamma UCL	1881		
Potential UCL to Use		Use 99% Chebyshev (Mean, Sd) UCL	3348
Recommended UCL exceeds the maximum observation			

ProUCL Version 4.04	General UCL Statistics for Data Sets with Non-Detects
User Selected Options	
From File	E:\PTRL\RevisedUCL\RevVaprinputforProUCL_4_11_13.wst
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

Benzene

General Statistics			
Number of Valid Data	7	Number of Detected Data	6
Number of Distinct Detected Data	5	Number of Non-Detect Data	1
		Percent Non-Detects	14.29%

Raw Statistics		Log-transformed Statistics	
Minimum Detected	8.4	Minimum Detected	2.128
Maximum Detected	39	Maximum Detected	3.664
Mean of Detected	16.28	Mean of Detected	2.643
SD of Detected	11.39	SD of Detected	0.545
Minimum Non-Detect	8.1	Minimum Non-Detect	2.092
Maximum Non-Detect	8.1	Maximum Non-Detect	2.092

Warning: There are only 6 Detected Values in this data
Note: It should be noted that even though bootstrap may be performed on this data set
the resulting calculations may not be reliable enough to draw conclusions

It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.

UCL Statistics			
Normal Distribution Test with Detected Values Only		Lognormal Distribution Test with Detected Values Only	
Shapiro Wilk Test Statistic	0.686	Shapiro Wilk Test Statistic	0.828
5% Shapiro Wilk Critical Value	0.788	5% Shapiro Wilk Critical Value	0.788
Data not Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	
Assuming Normal Distribution		Assuming Lognormal Distribution	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	14.53	Mean	2.465
SD	11.38	SD	0.685
95% DL/2 (t) UCL	22.89	95% H-Stat (DL/2) UCL	31.36
Maximum Likelihood Estimate(MLE) Method		Log ROS Method	
Mean	14.09	Mean in Log Scale	2.461
SD	11.22	SD in Log Scale	0.694
95% MLE (t) UCL	22.34	Mean in Original Scale	14.51
95% MLE (Tiku) UCL	22.05	SD in Original Scale	11.4
		95% Percentile Bootstrap UCL	22.47
		95% BCA Bootstrap UCL	23.75
Gamma Distribution Test with Detected Values Only		Data Distribution Test with Detected Values Only	
k star (bias corrected)	1.898	Data appear Lognormal at 5% Significance Level	
Theta Star	8.575		
nu star	22.78		
A-D Test Statistic	0.723	Nonparametric Statistics	
5% A-D Critical Value	0.701	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.701	Mean	15.15
5% K-S Critical Value	0.334	SD	10.01
Data not Gamma Distributed at 5% Significance Level		SE of Mean	4.146
		95% KM (t) UCL	23.21
Assuming Gamma Distribution		95% KM (z) UCL	21.97
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	23.04
Minimum	3.112	95% KM (bootstrap t) UCL	38.05
Maximum	39	95% KM (BCA) UCL	24.04
Mean	14.39	95% KM (Percentile Bootstrap) UCL	22.97
Median	13	95% KM (Chebyshev) UCL	33.22
SD	11.53	97.5% KM (Chebyshev) UCL	41.04
k star	1.378	99% KM (Chebyshev) UCL	56.41
Theta star	10.45		
Nu star	19.29	Potential UCLs to Use	
AppChi2	10.33	95% KM (Chebyshev) UCL	33.22
95% Gamma Approximate UCL	26.88		
95% Adjusted Gamma UCL	32.97		

Note: DL/2 is not a recommended method.

ProUCL Version 4.04	General UCL Statistics for Data Sets with Non-Detects
User Selected Options	
From File	E:\PTRL\RevisedUCL\RevVaprinputforProUCL_4_11_13.wst
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

Carbon Disulfide

General Statistics			
Number of Valid Data	7	Number of Detected Data	5
Number of Distinct Detected Data	5	Number of Non-Detect Data	2
		Percent Non-Detects	28.57%
Raw Statistics		Log-transformed Statistics	
Minimum Detected	4.9	Minimum Detected	1.589
Maximum Detected	24	Maximum Detected	3.178
Mean of Detected	13.16	Mean of Detected	2.442
SD of Detected	7.343	SD of Detected	0.6
Minimum Non-Detect	7.5	Minimum Non-Detect	2.015
Maximum Non-Detect	7.9	Maximum Non-Detect	2.067
Note: Data have multiple DLs - Use of KM Method is recommen		Number treated as Non-Detect	3
For all methods (except KM, DL/2, and ROS Methods),		Number treated as Detected	4
Observations < Largest ND are treated as NDs		Single DL Non-Detect Percentage	42.86%

Warning: There are only 5 Detected Values in this data
Note: It should be noted that even though bootstrap may be performed on this data set
the resulting calculations may not be reliable enough to draw conclusions

It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.

UCL Statistics			
Normal Distribution Test with Detected Values Only		Lognormal Distribution Test with Detected Values Only	
Shapiro Wilk Test Statistic	0.962	Shapiro Wilk Test Statistic	0.985
5% Shapiro Wilk Critical Value	0.762	5% Shapiro Wilk Critical Value	0.762
Data appear Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	
Assuming Normal Distribution		Assuming Lognormal Distribution	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	10.5	Mean	2.129
SD	7.523	SD	0.725
95% DL/2 (t) UCL	16.02	95% H-Stat (DL/2) UCL	31.5
Maximum Likelihood Estimate(MLE) Method		Log ROS Method	
Mean	9.317	Mean in Log Scale	2.186
SD	8.711	SD in Log Scale	0.657
95% MLE (t) UCL	15.71	Mean in Original Scale	10.74
95% MLE (Tiku) UCL	16.69	SD in Original Scale	7.282
		95% Percentile Bootstrap UCL	15.27
		95% BCA Bootstrap UCL	15.94
Gamma Distribution Test with Detected Values Only		Data Distribution Test with Detected Values Only	
k star (bias corrected)	1.675	Data appear Normal at 5% Significance Level	
Theta Star	7.858		
nu star	16.75		
A-D Test Statistic	0.183	Nonparametric Statistics	
5% A-D Critical Value	0.681	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.681	Mean	10.8
5% K-S Critical Value	0.359	SD	6.689
Data appear Gamma Distributed at 5% Significance Level		SE of Mean	2.826
		95% KM (t) UCL	16.29
Assuming Gamma Distribution		95% KM (z) UCL	15.45
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	16.14
Minimum	4.9	95% KM (bootstrap t) UCL	19.16
Maximum	24	95% KM (BCA) UCL	17.36
Mean	11.76	95% KM (Percentile Bootstrap) UCL	16.29
Median	9.4	95% KM (Chebyshev) UCL	23.12
SD	6.457	97.5% KM (Chebyshev) UCL	28.45
k star	2.62	99% KM (Chebyshev) UCL	38.92
Theta star	4.487		
Nu star	36.68	Potential UCLs to Use	
AppChi2	23.82	95% KM (t) UCL	16.29
95% Gamma Approximate UCL	18.11	95% KM (Percentile Bootstrap) UCL	16.29
95% Adjusted Gamma UCL	20.79		

Note: DL/2 is not a recommended method.

ProUCL Version 4.04	General UCL Statistics for Data Sets with Non-Detects
User Selected Options	
From File	E:\PTRL\RevisedUCL\RevVaprinputforProUCL_4_11_13.wst
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

Carbon Tetrachloride

General Statistics			
Number of Valid Observations	7	Number of Distinct Observations	7
Raw Statistics		Log-transformed Statistics	
Minimum	120	Minimum of Log Data	4.787
Maximum	610	Maximum of Log Data	6.413
Mean	300	Mean of log Data	5.559
Median	220	SD of log Data	0.579
SD	176.7		
Coefficient of Variation	0.589		
Skewness	0.985		

Warning: A sample size of 'n' = 7 may not adequate enough to compute meaningful and reliable test statistics and estimates!

It is suggested to collect at least 8 to 10 observations using these statistical methods!
If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.

Warning: There are only 7 Values in this data
Note: It should be noted that even though bootstrap methods may be performed on this data set,
the resulting calculations may not be reliable enough to draw conclusions

The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.

Relevant UCL Statistics			
Normal Distribution Test		Lognormal Distribution Test	
Shapiro Wilk Test Statistic	0.904	Shapiro Wilk Test Statistic	0.969
Shapiro Wilk Critical Value	0.803	Shapiro Wilk Critical Value	0.803
Data appear Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	
Assuming Normal Distribution		Assuming Lognormal Distribution	
95% Student's-t UCL	429.7	95% H-UCL	571.2
95% UCLs (Adjusted for Skewness)		95% Chebyshev (MVUE) UCL	585.9
95% Adjusted-CLT UCL	436.4	97.5% Chebyshev (MVUE) UCL	710
95% Modified-t UCL	433.9	99% Chebyshev (MVUE) UCL	953.8
Gamma Distribution Test		Data Distribution	
k star (bias corrected)	2.165	Data appear Normal at 5% Significance Level	
Theta Star	138.6		
MLE of Mean	300		
MLE of Standard Deviation	203.9		
nu star	30.31		
Approximate Chi Square Value (.05)	18.74	Nonparametric Statistics	
Adjusted Level of Significance	0.0158	95% CLT UCL	409.8
Adjusted Chi Square Value	16.05	95% Jackknife UCL	429.7
		95% Standard Bootstrap UCL	402.7
Anderson-Darling Test Statistic	0.25	95% Bootstrap-t UCL	547.8
Anderson-Darling 5% Critical Value	0.711	95% Hall's Bootstrap UCL	499.3
Kolmogorov-Smirnov Test Statistic	0.22	95% Percentile Bootstrap UCL	407.1
Kolmogorov-Smirnov 5% Critical Value	0.313	95% BCA Bootstrap UCL	421.4
Data appear Gamma Distributed at 5% Significance Level		95% Chebyshev(Mean, Sd) UCL	591
		97.5% Chebyshev(Mean, Sd) UCL	717
Assuming Gamma Distribution		99% Chebyshev(Mean, Sd) UCL	964.4
95% Approximate Gamma UCL	485.3		
95% Adjusted Gamma UCL	566.5		
Potential UCL to Use		Use 95% Student's-t UCL	429.7

ProUCL Version 4.04	General UCL Statistics for Data Sets with Non-Detects
User Selected Options	
From File	E:\PTRL\RevisedUCL\RevVaprinputforProUCL_4_11_13.wst
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

Chloroform

General Statistics			
Number of Valid Observations	7	Number of Distinct Observations	7
Raw Statistics		Log-transformed Statistics	
Minimum	81	Minimum of Log Data	4.394
Maximum	3000	Maximum of Log Data	8.006
Mean	1338	Mean of log Data	6.756
Median	1200	SD of log Data	1.239
SD	1025		
Coefficient of Variation	0.766		
Skewness	0.448		

Warning: A sample size of 'n' = 7 may not adequate enough to compute meaningful and reliable test statistics and estimates!

It is suggested to collect at least 8 to 10 observations using these statistical methods!
If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.

Warning: There are only 7 Values in this data
Note: It should be noted that even though bootstrap methods may be performed on this data set,
the resulting calculations may not be reliable enough to draw conclusions

The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.

Relevant UCL Statistics			
Normal Distribution Test		Lognormal Distribution Test	
Shapiro Wilk Test Statistic	0.961	Shapiro Wilk Test Statistic	0.892
Shapiro Wilk Critical Value	0.803	Shapiro Wilk Critical Value	0.803
Data appear Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	
Assuming Normal Distribution		Assuming Lognormal Distribution	
95% Student's-t UCL	2091	95% H-UCL	17058
95% UCLs (Adjusted for Skewness)		95% Chebyshev (MVUE) UCL	4798
95% Adjusted-CLT UCL	2045	97.5% Chebyshev (MVUE) UCL	6188
95% Modified-t UCL	2102	99% Chebyshev (MVUE) UCL	8920
Gamma Distribution Test		Data Distribution	
k star (bias corrected)	0.821	Data appear Normal at 5% Significance Level	
Theta Star	1630		
MLE of Mean	1338		
MLE of Standard Deviation	1477		
nu star	11.49		
Approximate Chi Square Value (.05)	4.894	Nonparametric Statistics	
Adjusted Level of Significance	0.0158	95% CLT UCL	1975
Adjusted Chi Square Value	3.679	95% Jackknife UCL	2091
		95% Standard Bootstrap UCL	1927
Anderson-Darling Test Statistic	0.246	95% Bootstrap-t UCL	2164
Anderson-Darling 5% Critical Value	0.724	95% Hall's Bootstrap UCL	2051
Kolmogorov-Smirnov Test Statistic	0.19	95% Percentile Bootstrap UCL	1942
Kolmogorov-Smirnov 5% Critical Value	0.318	95% BCA Bootstrap UCL	1928
Data appear Gamma Distributed at 5% Significance Level		95% Chebyshev(Mean, Sd) UCL	3027
		97.5% Chebyshev(Mean, Sd) UCL	3758
Assuming Gamma Distribution		99% Chebyshev(Mean, Sd) UCL	5193
95% Approximate Gamma UCL	3142		
95% Adjusted Gamma UCL	4179		
Potential UCL to Use		Use 95% Student's-t UCL	2091

ProUCL Version 4.04	General UCL Statistics for Data Sets with Non-Detects
User Selected Options	
From File	E:\PTRL\RevisedUCL\RevVaprinputforProUCL_4_11_13.wst
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

Ethyl Benzene

General Statistics

Number of Valid Data	7	Number of Detected Data	3
Number of Distinct Detected Data	3	Number of Non-Detect Data	4
		Percent Non-Detects	57.14%

Raw Statistics		Log-transformed Statistics	
Minimum Detected	6.15	Minimum Detected	1.816
Maximum Detected	34	Maximum Detected	3.526
Mean of Detected	15.65	Mean of Detected	2.42
SD of Detected	15.89	SD of Detected	0.96
Minimum Non-Detect	5.2	Minimum Non-Detect	1.649
Maximum Non-Detect	11	Maximum Non-Detect	2.398

Note: Data have multiple DLs - Use of KM Method is recommen	Number treated as Non-Detect	6
For all methods (except KM, DL/2, and ROS Methods),	Number treated as Detected	1
Observations < Largest ND are treated as NDs	Single DL Non-Detect Percentage	85.71%

Warning: There are only 3 Distinct Detected Values in this data set
The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.
Those methods will return a 'N/A' value on your output display!

It is necessary to have 4 or more Distinct Values for bootstrap methods.
However, results obtained using 4 to 9 distinct values may not be reliable.
It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.

UCL Statistics

Normal Distribution Test with Detected Values Only		Lognormal Distribution Test with Detected Values Only	
Shapiro Wilk Test Statistic	0.767	Shapiro Wilk Test Statistic	0.794
5% Shapiro Wilk Critical Value	0.767	5% Shapiro Wilk Critical Value	0.767
Data appear Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	
Assuming Normal Distribution		Assuming Lognormal Distribution	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	8.664	Mean	1.711
SD	11.31	SD	0.899
95% DL/2 (t) UCL	16.97	95% H-Stat (DL/2) UCL	12.05

Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE method failed to converge properly		Mean in Log Scale	1.179
		SD in Log Scale	1.339
		Mean in Original Scale	7.516
		SD in Original Scale	11.93
		95% Percentile Bootstrap UCL	15.87
		95% BCA Bootstrap UCL	20.01

Gamma Distribution Test with Detected Values Only		Data Distribution Test with Detected Values Only
k star (bias corrected)	N/A	Data appear Normal at 5% Significance Level
Theta Star	N/A	
nu star	N/A	

		Nonparametric Statistics	
A-D Test Statistic	N/A		
5% A-D Critical Value	N/A	Kaplan-Meier (KM) Method	
K-S Test Statistic	N/A	Mean	10.24
5% K-S Critical Value	N/A	SD	9.703
Data not Gamma Distributed at 5% Significance Level		SE of Mean	4.492
		95% KM (t) UCL	18.97
Assuming Gamma Distribution		95% KM (z) UCL	17.63
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	17.74
Minimum	N/A	95% KM (bootstrap t) UCL	166.9
Maximum	N/A	95% KM (BCA) UCL	N/A
Mean	N/A	95% KM (Percentile Bootstrap) UCL	34
Median	N/A	95% KM (Chebyshev) UCL	29.82
SD	N/A	97.5% KM (Chebyshev) UCL	38.29
k star	N/A	99% KM (Chebyshev) UCL	54.93
Theta star	N/A		
Nu star	N/A	Potential UCLs to Use	
AppChi2	N/A	95% KM (t) UCL	18.97
95% Gamma Approximate UCL	N/A	95% KM (Percentile Bootstrap) UCL	34
95% Adjusted Gamma UCL	N/A		

Note: DL/2 is not a recommended method.

ProUCL Version 4.04	General UCL Statistics for Data Sets with Non-Detects
User Selected Options	
From File	E:\PTRL\RevisedUCL\RevVaprinputforProUCL_4_11_13.wst
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

m,p-Xylene

General Statistics			
Number of Valid Observations	7	Number of Distinct Observations	6
Raw Statistics		Log-transformed Statistics	
Minimum	11	Minimum of Log Data	2.398
Maximum	99	Maximum of Log Data	4.595
Mean	28.14	Mean of log Data	3.019
Median	17	SD of log Data	0.744
SD	31.57		
Coefficient of Variation	1.122		
Skewness	2.535		

Warning: A sample size of 'n' = 7 may not adequate enough to compute meaningful and reliable test statistics and estimates!

It is suggested to collect at least 8 to 10 observations using these statistical methods!
If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.

Warning: There are only 7 Values in this data
Note: It should be noted that even though bootstrap methods may be performed on this data set,
the resulting calculations may not be reliable enough to draw conclusions

The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.

Relevant UCL Statistics			
Normal Distribution Test		Lognormal Distribution Test	
Shapiro Wilk Test Statistic	0.581	Shapiro Wilk Test Statistic	0.77
Shapiro Wilk Critical Value	0.803	Shapiro Wilk Critical Value	0.803
Data not Normal at 5% Significance Level		Data not Lognormal at 5% Significance Level	
Assuming Normal Distribution		Assuming Lognormal Distribution	
95% Student's-t UCL	51.33	95% H-UCL	67.5
95% UCLs (Adjusted for Skewness)		95% Chebyshev (MVUE) UCL	57.65
95% Adjusted-CLT UCL	59.99	97.5% Chebyshev (MVUE) UCL	71.43
95% Modified-t UCL	53.24	99% Chebyshev (MVUE) UCL	98.51
Gamma Distribution Test		Data Distribution	
k star (bias corrected)	1.078	Data do not follow a Discernable Distribution (0.05)	
Theta Star	26.09		
MLE of Mean	28.14		
MLE of Standard Deviation	27.1		
nu star	15.1		
Approximate Chi Square Value (.05)	7.33	Nonparametric Statistics	
Adjusted Level of Significance	0.0158	95% CLT UCL	47.77
Adjusted Chi Square Value	5.776	95% Jackknife UCL	51.33
		95% Standard Bootstrap UCL	46.28
Anderson-Darling Test Statistic	1.062	95% Bootstrap-t UCL	192.4
Anderson-Darling 5% Critical Value	0.718	95% Hall's Bootstrap UCL	168.3
Kolmogorov-Smirnov Test Statistic	0.349	95% Percentile Bootstrap UCL	51.14
Kolmogorov-Smirnov 5% Critical Value	0.316	95% BCA Bootstrap UCL	62.86
Data not Gamma Distributed at 5% Significance Level		95% Chebyshev(Mean, Sd) UCL	80.16
		97.5% Chebyshev(Mean, Sd) UCL	102.7
Assuming Gamma Distribution		99% Chebyshev(Mean, Sd) UCL	146.9
95% Approximate Gamma UCL	57.97		
95% Adjusted Gamma UCL	73.57		
Potential UCL to Use		Use 95% Chebyshev (Mean, Sd) UCL	80.16

ProUCL Version 4.04	General UCL Statistics for Data Sets with Non-Detects
User Selected Options	
From File	E:\PTRL\RevisedUCL\RevVaprinputforProUCL_4_11_13.wst
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

o-Xylene

General Statistics			
Number of Valid Data	7	Number of Detected Data	4
Number of Distinct Detected Data	4	Number of Non-Detect Data	3
		Percent Non-Detects	42.86%
Raw Statistics		Log-transformed Statistics	
Minimum Detected	5.6	Minimum Detected	1.723
Maximum Detected	28	Maximum Detected	3.332
Mean of Detected	12.98	Mean of Detected	2.36
SD of Detected	10.27	SD of Detected	0.705
Minimum Non-Detect	5.2	Minimum Non-Detect	1.649
Maximum Non-Detect	6.3	Maximum Non-Detect	1.841
Note: Data have multiple DLs - Use of KM Method is recommen		Number treated as Non-Detect	4
For all methods (except KM, DL/2, and ROS Methods),		Number treated as Detected	3
Observations < Largest ND are treated as NDs		Single DL Non-Detect Percentage	57.14%

Warning: There are only 4 Distinct Detected Values in this data
Note: It should be noted that even though bootstrap may be performed on this data set
the resulting calculations may not be reliable enough to draw conclusions

It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.

UCL Statistics			
Normal Distribution Test with Detected Values Only		Lognormal Distribution Test with Detected Values Only	
Shapiro Wilk Test Statistic	0.811	Shapiro Wilk Test Statistic	0.926
5% Shapiro Wilk Critical Value	0.748	5% Shapiro Wilk Critical Value	0.748
Data appear Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	
Assuming Normal Distribution		Assuming Lognormal Distribution	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	8.636	Mean	1.796
SD	9.057	SD	0.864
95% DL/2 (t) UCL	15.29	95% H-Stat (DL/2) UCL	9.613
Maximum Likelihood Estimate(MLE) Method		Log ROS Method	
Mean	3.187	Mean in Log Scale	1.636
SD	13.9	SD in Log Scale	1.039
95% MLE (t) UCL	13.39	Mean in Original Scale	8.267
95% MLE (Tiku) UCL	17.04	SD in Original Scale	9.341
		95% Percentile Bootstrap UCL	14.45
		95% BCA Bootstrap UCL	16.3
Gamma Distribution Test with Detected Values Only		Data Distribution Test with Detected Values Only	
k star (bias corrected)	0.822	Data appear Normal at 5% Significance Level	
Theta Star	15.79		
nu star	6.573		
A-D Test Statistic	0.388	Nonparametric Statistics	
5% A-D Critical Value	0.66	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.66	Mean	9.814
5% K-S Critical Value	0.397	SD	7.648
Data appear Gamma Distributed at 5% Significance Level		SE of Mean	3.338
		95% KM (t) UCL	16.3
Assuming Gamma Distribution		95% KM (z) UCL	15.3
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	15.62
Minimum	5.6	95% KM (bootstrap t) UCL	23.75
Maximum	28	95% KM (BCA) UCL	19.17
Mean	12.59	95% KM (Percentile Bootstrap) UCL	15.97
Median	11.67	95% KM (Chebyshev) UCL	24.36
SD	7.287	97.5% KM (Chebyshev) UCL	30.66
k star	2.628	99% KM (Chebyshev) UCL	43.03
Theta star	4.791		
Nu star	36.8	Potential UCLs to Use	
AppChi2	23.91	95% KM (t) UCL	16.3
95% Gamma Approximate UCL	19.38	95% KM (Percentile Bootstrap) UCL	15.97
95% Adjusted Gamma UCL	N/A		

Note: DL/2 is not a recommended method.

ProUCL Version 4.04	General UCL Statistics for Data Sets with Non-Detects
User Selected Options	
From File	E:\PTRL\RevisedUCL\RevVaprinputforProUCL_4_11_13.wst
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

Methylene Chloride

General Statistics			
Number of Valid Data	7	Number of Detected Data	2
Number of Distinct Detected Data	2	Number of Non-Detect Data	5
		Percent Non-Detects	71.43%

Raw Statistics		Log-transformed Statistics	
Minimum Detected	4.6	Minimum Detected	1.526
Maximum Detected	6.4	Maximum Detected	1.856
Mean of Detected	5.5	Mean of Detected	1.691
SD of Detected	1.273	SD of Detected	0.234
Minimum Non-Detect	4.1	Minimum Non-Detect	1.411
Maximum Non-Detect	8.8	Maximum Non-Detect	2.175

Note: Data have multiple DLs - Use of KM Method is recommen	Number treated as Non-Detect	7
For all methods (except KM, DL/2, and ROS Methods),	Number treated as Detected	0
Observations < Largest ND are treated as NDs	Single DL Non-Detect Percentage	100.00%

Warning: Data set has only 2 Distinct Detected Values.
This may not be adequate enough to compute meaningful and reliable test statistics and estimates.
The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).

Unless Data Quality Objectives (DQOs) have been met, it is suggested to collect additional observations.

The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.
Those methods will return a 'N/A' value on your output display!

It is necessary to have 4 or more Distinct Values for bootstrap methods.
However, results obtained using 4 to 9 distinct values may not be reliable.
It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.

UCL Statistics			
Normal Distribution Test with Detected Values Only		Lognormal Distribution Test with Detected Values Only	
Shapiro Wilk Test Statistic	N/A	Shapiro Wilk Test Statistic	N/A
5% Shapiro Wilk Critical Value	N/A	5% Shapiro Wilk Critical Value	N/A
Data not Normal at 5% Significance Level		Data not Lognormal at 5% Significance Level	
Assuming Normal Distribution		Assuming Lognormal Distribution	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	3.75	Mean	1.239
SD	1.61	SD	0.444
95% DL/2 (t) UCL	4.932	95% H-Stat (DL/2) UCL	6.982
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE method failed to converge properly		Mean in Log Scale	N/A
		SD in Log Scale	N/A
		Mean in Original Scale	N/A
		SD in Original Scale	N/A
		95% Percentile Bootstrap UCL	N/A
		95% BCA Bootstrap UCL	N/A
Gamma Distribution Test with Detected Values Only		Data Distribution Test with Detected Values Only	
k star (bias corrected)	N/A	Data do not follow a Discernable Distribution (0.05)	
Theta Star	N/A		
nu star	N/A		
A-D Test Statistic	N/A	Nonparametric Statistics	
5% A-D Critical Value	N/A	Kaplan-Meier (KM) Method	
K-S Test Statistic	N/A	Mean	4.96
5% K-S Critical Value	N/A	SD	0.72
Data not Gamma Distributed at 5% Significance Level		SE of Mean	0.455
		95% KM (t) UCL	5.845
Assuming Gamma Distribution		95% KM (z) UCL	5.709
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	6.326
Minimum	N/A	95% KM (bootstrap t) UCL	N/A
Maximum	N/A	95% KM (BCA) UCL	6.4
Mean	N/A	95% KM (Percentile Bootstrap) UCL	N/A
Median	N/A	95% KM (Chebyshev) UCL	6.945
SD	N/A	97.5% KM (Chebyshev) UCL	7.804
k star	N/A	99% KM (Chebyshev) UCL	9.491
Theta star	N/A		
Nu star	N/A	Potential UCLs to Use	
AppChi2	N/A	95% KM (t) UCL	5.845
95% Gamma Approximate UCL	N/A	95% KM (% Bootstrap) UCL	N/A
95% Adjusted Gamma UCL	N/A		

Note: DL/2 is not a recommended method.

ProUCL Version 4.04	General UCL Statistics for Data Sets with Non-Detects
User Selected Options	
From File	E:\PTRL\RevisedUCL\RevVaprinputforProUCL_4_11_13.wst
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

Tetrachloroethene

General Statistics

Number of Valid Data	7	Number of Detected Data	2
Number of Distinct Detected Data	2	Number of Non-Detect Data	5
		Percent Non-Detects	71.43%

Raw Statistics		Log-transformed Statistics	
Minimum Detected	16	Minimum Detected	2.773
Maximum Detected	49	Maximum Detected	3.892
Mean of Detected	32.5	Mean of Detected	3.332
SD of Detected	23.33	SD of Detected	0.791
Minimum Non-Detect	8.1	Minimum Non-Detect	2.092
Maximum Non-Detect	16	Maximum Non-Detect	2.773

Note: Data have multiple DLs - Use of KM Method is recommen	Number treated as Non-Detect	5
For all methods (except KM, DL/2, and ROS Methods),	Number treated as Detected	2
Observations < Largest ND are treated as NDs	Single DL Non-Detect Percentage	71.43%

Warning: Data set has only 2 Distinct Detected Values.
This may not be adequate enough to compute meaningful and reliable test statistics and estimates.
The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).

Unless Data Quality Objectives (DQOs) have been met, it is suggested to collect additional observations.

The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.
Those methods will return a 'N/A' value on your output display!

It is necessary to have 4 or more Distinct Values for bootstrap methods.
However, results obtained using 4 to 9 distinct values may not be reliable.
It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.

UCL Statistics

Normal Distribution Test with Detected Values Only		Lognormal Distribution Test with Detected Values Only	
Shapiro Wilk Test Statistic	N/A	Shapiro Wilk Test Statistic	N/A
5% Shapiro Wilk Critical Value	N/A	5% Shapiro Wilk Critical Value	N/A
Data not Normal at 5% Significance Level		Data not Lognormal at 5% Significance Level	
Assuming Normal Distribution		Assuming Lognormal Distribution	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	12.95	Mean	2.096
SD	16.46	SD	0.932
95% DL/2 (t) UCL	25.04	95% H-Stat (DL/2) UCL	17.66
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE method failed to converge properly		Mean in Log Scale	N/A
		SD in Log Scale	N/A
		Mean in Original Scale	N/A
		SD in Original Scale	N/A
		95% Percentile Bootstrap UCL	N/A
		95% BCA Bootstrap UCL	N/A
Gamma Distribution Test with Detected Values Only		Data Distribution Test with Detected Values Only	
k star (bias corrected)	N/A	Data do not follow a Discernable Distribution (0.05)	
Theta Star	N/A		
nu star	N/A		
A-D Test Statistic	N/A	Nonparametric Statistics	
5% A-D Critical Value	N/A	Kaplan-Meier (KM) Method	
K-S Test Statistic	N/A	Mean	20.71
5% K-S Critical Value	N/A	SD	11.55
Data not Gamma Distributed at 5% Significance Level		SE of Mean	6.172
		95% KM (t) UCL	32.71
Assuming Gamma Distribution		95% KM (z) UCL	30.87
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	45.33
Minimum	N/A	95% KM (bootstrap t) UCL	20.71
Maximum	N/A	95% KM (BCA) UCL	49
Mean	N/A	95% KM (Percentile Bootstrap) UCL	49
Median	N/A	95% KM (Chebyshev) UCL	47.62
SD	N/A	97.5% KM (Chebyshev) UCL	59.26
k star	N/A	99% KM (Chebyshev) UCL	82.13
Theta star	N/A		
Nu star	N/A	Potential UCLs to Use	
AppChi2	N/A	95% KM (t) UCL	32.71
95% Gamma Approximate UCL	N/A	95% KM (% Bootstrap) UCL	49
95% Adjusted Gamma UCL	N/A		

Note: DL/2 is not a recommended method.

ProUCL Version 4.04	General UCL Statistics for Data Sets with Non-Detects
User Selected Options	
From File	E:\PTRL\RevisedUCL\RevVaprinputforProUCL_4_11_13.wst
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

Toluene

General Statistics			
Number of Valid Observations	7	Number of Distinct Observations	7
Raw Statistics		Log-transformed Statistics	
Minimum	22	Minimum of Log Data	3.091
Maximum	70	Maximum of Log Data	4.248
Mean	41.5	Mean of log Data	3.649
Median	44	SD of log Data	0.427
SD	17.37		
Coefficient of Variation	0.419		
Skewness	0.528		

Warning: A sample size of 'n' = 7 may not adequate enough to compute meaningful and reliable test statistics and estimates!

It is suggested to collect at least 8 to 10 observations using these statistical methods!
If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.

Warning: There are only 7 Values in this data
Note: It should be noted that even though bootstrap methods may be performed on this data set,
the resulting calculations may not be reliable enough to draw conclusions

The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.

Relevant UCL Statistics			
Normal Distribution Test		Lognormal Distribution Test	
Shapiro Wilk Test Statistic	0.932	Shapiro Wilk Test Statistic	0.94
Shapiro Wilk Critical Value	0.803	Shapiro Wilk Critical Value	0.803
Data appear Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	
Assuming Normal Distribution		Assuming Lognormal Distribution	
95% Student's-t UCL	54.26	95% H-UCL	63.12
95% UCLs (Adjusted for Skewness)		95% Chebyshev (MVUE) UCL	70.88
95% Adjusted-CLT UCL	53.7	97.5% Chebyshev (MVUE) UCL	83.58
95% Modified-t UCL	54.48	99% Chebyshev (MVUE) UCL	108.5
Gamma Distribution Test		Data Distribution	
k star (bias corrected)	3.899	Data appear Normal at 5% Significance Level	
Theta Star	10.64		
MLE of Mean	41.5		
MLE of Standard Deviation	21.02		
nu star	54.58		
Approximate Chi Square Value (.05)	38.61	Nonparametric Statistics	
Adjusted Level of Significance	0.0158	95% CLT UCL	52.3
Adjusted Chi Square Value	34.59	95% Jackknife UCL	54.26
		95% Standard Bootstrap UCL	51.61
Anderson-Darling Test Statistic	0.303	95% Bootstrap-t UCL	55
Anderson-Darling 5% Critical Value	0.709	95% Hall's Bootstrap UCL	53.59
Kolmogorov-Smirnov Test Statistic	0.222	95% Percentile Bootstrap UCL	51.57
Kolmogorov-Smirnov 5% Critical Value	0.313	95% BCA Bootstrap UCL	52.5
Data appear Gamma Distributed at 5% Significance Level		95% Chebyshev(Mean, Sd) UCL	70.12
		97.5% Chebyshev(Mean, Sd) UCL	82.5
Assuming Gamma Distribution		99% Chebyshev(Mean, Sd) UCL	106.8
95% Approximate Gamma UCL	58.67		
95% Adjusted Gamma UCL	65.48		
Potential UCL to Use		Use 95% Student's-t UCL	54.26

ProUCL Version 4.04	General UCL Statistics for Data Sets with Non-Detects
User Selected Options	
From File	E:\PTRL\RevisedUCL\RevVaprinputforProUCL_4_11_13.wst
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

Trichloroethene

General Statistics

Number of Valid Observations	7	Number of Distinct Observations	7
Raw Statistics		Log-transformed Statistics	
Minimum	6.5	Minimum of Log Data	1.872
Maximum	88	Maximum of Log Data	4.477
Mean	43.07	Mean of log Data	3.51
Median	35	SD of log Data	0.86
SD	28.77		
Coefficient of Variation	0.668		
Skewness	0.638		

Warning: A sample size of 'n' = 7 may not adequate enough to compute meaningful and reliable test statistics and estimates!

It is suggested to collect at least 8 to 10 observations using these statistical methods!
If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.

Warning: There are only 7 Values in this data
Note: It should be noted that even though bootstrap methods may be performed on this data set,
the resulting calculations may not be reliable enough to draw conclusions

The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.

Relevant UCL Statistics

Normal Distribution Test		Lognormal Distribution Test	
Shapiro Wilk Test Statistic	0.929	Shapiro Wilk Test Statistic	0.912
Shapiro Wilk Critical Value	0.803	Shapiro Wilk Critical Value	0.803
Data appear Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	
Assuming Normal Distribution		Assuming Lognormal Distribution	
95% Student's-t UCL	64.2	95% H-UCL	155.1
95% UCLs (Adjusted for Skewness)		95% Chebyshev (MVUE) UCL	110.2
95% Adjusted-CLT UCL	63.76	97.5% Chebyshev (MVUE) UCL	138.2
95% Modified-t UCL	64.64	99% Chebyshev (MVUE) UCL	193.2
Gamma Distribution Test		Data Distribution	
k star (bias corrected)	1.311	Data appear Normal at 5% Significance Level	
Theta Star	32.84		
MLE of Mean	43.07		
MLE of Standard Deviation	37.61		
nu star	18.36		
Approximate Chi Square Value (.05)	9.651	Nonparametric Statistics	
Adjusted Level of Significance	0.0158	95% CLT UCL	60.96
Adjusted Chi Square Value	7.82	95% Jackknife UCL	64.2
		95% Standard Bootstrap UCL	59.54
Anderson-Darling Test Statistic	0.254	95% Bootstrap-t UCL	81.38
Anderson-Darling 5% Critical Value	0.715	95% Hall's Bootstrap UCL	116.7
Kolmogorov-Smirnov Test Statistic	0.17	95% Percentile Bootstrap UCL	59.86
Kolmogorov-Smirnov 5% Critical Value	0.315	95% BCA Bootstrap UCL	60.86
Data appear Gamma Distributed at 5% Significance Level		95% Chebyshev(Mean, Sd) UCL	90.47
		97.5% Chebyshev(Mean, Sd) UCL	111
Assuming Gamma Distribution		99% Chebyshev(Mean, Sd) UCL	151.3
95% Approximate Gamma UCL	81.93		
95% Adjusted Gamma UCL	101.1		
Potential UCL to Use		Use 95% Student's-t UCL	64.2

ProUCL Version 4.04	General UCL Statistics for Data Sets with Non-Detects
User Selected Options	
From File	E:\PTRL\RevisedUCL\RevVaprinputforProUCL_4_11_13.wst
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

Freon 11 (Fluorotrichloromethane)

General Statistics

Number of Valid Observations	7	Number of Distinct Observations	7
Raw Statistics		Log-transformed Statistics	
Minimum	180	Minimum of Log Data	5.193
Maximum	1400	Maximum of Log Data	7.244
Mean	552.1	Mean of log Data	6.026
Median	270	SD of log Data	0.804
SD	464.2		
Coefficient of Variation	0.841		
Skewness	1.22		

Warning: A sample size of 'n' = 7 may not adequate enough to compute meaningful and reliable test statistics and estimates!

It is suggested to collect at least 8 to 10 observations using these statistical methods!
If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.

Warning: There are only 7 Values in this data
Note: It should be noted that even though bootstrap methods may be performed on this data set,
the resulting calculations may not be reliable enough to draw conclusions

The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.

Relevant UCL Statistics

Normal Distribution Test		Lognormal Distribution Test	
Shapiro Wilk Test Statistic	0.82	Shapiro Wilk Test Statistic	0.881
Shapiro Wilk Critical Value	0.803	Shapiro Wilk Critical Value	0.803
Data appear Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	
Assuming Normal Distribution		Assuming Lognormal Distribution	
95% Student's-t UCL	893.1	95% H-UCL	1619
95% UCLs (Adjusted for Skewness)		95% Chebyshev (MVUE) UCL	1264
95% Adjusted-CLT UCL	927.1	97.5% Chebyshev (MVUE) UCL	1577
95% Modified-t UCL	906.5	99% Chebyshev (MVUE) UCL	2191
Gamma Distribution Test		Data Distribution	
k star (bias corrected)	1.174	Data appear Normal at 5% Significance Level	
Theta Star	470.4		
MLE of Mean	552.1		
MLE of Standard Deviation	509.6		
nu star	16.43		
Approximate Chi Square Value (.05)	8.269	Nonparametric Statistics	
Adjusted Level of Significance	0.0158	95% CLT UCL	840.7
Adjusted Chi Square Value	6.598	95% Jackknife UCL	893.1
		95% Standard Bootstrap UCL	822.9
Anderson-Darling Test Statistic	0.537	95% Bootstrap-t UCL	1356
Anderson-Darling 5% Critical Value	0.716	95% Hall's Bootstrap UCL	1070
Kolmogorov-Smirnov Test Statistic	0.305	95% Percentile Bootstrap UCL	842.9
Kolmogorov-Smirnov 5% Critical Value	0.316	95% BCA Bootstrap UCL	882.1
Data appear Gamma Distributed at 5% Significance Level		95% Chebyshev(Mean, Sd) UCL	1317
		97.5% Chebyshev(Mean, Sd) UCL	1648
Assuming Gamma Distribution		99% Chebyshev(Mean, Sd) UCL	2298
95% Approximate Gamma UCL	1097		
95% Adjusted Gamma UCL	1375		
Potential UCL to Use		Use 95% Student's-t UCL	893.1

ProUCL Version 4.04	General UCL Statistics for Data Sets with Non-Detects
User Selected Options	
From File	E:\PTRL\RevisedUCL\RevVaprinputforProUCL_4_11_13.wst
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

Freon 12 (Dichlorodifluoromethane)

General Statistics

Number of Valid Observations	7	Number of Distinct Observations	7
Raw Statistics		Log-transformed Statistics	
Minimum	50	Minimum of Log Data	3.912
Maximum	650	Maximum of Log Data	6.477
Mean	331.4	Mean of log Data	5.499
Median	350	SD of log Data	0.979
SD	212.9		
Coefficient of Variation	0.642		
Skewness	-0.0758		

Warning: A sample size of 'n' = 7 may not adequate enough to compute meaningful and reliable test statistics and estimates!

It is suggested to collect at least 8 to 10 observations using these statistical methods!
If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.

Warning: There are only 7 Values in this data
Note: It should be noted that even though bootstrap methods may be performed on this data set,
the resulting calculations may not be reliable enough to draw conclusions

The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.

Relevant UCL Statistics

Normal Distribution Test		Lognormal Distribution Test	
Shapiro Wilk Test Statistic	0.928	Shapiro Wilk Test Statistic	0.824
Shapiro Wilk Critical Value	0.803	Shapiro Wilk Critical Value	0.803
Data appear Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	
Assuming Normal Distribution		Assuming Lognormal Distribution	
95% Student's-t UCL	487.8	95% H-UCL	1689
95% UCLs (Adjusted for Skewness)		95% Chebyshev (MVUE) UCL	947.2
95% Adjusted-CLT UCL	461.3	97.5% Chebyshev (MVUE) UCL	1201
95% Modified-t UCL	487.4	99% Chebyshev (MVUE) UCL	1698
Gamma Distribution Test		Data Distribution	
k star (bias corrected)	1.118	Data appear Normal at 5% Significance Level	
Theta Star	296.5		
MLE of Mean	331.4		
MLE of Standard Deviation	313.5		
nu star	15.65		
Approximate Chi Square Value (.05)	7.716	Nonparametric Statistics	
Adjusted Level of Significance	0.0158	95% CLT UCL	463.8
Adjusted Chi Square Value	6.113	95% Jackknife UCL	487.8
		95% Standard Bootstrap UCL	454
Anderson-Darling Test Statistic	0.591	95% Bootstrap-t UCL	476.5
Anderson-Darling 5% Critical Value	0.718	95% Hall's Bootstrap UCL	456.7
Kolmogorov-Smirnov Test Statistic	0.327	95% Percentile Bootstrap UCL	455
Kolmogorov-Smirnov 5% Critical Value	0.316	95% BCA Bootstrap UCL	452.9
Data follow Appr. Gamma Distribution at 5% Significance Level		95% Chebyshev(Mean, Sd) UCL	682.2
		97.5% Chebyshev(Mean, Sd) UCL	833.9
Assuming Gamma Distribution		99% Chebyshev(Mean, Sd) UCL	1132
95% Approximate Gamma UCL	672.2		
95% Adjusted Gamma UCL	848.6		
Potential UCL to Use		Use 95% Student's-t UCL	487.8

ProUCL Version 4.04	General UCL Statistics for Data Sets with Non-Detects
User Selected Options	
From File	E:\PTRL\RevisedUCL\RevVaprinputforProUCL_4_11_13.wst
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

Freon 113 (1,1,2-Trichlorotrifluoroethane)

General Statistics			
Number of Valid Observations	7	Number of Distinct Observations	7
Raw Statistics		Log-transformed Statistics	
Minimum	37	Minimum of Log Data	3.611
Maximum	360	Maximum of Log Data	5.886
Mean	126.3	Mean of log Data	4.55
Median	70	SD of log Data	0.792
SD	113.4		
Coefficient of Variation	0.898		
Skewness	1.797		

Warning: A sample size of 'n' = 7 may not adequate enough to compute meaningful and reliable test statistics and estimates!

It is suggested to collect at least 8 to 10 observations using these statistical methods!
If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.

Warning: There are only 7 Values in this data
Note: It should be noted that even though bootstrap methods may be performed on this data set,
the resulting calculations may not be reliable enough to draw conclusions

The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.

Relevant UCL Statistics			
Normal Distribution Test		Lognormal Distribution Test	
Shapiro Wilk Test Statistic	0.781	Shapiro Wilk Test Statistic	0.931
Shapiro Wilk Critical Value	0.803	Shapiro Wilk Critical Value	0.803
Data not Normal at 5% Significance Level		Data appear Lognormal at 5% Significance Level	
Assuming Normal Distribution		Assuming Lognormal Distribution	
95% Student's-t UCL	209.6	95% H-UCL	357
95% UCLs (Adjusted for Skewness)		95% Chebyshev (MVUE) UCL	284.1
95% Adjusted-CLT UCL	227.9	97.5% Chebyshev (MVUE) UCL	353.9
95% Modified-t UCL	214.4	99% Chebyshev (MVUE) UCL	491.1
Gamma Distribution Test		Data Distribution	
k star (bias corrected)	1.17	Data appear Gamma Distributed at 5% Significance Level	
Theta Star	108		
MLE of Mean	126.3		
MLE of Standard Deviation	116.8		
nu star	16.38		
Approximate Chi Square Value (.05)	8.229	Nonparametric Statistics	
Adjusted Level of Significance	0.0158	95% CLT UCL	196.8
Adjusted Chi Square Value	6.563	95% Jackknife UCL	209.6
		95% Standard Bootstrap UCL	193.7
Anderson-Darling Test Statistic	0.437	95% Bootstrap-t UCL	292.7
Anderson-Darling 5% Critical Value	0.716	95% Hall's Bootstrap UCL	429.4
Kolmogorov-Smirnov Test Statistic	0.256	95% Percentile Bootstrap UCL	198.1
Kolmogorov-Smirnov 5% Critical Value	0.316	95% BCA Bootstrap UCL	213.9
Data appear Gamma Distributed at 5% Significance Level		95% Chebyshev(Mean, Sd) UCL	313.1
		97.5% Chebyshev(Mean, Sd) UCL	393.9
Assuming Gamma Distribution		99% Chebyshev(Mean, Sd) UCL	552.7
95% Approximate Gamma UCL	251.3		
95% Adjusted Gamma UCL	315.1		
Potential UCL to Use		Use 95% Approximate Gamma UCL	251.3

APPENDIX F

Output from Vapor Intrusion Model

Appendix F
Contents

Table F-1: Summary of Inputs used in Vapor Intrusion Model (SG-ADV; version 3.1) –Basement Scenario

Table F-2: Summary of Soil and Chemical Properties Used in Vapor Intrusion Model

Table F-3: Summary of Exposure Point Concentrations, Air Concentrations and Risk Estimates –Offsite Residence with Basement

Table F-4: Summary of Inputs used in Vapor Intrusion Model (SG-ADV; version 3.1) –Slab on Grade Scenario

Table F-5: Summary of Exposure Point Concentrations, Air Concentrations and Risk Estimates –Offsite Residence with Slab Base

Appendix F Table 1
Summary of Inputs used in Vapor Intrusion Model--Basement Scenario
Page Trowbridge Ranch Landfill

SG-ADV
Version 3.1; 02/04

MODIFIED TO RUN AS A BATCH PROCESSOR

USES SOIL VAPOR CONC UNITS IN PPMv ONLY

= Site Specific Parameters

Soil Gas Concentration Data

ENTER Chemical 127184 (numbers only, no dashes)	Soil gas conc., C_g ($\mu g/m^3$)	OR	ENTER Soil gas 0.004734005 C_g (ppmv)	Chemical
76131			3.22E-02	1,1,2-Trichloro-1,2,2-trifluoroethane

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (cm)	ENTER Soil gas sampling depth below grade, L_s (cm)	ENTER Average soil temperature, T_S (°C)	ENTER Totals must add up to value of Ls (cell F24) Thickness of soil stratum A, h_A (cm)	ENTER Thickness of soil stratum B, (Enter value or 0) h_B (cm)	ENTER Thickness of soil stratum C, (Enter value or 0) h_C (cm)	ENTER Soil stratum A SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined stratum A soil vapor permeability, k_v (cm^2)
200	304	22	304	0	0	SL		

MORE ↓

ENTER Stratum A SCS soil type	ENTER Stratum A soil dry bulk density, ρ_b^A (g/cm^3)	ENTER Stratum A soil total porosity, n^A (unitless)	ENTER Stratum A soil water-filled porosity, θ_w^A (cm^3/cm^3)	ENTER Stratum B SCS soil type	ENTER Stratum B soil dry bulk density, ρ_b^B (g/cm^3)	ENTER Stratum B soil total porosity, n^B (unitless)	ENTER Stratum B soil water-filled porosity, θ_w^B (cm^3/cm^3)	ENTER Stratum C SCS soil type	ENTER Stratum C soil dry bulk density, ρ_b^C (g/cm^3)	ENTER Stratum C soil total porosity, n^C (unitless)	ENTER Stratum C soil water-filled porosity, θ_w^C (cm^3/cm^3)
SL	1.62	0.387	0.103	SL	1.62	0.387	0.103	SL	1.62	0.387	0.103

MORE ↓

ENTER Enclosed space floor thickness, L_{crack} (cm)	ENTER Soil-bldg. pressure differential, ΔP ($g/cm\text{-}s^2$)	ENTER Enclosed space floor length, L_B (cm)	ENTER Enclosed space floor width, W_B (cm)	ENTER Enclosed space height, H_B (cm)	ENTER Floor-wall seam crack width, w (cm)	ENTER Indoor air exchange rate, ER (1/h)	ENTER Average vapor flow rate into bldg. OR Leave blank to calculate Q_{soil} (L/m)
10	40	1000	1000	366	0.1	0.25	5

ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)
70	30	30	350.000

END

Note:
Information from EPA SG-ADV Model (http://www.epa.gov/oswer/riskassessment/airmodel/johnson_ettinger.htm)

Appendix F Table 2
Summary of Soil and Chemical Properties Used in Vapor Intrusion Model
Page Trowbridge Ranch Landfill

Soil Properties Lookup Table

SCS Soil Type	K_s (cm/h)	α_1 (1/cm)	N (unitless)	M (unitless)	n (cm^3/cm^3)	θ_r (cm^3/cm^3)	Mean Grain Diameter (cm)	Bulk Density (g/cm^3)	θ_w (cm^3/cm^3)	SCS Soil Name
SL	1.60	0.02667	1.449	0.3099	0.387	0.039	0.030	1.62	0.103	Sandy Loam

Chemical Properties Lookup Table

CAS No.	Chemical	Organic carbon partition coefficient, K_{oc} (cm^3/g)	Diffusivity in air, D_a (cm^2/s)	Diffusivity in water, D_w (cm^2/s)	Pure component water solubility, S (mg/L)	Henry's law constant H' (unitless)	Henry's law constant at reference temperature, H (atm-m^3/mol)	Henry's law constant reference temperature, T_R (^oC)	Normal boiling point, T_B (^oK)	Critical temperature, T_C (^oK)	Enthalpy of vaporization at the normal boiling point, $\Delta H_{v,b}$ (cal/mol)	Unit risk factor, URF ($\mu g/m^3)^{-1}$	Reference conc., RfC (mg/m^3)	Molecular weight, MW (g/mol)	URF extrapolated (X)	RfC extrapolated (X)
56235	Carbon tetrachloride	1.74E+02	7.80E-02	8.80E-06	7.93E+02	1.24E+00	3.03E-02	25	349.90	556.60	7,127	1.5E-05	0.0E+00	1.54E+02		
67641	Acetone	5.75E-01	1.24E-01	1.14E-05	1.00E+06	1.59E-03	3.87E-05	25	329.20	508.10	6,955	0.0E+00	3.5E-01	5.81E+01		X
67663	Chloroform	3.98E+01	1.04E-01	1.00E-05	7.92E+03	1.50E-01	3.66E-03	25	334.32	536.40	6,988	2.3E-05	0.0E+00	1.19E+02		
71432	Benzene	5.89E+01	8.80E-02	9.80E-06	1.79E+03	2.27E-01	5.54E-03	25	353.24	562.16	7,342	7.8E-06	3.0E-02	7.81E+01		
75092	Methylene chloride	1.17E+01	1.01E-01	1.17E-05	1.30E+04	8.96E-02	2.18E-03	25	313.00	510.00	6,706	4.7E-07	3.0E+00	8.49E+01		
75150	Carbon disulfide	4.57E+01	1.04E-01	1.00E-05	1.19E+03	1.24E+00	3.02E-02	25	319.00	552.00	6,391	0.0E+00	7.0E-01	7.61E+01		
75694	Trichlorofluoromethane	4.97E+02	8.70E-02	9.70E-06	1.10E+03	3.97E+00	9.68E-02	25	296.70	471.00	5,999	0.0E+00	7.0E-01	1.37E+02		
75718	Dichlorodifluoromethane	4.57E+02	6.65E-02	9.92E-06	2.80E+02	1.40E+01	3.42E-01	25	243.20	384.95	9,421	0.0E+00	2.0E-01	1.21E+02		
76131	1,1,2-Trichloro-1,2,2-trifluoroetha	1.11E+04	7.80E-02	8.20E-06	1.70E+02	1.97E+01	4.80E-01	25	320.70	487.30	6,463	0.0E+00	3.0E+01	1.87E+02		
78933	Methylethylketone (2-butanone)	2.30E+00	8.08E-02	9.80E-06	2.23E+05	2.29E-03	5.58E-05	25	352.50	536.78	7,481	0.0E+00	5.0E+00	7.21E+01		
79016	Trichloroethylene	1.66E+02	7.90E-02	9.10E-06	1.47E+03	4.21E-01	1.03E-02	25	360.36	544.20	7,505	2.00E-06		1.31E+02		
95476	o-Xylene	3.63E+02	8.70E-02	1.00E-05	1.78E+02	2.12E-01	5.18E-03	25	417.60	630.30	8,661	0.0E+00	7.00E-01	1.06E+02		
100414	Ethylbenzene	3.63E+02	7.50E-02	7.80E-06	1.69E+02	3.22E-01	7.86E-03	25	409.34	617.20	8,501	0.0E+00	1.0E+00	1.06E+02		
106423	p-Xylene	3.89E+02	7.69E-02	8.44E-06	1.85E+02	3.13E-01	7.64E-03	25	411.52	616.20	8,525	0.0E+00	7.00E-01	1.06E+02		
108101	Methylisobutylketone (4-methyl-2	9.06E+00	7.50E-02	7.80E-06	1.90E+04	5.64E-03	1.38E-04	25	389.50	571.00	8,243	0.0E+00	3.0E+00	1.00E+02		
108883	Toluene	1.82E+02	8.70E-02	8.60E-06	5.26E+02	2.72E-01	6.62E-03	25	383.78	591.79	7,930	0.0E+00	5.00E+00	9.21E+01		
127184	Tetrachloroethylene	1.55E+02	7.20E-02	8.20E-06	2.00E+02	7.53E-01	1.84E-02	25	394.40	620.20	8,288	5.9E-06	6.0E-01	1.66E+02		

Note:
Information from EPA SG-ADV Model (http://www.epa.gov/oswer/riskassessment/airmodel/johnson_ettinger.htm)
Toxicity information updated August 26, 2009.

Appendix F Table 3
Summary of Exposure Point Concentrations, Air Concentrations and Risk Estimates
Soil Vapor Concentrations
Page Trowbridge Ranch Landfill--offsite resident (basement)

COMPOUND	CASRN	Soil Vapor Conc (ppmv)	Alpha (dimensionless)	Predicted Indoor Air Concentration from Soil Vapor (ug/m3)	Incremental risk from vapor intrusion to indoor air, carcinogen (unitless)	Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless)
Carbon tetrachloride	56235	6.73E-02	2.03E-03	8.70E-01	5.36E-06	NA
Acetone	67641	9.09E-01	2.37E-03	5.17E+00	NA	1.42E-02
Chloroform	67663	4.20E-01	2.25E-03	4.66E+00	4.40E-05	NA
Benzene	71432	1.02E-02	2.13E-03	7.00E-02	2.24E-07	2.24E-03
Methylene chloride	75092	1.65E-03	2.23E-03	1.29E-02	2.49E-09	4.11E-06
Carbon disulfide	75150	5.13E-03	2.25E-03	3.63E-02	NA	4.97E-05
Trichlorofluoromethane	75694	1.56E-01	2.12E-03	1.87E+00	NA	2.57E-03
Dichlorodifluoromethane	75718	1.35E-01	1.91E-03	1.29E+00	NA	6.19E-03
1,1,2-Trichloro-1,2,2-trifluoroethane	76131	3.22E-02	2.03E-03	5.07E-01	NA	1.62E-05
Methylethylketone (2-butanone)	78933	1.36E-02	2.06E-03	8.34E-02	NA	1.60E-05
Trichloroethene	79016	1.17E-02	2.04E-03	1.30E-01	1.07E-07	NA
o-Xylene	95476	3.61E-03	2.12E-03	3.35E-02	NA	4.59E-05
Ethylbenzene	100414	4.29E-03	2.00E-03	3.77E-02	NA	3.61E-05
p-Xylene	106423	1.81E-02	2.02E-03	1.61E-01	NA	2.20E-04
Methylisobutylketone (4-methyl-2-pentan	108101	6.50E-03	2.00E-03	5.39E-02	NA	1.72E-05
Toluene	108883	1.41E-02	2.12E-03	1.14E-01	NA	2.18E-05
Tetrachloroethene	127184	4.73E-03	1.97E-03	6.39E-02	1.55E-07	1.02E-04
				Total	5E-05	3E-02

Appendix F Table 4
Summary of Inputs used in Vapor Intrusion Model--Slab on Grade Assumption
Page Trowbridge Ranch Landfill

SG-ADV
Version 3.1; 02/04

MODIFIED TO RUN AS A BATCH PROCESSOR

USES SOIL VAPOR CONC UNITS IN PPMv ONLY

= Site Specific Parameters

Soil Gas Concentration Data

ENTER Chemical 76131 (numbers only, no dashes)	Soil gas conc., C_g ($\mu g/m^3$)	OR	ENTER Soil gas 0.032187 C_g (ppmv)	Chemical
76131			3.22E-02	1,1,2-Trichloro-1,2,2-trifluoroethane

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (cm)	ENTER Soil gas sampling depth below grade, L_s (cm)	ENTER Average soil temperature, T_S (°C)	ENTER Thickness of soil stratum A, h_A (cm)	ENTER Thickness of soil stratum B, (Enter value or 0) h_B (cm)	ENTER Thickness of soil stratum C, (Enter value or 0) h_C (cm)	ENTER Soil stratum A SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined stratum A soil vapor permeability, k_v (cm^2)
			Totals must add up to value of Ls (cell F24)					
15	304	22	304	0	0	SL		

MORE ↓

ENTER Stratum A SCS soil type	ENTER Stratum A soil dry bulk density, ρ_b^A (g/cm^3)	ENTER Stratum A soil total porosity, n^A (unitless)	ENTER Stratum A soil water-filled porosity, θ_w^A (cm^3/cm^3)	ENTER Stratum B SCS soil type	ENTER Stratum B soil dry bulk density, ρ_b^B (g/cm^3)	ENTER Stratum B soil total porosity, n^B (unitless)	ENTER Stratum B soil water-filled porosity, θ_w^B (cm^3/cm^3)	ENTER Stratum C SCS soil type	ENTER Stratum C soil dry bulk density, ρ_b^C (g/cm^3)	ENTER Stratum C soil total porosity, n^C (unitless)	ENTER Stratum C soil water-filled porosity, θ_w^C (cm^3/cm^3)
SL	1.62	0.387	0.103	SL	1.62	0.387	0.103	SL	1.62	0.387	0.103

MORE ↓

ENTER Enclosed space floor thickness, L_{crack} (cm)	ENTER Soil-bldg. pressure differential, ΔP ($g/cm\text{-}s^2$)	ENTER Enclosed space floor length, L_B (cm)	ENTER Enclosed space floor width, W_B (cm)	ENTER Enclosed space height, H_B (cm)	ENTER Floor-wall seam crack width, w (cm)	ENTER Indoor air exchange rate, ER (1/h)	ENTER Average vapor flow rate into bldg. OR Leave blank to calculate Q_{soil} (L/m)
10	40	1000	1000	366	0.1	0.25	5

ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)
70	30	30	350.000

END

Note:
Information from EPA SG-ADV Model (http://www.epa.gov/oswer/riskassessment/airmodel/johnson_ettinger.htm)

Appendix F Table 5
Summary of Exposure Point Concentrations, Air Concentrations and Risk Estimates
Soil Vapor Concentrations
Page Trowbridge Ranch Landfill--offsite resident (slab base)

COMPOUND	CASRN	Soil Vapor Conc (ppmv)	Alpha (dimensionless)	Predicted Indoor Air Concentration from Soil Vapor (ug/m3)	Incremental risk from vapor intrusion to indoor air, carcinogen (unitless)	Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless)
Carbon tetrachloride	56235	6.73E-02	1.27E-03	5.41E-01	3.34E-06	NA
Acetone	67641	9.09E-01	1.75E-03	3.81E+00	NA	1.05E-02
Chloroform	67663	4.20E-01	1.55E-03	3.22E+00	3.04E-05	NA
Benzene	71432	1.02E-02	1.38E-03	4.55E-02	1.46E-07	1.45E-03
Methylene chloride	75092	1.65E-03	1.52E-03	8.83E-03	1.70E-09	2.81E-06
Carbon disulfide	75150	5.13E-03	1.55E-03	2.51E-02	NA	3.44E-05
Trichlorofluoromethane	75694	1.56E-01	1.37E-03	1.21E+00	NA	1.66E-03
Dichlorodifluoromethane	75718	1.35E-01	1.12E-03	7.58E-01	NA	3.64E-03
1,1,2-Trichloro-1,2,2-trifluoroethane	76131	3.22E-02	1.27E-03	3.15E-01	NA	1.01E-05
Methylethylketone (2-butanone)	78933	1.36E-02	1.30E-03	5.26E-02	NA	1.01E-05
Trichloroethene	79016	1.17E-02	1.28E-03	8.13E-02	6.68E-08	NA
o-Xylene	95476	3.61E-03	1.37E-03	2.17E-02	NA	2.97E-05
Ethylbenzene	100414	4.29E-03	1.23E-03	2.31E-02	NA	2.22E-05
p-Xylene	106423	1.81E-02	1.25E-03	9.95E-02	NA	1.36E-04
Methylisobutylketone (4-methyl-2-pentanone)	108101	6.50E-03	1.23E-03	3.31E-02	NA	1.06E-05
Toluene	108883	1.41E-02	1.37E-03	7.37E-02	NA	1.41E-05
Tetrachloroethene	127184	4.73E-03	1.19E-03	3.86E-02	9.37E-08	6.18E-05
				Total	3E-05	2E-02

APPENDIX G

Memorandum dated March 11, 2009:
Response to Jeneane Hanley/ADEQ Comments on the
Draft Human Health Risk Assessment for Page Trowbridge Ranch Landfill
(Dated September 25, 2008)

Memo

To	**Jeanene Hanley/ADEQ**	File no	
From	**Barbara Pugh/AMEC**	cc	**Doug Brown/ADOA-RMS**
Tel	**978-692-9090 x 298**		
Date	**09 February 2009**		

Subject **Response to ADEQ Comments (dated January 7, 2009) on Human Health Risk Assessment for Page Trowbridge Ranch Landfill (dated September 23, 2008)**

The following represents AMEC's responses to ADEQ comments. ADEQ's comments are presented as they were written and provided by Jeanene Hanley/ADEQ within the draft document.

Comment 1 (Section 2.1 page 6): I think this is a little misleading as stated. The sampling in this case is a bit limited relative to the size of the source. Perhaps at the locations that they conducted this limited sampling, there may not have been levels of concern. But, we can not conclude that there were no levels of concern in soil elsewhere. These samples were collected from outside the A and B units, which would not provide direct measures of deposited and released compounds. At the limited sample depths shown, we might conclude that they may or may not have intercepted the leachable spread from the source in the vadose zone. However, we can still state that detected compounds are still valid for inclusion in the hazard assessment. A slight restatement here would be helpful to reflect this conditional information.

Response: As noted in the comment, the soil dataset from this single investigation represent soil samples collected outside the footprint of the landfill. And while the comment is also correct that no characterization activities occurred within the deposited material within the landfill, there is no need to do so as the permitted landfill itself and the material deposited within it do not represent a source of direct exposure. As indicated in the first paragraph of this section, the data were obtained as part of an investigation activity to determine the potential for hazardous waste materials to exist lateral to and outside the landfill units--either not placed correctly into the original landfill boundary or subsequently migrated laterally from the original landfill cells. The next paragraph describes the dataset from an subsurface investigation that did evaluate subsurface soil up to 200 ft bgs at 4 borings in order to determine both potential lateral and vertical migration albeit only along the west side of the landfill units, which generally represents the reported direction of groundwater flow.

The last bullet of the passage noted by the comment will be modified as follows:

- <u>The</u> detected concentrations <u>in soil from this sampling event conducted prior to landfill closure activities were</u> below conservative risk-based <u>concentrations protective of direct contact exposures.</u>

Comment 2: (Section 2.2 1st paragraph page 7) I think it would be good to add a statement here that informs the reader that this method of collection and analysis does adequate to quantitate or recover all VOCs with reliable accuracy. It is a useful screening tool for hazard assessment and relative qualitative characterization. However, it does not meet the identification and quantitation QA/QC requirements necessary for risk assessment or compliance sampling.

Response: The noted paragraph will be modified as follows:

> ….The samples were collected into charcoal filter glass tubes and analyzed with a portable gas chromatograph for target VOCs as well as total hydrocarbons by PID/FID. <u>While this field method is a useful screening tool for characterization activities and for a qualitative hazard assessment, it does not meet the identification and quantitative quality assurance/quality control requirements necessary for risk assessment or compliance sampling</u>.

Comment 3 (Section 2.2 2nd paragraph page 7): I think it would be a helpful clarification if this could be restated to reflect that while this data indicates that these compounds are valid COPCs, the data is not suitable for quantitative use in the risk assessment.

Response: The noted paragraph will be modified as follows:

> ... It is noted that these data reflect site conditions prior to closure of the landfill and are therefore not representative of current, post-closure site conditions. <u>Furthermore, as previously stated, the data are not of suitable analytical quality to be used in the risk assessment.</u> Therefore, these data are not evaluated further in this risk assessment.

Comment 4 (Section 2.2, 7th paragraph page 9): It seems like 2 different sentences were morphed together here. So, the missing text should be replaced to make sense.

Response: The noted paragraph will be modified as follows:

> In addition, <u>five soil vapor samples were collected at each of</u> five soil boring locations representing <u>the</u> area immediately adjacent to the landfill but still on the landfill site<u>, including a sample</u> to the north (DP-16), <u>to the</u> east (DP-10 and DP-32), <u>to the</u> south (DP-23) and <u>to the</u> west (DP-17). <u>The</u> soil vapor samples were collected from a depth of 15 ft bgs <u>and analyzed by EPA modified 8021B in an on-site mobile laboratory (as previously described).</u> Among these samples, TCE and toluene were detected in all five samples and PCE was detected in three samples; the maximum detected concentrations of these three analytes were 7.6 mg/m^3, 6 mg/m^3, and 5.1 mg/m^3 respectively (see Table 4 in Weston 2003).

Comment 5 (Section 2.2, 10th paragraph page 10): I think we should reconsider how this is presented. As I recall, the ADEQ hydrologist was not in agreement with these conclusions. I'll defer to Anthony on how this should be handled.

Response: No information was provided by Mr. Leverock as part of this comment. However, in a letter from Anthony Leverock to Steve Holland dated April 7, 2005 and referenced as "Review Comments, Post-Closure Period Expanded Groundwater Detection Monitoring Plan, University of Arizona Page-Trowbridge Ranch Landfill EPA ID No. AZD806658124", the following conclusions were made about the 2003 Interim Measures investigation:

> "….Results of UA's Interim Measure Investigation confirmed that releases of volatile organic compounds have occurred at the PTRL, but that (1) **ground water contamination beneath the site has not occurred**, (2) contaminant transport is occurring almost entirely by vapor diffusion, (3) current vapor concentrations at depth although widespread are too small to cause ground water contaminant, and (4) **future increasing vapor concentrations at depth are monitored and controlled by soil vapor extraction prior to any ground water contamination above regulatory thresholds."**

No statements were made or noted by Mr Leverock in the document that negate or find issue with these conclusions. The noted document is provided as an attachment to this memorandum. No additional changes to the risk assessment are required based on this comment.

October 2009 Revised Response: Comments were received from Mr. Leverock in an email dated May 22, 2009. Responses to these additional comments are provided in Appendix H.

Comment 6 (Section 2.2, 10th paragraph page 10): I looked in the appendices and the CD but couldn't find the AMEC reports. Would it be possible to add this to the CD for completeness of available information to review?

Response: The historical reports included in the CD provided as Appendix A are noted with an asterisk in Section 1.0 of the report. However, to comply with the request, the list of documents provided on the CD will be expanded to include the two AMEC reports documenting the December 2007 and April 2008 soil vapor sampling events.

Comment 7 (Section 2.2. 12th paragraph page 10): This is where I get a little lost because the text begins to depart from what is depicted in the figures. Here, the text indicates that MW-2 is part of this data set, yet it's not footnoted or depicted in the graphs provided in Figures 3, 4, and 5. That's okay if you state the basis for this, i.e., even though MW-2 and MW-5 have different results, they are not significant, and both wells have similar depth intercepts of screen though quite oppositely located relative to the fill areas. If you want to include any of the MW data, I would suggest reporting it as a combined well data set or the greater concentration of the two wells. Either way it's not going to shift the graph patterns. However, I would much rather see the data plotted for SGD-SP because those are frequently some good hits and will be quite visible on the plot, as apposed to the flatliners that MW-2 and MW-5 result in. Also, please fix Figure 4 to follow the same plotting sequence as Figs. 3 and 5, so that deeper data is toward the front and shallowest data in the back.

Response: Figures 3, 4, and 5 will be revised as requested. The data for MW-5 was included as it represents the deepest sampling interval for soil vapor information. However, the data

were presented in Figure 4 in a different order so that the graph information was fully visible. If plotting sequence follows that as presented in Figures 3 and 5, the data becomes obscured.

Comment 8 (page 11 last paragraph first bullet): It hard to place this chemical in the category you have described here. 1,1-DCE is non-detect everywhere except at SV13 which is up at the NW corner. The detection levels are certainly low enough at the southern border vapor points. But the elevated detection limits for SV-9,-10, and -11 and the lack of additional vapor location relative to the NW and NE areas don't allow us to draw any conclusion regarding magnitudes of decreased levels. You might want to footnote that accordingly.

Response: The following footnote will be added:

> [5] 1,1-Dichloroethene was detected in a single shallow soil vapor sample (SV-13) located in the northeast corner of the landfill. 1,1-Dichloroethene was not detected in any shallow soil vapor sample along the southern property boundary (see Table 7 and Figure 2).

Comment 9 (page 12 2nd paragraph last sentence): I can not concur with this conclusion. I think is more supportable to stick to what we do know. First, we know that these chemicals are widely used solvents, typical in many laboratories. Second, they tend to be at lower concentrations than the group of chemicals above. Unfortunately, it's entirely possible that they may not be found in significant concentrations relative to other chemicals, or they may have not shared the same deposition patterns as the other chemicals in the fill area. Because the elevated detection levels of the "on" landfill vapor locations (SV-9,-10) are too high to be able to determine what concentration might be within the fill area then we can not determine any patterns. Even the wash does not appear to be a reasonable "alternative source" for all these chemicals at the southern side of the landfill, because they are present at sample location having the greatest distance from the wash, i.e., SV-13 at the NE corner. Additionally, acetone was detected at SV-9 and SV-11. Without additional investigation, no conclusions can reasonably be drawn.

Response: The noted sentence and the following paragraph (3rd paragraph as noted in comment) will be revised as follows:

> "The following analytes were detected at highest concentrations in the soil vapor samples from the furthest distance from the landfill perimeter~~, suggesting a source(s) other than the landfill to their presence~~:"
>
> "The highest concentrations of the analytes benzene, ethylbenzene, toluene, and xylenes (BTEX) were associated with shallow soil vapor samples from SV-1 and SV-2, collected from the extreme southeastern property boundary (see Figure 2). ~~None of the BTEX compounds, which are commonly associated with recent petroleum releases (e.g. gasoline from an off-road vehicle), were detected in any of the soil vapor samples collected closer to the landfill periphery or in any sample from the soil vapor monitoring wells (see Table 6).~~ All detected compounds in the shallow soil vapor samples SV-1 through SV-8 from this sampling event were evaluated as COPCs in the risk assessment."

Comment 10 (page 13, first paragraph): I recommend that the data from SV-4 not be used quantitatively in the risk assessment. It had a clear leak, and all data is flagged as estimates. When observing the order of magnitude difference from the data at SV-3 and SV-5 which bracket it in location, It is clearly compromised. It would be appropriate to discuss this issue here.

Also, just for clarification purposes for the readers' benefit, please place a brief statement in this paragraph indicating why it is not appropriate to use the data from SV-9, -10, -11, and -13 in the risk assessment.

Response 10: The data from SV-4 will be removed the soil vapor dataset used to estimate indoor air concentrations and the noted paragraph will be revised as follows:

> All detected compounds in the shallow soil vapor samples SV-1 through SV-8 from this sampling event, excluding the SV-4, were evaluated as COPCs in the risk assessment. The data from sampling location SV-4 was not evaluated quantitatively in the risk assessment because of the presence of a leak detection compound (1,1-difluoroethane) in the sample, indicating the sample was compromised and not representative of soil vapor conditions. The shallow soil vapor samples were collected along the fence line to approximate the southern boundary of the state-owned property (State of Arizona Board of Regents), which is approximately 50 feet further south than the fence. The soil vapor samples were collected north of the fence line because of difficulty accessing the roughly 50 feet of state-owned property south of the fence. The area south of the fence is in a wash area and consists of soft sands making access extremely difficult. The soil vapor sampling locations SV-1 through SV-8 were installed along the northern edge of the fence to provide conservative estimates of concentrations at the edge of the state-owned property, immediately adjacent to private property that could be developed for any future use, including residential use. Sampling locations SV-9 through SV-13 represent shallow soil vapor conditions on the State of Arizona Board of Regents property adjacent to the landfill periphery. These locations are within the 10-acre fenced area of the landfill. Currently, the private property located immediately south of the wash is not used for any purpose and consists of native vegetation for approximately 1 mile to State Highway 77. A former Titan II missile site also lies approximately 0.75 miles to south of the landfill. The Saddlebrook Ranch golf course lies approximately 1.3 miles west southwest of the landfill.

Comment 11 (Section 2.4 6th paragraph page 16): Because Table 10 is not presented amid the text of this section and is easily missed as there is no discussion of some of the other notable isotopes deposited at the landfill which have remaining activity, please include a brief statement of those beta and gamma emitters present at greater than 1 mCi, and indicate if the chlorine and argon isotopes were deposit as a containerized gas or otherwise.

Response: The first sentence of the section introduces Table 10. Additional references to Table 10 will be inserted within the entire section. In addition, the 2nd paragraph of Section 2.4.6

will be modified as follows to include information about nuclides with activities greater than 1 millicurie (mCi):

> "Based on inventory amounts and the decay rates of the disposed radionuclides at PTRL (Table 10), as of March 26, 2008, the total radionuclide activity remaining in the approximate 231 pits within Site B was 6.7 curies (Ci) [5], of which 4.5 Ci (or 65.9%) is tritium (^{3}H) and 2.29 Ci is 14-carbon (^{14}C). The remaining 0.02% of low-level activity is associated with 16 nuclides, although it is again noted that daughter progeny were not included in this inventory. The 16 nuclides with remaining activity (in order ranging from highest to lowest amount of remaining activity; see Table 10) include the following nuclides:
>
> - Tritium (^{3}H)
> - Carbon-14 (^{14}C)
> - Chlorine-36
> - Nickel-63
> - Curium-244
> - Cobalt-60
> - Uranium-238 (depleted)
> - Radium 226
> - Uranium-238 (natural)
> - Cesium-137
> - Strontium-90
> - Lead-210
> - Argon-39
> - Barium-133
> - Iron-55
> - Americium-241
> - Sodium-22
> - Promethium-145
>
> The nuclides disposed of at the PTRL whose activities are currently greater than one millicurie (mCi) (decay-corrected to 26 March 2008 as indicated in Table 10) are listed in the table below.

Nuclide	**Total Current Activitiy (millicuries)**
Hydrogen-3 (tritium; ^{3}H)	4464.71
Carbon-14 (^{14}C)	2297.86
Nickel-63	5.72
Curium-244	2.61

Regarding the comment about the nature of the argon and chlorine nuclides disposed in the landfill, argon-39 is a noble gas and as such was likely disposed as a containerized gas. Regarding chlorine-36, the nuclide is supplied to UA in a liquid form and wouldl likely be disposed as lab waste material (e.g., scintillation vials, animal carcasses, bedding, and paper/plastic waste material). The following paragraph will be added as the 4th paragraph in Section 2.4.6.

> As previously stated in Section 1.1, the disposed radioactive waste materials consisted of both liquid and dry waste (e.g. scintillation vials, animal carcasses, bedding, and laboratory research waste material, [UA, 1999]). Of the inventoried nuclides disposed in the landfill (Table 10), the following nuclides were likely disposed as a gas: argon-39[7] (with some remaining activity; see above), radon-222 and xenon-133[7] (with no remaining activity of either radon or xenon; see Table 10).

[7] Argon-39 and Xenon-133 were likely disposed as containerized gases as they are both noble gases.

Comment 12 (Section 4.2.2 Last bullet page 25): Very briefly here, and in greater detail in section 6.3, it is appropriate to discuss what measures can be taken to reduce this uncertainty. Of most direct measure, soil vapor samples can be collected onto appropriate sorbents and analyzed.

Response: Measures to address this uncertainty as part of future activities to operate the SVE system are presented in Section 6.3. The following sentence is added to the section noted in the comment:

> Planned efforts to qualitatively address this uncertainty are presented in Section 6.1.

October 2009 Revised Response: The SVE system became operational in November 2008 and a sample was collected in April 2009 from the SVE knockout tank and analyzed for tritium and ^{14}C. Sections 4.2.2 and 6.1 have been modified to reflect this change since submittal of this response.

Comment 13 (Section 4.2.3 1st bullet under Future Receptors page 26): Please provide a discussion on why trespassers are currently not expected to be present in the future. However, It would be note worthy in section 6.3 or 6.4 to discuss the influences of the growth plan and the proposed OHV trail that runs south of the landfill that Pinal County is apparently projecting. See attached excerpts from the most recent online documents.

Response: Trespassers are not expected to be at the landfill property itself in accordance with the permit requirements detailed in Section 4.1, which as stated in that Section will be enforced for the foreseeable future (i.e., for a period of 30 years beyond the date of the permit [2031]).

As noted in Section 4.1 the permit states that *"a notation be attached to the deed to the facility property (or other document associated with the title to the property) that will "in perpetuity" notify any potential purchaser that hazardous material were managed on the property and that the re-use of the property is restricted under regulations*" [see Section 4.1]. Furthermore, the entire perimeter fence that restricts all access to the landfill is walked six times annually as part of the complete site inspection required by the permit.

Furthermore, while Pinal County has developed a Growth Plan, it does not mean there are any actual uses currently or even likely to exist in the future at the landfill property given the restrictions of the permit. There are currently no specific or proposed routes identified for an OHV trail at the Page Trowbridge Ranch property, nor has there by any discussion between Pinal County and the potentially affected landowners (Arizona Board of Regents [ABOR] and Robson Communities) about easements or other means to establish an OHV trail through the area (information provided by Steven Holland, University of Arizona).

The following information will be added to the first paragraph in Section 4.2.3:

> 'As previously presented in Section 4.1, no receptors including trespassers are likely to be at the landfill property under current or future conditions. Currently, the entire 10 acre-landfill site is surrounded by a perimeter fence that restricts all access to the landfill and surrounding area. The fence is walked six times annually as part of the complete site inspection required by the permit. In addition, no receptor is likely to be at the landfill site under the foreseeable future, which in accordance with the permit requirements and detailed in Section 4.1, represents a period of 30 years beyond the date of the permit, or 2031. Furthermore, the permit also required that "a notation be attached to the deed to the facility property (or other document associated with the title to the property) that will "in perpetuity" notify any potential purchaser that hazardous material were managed on the property and that the re-use of the property is restricted under regulations " (see Section 4.1). Therefore, no current or future receptor has been identified at the 10-acres landfill site. Current receptors are possible in the land surrounding the 10-acres landfill site, and include recreational users and UA personnel. In addition to these current receptors, future residents are considered possible. A summary of the potential exposure scenarios for current and future site conditions, including the exposure areas and receptors, are presented in Standard Table 1 (see Appendix D). The exposure scenarios include:

Comment 14a (Section 4.3 4th paragraph page 29): Actually, the guidance that goes with ProUCL version 4.00.02 does not recommend using ½ the reporting level to represent non-detect values. Although this was historically the practice in risk assessment, US EPA no long recommends this. Also, since SV-4 data is compromised and not quantitatively accurate, we have a very small data set in which statistics are going to become "less than meaningful". Let's see how the output from ProUCL looks when the data is run with the method option selected for identifying the reporting level of the non-detect without using a surrogate ½ value.

Response: The indoor air risk calculations will be revised, with adjustments for the soil vapor dataset (as noted in Comment 10), based on use of ProUCL version 4.00.02 without using ½

reporting limit as proxy for non-detect values, and the inclusion of residential homes with a basement (as requested in Comment 15). The revised risk and hazard estimates, as presented in revised Table 13, are provided as Attachment B to this document. In addition, the documentation of the revised EPCs, presented as Appendix E to the risk assessment document, is also provided as Attachment B to this memorandum.[1]

October 2009 Revised Response: U.S. EPA has issued another version of ProUCL (version 4.00.04) since the submission of this response. The soil vapor EPCs have been revised in the risk assessment as requested by ADEQ but utilizing the most recent version of the ProUCL software. Attachment B to the March 2009 response document is no longer relevant and is not included in this response as Appendix G to the Risk Assessment.

Comment 14b: This might also be a good time to introduce the discussion to explain why there were not more sampling data points. Such factors would include: 1) multiple temporal sampling events typically conducted for landfills were not needed because no landfill degradation gases are being generated to act as a carrier of vapor contaminants, 2) proposed construction is slated to occur at a lateral distance from the southern border of the landfill so other borders were not as representative, 3) barometric influences are relatively insignificant at depth greater than 5 feet so sampling under different barometric conditions would provide significant information, 4) etc.

Response: A sentence has been added to the noted section referring the reader to Section 6.3 where the uncertainty regarding the exposure estimates is presented. The 3rd paragraph in Section 6.3 will be revised as follows:

> The indoor air exposure point concentrations were based on measured concentrations in <u>seven shallow</u> soil vapor samples collected during a single, recent sampling event at the edge of the PTRL property. <u>The use of this single sampling event at the soil vapor sampling locations at the property boundary is considered representative because:</u>
>
> 1) <u>Multiple temporal sampling events typically conducted for municipal landfills were not needed at the Page Trowbridge Landfill because no landfill degradation gases are being generated to act as a carrier of vapor contaminants;</u>
>
> 2) <u>Proposed construction of residential properties on private land will likely occur at a lateral distance from the southern border of the landfill so other borders were not as representative;</u>
>
> 3) <u>Barometric influences are relatively insignificant at depths greater than 5 feet so sampling under different barometric conditions would not provide significant information.</u>
>
> <u>This approach likely overestimates actual indoor air exposures as soil vapor concentrations at off-property locations are likely much lower given the substantial</u>

[1] The exposure point concentrations were derived using the updated version of ProUCL (version 4.00.04; 2009) in the September 2009 Risk Assessment.

> decline in soil vapor concentrations at the property boundary relative to that measured at the landfill edge, located approximately 180 feet away. Finally, the use.."

Comment 15 (Section 4.3 last paragraph page 29): We need to change that assumption to reflect that, although many homes are typically slab on grade construction, more builders are offering the basement option.

Response: See response to comment 14a.

Comment 16 (Section 6 2nd paragraph page 33): Except, that the arithmetic average was used for the groundwater concentrations rather than the 95% UCL or maximum concentration as in other contaminant exposures. Although unlikely, if individual wells were the source of drinking water for each property, this would under-represent certain property owner exposures, depending on their well location.

Response: The use of arithmetic average concentrations as the groundwater exposure point concentration is considered representative of RME conditions (US EPA citation). Furthermore, the arithmetic average concentration of each COPC was calculated for multiple sampling events conducted at each monitoring well, with the highest of the temporal arithmetic average concentration for each COPC among all monitoring wells evaluated in the risk assessment. This over-estimates potential exposures and risk to a private-well user as it is virtually impossible to use each well as a single source of drinking water (e.g. highest temporal average concentrations were associated with monitoring wells MW-2, MW-4 and MW-5) (see Table 12). And it over-estimates potential exposures and associated risks to anyone whose source of drinking water is a production/community water supply well whose source includes the regional aquifer, which includes the hydrologically upgradient portion represented by on-site monitoring wells. No modification to the document is needed by this comment.

Comment 17 (Section 6.1 5th paragraph page 34): I'm fairly certain that there are. Geiger Mueller counters can be used at the source to do reading with and without the window open. I'm certain that the Arizona Radiation Regulatory Agency has special cartridges they use as well on vacuum-pulled air samplers. Rather than doing extensive research, I think a phone call to ARRA would help clarify. And I would refer to them for potential follow up issues as needed.

Response: The document, including Section 6.1, was reviewed by ARRA. In an email to Keith Carston, UA RADCON, from Philip Kern, ARRA, dated 13 February 2009, Mr. Kern indicated that both Mr. Kern and Aubrey Godwin, Director of the ARRA, had reviewed the risk assessment and had no basis for any objection to the report (Email from Keith Carsten to Barbara Pugh, AMEC dated 10 March 2009). As indicated in the noted paragraph in the comment, qualitative information will be obtained from condensate and filter media once the SVE system becomes operational, addressing this potential uncertainty. Therefore, the third sentence in the noted paragraph has been revised as follows:

> "Based on dosimetry surveys conducted by UA RADCON across the surface of the landfill, there was no increase in radiation levels at the PTRL site relative to background as measured at two other Page Ranch locations and in Tucson. However, while the

documented amounts of radionuclide activity disposed in the landfill are low, there is some level of uncertainty associated with ultimate fate of some radionuclides disposed at the landfill and the potential for radionuclides and/or decay progeny to exist as gas or vapors. It is noted after the SVE system becomes operational, the UA RADCON Office will collect a sample of the condensate and the carbon from the SVE unit and analyze it for radionuclides (3H and 14C) for the purposes of characterizing prior to disposal. This data will provide qualitative information regarding the potential for radionuclides to exist in subsurface soil vapor."[2]

Comment 18 (related to embedded comment from D. Brown in 5th paragraph of Section 6.1 regarding the conclusions of this risk assessment if radionuclides were identified in SVE samples): Yes. If radiation was detected, that would be a separate risk assessment which would be very different in methodology and approach than this one.

Response: Agree that a separate risk assessment or evaluation would be required. However, no modification to this risk assessment is required based on this comment.

Comment 19 (Section 6.3 3rd paragraph page 35): Refer to the earlier comment on this issue of non-landfill sources. We don't agree that this can be reasonably concluded given the factors stated previously, and that it is not possible for any off-road vehicle to provide that great of a magnitude of fuel release. This area has no AST or UST features, either permanent or temporary. Random off-road vehicles could not release enough fuel to have this so widely spread out. There is no urbanization in this area. Please see attached photos.

Response: The noted paragraph will be revised. See response to Comment 14b.

Comment 20 (Section 6.3 3rd paragraph page 35): Sometimes it overestimates, and sometimes it's on target. It is most accurate when soil gas is the measured parameter, as apposed to groundwater or soil concentrations. Overestimation cannot be determined without individual indoor air monitoring to confirm the model output.

Response: The word "likely" will be replaced by "at times may" as edited by ADEQ.

Comment 21 (Section 6.3 5th bullet page 36): I don't really think that this a criteria at this site since the age of the landfill deposits, the fact that you have already stated that landfill gases have indicated no biodegradation, and you have stated that no leachate is being generated. So, this does not impact the results of the modeling to be overestimated in this case.

Response: The noted bullet "*The model does not account for transformation processes (e.g., biodegradation, hydrolysis, etc.*" as a source of uncertainty that could overestimate indoor air concentrations is referring not to the landfill, but to the assumptions within the model that any

[2] The SVE system became operational on November 25, 2008. Information regarding analysis of the condensate sample from the SVE was added to the revised risk assessment.

(shallow) soil vapor concentration (used to estimate indoor air concentrations at a current or future point in time) would not be subject to any transformation processes (e.g. no degradation) either over time within the vadose zone or during any presumed vapor intrusion. The statement is not referring to the landfill or the nature of the landfill processes to the assumptions used by EPA within the (Johnson and Ettinger) Vapor Intrusion model. The statement is considered representative of uncertainty regarding the model assumptions that measured soil gas concentrations are unchanged forever and always. No modification to the risk assessment is required based on this comment.

Comment 22 (Section 6.3 7th bullet page 36): Although it's true that the model doesn't calculate multiple organic concentrations within a soil vadose source, I'm not sure that they are saying it results in overpredictive indoor air concentrations. You might want to check that and see what you think. Also, we're measuring soil gas outside the zone of contaminated vadose soils. This would be more relevant if gases were collected within the contaminated zone.

Response: The noted section will be deleted.

APPENDIX H

Memorandum dated September 30, 2009:

Response to Anthony Leverock/ADEQ Comments (dated May 22, 2009) on
Memorandum documenting Response to Jeneane Hanley/ADEQ Comments on the
Draft Human Health Risk Assessment Page for Trowbridge Ranch Landfill
(dated March 11, 2009)
and the
Draft Human Health Risk Assessment Page Trowbridge Ranch Landfill
(Dated September 25, 2008)

Memo

To	**Doug Brown/ADOA-RMS**	File no	**774330000**
From	**Barbara Pugh/AMEC**		**Cc: Steven Holland**
Tel	**978-692-9090 x 298**		
Date	**11 September 2009**		

Subject **Response to ADEQ Comments (dated May 22, 2009) on Human Health Risk Assessment for Page Trowbridge Ranch Landfill (dated September 23, 2008)**

The following represents ADEQ comments provided by Anthony C. Leverock, Arizona Department of Environmental Quality (ADEQ) (Leverock.Anthony@azdeq.gov) in an email dated May 22, 2009 sent to Doug Brown, Arizona Department of Administration – Risk Management Section (ADOA – RMS). ADEQ's comments are presented as they were written, with AMEC's response immediately following the specific comment. These comments represent a 2nd set of comments received from ADEQ on the draft Human Health Risk Assessment for the Page Trowbridge Ranch Landfill submitted to ADEQ 23 September 2008. These comments also reference a memorandum (dated March 11, 2009) from AMEC responding to Jeanene Hanley/ADEQ's comments (dated January 7, 2009) on the draft Human Health Risk Assessment for the Page Trowbridge Ranch (dated September 23, 2008).

1. HHRA, page 3, para 1. - The report notes that the landfill initially consisted of (unlined) disposal cells which were used as "open neutralization" and burn pits. This is a hugely significant item that should have more detail presented in the report. The current location is probably fine. Does UA have any information concerning quantities and types of waste that were so disposed? Also, when used as burn pits, was an accelerant used?

Response to Comment 1: As noted in Section 1 page 1 of the report, the information provided in the risk assessment was obtained from many reports documenting the many investigational activities conducted at the site. The historical information about the nature of the landfill has been described in detail in these reports, which were included in Appendix A to this report, as well as in the Post Closure Permit (ADEQ, 2002). The information about the types of waste is presented in this section (3rd paragraph on page 3) and in Appendix A. The information previously presented in Section 1.1 will be revised as follows:

> The PTRL site encompasses 3.25 acres in an area approximately one mile north of State Road (SR) 77, seven miles west of Oracle, Pinal County, Arizona (see Figure 1). The landfill site is surrounded on the west, north and east sides by approximately 640 acres of undeveloped state-owned land and privately owned, undeveloped land to the south. The landfill consists of two units: 1) Unit A, the northern 200 feet wide by 200 feet long by 10 feet deep unit; and 2) Unit B the southern 200 feet wide by 500 feet long by

10 feet deep unit. Waste materials, which included low-level radioactive laboratory waste material and chemical laboratory waste material generated by the University of Arizona, Northern Arizona University, Arizona State University, and Veterans Administration Hospital in Tucson, were disposed in these two units of the PTRL. The Arizona Atomic Energy Commission [currently Arizona Radiation Regulatory Agency (ARRA)] oversaw and maintained the approval of disposed radioactive laboratory wastes.

As described in the *PTRL Revised Post Closure Contingency Plan* (November 2002; provided as Attachment L to the Post-Closure Permit [ADEQ, 2002]), low-level radioactive wastes were first disposed in Unit B in 1962 under the approval of the ARRA (formerly the Arizona Atomic Energy Commission). The low-level radioactive waste material was comprised of mixed laboratory waste material consisting of both liquid and dry waste (e.g. scintillation vials, animal carcasses, bedding, and laboratory research waste material [UA, 1999]). The low-level radioactive waste material was disposed into individual 10 foot by 10 foot by 10 foot cells (also referred to as "pits") excavated in Unit B. At the time of each disposal, the cells containing the disposed low-level radioactive waste materials were backfilled with more than 4 feet of earth (UA, 2002a). From 1962 until early 1985, the low-level hazardous waste material was disposed in various containers collected from the individual research laboratories. In early 1985, the disposed low-level radioactive waste materials were contained in 55-gallon drums until the final burial in February 1986.

In 1976, chemical waste material that was not radioactive was disposed in open neutralization and burn pits within Unit B. These open neutralization and burn pits were separated by at least a row or more (more than 10 feet) from the pits used for disposal of low-level radioactive waste material. Between 1976 and 1979, flammable solvents were added to the burn pits and either self-ignited from mixing with non-radioactive chemical wastes containing oxidizers, or the material in the pits was ignited with a railroad flare. Acids and bases were similarly mixed in other open pits in the hope that some level of neutralization would occur (open neutralization pits). This practice ceased in 1979 and was never used in the cells containing disposed low-level radioactive wastes. It is also noted that Unit B was expanded in 1976 to a total area of 2.33 acres and that no liner exists in Unit B.

Unit A replaced Unit B for the disposal of chemical wastes in November 1982 under a RCRA interim status Treatment, Storage or Disposal (TSD) permit. From 1984 through the final burial in 1986, the disposal practice evolved to direct burial of chemical wastes packed in containers with absorbent material (including one- and five-gallon laboratory containers placed in 55-gallon drums containing additional absorbent material). Unit A was used until February 1986 when all disposal operations at PTRL ceased. Prior to disposal, the cells within Unit A were lined with a "chemically-resistant synthetic" (as noted in the Post Closure Permit page VIII-1; ADEQ, 2001) 20-mil polyvinyl chloride (PVC) liner, with the sealed 55-gallon drums placed in single layers within the cells. Following placement of the drums/waste containers into each cell within Unit A, the 20-mil PVC liner was folded over the top of containers to enclose the buried materials prior

to backfilling the cell with the soil excavated to create the cell (Post Closure Permit page VIII-1; ADEQ, 2001).

It is estimated the landfill contains approximately 280 tons of documented waste containers based on record keeping that began in 1978. The documented chemical waste material consists of approximately 80 tons of waste in original containers and 200 tons of waste in laboratory packs within Unit A and in the hazardous waste portions of Unit B. The documented chemical wastes include organics, ignitables, acids, bases, heavy metals, pesticides, and photographic compounds. In addition to chemical waste material, the UA Office of Radiation Control (RADCON) (under the requirements of ARRA) maintained an inventory of all radioactive waste materials disposed at PTRL from 1962 to closure in 1986. The inventory includes the nuclide type, total activity, disposal date, and the pit or pits into which the waste material was placed (see Appendix A for inventory details). The total radioactivity of the low-level radioactive waste material disposed in Unit B is 29 curies (Ci)[3] . It is estimated that a total of approximately 0.5 acres of the 2.33 acre area of Unit B (representing 231 cell units total) contain low-level radioactive waste material. No radionuclides were disposed in Unit A.

During 1983, the quantity of materials disposed in the landfills was reduced as the result of the operation of a chemical waste incinerator and neutralization facilities at the UA (HGC, 2005). It is estimated that hazardous waste disposal occurred in approximately 0.7 acres of the total 3.25 acres landfill (representing the portion of Unit B where non-radioactive chemical wastes were disposed and a portion of the 0.92 acres of Unit A). It is possible that entire landfill area was not filled to capacity prior to closing (RUST, 1995).

2. HHRA page 3, para 2 – The report states: "Prior to disposal, the cells within Unit A were lined with a chemically-resistant synthetic liner" and "following placement of the drums into Unit A cells, the cells were sealed with the liner". To say that the cells were lined is misleading. In actuality, the drummed waste was wrapped in plastic sheeting and the extra sheeting was bundled to seal the waste. This should be rephrased to more accurately describe the disposal practices.

Response to Comment 2: In addition to the disposed materials being contained in drums and waste containers, the drums were placed in disposal cells that were lined with a 20-mil PVC liner, similar to that used in above-ground swimming pools. To clarify this, the noted text will be revised to state that each 10 by 10 by 10 foot cell was lined with approximately 400 square feet (ft^2) of 20-mil PVC liner, with the initial cells created in Unit A containing 1 layer and later cells containing 2 layers of the PVC liner. After placement of the sealed drums and/or waste containers in a cell within Unit A, the 20 mil PVC liner was folded over the top of disposed containers to enclose the buried materials prior to backfilling the cell with the soil excavated to create the cell.

3. HHRA page 3, para 2 – To call the liner "chemically-resistant" may not be accurate. Does UA have data concerning the chemical resistance of the plastic? Can this part be rephrased?

Response to Comment 3: The "chemical-resistant synthetic liner" used to line the landfill cells in Unit A is a 20 mil PVC geomembrane, which was used in accordance with the applicable RCRA landfill standards in effect at the time. This information was obtained from the 3rd paragraph on page VIII-1 of the Final Post Closure Permit prepared by ADEQ in 2001. Because the source of ADEQ's statement is not known, the term "chemically resistant" will be placed in quotation marks and ADEQ will be cited immediately following the use of the term. PVC is a synthetic thermoplastic polymer that provides excellent resistance to most oils, acids, fats, alcohols and glycol ethers. PVC gloves provide good resistance to anhydrous ammonia, pesticides and acids. It is noted that approximately 20 feet^2 of the PVC-liner as used in each of the 10x10x10 foot cells. The first cells filled in Unit A had a single layer of the PVC liner while later cells had 2 layers of the PVC liner. This information has been added to the noted paragraph (see Response to Comment 2).

4. HHRA page 4, para 1 – The report describes the layers of the landfill caps. This may be interpreted to show how protective the landfill cover design is. In actuality, as modern hazardous waste landfills go, the PTRL was not a sophisticated design. The report should also note that the landfill lacks a bottom impermeable liner and a leachate detection and collection system. I'm not asking that the report contain a section that is critical of the design, but it should present, in an unbiased way, the limitations of the landfill, too.

Response to Comment 4: The noted paragraph describes the components of the ADEQ reviewed and approved closure plan, which included an engineered designed landfill cap; no leachate detection or collection system was deemed necessary during the closure activities. The purpose of this section "Site Description", including the noted single paragraph of post-closure conditions and the previous four paragraphs detailing the active history of the landfill, is to provide the reader information about the history of the landfill. The purpose is not to re-present all the details about closing landfill nor to provide a comparative analysis with other landfills, but to lay the unbiased foundations for the context of the existing landfill for the purpose of characterizing current and future potential exposures to hazardous materials disposed in the landfill. A statement will be added to the 2nd paragraph in this section (Section 1.1) explicitly stating that no liner exists beneath Unit B of the landfill.

5. HHRA page 4, bottom paragraph – A nit - the report states that the landfill is located approximately 2 miles north of SR 77. Actually, it is just over 1 mile north of SR 77 (as confirmed elsewhere in the report).

Response to Comment 5: The distance from SR 77 will be reviewed and corrected where necessary.

6. HHRA page 22, paras 4 and 5 – The closest wells to the landfill are generally described, says that it is not known if the Robson well is currently operational. Is there no way to include more recent information? Also, the report states that the well is not located directly downgradient of the PTRL site. I assume this statement is based on regional groundwater flow information, not local information, because wells at the landfill have not provided consistent information on groundwater flow direction.

Response to Comment 6: At the time the draft report was written (September 2008), it was not known if the wells were operational. It is now known (as of September 2009) that the wells are operational. It is also known that they are regionally located down gradient from the PTRL site. This information will be included in the noted section of the document.

7. AMEC Response [AMEC memorandum dated March 11, 2009] – The AMEC response is labeled as confidential. Does UA request ADEQ to maintain this information as confidential? If so, state the basis. (Note: I do not see any reason that the response should be kept as confidential).

Response to Comment 7: The confidential label will be removed from the memo.

8. AMEC Response, page 2, Comment 4 [AMEC memorandum dated March 11, 2009]– AMEC quotes ADEQ's conclusions following the 2003 IM investigation. AMEC's response is curious indeed - Can AMEC provide a more independent response here, rather than quoting the ADEQ letter? First, ADEQ states that groundwater contamination has not occurred. Obviously, we stand by that statement. (If we didn't stand by that statement, ADEQ would be modifying the permit to instruct UA to either increase sampling frequency, install more wells, or engage in some form of remediation). Also, I observe that the conclusions note that vapor constituents are said to be controlled by soil vapor extraction. That has not been occurring at PTRL for the last few years. Has the system been restarted? AMEC should elaborate on this issue. If the system is not restarted, ADEQ's conclusions are no longer valid.

Response to Comment 8: Regarding the comment about AMEC providing an 'independent response' regarding the soil vapor dataset and Weston's 2003 IM investigation (Response to ADEQ's Comment 4), the purpose of this section (Hazard Identification) is to present the existing dataset for the PTRL site for the purposes of evaluating the potential for current and future human exposure in the human health risk assessment. At the time of the draft report (September 2008), the SVE system was not operational but has since been restarted (restarted on November 25, 2008). This information will be added to the risk assessment.

9. AMEC Response, page 7, Comment 13 [AMEC memorandum dated March 11, 2009] – I am a bit reluctant to comment on the RA assumptions as that is not an area I am familiar with, however, I do take issue with the response to this comment. I think trespassers should be included in the assessment. Quoting the post-closure permit conditions or the county plan does not answer this comment. I assume "tresspassers" does not mean that the persons stay at the landfill, just that they bypass the security and enter the post-closed area, right? In that case, the HHRA should consider this.

Response to Comment 9: No exposure pathway was considered complete for trespassers in the risk assessment for the following reasons. First, there is no compound of any concern in any environmental media (surface soil or ambient air) that represent a potential exposure to trespassers. Second, the landfill proper is not accessible to trespassers as stated in the March 11, 2009 response to ADEQ's comment 13.