

**GROUNDWATER MONITORING REPORT
OCTOBER 2014**

**CARIBE GENERAL ELECTRIC
DISTRIBUTION TRANSFORMERS FACILITY
VIEQUES, PUERTO RICO**

Prepared For:
GE Global Remediation

Prepared By:
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December 2014

**GROUNDWATER MONITORING REPORT
OCTOBER 2014**

**CARIBE GENERAL ELECTRIC
DISTRIBUTION TRANSFORMERS FACILITY**
PR-200, CORNER 201
MARTINO WARD, VIEQUES, PUERTO RICO 00765

FOR

GE GLOBAL REMEDIATION

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LIST OF ACRONYMS

bgs	below ground surface
cDCE	Cis-1,2-dichloroethene
COC	constituents of concern
1,1-DCA	1,1-dichloroethane
1,1-DCE	1,1-dichloroethene
EB	equipment blank
GE	General Electric
IDW	investigation derived waste
MCL	maximum contaminant level
mg/L	milligrams per liter
mV	millivolts
ORP	oxidation reduction potential
PCE	Tetrachloroethylene
PPE	personal protective equipment
PRIDCO	Puerto Rico Industrial Development Company
QA/QC	Quality Assurance/Quality Control
RSL	Regional Screening Level
SM	standard method
TB	trip blank
TCE	Trichloroethene
TOC	Total Organic Carbon
µg/L	micrograms per liter
USEPA	United States Environmental Protection Agency
VC	vinyl chloride
VOCs	volatile organic compounds

1.0 INTRODUCTION

This report presents the results of the October 2014 groundwater monitoring event conducted at the Caribe General Electric Distribution Transformers, Inc. (GE) facility located in Vieques, Puerto Rico (the Site). The purpose of the sampling effort was to evaluate the current extent of volatile organic compounds (VOCs) in groundwater beneath the Site and provide information on the historical concentration trends and natural attenuation of VOCs in groundwater beneath the Site. The following activities were performed during this sampling event:

- Measured depth-to-groundwater in 11 existing onsite monitoring wells.
- Collected groundwater samples from 11 existing onsite monitoring wells (C1 through C-11) for analysis of VOCs and natural attenuation parameters including chloride, ethane, ethene, methane, total organic carbon (TOC), magnesium, calcium, and sodium.

These activities were conducted at the request of the United States Environmental Protection Agency (USEPA) and in general accordance with industry standards for low-flow groundwater sample collection and analysis.

2.0 PROJECT BACKGROUND

The Site covers 4 acres and includes a main plant building where GE manufactures power fuses, auxiliary relays, and switch gear accessories. The Site is located near the northern coast of the island of Vieques, Puerto Rico at the intersection of PR-200 and PR-201 in the Barrio Martino section of Isabel Segunda. Vieques is located approximately 10 miles east of mainland Puerto Rico. **Figure 1** shows the site location. The Site consists of the main manufacturing facility and associated parking and outbuildings. **Figure 2** shows the property boundaries and other site features.

The facility began operations in 1969 and is currently an active manufacturing facility. The property is owned by the Puerto Rico Industrial Development Company (PRIDCO) and leased by GE.

From 1988 through 2005, assessment and investigation of the Site took place under Resource Conservation and Recovery Act (RCRA). During this period, solid waste management units associated with degreasing solvents, acids, and associated rinse waters were identified and subsequently given RCRA closure in 2005. As part of the investigation related to RCRA closure, VOCs were detected in groundwater beneath the Site. By 2005, monitoring wells C-1 through C-10 had been installed at the Site. Groundwater monitoring sampling was conducted on a quarterly basis beginning in November 2005 and has continued on a semi-annual basis since 2008.

In 2012, USEPA approved a Focused Corrective Measures Work Plan (Tetra Tech GEO, Inc., 2012) for the Site that included installation of monitoring well C-11 for additional delineation of groundwater impacts. Semi-annual sampling of monitoring wells C-1 through C-11 continued through 2013. Monitoring well locations are shown on **Figure 2**. As documented in the Focused CMS Work Plan the constituents of concern (COCs) in groundwater include trichloroethene (TCE), 1,1-dichloroethane (1,1-DCA), 1,1-dichloroethene (1,1-DCE), cis-1,2-dichloroethene (cDCE), and vinyl chloride (VC). Concentrations of other compounds such as tetrachloroethene (PCE) have also been sporadically detected.

A groundwater sampling event was conducted in December 2013, and following submission of the report, USEPA requested one additional round of groundwater sampling in anticipation of corrective measures selection. This was discussed during a conference call between USEPA and GE on October 14, 2014, and was documented in GE's letter to USEPA dated November 12, 2014. This report describes the field activities and discusses the results of the most recent groundwater monitoring event conducted in October 2014.

3.0 FIELD ACTIVITIES

Groundwater monitoring activities were performed on October 23, 2014. The following field activities were performed during this monitoring event:

- Measurement of depth-to-groundwater in 11 existing onsite monitoring wells
- Collection of groundwater samples from monitoring wells for laboratory analysis

The procedures used during these activities are described in the following sections.

3.1 DEPTH-TO-GROUNDWATER MEASUREMENTS

Depth-to-groundwater measurements were collected from onsite monitoring wells C-1 through C-11. Depth-to-water measurements and groundwater elevations are presented in **Table 1**.

Water levels were measured by using a decontaminated water-level meter to record the depth-to-water below a surveyed reference point (top of well casing). The water level meter was slowly lowered into the monitoring well until the meter was activated (as indicated by an audible tone). The depth-to-water reading was then measured at 30 second intervals until two consecutive readings were recorded to the nearest 0.01 foot. This measurement was then recorded in the field notebook. Measurements were collected prior to the start of sampling.

3.2 GROUNDWATER SAMPLING PROCEDURES AND ANALYSIS

Samples were collected from 11 onsite monitoring wells (C-1 through C-11). Groundwater sampling forms were completed for each sample collected, and are included in **Appendix A**. The groundwater samples were collected in accordance with the following procedures:

- The depth to water was measured in the monitoring well.
- Prior to sample collection, the wells were purged using a submersible pump until field parameters stabilized, or the well was purged dry. Field parameters

included dissolved oxygen, oxidation reduction potential [ORP], temperature, pH, and conductivity.

- Samples were collected using a submersible pump fitted with disposable tubing in accordance with low-flow sampling practices, generally acceptable industry standards and current USEPA guidance.
- Sample bottles were labeled with date, time, sample identification, analytical parameters, and sampler initials, and the sample vials were immediately placed into a cooler filled with ice. Proper chain-of-custody was maintained and the samples were shipped to Tri-Matrix Laboratories, Inc. in Grand Rapids, Michigan for analysis.

The groundwater samples were analyzed for VOCs by USEPA Method 8260B; TOC by standard method (SM) 5310C-2011; chloride by SM 4500; dissolved gases (ethane, ethane, methane) by USEPA Method RSK-175; and total calcium, magnesium, and sodium (wells C-4 and C-7 only) by USEPA Method 6010C. The following quality assurance/quality control (QA/QC) samples were collected:

- One field duplicate (collected from monitoring well C-4)
- One equipment blank (EB)
- One trip blank (TB)

The laboratory analytical and QA/QC results were validated in accordance with USEPA Region II quality control criteria and certified by a Puerto Rico certified chemist. The data were reviewed for general compliance with QA/QC procedures. The samples were received by Tri-Matrix chilled, in good condition, and within the allowable holding times. The laboratory quality control samples showed that the laboratory results were acceptable with some qualification. MWH did not identify QA/QC issues that would affect the usability of the data and the data were deemed to be of acceptable quality. A copy of the laboratory data reports and chain-of-custody documentation are included in **Appendix B**. Data validation and certification reports are included in **Appendix C**.

3.3 DECONTAMINATION PROCEDURE

Non-disposable equipment was cleaned before and between each use using an Alconox[®] wash and distilled water rinse. Disposable sampling equipment did not require decontamination for single use. Sampling containers were received from the laboratory pre-cleaned and contaminant free.

3.4 INVESTIGATION-DERIVED WASTE MANAGEMENT

Investigation-derived waste (IDW) was limited to purge water generated during sampling, decontamination water from the water-level meter, shipping packaging for the disposable sampling equipment, personal protective equipment (PPE), and used sample tubing. The IDW was handled according to waste stream characteristics as follows:

- Purge water and decontamination water was containerized in a 55-gallon drum and staged at a secure location at the facility as directed by GE for eventual offsite disposal by GE.
- Shipment packaging, PPE, and used sample tubing was contained in a plastic trash bag and disposed offsite with general refuse. Shipment packaging typically contained plastic bags, papers, twist ties, and zip ties. PPE consisted of nitrile gloves.

4.0 RESULTS AND DISCUSSION

The following sections present the groundwater monitoring results for the October 2014 groundwater monitoring event.

4.1 GROUNDWATER ELEVATIONS

The depth-to-water measurements and groundwater elevations for October 2014 are presented in **Table 1**. Groundwater onsite is generally 24 to 44 feet below ground surface (bgs), or 38 to 48 feet above mean sea level. Groundwater elevation contours are presented in **Figure 3** (October 2014). Groundwater flow direction is northwest, towards the Atlantic Ocean, which is approximately 2,000 feet north of the northern property boundary. The groundwater elevations and flow direction observed during this monitoring event are consistent with previous monitoring events and historical records. Long term hydrographs for each monitoring well are included in **Appendix D**. The hydrographs indicate long-term groundwater elevation trends which generally correlate with higher elevations during the rainy season (August to November) and lower elevations during the dry season (February to March).

4.2 GROUNDWATER SAMPLE RESULTS AND DISCUSSION

Laboratory analytical results for VOCs are presented in **Table 2**, and laboratory reports are included in **Appendix C**. The data were compared with USEPA Regional Screening Levels (RSLs) and Maximum Contaminant Levels (MCLs). The results are discussed in the sections below.

4.2.1 Current Distribution of VOCs in Groundwater

During the October 2014 monitoring event VOCs were detected at low levels in each of the monitoring wells sampled, with the exception of monitoring wells C-1 and C-9 which were non-detect for all analytes. Detections of VOCs above MCLs were limited to monitoring wells C-4, C-6, C-7, and C-8 (southeast corner of the Site) and C-11 (west of the main plant building). VOCs were either non-detect or present at estimated concentrations (below the comparison criteria) at downgradient wells C-1, C-2, C-3, C-9, and C-10. COCs detected at concentrations above groundwater criteria included

TCE, 1,1-DCA, 1,1-DCE, cDCE, and VC. In addition, concentrations of 1,2-dichloroethene (1,2-DCE) and PCE were detected above MCLs, in C-7 and C-4, respectively. The highest concentration of any individual VOC was 300 ug/L of 1,2-DCE at C-7. **Figure 4** shows the distribution of COCs in groundwater for the October 2014 sampling event. No VOCs are migrating offsite, but are confined to the Site boundary.

4.2.2 Historical VOC Trends

Time series plots of groundwater monitoring data for COCs are included in **Appendix E**. During the October 2014 monitoring event, VOC concentrations in groundwater samples from downgradient monitoring wells were non-detect or below MCLs. This is consistent with historical results for the downgradient area; since 2005, concentrations of VOCs have been below MCLs in downgradient wells C-1, C-2, C-3, C-9, and C-10.

Concentrations of 1,1-DCA were observed to exhibit a decreasing historical trend, with the exception of those at monitoring well C-7, which remain relatively stable. Additional discussion regarding the presence and potential attenuation of 1,1-DCA is included in the section below.

A decrease in TCE concentrations from monitoring well C-7 was noted following the July 2013 sampling event, which is a trend that continued through 2014. While the exact reason for this decrease is not immediately apparent, this could be attributed to some destructive attenuation process (biodegradation or cometabolism) as evident by the slight increase in daughter products cDCE and VC at C-7 during the same time period, or it could be the result of increased hydrodynamic dispersion, dilution, or a combination of these processes.

With the exception of a slight increase in VOC concentrations detected in samples from monitoring well C-4 since the last monitoring event (December 2013), results from the remaining monitoring wells at the Site indicate an overall decreasing trend in VOC concentrations. The reason for the increase in concentrations at C-4 is unknown at this time; however, concentrations of VOCs remain at least an order of magnitude lower than historical highs recorded during the late 1990s, and an overall decreasing trend continues to exist at this monitoring well location.

4.2.3 Natural Attenuation

Table 3 presents the analytical results for natural attenuation parameters, and laboratory reports are included in **Appendix C**. **Figure 5** illustrates the distribution of these parameters.

Natural attenuation parameters and geochemical data collected during this monitoring period were slightly different from historical trends. For example, ethane was historically present in monitoring well C-7 at concentrations that suggest its presence as a result of dechlorination (greater than 0.01 mg/L), but during the most recent event, ethane was non-detect in the sample collected. Additionally, the measured dissolved oxygen concentration and ORP level for monitoring well C-7 were not consistent with the values that would be expected for dechlorination. However, evidence of natural attenuation is present downgradient of C-7 as indicated by the presence of ethene, lower dissolved oxygen concentrations, and negative ORP levels in the range indicative of a likely reductive pathway at monitoring well C-10.

While the case for 1,1-DCA attenuation through dechlorination is not currently strong (chloroethane non-detect), the absence of 1,1,1-TCA could indicate that biodegradation or cometabolism attenuation processes may have been active in the past. Additionally, the decrease in concentrations of this compound (with the exception of those at C-7) support the thought that attenuation is occurring through dispersion or dilution. Although concentrations of 1,1-DCA have been relatively stable at C-7, the presence of 1,1-DCA in low concentrations in this well is not likely to have a pronounced inhibitory effect on dechlorination of TCE (if any is currently occurring).

The detection of biodegradation products continues to support the viability of monitored natural attenuation as a potential remedy for the Site. Elevated concentrations of degradation products of TCE (cDCE and VC) were detected in C-7, indicating potential reductive dechlorination. TCE was detected at a low level, while cDCE and VC concentrations were relatively high (above MCLs). Additionally, the higher concentrations of cis-DCE as opposed to trans-DCE in this monitoring well could indicate that some dechlorination has occurred or is possibly still occurring at C-7.

Elevated methane concentrations at both C-7 and C-10 also support evidence that biodegradation is occurring or has occurred.

4.3 SUMMARY

Based on VOC concentrations in downgradient wells, the overall decreasing concentration trends and historical evidence of natural attenuation, and low migration rate of VOCs in groundwater beneath the Site, VOCs in groundwater are generally expected to remain within the boundaries of the Site. Eventually the VOCs will degrade naturally, likely through a combination of destructive attenuation processes (biodegradation or cometabolism), hydrodynamic dispersion, and dilution, but the time frame for this to occur is unknown.

TABLES

**Table 1. Groundwater Elevations
October 2014
Caribe General Electric Distribution Transformers Inc.
Vieques, Puerto Rico**

Well ID	Depth to Water¹ (feet)	Depth to Bottom¹ (feet)	Top of Casing Elevation²	Ground Surface Elevation²	Groundwater Elevation²
C-1	24.44	57.55	70.49	70.16	46.05
C-2	26.82	61.10	68.78	68.45	41.96
C-3	28.95	60.45	71.00	70.44	42.05
C-4	29.99	50.66	77.04	76.15	47.05
C-5	42.90	69.70	90.06	87.46	47.16
C-6	44.69	52.51	91.69	90.51	47.00
C-7	28.79	112.00	76.38	74.74	47.59
C-8	28.02	51.57	75.13	72.90	47.11
C-9	41.31	63.75	79.80	77.41	38.49
C-10	37.29	80.05	78.33	76.03	41.04
C-11	36.30	102.43	80.65	78.22	44.35

¹ Depth to water and depth to bottom measured from the north side of the top of casing.

² Elevations reported in feet above mean sea level.

Table 2. Groundwater Sample Results - VOCs
October 2014
GE Vieques, Puerto Rico

Analyte	RSL or MCL*	Sample ID											Equipment		Storage	
		C-1	C-2	C-3	Duplicate (C-4)		C-5	C-6	C-7	C-8	C-9	C-10	C-11	Blank	Trip Blank	Blank
1,1,1,2-Tetrachloroethane	0.57	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.5 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,1-Trichloroethane	200*	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.5 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	0.076	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.5 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	5*	1.0 U	1.0 U	1.0 U	0.71 J	0.74 J	1.0 U	1.0 U	2.5 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	2.7	1.0 U	0.27 J	1.0 U	74	79	1.0 U	2.7	15	4.8	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	7*	1.0 U	0.36 J	1.0 U	15	16	1.0 U	2.0	9.6	1.7	1.0 U	1.0 U	9.7	1.0 U	1.0 U	1.0 U
1,1-Dichloropropene	-	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.5 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-Trichloropropane	0.00075	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.5 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trimethylbenzene	15	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.5 U	1.0 U	1.0 U	0.25 J	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dibromoethane	0.05*	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	12 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,2-Dichlorobenzene	600*	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.5 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	5*	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.5 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethene (Total)	170*	2.0 U	0.47 J	2.0 U	23	25	2.0 U	1.2 J	300	2.4	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2-Dichloropropane	5*	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.5 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3,5-Trimethylbenzene	120	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.5 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	-	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.5 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichloropropane	370	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.5 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	75*	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.5 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2,2-Dichloropropane	-	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.5 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Butanone (MEK)	5,600	10 U	10 U	10 U	10 U	10 U	10 U	10 U	25 U	10 U	10 U	32	10 U	10 U	10 U	10 U
2-Chlorotoluene	240	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.5 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Hexanone	38	10 U	10 U	10 U	10 U	10 U	10 U	10 U	25 U	10 U	10 U	12	10 U	10 U	10 U	10 U
4-Chlorotoluene	250	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.5 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
4-Isopropyltoluene	-	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.5 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
4-Methyl-2-pentanone (MIBK)	1,200	10 U	10 U	10 U	10 U	10 U	10 U	10 U	25 U	10 U	10 U	0.63 J	10 U	10 U	10 U	10 U
Acetone	14,000	10 U	10 U	10 U	10 U	10 U	10 U	10 U	5.6 J	10 U	10 U	150	10 U	10 U	10 U	10 U
Benzene	5*	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.5 U	1.0 U	1.0 U	0.26 J	1.0 U	1.0 U	1.0 U	1.0 U
Bromobenzene	62	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.5 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromochloromethane	83	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.5 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromodichloromethane	80 ⁺¹	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.5 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromoform	80 ⁺¹	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.5 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromomethane	7.5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.5 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Carbon Disulfide	810	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	12 U	5.0 U	5.0 U	8.1	5.0 U	12	5.0 U	5.0 U
Carbon Tetrachloride	5*	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.5 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	100*	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.5 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroethane	21,000	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.5 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform	80 ⁺¹	1.0 U	1.0 U	1.0 U	0.51 J	0.56 J	1.0 U	1.0 U	2.5 U	0.14 J	1.0 U	1.0 U	1.0 U	0.92 J	1.0 U	1.0 U
Chloromethane	190	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.5 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	70*	1.0 U	0.47 J	1.0 U	23	24	0.24 J	1.2	280	2.4	1.0 U	0.24 J	0.32 J	1.0 U	1.0 U	1.0 U
cis-1,3-Dichloropropene	-	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.5 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Dibromochloromethane	80 ⁺¹	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.5 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Dibromomethane	8.0	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.5 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Dichlorodifluoromethane	200	10 U	10 U	10 U	10 U	10 U	10 U	10 U	25 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Ethylbenzene	700*	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.5 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Isopropylbenzene	-	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.5 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methyl tert-Butyl Ether	14	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	12 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Methylene Chloride	5*	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	12 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
n-Butylbenzene	1,000	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.5 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
n-Propylbenzene	-	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.5 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
sec-Butylbenzene	2,000	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.5 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Styrene	100*	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.5 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
tert-Butylbenzene	690	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.5 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	5*	1.0 U	1.0 U	1.0 U	6.4	6.3	1.0 U	0.54 J	2.5 U	0.34 J	1.0 U	1.0 U	0.18 J	1.0 U	1.0 U	1.0 U
Toluene	1000*	1.0 U	0.28 J	0.37 J	1.0 U	1.0 U	1.0 U	1.0 U	2.5 U	1.0 U	1.0 U	0.49 J	1.0 U	1.2	1.0 U	1.0 U
trans-1,2-Dichloroethene	100*	1.0 U	1.0 U	1.0 U	0.29 J	0.40 J	1.0 U	1.0 U	15	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	-	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.5 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	5*	1.0 U	0.80 J	1.0 U	160	170	1.0 U	14	2.4 J	13	1.0 U	1.0 U	53	1.0 U	1.0 U	1.0 U
Trichlorofluoromethane	1,100	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.5 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Vinyl Acetate	410	10 U	10 U	10 U	10 U	10 U	10 U	10 U	25 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Vinyl Chloride	2*	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	4.9 J	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Xylene (Total)	10,000*	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	7.5 U	3.0 U	3.0 U	0.93 J	3.0 U	3.0 U	3.0 U	3.0 U
Xylene, Meta + Para	190	2.0 U	2.0 U	0.30 J	2.0 U	2.0 U	2.0 U	2.0 U	5.0 U	2.0 U	2.0 U	0.64 J	2.0 U	2.0 U	2.0 U	2.0 U
Xylene, Ortho	1,400	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.5 U	1.0 U	1.0 U	0.29 J	1.0 U	1.0 U	1.0 U	1.0 U

RSL - USEPA Regional Screening Level

*MCL - Maximum contaminant level screening level

¹80 µg/L is the MCL for Total Trihalomethanes (bromodichloromethane, bromoform, dibromochloromethane, chloroform)

Results are reported in micrograms per liter (µg/L).

U - The compound was not detected above the indicated reporting limit.

J - Estimated. The analyte was detected below the reporting limit.

Detected compounds and results are bold.

Results that exceed RSLs/MCLs are boxed.

Table 3. Groundwater Sample Results - Natural Attenuation Parameters
October 2014
GE Vieques, Puerto Rico

Analyte	Sample ID												Equipment Blank
	C-1	C-2	C-3	C-4	Duplicate (C-4)	C-5	C-6	C-7	C-8	C-9	C-10	C-11	
Dissolved Gases (ug/L)													
Ethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	3.7	1.0 U	1.0 U
Methane	9.4	1.1	1.4	0.50 U	0.50 U	1.4	0.50 U	2000 E	7.7	0.50 U	3200 E	17	0.46 J
Chloride (mg/L)	8.9	14	8.2	410	420	540	69	460	330	34	130	11	6.7
Total Organic Carbon (mg/L)	1.8	1.4	5.5	2.9	3.0	3.3	0.97	11	1.7	1.1	23	1.1	0.14 J
Total Metals (mg/L)													
Calcium	-	-	-	97	96	-	-	65	-	-	-	-	5.5
Magnesium	-	-	-	63	63	-	-	32	-	-	-	-	4.0
Sodium	-	-	-	550	540	-	-	400	-	-	-	-	5.9
Field Parameters													
pH	6.40	7.36	7.00	6.21	-	6.10	6.53	7.17	6.80	7.23	14.26*	8.43	-
Specific Conductance (µmhos/cm)	505	655	808	3,324	-	3,417	1,335	2,971	2,581	943	3,770	695	-
Temperature (°C)	29.42	31.13	30.70	28.86	-	30.13	28.77	33.40	30.18	31.09	32.19	31.30	-
Dissolved Oxygen (mg/L)	0.48	4.89	7.50	1.54	-	3.50	4.68	3.94	4.71	4.84	28.0	5.64	-
ORP (mV)	432.8	192.6	219.1	466.2	-	134.1	395.9	28.3	115.9	483.4	-237	161.5	-

Results are reported in micrograms per liter (ug/L), milligrams per liter (mg/L), or as indicated.

U - The compound was not detected above the indicated reporting limit.

J - Estimated. The analyte was detected below the reporting limit.

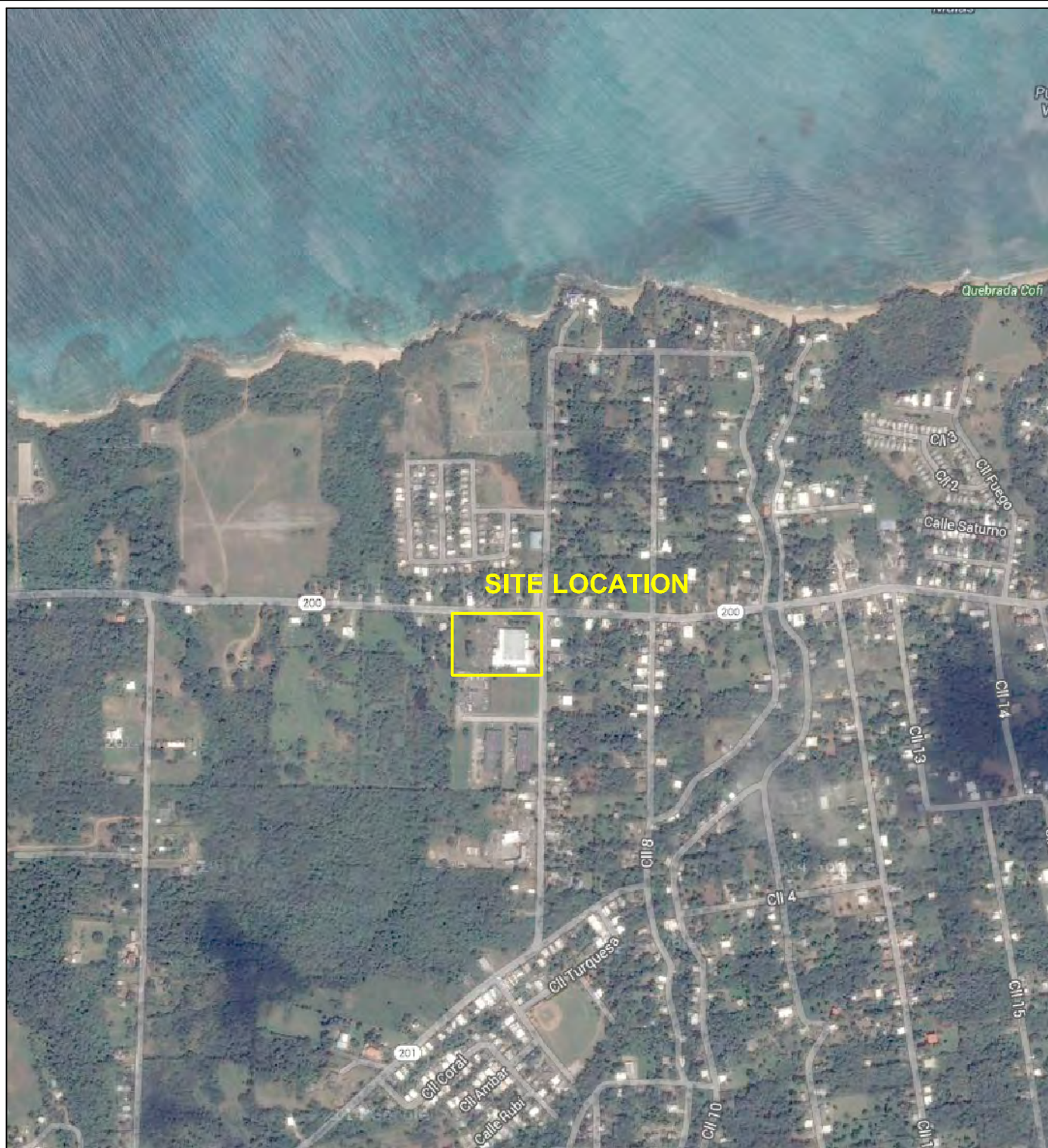
E - Concentration exceeds calibration range. Result is estimated.

Detected compounds and results are bold.

"-" - Sample was not analyzed for this parameter.

* - Elevated reading likely the result of chloride interference with equipment.

FIGURES



SOURCE: <https://maps.google.com>

CARIBE GE PRODUCTS, INC.
VIEQUES, PUERTO RICO

SITE LOCATION MAP

FIGURE 1



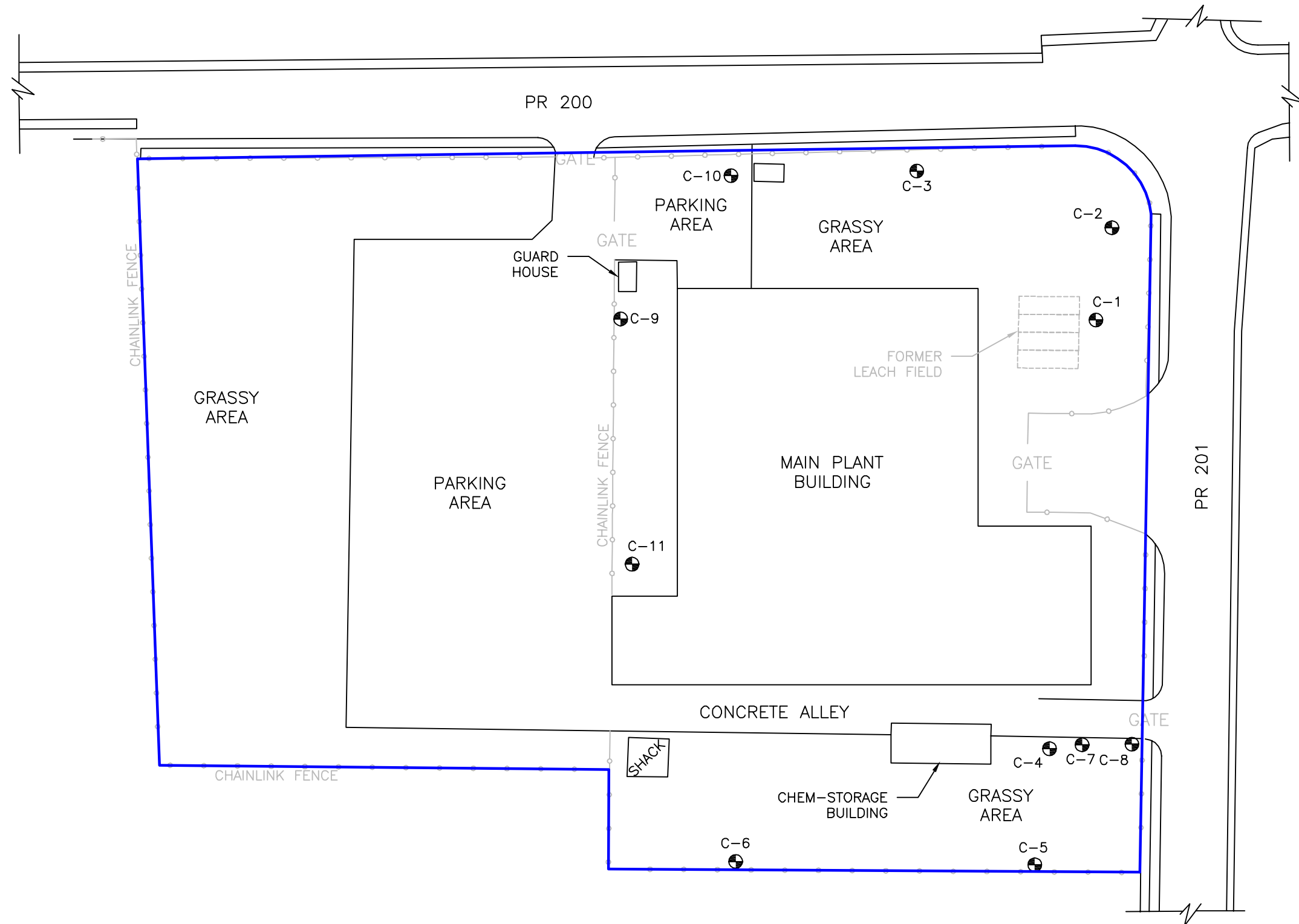
MWH

Approved By & Date:

Revised By & Date:

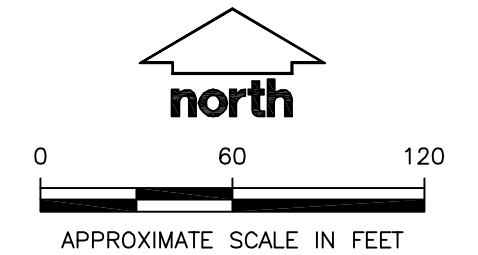
Approved By & Date:

Drawn By & Date: TLP 09/29/14



LEGEND

- C-6  MONITORING WELL LOCATION AND DESIGNATION
-  APPROXIMATE SITE BOUNDARY



CARIBE GE PRODUCTS, INC.
VIEQUES, PUERTO RICO

SITE FEATURES

FIGURE 2



Approved By & Date:

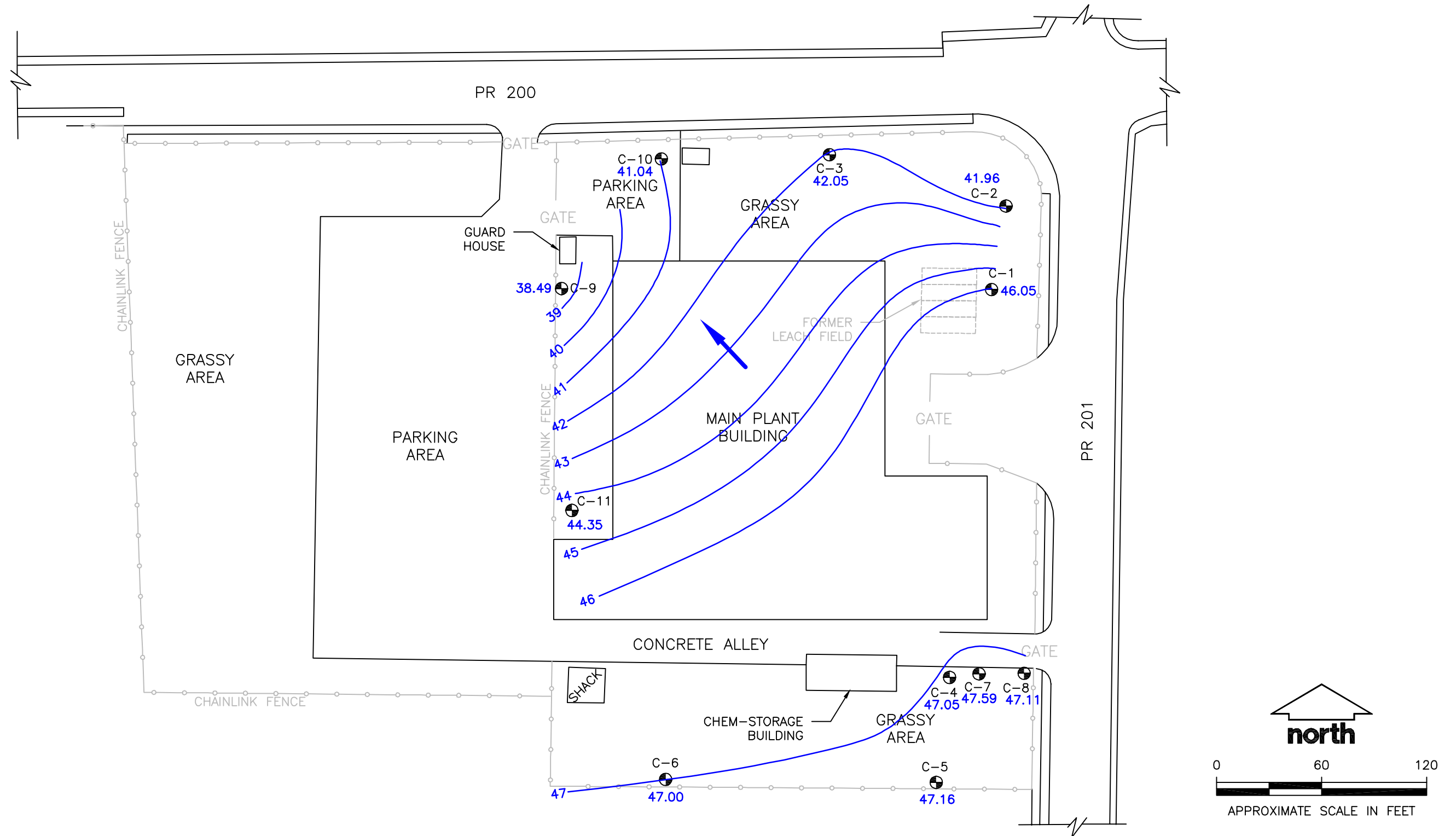
Revised By & Date:

Approved By & Date:

Drawn By & Date: TLP 11/13/14

LEGEND

- C-6  MONITORING WELL LOCATION AND DESIGNATION
- 46 — GROUNDWATER ELEVATION CONTOUR (FT AMSL) (1 FT CONTOUR INTERVAL)
-  GROUNDWATER FLOW DIRECTION



CARIBE GE PRODUCTS, INC.
VIEQUES, PUERTO RICO

GROUNDWATER ELEVATIONS
OCTOBER 2014

FIGURE 3

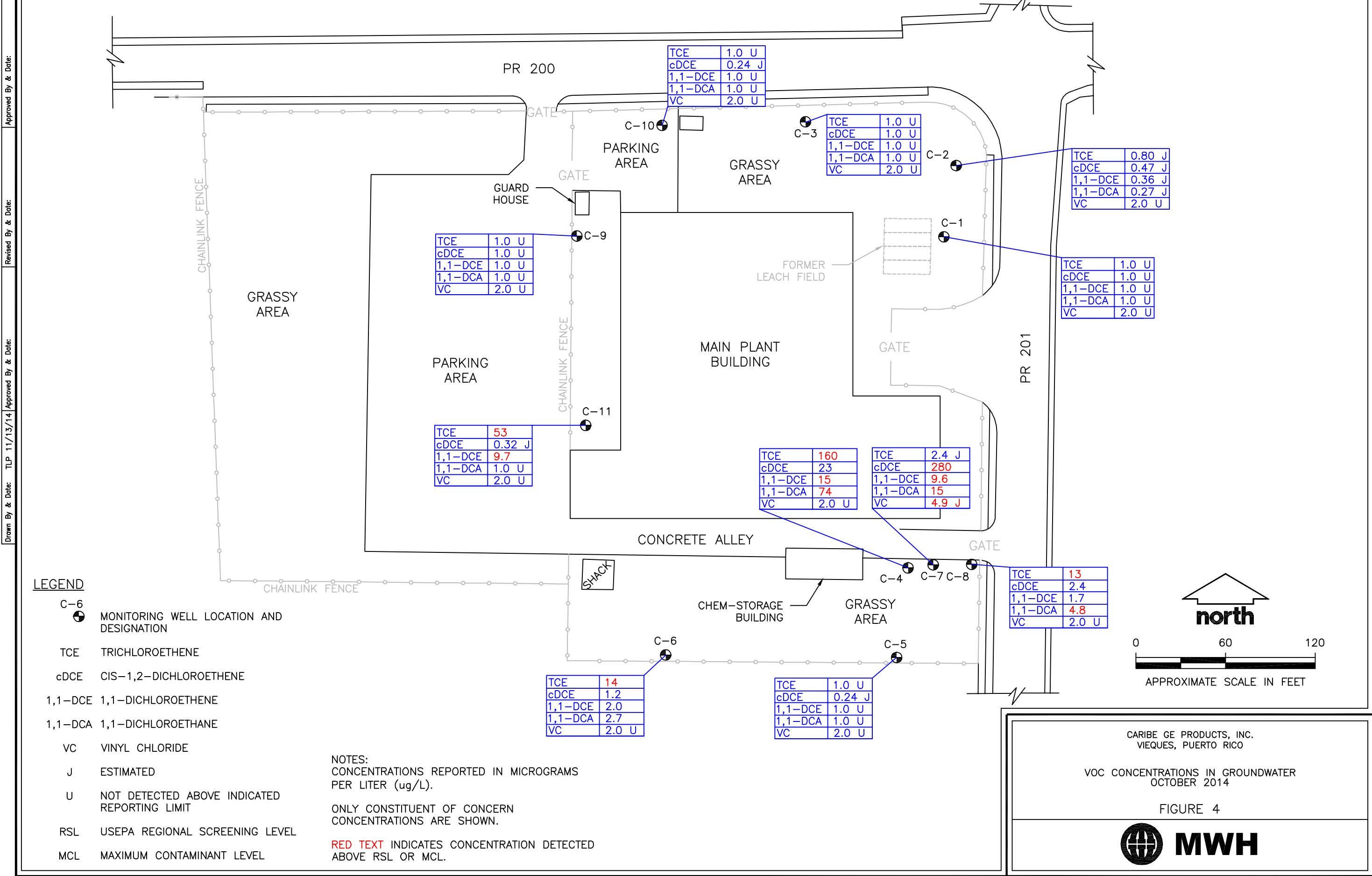


Approved By & Date:

Revised By & Date:

Approved By & Date:

Drawn By & Date:

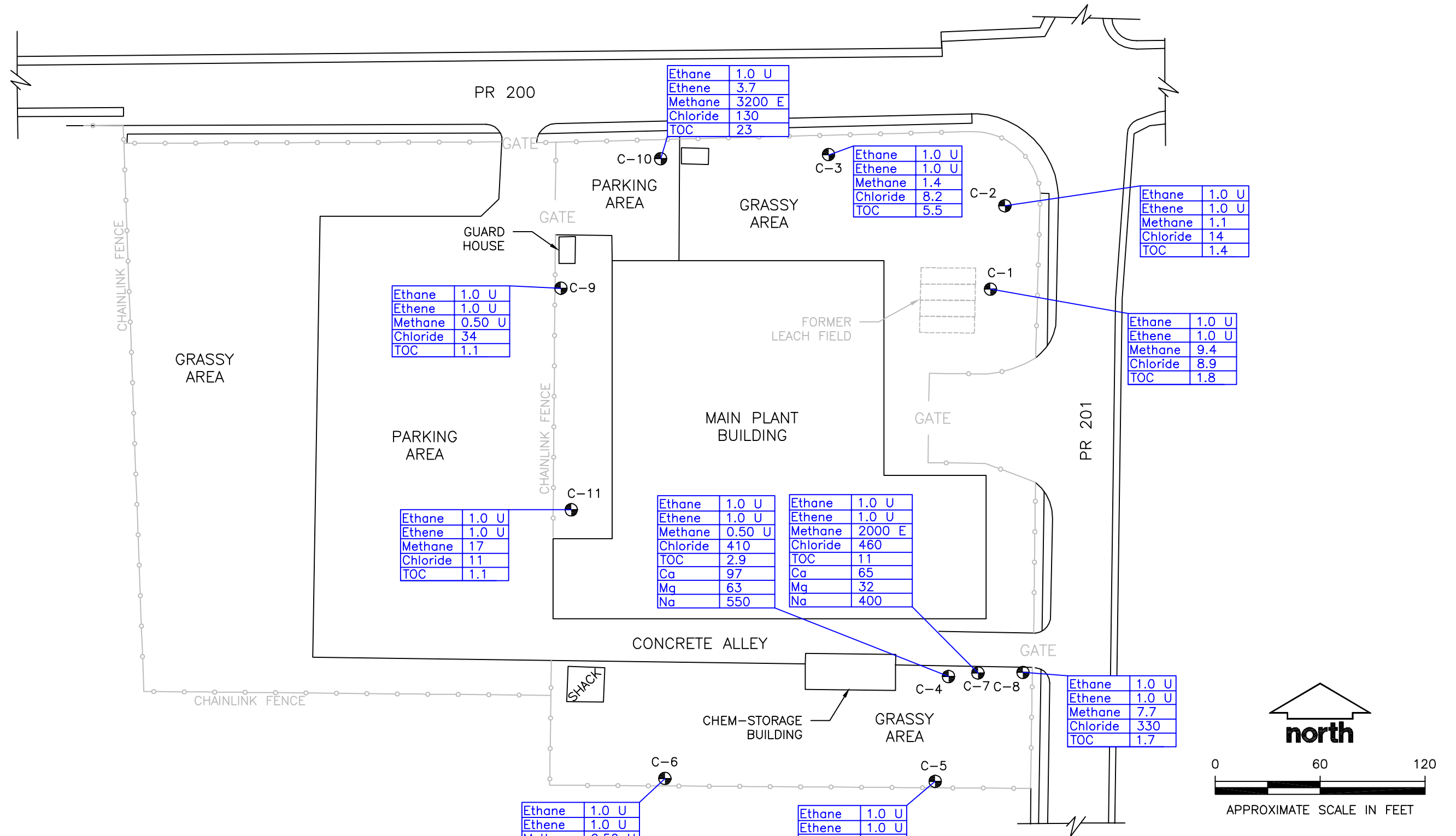


Approved By & Date:

Revised By & Date:

Approved By & Date:

Drawn By & Date: TLP 11/13/14



CARIBE GE PRODUCTS, INC.
VIEQUES, PUERTO RICO

NATURAL ATTENUATION PARAMETER
CONCENTRATIONS IN GROUNDWATER
OCTOBER 2014

FIGURE 5



APPENDIX A
GROUNDWATER SAMPLING FORMS



WATER SAMPLING LOG

Project - GE Vieques
Site Location - Vieques, PR
Job No. - 7100800
Well ID - C-1

Sampling Date - October 23, 2014
Time Sampling Began - 1212 1246
Time Sampling Completed - 1315
Coded/ Duplicate No. - N/A
Weather - Sunny

EVACUATION DATA

Description of Measuring Point (MP) (ft) PVC Diameter of Casing 2
Total Sounded Depth of Well Below MP (ft) 57.55 Water Column in Well 33.11
Depth to Water Below MP 24.44 Gallons per Foot 0.86
Gallons per Well 5.30 Volume (ml) Pumped Prior to Sampling 5 gal

Time 24hr	Pump Rate (ml/min)	Depth to Water (feet)	Temp. °C	Cond. µmhos/cm (±3%)	DO% (±10%)	DO (mg/L) (±10%)	pH (±0.10)	ORP (±10)
1255	350	25.26	29.37	505	41.2	3.11	6.67	406.8
1258	350	25.31	29.26	504	14.2	1.09	6.67	430.8
1301	350	25.28	29.67	509	7.9	0.59	6.65	442.7
1304	350	25.35	29.54	507	6.8	0.52	6.53	441.5
1307	350	25.40	29.54	507	6.6	0.50	6.47	436.3
1310	350	25.44	29.42	505	6.3	0.48	6.40	432.8

SAMPLING DATA/FIELD PARAMETERS

Color Yellowish Appearance Low Odor Sampling Date 10/23/14
Sampling Method Low Flow Material Field Filtered N

Constituents Sampled for	Container Description	Preservative
<u>VOC's</u>	From Lab <u>X</u> GESPR <u>3 vials (40ml)</u>	<u>HCl</u>
<u>Dissolved Gases</u>	<u>2 vials (40ml)</u>	<u>HCl</u>
<u>TOC</u>	<u>3 vials (40ml)</u>	<u>H₂SO₄</u>

Analytical Laboratory TriMatrix Sampling Personnel Luis A. Garcia

Well Capacity (Gal/ft): 1-1/4"=0.06; 1-1/2"=0.09; 2"=0.16; 2-1/2"=0.26; 3"=0.37; 3-1/2"=0.50; 4"=0.65; 6"=1.47; 12"=5.88
Stabilization Criteria for range of variation of last three consecutive readings: pH: ±0.1; Cond.=±3%; ORP=±10; DO%=±10%

chloride

1 Bottle
Plastic

None



WATER SAMPLING LOG

Project - GE Vieques
 Site Location - Vieques, PR
 Job No. - 7100800
 Well ID - C-2

Sampling Date - October 23, 2014
 Time Sampling Began - 1240
 Time Sampling Completed - 1310
 Coded/ Duplicate No. - 2/m
 Weather - Sunny

EVACUATION DATA

Description of Measuring Point (MP) (ft) PVC Diameter of Casing 2 "
 Total Sounded Depth of Well Below MP (ft) 61.10 Water Column in Well 39.28
 Depth to Water Below MP 21.82 Gallons per Foot 0.16
 Gallons per Well 6.28 Volume (ml) Pumped Prior to Sampling 5 gal

Time 24hr	Pump Rate (ml/min)	Depth to Water (feet)	Temp. °C	Cond. µmhos/cm (±3%)	DO% (±10%)	DO (mg/L) (±10%)	pH (±0.10)	ORP (±10)
1256	250	26.92	30.81	591	50.1	3.73	8.22	656
1259	250	26.92	31.11	620	63.0	4.31	7.35	125.4
1303	250	26.92	31.13	631	63.1	4.30	7.35	181.3
1306	250	26.92	31.20	658	63.4	4.68	7.36	183.4
1309	250	26.92	31.13	655	63.4	4.89	7.36	192.6

SAMPLING DATA/FIELD PARAMETERS

Color Clear Appearance Clear Sampling Date 10/23/14
 Sampling Method Low Flow Material Field Filtered N

Container Description
 Constituents Sampled for VOC's From Lab X GESPR Preservative HCl
Dissolved Gases 3 vials (40ml) HCl
TOC 2 vials (40ml) H₂SO₄
3 vials (40ml)
 Analytical Laboratory TriMatrix Sampling Personnel Felix Ocasio

Well Capacity (Gal/ft): 1-1/4"=0.06; 1-1/2"=0.09; 2"=0.16; 2-1/2"=0.26; 3"=0.37; 3-1/2"=0.50; 4"=0.65; 6"=1.47; 12"=5.88
 Stabilization Criteria for range of variation of last three consecutive readings: pH: ±0.1; Cond.=±3%; ORP=±10; DO%=±10%

Chloride

1 (Plastic Bottle)

None



WATER SAMPLING LOG

Project - GE Vieques
Site Location - Vieques, PR
Job No. - 7100800
Well ID - C-7

Sampling Date - October 27, 2014
Time Sampling Began - 1024 0950
Time Sampling Completed - 1034
Coded/ Duplicate No. - C-4-D 1030
Weather - Sunny

EVACUATION DATA

Description of Measuring Point (MP) (ft) PVC Diameter of Casing 2 "
Total Sounded Depth of Well Below MP (ft) 50.68 Water Column in Well 20.67
Depth to Water Below MP 29.99 Gallons per Foot 0.16
Gallons per Well 3.31 Volume (ml) Pumped Prior to Sampling 4 gal

Time 24hr	Pump Rate (ml/min)	Depth to Water (feet)	Temp. °C	Cond. µmhos/cm (±3%)	DO% (±10%)	DO (mg/L) (±10%)	pH (±0.10)	ORP (±10)
1002	550	33.50	28.93	3616	31.5	2.36	6.31	277.6
1005	550	33.46	28.80	3503	24.7	1.89	6.22	330.8
1008	550	33.53	28.87	3449	22.3	1.70	6.29	395.2
1011	550	33.76	28.86	3434	21.4	1.64	6.29	430.2
1014	550	33.86	28.84	3432	20.6	1.57	6.27	453.2
1017	550	34.08	28.80	3405	20.3	1.55	6.25	462.4
1020	550	33.90	28.86	3324	20.1	1.54	6.21	466.2
LGR								

SAMPLING DATA/FIELD PARAMETERS

Color clear Appearance clear Sampling Date 10/23/14
Sampling Method Low Flow Material Field Filtered N

Constituents Sampled for	Container Description	Preservative
<u>VOC's</u>	From Lab <u>X</u> GESPR <u>3 vials (40ml)</u>	<u>HCl</u>
<u>Dissolved Gases</u>	<u>2 vials (40ml)</u>	<u>HCl</u>
<u>TOC's</u>	<u>3 vials (40ml)</u>	<u>H₂SO₄</u>

Analytical Laboratory TriMatrix Sampling Personnel Luis A. Garcia

Well Capacity (Gal/ft): 1-1/4"=0.06; 1-1/2"=0.09; 2"=0.16; 2-1/2"=0.26; 3"=0.37; 3-1/2"=0.50; 4"=0.65; 6"=1.47; 12"=5.88
Stabilization Criteria for range of variation of last three consecutive readings: pH: ±0.1; Cond.=±3%; ORP=±10; DO%=±10%

Metals
Chloride

1 Plastic bottle
1 Plastic bottle

HNO₃
none



WATER SAMPLING LOG

Project - GE Vieques
Site Location - Vieques, PR
Job No. - 7100800
Well ID - C-6

Sampling Date - October 23, 2014
Time Sampling Began - 0750
Time Sampling Completed - 0835
Coded/ Duplicate No. - N/A
Weather - Sunny

EVACUATION DATA

Description of Measuring Point (MP) (ft) P.V.C. Diameter of Casing 2 "
Total Sounded Depth of Well Below MP (ft) 52.51 Water Column in Well 7.82
Depth to Water Below MP 44.69 Gallons per Foot 0.16
Gallons per Well 1.25 Volume (ml) Pumped Prior to Sampling 3 gal

Time 24hr	Pump Rate (ml/min)	Depth to Water (feet)	Temp. °C	Cond. µmhos/cm (±3%)	DO% (±10%)	DO (mg/L) (±10%)	pH (±0.10)	ORP (±10)
0813	180	44.79	28.96	1325	69.1	5.30	6.36	289.1
0816	180	45.09	29.13	1368	63.7	4.82	6.47	323.1
0819	180	45.07	29.31	1356	55.5	4.27	6.52	355.5
0822	180	45.40	28.94	1334	62.7	4.82	6.50	375.7
0825	180	45.47	28.82	1338	61.5	4.77	6.50	387.4
0828	180	45.48	28.77	1335	60.8	4.68	6.53	395.9
LGR								

SAMPLING DATA/FIELD PARAMETERS

Color Clear Appearance clear Sampling Date 10/23/14
Sampling Method Low Flow Material _____ Field Filtered N

Container Description
Constituents Sampled for From Lab X GESPR _____ Preservative
VOC's 3 vials (40 mL) HCl
Dissolved Gases 2 vials (40 mL) HCl
TOC's 3 vials (40 mL) H₂SO₄
Analytical Laboratory TriMatrix Sampling Personnel Luis A. Garcia

Well Capacity (Gal/ft): 1-1/4"=0.06; 1-1/2"=0.09; 2"=0.16; 2-1/2"=0.26; 3"=0.37; 3-1/2"=0.50; 4"=0.65; 6"=1.47; 12"=5.88
Stabilization Criteria for range of variation of last three consecutive readings: pH: ±0.1; Cond.=±3%; ORP=±10; DO%=±10%

Chloride

1 Plastic Bottle

None



WATER SAMPLING LOG

Project - GE Vieques
Site Location - Vieques, PR
Job No. - 7100800
Well ID - C-7

Sampling Date - October 13, 2014
Time Sampling Began - 0830
Time Sampling Completed - 0920
Coded/ Duplicate No. - N/A
Weather - Sunny

EVACUATION DATA

Description of Measuring Point (MP) (ft) PVC Diameter of Casing 2 "
Total Sounded Depth of Well Below MP (ft) 112.00 28.7 FWS Water Column in Well 83.21
Depth to Water Below MP 28.79 Gallons per Foot 0.16
Gallons per Well 13 Volume (ml) Pumped Prior to Sampling 5 gal

Time 24hr	Pump Rate (ml/min)	Depth to Water (feet)	Temp. °C	Cond. µmhos/cm (±3%)	DO% (±10%)	DO (mg/L) (±10%)	pH (±0.10)	ORP (±10)
0852			29.94	2845	34.8	2.69	9.03	24.2
0855			31.36	2894	51.4	3.77	7.26	52.00
0858		31.22	31.22	2889	53.1	3.90	7.25	49.8
0901		31.60	31.82	2918	54.8	3.98	7.23	39.8
0904	100	32.71	32.71	2925	55.1	3.95	7.23	33.7
0907		34.10	32.92	2979	49.9	3.90	7.23	23.7
0910			32.02	2974	50.9	3.98	7.20	32.1
0913			32.05	2970	50.8	3.95	7.18	31.9
0916			33.4	2971	49.7	3.94	7.17	28.3
0919								

SAMPLING DATA/FIELD PARAMETERS

Color clear Appearance clear Sampling Date 10/31/14
Sampling Method Low Flow Material Field Filtered N

Constituents Sampled for	Container Description	Preservative
<u>VOC's</u>	From Lab <u>X</u> GESPR <u>3 vials (40mL)</u>	<u>HCl</u>
<u>Dissolved Gases</u>	<u>2 vials (40mL)</u>	<u>HCl</u>
<u>TOC's</u>	<u>3 vials (40mL)</u>	<u>H2SO4</u>
Analytical Laboratory <u>TriMatrix</u>	Sampling Personnel <u>FAU</u>	

Well Capacity (Gal/ft): 1-1/4"=0.06; 1-1/2"=0.09; 2"=0.16; 2-1/2"=0.26; 3"=0.37; 3-1/2"=0.50; 4"=0.65; 6"=1.47; 12"=5.88
Stabilization Criteria for range of variation of last three consecutive readings: pH: ±0.1; Cond.=±3%; ORP=±10; DO%=±10%

Total Metals
Chloride

1 Plastic Bottle
1 Plastic Bottle

None
None



WATER SAMPLING LOG

Project - GE Vieques
Site Location - Vieques, PR
Job No. - 7100800
Well ID - C-8

Sampling Date - October 23, 2014
Time Sampling Began - 0930
Time Sampling Completed - 1005
Coded/ Duplicate No. - N/A
Weather - Sunny

EVACUATION DATA

Description of Measuring Point (MP) (ft) PVC Diameter of Casing 2"
Total Sounded Depth of Well Below MP (ft) 51.57 Water Column in Well 23.55
Depth to Water Below MP 28.02 Gallons per Foot 0.16
Gallons per Well 3.77 Volume (gal) Pumped Prior to Sampling 4 gal

Time 24hr	Pump Rate (ml/min)	Depth to Water (feet)	Temp. °C	Cond. µmhos/cm (±3%)	DO% (±10%)	DO (mg/L) (±10%)	pH (±0.10)	ORP (±10)
0941	180	28.10	29.81	2535	68.7	5.20	7.46	64.5
0944	160	28.10	29.60	2561	77.4	5.88	7.00	94.3
0947	160	28.10	29.73	2580	77.7	6.88	6.95	112.7
0950	160	28.10	29.75	2583	73.1	5.50	6.94	114.6
0953	160	28.10	29.84	2580	84.6	4.87	6.82	114.9
0956	160	28.10	30.12	2580	63.1	4.69	6.83	115.9
0959	160	28.10	30.16	2580	62.7	4.70	6.85	113.1
1002	160	30.05	30.18	2581	63.1	4.71	6.80	115.9
End								

SAMPLING DATA/FIELD PARAMETERS

Color Clear Appearance Clear Sampling Date 10/23/14
Sampling Method Low Flow Material Field Filtered N

Container Description
Constituents Sampled for From Lab X GESPR Preservative
VOC's 3 vials (40mL) HCl
Dissolved Gases 2 vials (40mL) HCl
TOC's 3 vials (40mL) H₂SO₄
Analytical Laboratory TriMatrix Sampling Personnel Felix Occasio

Well Capacity (Gal/ft): 1-1/4"=0.06; 1-1/2"=0.09; 2"=0.16; 2-1/2"=0.26; 3"=0.37; 3-1/2"=0.50; 4"=0.65; 6"=1.47; 12"=5.88
Stabilization Criteria for range of variation of last three consecutive readings: pH: ±0.1; Cond.=±3%; ORP=±10; DO%=±10%

Chloride

1 Plastic Bottle



Groundwater & Environmental Services, Inc.

WATER SAMPLING LOG

Project - GE Vieques
 Site Location - Vieques, PR
 Job No. - 7100800
 Well ID - C-9

Sampling Date - October 13, 2014
 Time Sampling Began - 1405 1335
 Time Sampling Completed - 1409
 Coded/ Duplicate No. - N/A
 Weather - Sunny

EVACUATION DATA

Description of Measuring Point (MP) (ft) P.V.C. Diameter of Casing 2 "
 Total Sounded Depth of Well Below MP (ft) 63.75 Water Column in Well 22.44
 Depth to Water Below MP 41.31 Gallons per Foot 0.16
 Gallons per Well 3.59 Volume (gal) Pumped Prior to Sampling 4 gal

Time 24hr	Pump Rate (ml/min)	Depth to Water (feet)	Temp. °C	Cond. µmhos/cm (±3%)	DO% (±10%)	DO (mg/L) (±10%)	pH (±0.10)	ORP (±10)
1349	275	43.89	30.25	924	82.3	6.01	7.07	339.0
1352	275	45.37	30.48	930	69.5	5.19	6.99	449.4
1355	275	45.97	30.72	935	67.9	5.06	7.09	479.1
1358	275	46.53	30.89	940	66.5	4.94	7.16	482.2
1401	275	46.94	30.84	939	66.3	4.92	7.20	483.6
1403	275	47.42	31.09	943	65.4	4.84	7.23	483.4

SAMPLING DATA/FIELD PARAMETERS

Color clear Appearance clear Sampling Date 10/23/14
 Sampling Method Low Flow Material Field Filtered N

Container Description

Constituents Sampled for

From Lab X GESPR

Preservative

VOC's
Dissolved Gases
DOC's

3 vials (40ml)
2 vials (40ml)
3 vials (40ml)

HCl
HCl
H₂SO₄

Analytical Laboratory TriMatrixSampling Personnel Luis A. Garcia

Well Capacity (Gal/ft): 1-1/4"=0.06; 1-1/2"=0.09; 2"=0.16; 2-1/2"=0.26; 3"=0.37; 3-1/2"=0.50; 4"=0.65; 6"=1.47; 12"=5.88

Stabilization Criteria for range of variation of last three consecutive readings: pH: ±0.1; Cond.=±3%; ORP=±10; DO%=±10%

ChlorideNone



WATER SAMPLING LOG

Project - GE Vieques
Site Location - Vieques, PR
Job No. - 7100800
Well ID - C-10

Sampling Date - October 23, 2014
Time Sampling Began - 1340
Time Sampling Completed - 1415
Coded/ Duplicate No. - N/A
Weather - Sleazy

EVACUATION DATA

Description of Measuring Point (MP) (ft) PVC Diameter of Casing 2 "
Total Sounded Depth of Well Below MP (ft) 80.05 Water Column in Well 42.76
Depth to Water Below MP 37.29 Gallons per Foot 0.16
Gallons per Well 6.84 Volume (gal) Pumped Prior to Sampling 5 gal

Time 24hr	Pump Rate (ml/min)	Depth to Water (feet)	Temp. °C	Cond. µmhos/cm (±3%)	DO% (±10%)	DO (mg/L) (±10%)	pH (±0.10)	ORP (±10)
1345	150	38.90	35.18	3450	45.8	3.14	14.30	-203.4
1348	150	39.00	31.55	3724	32.8	2.38	14.21	-217.4
1351	150	39.00	31.60	3734	31.1	2.00	14.25	-217.8
1354	150	39.00	31.74	3740	26.8	1.95	14.26	-217.7
1357	150	39.00	31.80	3750	20.5	1.48	14.26	-220.3
1400	150	39.00	31.85	3760	19.1	1.41	14.26	-221.4
1403	150	39.00	32.28	3760	22.3	1.43	14.27	-229.1
1406	150	39.00	31.90	3765	27.1	1.49	14.26	-231.5
1409	150	39.00	32.17	3770	28.0	1.50	14.26	-237.0

SAMPLING DATA/FIELD PARAMETERS

Color clear Appearance clear Sampling Date 10/23/14
Sampling Method Low Flow Material Field Filtered N

Container Description

Constituents Sampled for

VOC's
Dissolved Gases
TOC's

From Lab X GESPR

3 vials (40mL)
2 vials (40mL)
3 vials (40mL)

Preservative

HCl
HCl
H₂O₂

Analytical Laboratory TriMatrix

Sampling Personnel Felix Ocasio

Well Capacity (Gal/ft): 1-1/4"=0.06; 1-1/2"=0.09; 2"=0.16; 2-1/2"=0.26; 3"=0.37; 3-1/2"=0.50; 4"=0.65; 6"=1.47; 12"=5.88
Stabilization Criteria for range of variation of last three consecutive readings: pH: ±0.1; Cond.=±3%; ORP=±10; DO%=±10%

chloride

1 Plastic Bottle

None



WATER SAMPLING LOG

Project - GE Vieques
Site Location - Vieques, PR
Job No. - 7100800
Well ID - C-11

Sampling Date - October 23, 2014
Time Sampling Began - 1456
Time Sampling Completed - 1529
Coded/ Duplicate No. - N/A
Weather - Sunny

EVACUATION DATA

Description of Measuring Point (MP) (ft) P.V.C. Diameter of Casing 2"
Total Sounded Depth of Well Below MP (ft) 102.43 Water Column in Well 66.13
Depth to Water Below MP 36.30 Gallons per Foot 0.16
Gallons per Well 10.58 Volume (ml) Pumped Prior to Sampling 5 gal

Time 24hr	Pump Rate (ml/min)	Depth to Water (feet)	Temp. °C	Cond. µmhos/cm (±3%)	DO% (±10%)	DO (mg/L) (±10%)	pH (±0.10)	ORP (±10)
1502	150	37.06	30.96	695	66.9	4.99	10.07	29.7
1505	150	38.04	30.72	690	75.7	5.65	9.25	98.7
1508	150	38.66	30.27	682	77.7	5.84	8.90	124.9
1511	150	39.43	31.03	694	79.2	5.87	8.66	147.5
1515	150	40.01	31.18	695	78.7	5.82	8.50	163.7
1518	150	43.50	31.20	694	76.8	5.78	8.48	168.8
1521	150	40.82	31.30	695	75.2	5.64	8.43	161.5
<u>✓ 60</u>								

SAMPLING DATA/FIELD PARAMETERS

Color Clear Appearance clear Sampling Date 10/23/14
Sampling Method Low Flow Material Field Filtered N

Container Description
From Lab X GESPR Preservative
3 vials (40 mL)
2 vials (40 mL)
3 vials (40 mL)
HCl
HCl
H2SO4

Constituents Sampled for
VOC's
Dissolved Gases
TOC's

Analytical Laboratory TriMatrix Sampling Personnel Luis A. Gonzalez

Well Capacity (Gal/ft): 1-1/4"=0.06; 1-1/2"=0.09; 2"=0.16; 2-1/2"=0.26; 3"=0.37; 3-1/2"=0.50; 4"=0.65; 6"=1.47; 12"=5.88
Stabilization Criteria for range of variation of last three consecutive readings: pH: ±0.1; Cond.=±3%; ORP=±10; DO%=±10%

Chloride

1 Plastic Bottle

None

APPENDIX B
LABORATORY ANALYTICAL REPORTS
(INCLUDED ON CD)

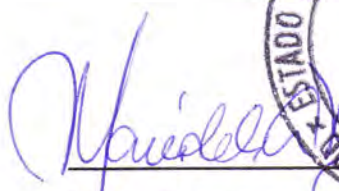
APPENDIX C
DATA CERTIFICATION
AND
VALIDATION PACKAGE

María de los A Negrón

Licensed Chemist

CERTIFICATION

I, María de los A Negrón, in my capacity as Licensed Chemist in Puerto Rico, hereby certify the Analytical Results from Project GE Caribe Vieques Puerto Rico and laboratory sample numbers 1410508-01; 1410508-02; 1410508-03; 1410508-04; 1410508-05; 1410508-06; 1410508-07; 1410508-08; 1410508-09; 1410508-10; 1410508-11; 1410508-12; 1410508-13; 1410508-14; 1410508-15.



Lda. María de los A Negrón
Licensed Chemist 5118

ORGANIC ANALYSIS DATA SHEET

USEPA-8260B

EB-102314

Laboratory: TriMatrix Laboratories, Inc.

SDG: 1410508

Client: MWH Americas - Farmington Hills, MI

Project: GE Caribe - Vieques, PR

Matrix: Water

Laboratory ID: 1410508-01

File ID: 1410508-01.D

Sampled: 10/23/14 08:30

Prepared: 10/31/14 07:00

Analyzed: 10/31/14 11:52

Solids:

Preparation: 5030B Aqueous Purge &

Initial/Final: 5 mL / 5 mL

QC Batch: 1412194

Sequence: 4K03010

Calibration: 4J27001

Instrument: 224

CAS No.	Analyte	Dilution	CONC. (ug/L)	MDL	MRL	Q
67-64-1	Acetone	1	10	1.6	10	U
71-43-2	Benzene	1	1.0	0.20	1.0	U
108-86-1	Bromobenzene	1	1.0	0.14	1.0	U
74-97-5	Bromochloromethane	1	1.0	0.15	1.0	U
75-27-4	Bromodichloromethane	1	1.0	0.13	1.0	U
75-25-2	Bromoform	1	1.0	0.18	1.0	U
74-83-9	Bromomethane	1	1.0	0.22	1.0	U
104-51-8	n-Butylbenzene	1	1.0	0.11	1.0	U
135-98-8	sec-Butylbenzene	1	1.0	0.12	1.0	U
98-06-6	tert-Butylbenzene	1	1.0	0.13	1.0	U
75-15-0	Carbon Disulfide	1	12	0.10	5.0	
56-23-5	Carbon Tetrachloride	1	1.0	0.16	1.0	U
108-90-7	Chlorobenzene	1	1.0	0.20	1.0	U
75-00-3	Chloroethane	1	1.0	0.23	1.0	U
67-66-3	Chloroform	1	0.92	0.14	1.0	J
74-87-3	Chloromethane	1	1.0	0.26	1.0	U
95-49-8	2-Chlorotoluene	1	1.0	0.16	1.0	U
106-43-4	4-Chlorotoluene	1	1.0	0.16	1.0	U
124-48-1	Dibromochloromethane	1	1.0	0.10	1.0	U
106-93-4	1,2-Dibromoethane	1	5.0	0.11	5.0	U
74-95-3	Dibromomethane	1	1.0	0.14	1.0	U
95-50-1	1,2-Dichlorobenzene	1	1.0	0.20	1.0	U
541-73-1	1,3-Dichlorobenzene	1	1.0	0.10	1.0	U
106-46-7	1,4-Dichlorobenzene	1	1.0	0.20	1.0	U
75-71-8	Dichlorodifluoromethane	1	10	0.18	10	U
75-34-3	1,1-Dichloroethane	1	1.0	0.13	1.0	U
107-06-2	1,2-Dichloroethane	1	1.0	0.17	1.0	U
75-35-4	1,1-Dichloroethene	1	1.0	0.22	1.0	U
156-59-2	cis-1,2-Dichloroethene	1	1.0	0.13	1.0	U
156-60-5	trans-1,2-Dichloroethene	1	1.0	0.27	1.0	U
540-59-0	1,2-Dichloroethene (Total)	1	2.0	0.40	2.0	U
78-87-5	1,2-Dichloropropane	1	1.0	0.15	1.0	U
142-28-9	1,3-Dichloropropane	1	1.0	0.20	1.0	U
594-20-7	2,2-Dichloropropane	1	1.0	0.14	1.0	U

000174



ORGANIC ANALYSIS DATA SHEET

USEPA-8260B

EB-102314

Laboratory: TriMatrix Laboratories, Inc.

SDG: 1410508

Client: MWH Americas - Farmington Hills, MI

Project: GE Caribe - Vieques, PR

Matrix: Water

Laboratory ID: 1410508-01

File ID: 1410508-01.D

Sampled: 10/23/14 08:30

Prepared: 10/31/14 07:00

Analyzed: 10/31/14 11:52

Solids:

Preparation: 5030B Aqueous Purge &

Initial/Final: 5 mL / 5 mL

QC Batch: 1412194

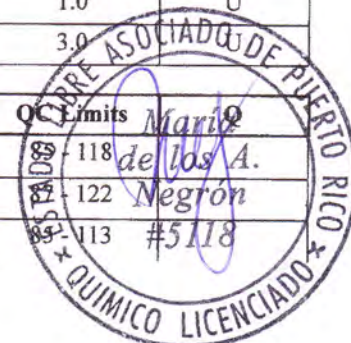
Sequence: 4K03010

Calibration: 4J27001

Instrument: 224

CAS No.	Analyte	Dilution	CONC. (ug/L)	MDL	MRL	Q
563-58-6	1,1-Dichloropropene	1	1.0	0.11	1.0	U
10061-01-5	cis-1,3-Dichloropropene	1	1.0	0.14	1.0	U
10061-02-6	trans-1,3-Dichloropropene	1	1.0	0.20	1.0	U
100-41-4	Ethylbenzene	1	1.0	0.20	1.0	U
591-78-6	2-Hexanone	1	10	0.35	10	U
98-82-8	Isopropylbenzene	1	1.0	0.14	1.0	U
99-87-6	4-Isopropyltoluene	1	1.0	0.14	1.0	U
1634-04-4	Methyl tert-Butyl Ether	1	5.0	0.10	5.0	U
75-09-2	Methylene Chloride	1	5.0	0.35	5.0	U
78-93-3	2-Butanone (MEK)	1	10	0.52	10	U
108-10-1	4-Methyl-2-pentanone (MIBK)	1	10	0.41	10	U
103-65-1	n-Propylbenzene	1	1.0	0.16	1.0	U
100-42-5	Styrene	1	1.0	0.11	1.0	U
630-20-6	1,1,1,2-Tetrachloroethane	1	1.0	0.12	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1	1.0	0.14	1.0	U
127-18-4	Tetrachloroethene	1	1.0	0.13	1.0	U
108-88-3	Toluene	1	1.2	0.20	1.0	
71-55-6	1,1,1-Trichloroethane	1	1.0	0.080	1.0	U
79-00-5	1,1,2-Trichloroethane	1	1.0	0.11	1.0	U
79-01-6	Trichloroethene	1	1.0	0.10	1.0	U
75-69-4	Trichlorofluoromethane	1	1.0	0.19	1.0	U
96-18-4	1,2,3-Trichloropropane	1	1.0	0.14	1.0	U
95-63-6	1,2,4-Trimethylbenzene	1	1.0	0.15	1.0	U
108-67-8	1,3,5-Trimethylbenzene	1	1.0	0.13	1.0	U
108-05-4	Vinyl Acetate	1	10	0.21	10	U
75-01-4	Vinyl Chloride	1	2.0	0.16	2.0	U
179601-23-1	Xylene, Meta + Para	1	2.0	0.22	2.0	U
95-47-6	Xylene, Ortho	1	1.0	0.12	1.0	U
1330-20-7	Xylene (Total)	1	3.0	0.34	3.0	

System Monitoring Compound	ADDED (ug/L)	CONC (ug/L)	% REC.
Dibromofluoromethane	40.0	39.5	99
1,2-Dichloroethane-d4	40.0	38.1	95
Toluene-d8	40.0	40.4	101



000175

ORGANIC ANALYSIS DATA SHEET

USEPA-8260B

C-1

Laboratory: TriMatrix Laboratories, Inc.

SDG: 1410508

Client: MWH Americas - Farmington Hills, MI

Project: GE Caribe - Vieques, PR

Matrix: Water

Laboratory ID: 1410508-02

File ID: 1410508-02.D

Sampled: 10/23/14 13:12

Prepared: 10/31/14 07:00

Analyzed: 10/31/14 13:41

Solids:

Preparation: 5030B Aqueous Purge &

Initial/Final: 5 mL / 5 mL

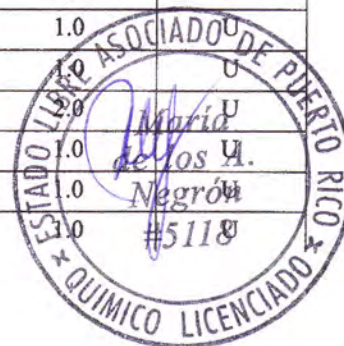
QC Batch: 1412194

Sequence: 4K03010

Calibration: 4J27001

Instrument: 224

CAS No.	Analyte	Dilution	CONC. (ug/L)	MDL	MRL	Q
67-64-1	Acetone	1	10	1.6	10	U
71-43-2	Benzene	1	1.0	0.20	1.0	U
108-86-1	Bromobenzene	1	1.0	0.14	1.0	U
74-97-5	Bromochloromethane	1	1.0	0.15	1.0	U
75-27-4	Bromodichloromethane	1	1.0	0.13	1.0	U
75-25-2	Bromoform	1	1.0	0.18	1.0	U
74-83-9	Bromomethane	1	1.0	0.22	1.0	U
104-51-8	n-Butylbenzene	1	1.0	0.11	1.0	U
135-98-8	sec-Butylbenzene	1	1.0	0.12	1.0	U
98-06-6	tert-Butylbenzene	1	1.0	0.13	1.0	U
75-15-0	Carbon Disulfide	1	5.0	0.10	5.0	U
56-23-5	Carbon Tetrachloride	1	1.0	0.16	1.0	U
108-90-7	Chlorobenzene	1	1.0	0.20	1.0	U
75-00-3	Chloroethane	1	1.0	0.23	1.0	U
67-66-3	Chloroform	1	1.0	0.14	1.0	U
74-87-3	Chloromethane	1	1.0	0.26	1.0	U
95-49-8	2-Chlorotoluene	1	1.0	0.16	1.0	U
106-43-4	4-Chlorotoluene	1	1.0	0.16	1.0	U
124-48-1	Dibromochloromethane	1	1.0	0.10	1.0	U
106-93-4	1,2-Dibromoethane	1	5.0	0.11	5.0	U
74-95-3	Dibromomethane	1	1.0	0.14	1.0	U
95-50-1	1,2-Dichlorobenzene	1	1.0	0.20	1.0	U
541-73-1	1,3-Dichlorobenzene	1	1.0	0.10	1.0	U
106-46-7	1,4-Dichlorobenzene	1	1.0	0.20	1.0	U
75-71-8	Dichlorodifluoromethane	1	10	0.18	10	U
75-34-3	1,1-Dichloroethane	1	1.0	0.13	1.0	U
107-06-2	1,2-Dichloroethane	1	1.0	0.17	1.0	U
75-35-4	1,1-Dichloroethene	1	1.0	0.22	1.0	U
156-59-2	cis-1,2-Dichloroethene	1	1.0	0.13	1.0	U
156-60-5	trans-1,2-Dichloroethene	1	1.0	0.27	1.0	U
540-59-0	1,2-Dichloroethene (Total)	1	2.0	0.40	1.0	U
78-87-5	1,2-Dichloropropane	1	1.0	0.15	1.0	U
142-28-9	1,3-Dichloropropane	1	1.0	0.20	1.0	U
594-20-7	2,2-Dichloropropane	1	1.0	0.14	1.0	U



000182

ORGANIC ANALYSIS DATA SHEET

USEPA-8260B

C-1

Laboratory: TriMatrix Laboratories, Inc.

SDG: 1410508

Client: MWH Americas - Farmington Hills, MI

Project: GE Caribe - Vieques, PR

Matrix: Water

Laboratory ID: 1410508-02

File ID: 1410508-02.D

Sampled: 10/23/14 13:12

Prepared: 10/31/14 07:00

Analyzed: 10/31/14 13:41

Solids:

Preparation: 5030B Aqueous Purge &

Initial/Final: 5 mL / 5 mL

QC Batch: 1412194

Sequence: 4K03010

Calibration: 4J27001

Instrument: 224

CAS No.	Analyte	Dilution	CONC. (ug/L)	MDL	MRL	Q
563-58-6	1,1-Dichloropropene	1	1.0	0.11	1.0	U
10061-01-5	cis-1,3-Dichloropropene	1	1.0	0.14	1.0	U
10061-02-6	trans-1,3-Dichloropropene	1	1.0	0.20	1.0	U
100-41-4	Ethylbenzene	1	1.0	0.20	1.0	U
591-78-6	2-Hexanone	1	10	0.35	10	U
98-82-8	Isopropylbenzene	1	1.0	0.14	1.0	U
99-87-6	4-Isopropyltoluene	1	1.0	0.14	1.0	U
1634-04-4	Methyl tert-Butyl Ether	1	5.0	0.10	5.0	U
75-09-2	Methylene Chloride	1	5.0	0.35	5.0	U
78-93-3	2-Butanone (MEK)	1	10	0.52	10	U
108-10-1	4-Methyl-2-pentanone (MIBK)	1	10	0.41	10	U
103-65-1	n-Propylbenzene	1	1.0	0.16	1.0	U
100-42-5	Styrene	1	1.0	0.11	1.0	U
630-20-6	1,1,1,2-Tetrachloroethane	1	1.0	0.12	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1	1.0	0.14	1.0	U
127-18-4	Tetrachloroethene	1	1.0	0.13	1.0	U
108-88-3	Toluene	1	1.0	0.20	1.0	U
71-55-6	1,1,1-Trichloroethane	1	1.0	0.080	1.0	U
79-00-5	1,1,2-Trichloroethane	1	1.0	0.11	1.0	U
79-01-6	Trichloroethene	1	1.0	0.10	1.0	U
75-69-4	Trichlorofluoromethane	1	1.0	0.19	1.0	U
96-18-4	1,2,3-Trichloropropane	1	1.0	0.14	1.0	U
95-63-6	1,2,4-Trimethylbenzene	1	1.0	0.15	1.0	U
108-67-8	1,3,5-Trimethylbenzene	1	1.0	0.13	1.0	U
108-05-4	Vinyl Acetate	1	10	0.21	10	U
75-01-4	Vinyl Chloride	1	2.0	0.16	2.0	U
179601-23-1	Xylene, Meta + Para	1	2.0	0.22	2.0	U
95-47-6	Xylene, Ortho	1	1.0	0.12	1.0	U
1330-20-7	Xylene (Total)	1	3.0	0.34		

System Monitoring Compound	ADDED (ug/L)	CONC (ug/L)	% REC.
Dibromofluoromethane	40.0	42.2	106
1,2-Dichloroethane-d4	40.0	40.0	100
Toluene-d8	40.0	42.1	105



000183

ORGANIC ANALYSIS DATA SHEET

USEPA-8260B

C-2

Laboratory: TriMatrix Laboratories, Inc.

SDG: 1410508

Client: MWH Americas - Farmington Hills, MI

Project: GE Caribe - Vieques, PR

Matrix: Water

Laboratory ID: 1410508-03

File ID: 1410508-03.D

Sampled: 10/23/14 13:10

Prepared: 10/31/14 07:00

Analyzed: 10/31/14 14:08

Solids:

Preparation: 5030B Aqueous Purge &

Initial/Final: 5 mL / 5 mL

QC Batch: 1412194

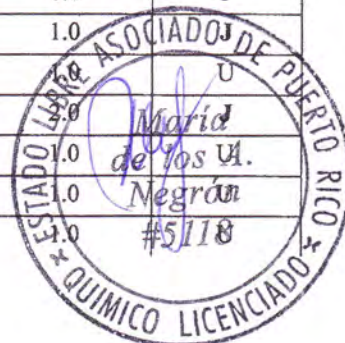
Sequence: 4K03010

Calibration: 4J27001

Instrument: 224

CAS No.	Analyte	Dilution	CONC. (ug/L)	MDL	MRL	Q
67-64-1	Acetone	1	10	1.6	10	U
71-43-2	Benzene	1	1.0	0.20	1.0	U
108-86-1	Bromobenzene	1	1.0	0.14	1.0	U
74-97-5	Bromochloromethane	1	1.0	0.15	1.0	U
75-27-4	Bromodichloromethane	1	1.0	0.13	1.0	U
75-25-2	Bromoform	1	1.0	0.18	1.0	U
74-83-9	Bromomethane	1	1.0	0.22	1.0	U
104-51-8	n-Butylbenzene	1	1.0	0.11	1.0	U
135-98-8	sec-Butylbenzene	1	1.0	0.12	1.0	U
98-06-6	tert-Butylbenzene	1	1.0	0.13	1.0	U
75-15-0	Carbon Disulfide	1	5.0	0.10	5.0	U
56-23-5	Carbon Tetrachloride	1	1.0	0.16	1.0	U
108-90-7	Chlorobenzene	1	1.0	0.20	1.0	U
75-00-3	Chloroethane	1	1.0	0.23	1.0	U
67-66-3	Chloroform	1	1.0	0.14	1.0	U
74-87-3	Chloromethane	1	1.0	0.26	1.0	U
95-49-8	2-Chlorotoluene	1	1.0	0.16	1.0	U
106-43-4	4-Chlorotoluene	1	1.0	0.16	1.0	U
124-48-1	Dibromochloromethane	1	1.0	0.10	1.0	U
106-93-4	1,2-Dibromoethane	1	5.0	0.11	5.0	U
74-95-3	Dibromomethane	1	1.0	0.14	1.0	U
95-50-1	1,2-Dichlorobenzene	1	1.0	0.20	1.0	U
541-73-1	1,3-Dichlorobenzene	1	1.0	0.10	1.0	U
106-46-7	1,4-Dichlorobenzene	1	1.0	0.20	1.0	U
75-71-8	Dichlorodifluoromethane	1	10	0.18	10	U
75-34-3	1,1-Dichloroethane	1	0.27	0.13	1.0	J
107-06-2	1,2-Dichloroethane	1	1.0	0.17	1.0	U
75-35-4	1,1-Dichloroethene	1	0.36	0.22	1.0	J
156-59-2	cis-1,2-Dichloroethene	1	0.47	0.13	1.0	U
156-60-5	trans-1,2-Dichloroethene	1	1.0	0.27	1.0	U
540-59-0	1,2-Dichloroethene (Total)	1	0.47	0.40	1.0	U
78-87-5	1,2-Dichloropropane	1	1.0	0.15	1.0	U
142-28-9	1,3-Dichloropropane	1	1.0	0.20	1.0	U
594-20-7	2,2-Dichloropropane	1	1.0	0.14	1.0	U

000188



ORGANIC ANALYSIS DATA SHEET

USEPA-8260B

C-2

Laboratory: TriMatrix Laboratories, Inc.

SDG: 1410508

Client: MWH Americas - Farmington Hills, MI

Project: GE Caribe - Vieques, PR

Matrix: Water

Laboratory ID: 1410508-03

File ID: 1410508-03.D

Sampled: 10/23/14 13:10

Prepared: 10/31/14 07:00

Analyzed: 10/31/14 14:08

Solids:

Preparation: 5030B Aqueous Purge &

Initial/Final: 5 mL / 5 mL

QC Batch: 1412194

Sequence: 4K03010

Calibration: 4J27001

Instrument: 224

CAS No.	Analyte	Dilution	CONC. (ug/L)	MDL	MRL	Q
563-58-6	1,1-Dichloropropene	1	1.0	0.11	1.0	U
10061-01-5	cis-1,3-Dichloropropene	1	1.0	0.14	1.0	U
10061-02-6	trans-1,3-Dichloropropene	1	1.0	0.20	1.0	U
100-41-4	Ethylbenzene	1	1.0	0.20	1.0	U
591-78-6	2-Hexanone	1	10	0.35	10	U
98-82-8	Isopropylbenzene	1	1.0	0.14	1.0	U
99-87-6	4-Isopropyltoluene	1	1.0	0.14	1.0	U
1634-04-4	Methyl tert-Butyl Ether	1	5.0	0.10	5.0	U
75-09-2	Methylene Chloride	1	5.0	0.35	5.0	U
78-93-3	2-Butanone (MEK)	1	10	0.52	10	U
108-10-1	4-Methyl-2-pentanone (MIBK)	1	10	0.41	10	U
103-65-1	n-Propylbenzene	1	1.0	0.16	1.0	U
100-42-5	Styrene	1	1.0	0.11	1.0	U
630-20-6	1,1,1,2-Tetrachloroethane	1	1.0	0.12	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1	1.0	0.14	1.0	U
127-18-4	Tetrachloroethene	1	1.0	0.13	1.0	U
108-88-3	Toluene	1	0.28	0.20	1.0	J
71-55-6	1,1,1-Trichloroethane	1	1.0	0.080	1.0	U
79-00-5	1,1,2-Trichloroethane	1	1.0	0.11	1.0	U
79-01-6	Trichloroethene	1	0.80	0.10	1.0	J
75-69-4	Trichlorofluoromethane	1	1.0	0.19	1.0	U
96-18-4	1,2,3-Trichloropropane	1	1.0	0.14	1.0	U
95-63-6	1,2,4-Trimethylbenzene	1	1.0	0.15	1.0	U
108-67-8	1,3,5-Trimethylbenzene	1	1.0	0.13	1.0	U
108-05-4	Vinyl Acetate	1	10	0.21	10	U
75-01-4	Vinyl Chloride	1	2.0	0.16	2.0	U
179601-23-1	Xylene, Meta + Para	1	2.0	0.22	2.0	U
95-47-6	Xylene, Ortho	1	1.0	0.12	1.0	U
1330-20-7	Xylene (Total)	1	3.0	0.34	3.0	U

System Monitoring Compound	ADDED (ug/L)	CONC (ug/L)	% REC.
Dibromofluoromethane	40.0	43.0	108
1,2-Dichloroethane-d4	40.0	40.7	102
Toluene-d8	40.0	42.2	106



000189

ORGANIC ANALYSIS DATA SHEET

USEPA-8260B

C-3

Laboratory: TriMatrix Laboratories, Inc.

SDG: 1410508

Client: MWH Americas - Farmington Hills, MI

Project: GE Caribe - Vieques, PR

Matrix: Water

Laboratory ID: 1410508-04

File ID: 1410508-04.D

Sampled: 10/23/14 12:15

Prepared: 10/31/14 07:00

Analyzed: 10/31/14 14:36

Solids:

Preparation: 5030B Aqueous Purge &

Initial/Final: 5 mL / 5 mL

QC Batch: 1412194

Sequence: 4K03010

Calibration: 4J27001

Instrument: 224

CAS No.	Analyte	Dilution	CONC. (ug/L)	MDL	MRL	Q
67-64-1	Acetone	1	10	1.6	10	U
71-43-2	Benzene	1	1.0	0.20	1.0	U
108-86-1	Bromobenzene	1	1.0	0.14	1.0	U
74-97-5	Bromochloromethane	1	1.0	0.15	1.0	U
75-27-4	Bromodichloromethane	1	1.0	0.13	1.0	U
75-25-2	Bromoform	1	1.0	0.18	1.0	U
74-83-9	Bromomethane	1	1.0	0.22	1.0	U
104-51-8	n-Butylbenzene	1	1.0	0.11	1.0	U
135-98-8	sec-Butylbenzene	1	1.0	0.12	1.0	U
98-06-6	tert-Butylbenzene	1	1.0	0.13	1.0	U
75-15-0	Carbon Disulfide	1	5.0	0.10	5.0	U
56-23-5	Carbon Tetrachloride	1	1.0	0.16	1.0	U
108-90-7	Chlorobenzene	1	1.0	0.20	1.0	U
75-00-3	Chloroethane	1	1.0	0.23	1.0	U
67-66-3	Chloroform	1	1.0	0.14	1.0	U
74-87-3	Chloromethane	1	1.0	0.26	1.0	U
95-49-8	2-Chlorotoluene	1	1.0	0.16	1.0	U
106-43-4	4-Chlorotoluene	1	1.0	0.16	1.0	U
124-48-1	Dibromochloromethane	1	1.0	0.10	1.0	U
106-93-4	1,2-Dibromoethane	1	5.0	0.11	5.0	U
74-95-3	Dibromomethane	1	1.0	0.14	1.0	U
95-50-1	1,2-Dichlorobenzene	1	1.0	0.20	1.0	U
541-73-1	1,3-Dichlorobenzene	1	1.0	0.10	1.0	U
106-46-7	1,4-Dichlorobenzene	1	1.0	0.20	1.0	U
75-71-8	Dichlorodifluoromethane	1	10	0.18	10	U
75-34-3	1,1-Dichloroethane	1	1.0	0.13	1.0	U
107-06-2	1,2-Dichloroethane	1	1.0	0.17	1.0	U
75-35-4	1,1-Dichloroethene	1	1.0	0.22	1.0	U
156-59-2	cis-1,2-Dichloroethene	1	1.0	0.13	1.0	U
156-60-5	trans-1,2-Dichloroethene	1	1.0	0.27	1.0	U
540-59-0	1,2-Dichloroethene (Total)	1	2.0	0.40	2.0	U
78-87-5	1,2-Dichloropropane	1	1.0	0.15	1.0	U
142-28-9	1,3-Dichloropropane	1	1.0	0.20	1.0	U
594-20-7	2,2-Dichloropropane	1	1.0	0.14	1.0	U



000197

ORGANIC ANALYSIS DATA SHEET

USEPA-8260B

C-3

Laboratory: TriMatrix Laboratories, Inc.

SDG: 1410508

Client: MWH Americas - Farmington Hills, MI

Project: GE Caribe - Vieques, PR

Matrix: Water

Laboratory ID: 1410508-04

File ID: 1410508-04.D

Sampled: 10/23/14 12:15

Prepared: 10/31/14 07:00

Analyzed: 10/31/14 14:36

Solids:

Preparation: 5030B Aqueous Purge &

Initial/Final: 5 mL / 5 mL

QC Batch: 1412194

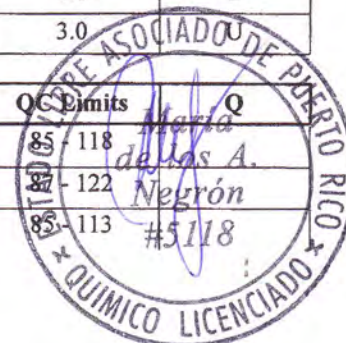
Sequence: 4K03010

Calibration: 4J27001

Instrument: 224

CAS No.	Analyte	Dilution	CONC. (ug/L)	MDL	MRL	Q
563-58-6	1,1-Dichloropropene	1	1.0	0.11	1.0	U
10061-01-5	cis-1,3-Dichloropropene	1	1.0	0.14	1.0	U
10061-02-6	trans-1,3-Dichloropropene	1	1.0	0.20	1.0	U
100-41-4	Ethylbenzene	1	1.0	0.20	1.0	U
591-78-6	2-Hexanone	1	10	0.35	10	U
98-82-8	Isopropylbenzene	1	1.0	0.14	1.0	U
99-87-6	4-Isopropyltoluene	1	1.0	0.14	1.0	U
1634-04-4	Methyl tert-Butyl Ether	1	5.0	0.10	5.0	U
75-09-2	Methylene Chloride	1	5.0	0.35	5.0	U
78-93-3	2-Butanone (MEK)	1	10	0.52	10	U
108-10-1	4-Methyl-2-pentanone (MIBK)	1	10	0.41	10	U
103-65-1	n-Propylbenzene	1	1.0	0.16	1.0	U
100-42-5	Styrene	1	1.0	0.11	1.0	U
630-20-6	1,1,1,2-Tetrachloroethane	1	1.0	0.12	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1	1.0	0.14	1.0	U
127-18-4	Tetrachloroethene	1	1.0	0.13	1.0	U
108-88-3	Toluene	1	0.37	0.20	1.0	J
71-55-6	1,1,1-Trichloroethane	1	1.0	0.080	1.0	U
79-00-5	1,1,2-Trichloroethane	1	1.0	0.11	1.0	U
79-01-6	Trichloroethene	1	1.0	0.10	1.0	U
75-69-4	Trichlorofluoromethane	1	1.0	0.19	1.0	U
96-18-4	1,2,3-Trichloropropane	1	1.0	0.14	1.0	U
95-63-6	1,2,4-Trimethylbenzene	1	1.0	0.15	1.0	U
108-67-8	1,3,5-Trimethylbenzene	1	1.0	0.13	1.0	U
108-05-4	Vinyl Acetate	1	10	0.21	10	U
75-01-4	Vinyl Chloride	1	2.0	0.16	2.0	U
179601-23-1	Xylene, Meta + Para	1	0.30	0.22	2.0	J
95-47-6	Xylene, Ortho	1	1.0	0.12	1.0	U
1330-20-7	Xylene (Total)	1	3.0	0.34	3.0	

System Monitoring Compound	ADDED (ug/L)	CONC (ug/L)	% REC.	Q
Dibromofluoromethane	40.0	42.1	105	
1,2-Dichloroethane-d4	40.0	39.9	100	
Toluene-d8	40.0	41.5	104	



000198

ORGANIC ANALYSIS DATA SHEET

USEPA-8260B

C-4

Laboratory: TriMatrix Laboratories, Inc.

SDG: 1410508

Client: MWH Americas - Farmington Hills, MI

Project: GE Caribe - Vieques, PR

Matrix: Water

Laboratory ID: 1410508-05

File ID: 1410508-05A.D

Sampled: 10/23/14 10:24

Prepared: 10/31/14 07:00

Analyzed: 10/31/14 18:41

Solids:

Preparation: 5030B Aqueous Purge &

Initial/Final: 5 mL / 5 mL

QC Batch: 1412194

Sequence: 4K03010

Calibration: 4J27001

Instrument: 224

CAS No.	Analyte	Dilution	CONC. (ug/L)	MDL	MRL	Q
67-64-1	Acetone	1	10	1.6	10	U
71-43-2	Benzene	1	1.0	0.20	1.0	U
108-86-1	Bromobenzene	1	1.0	0.14	1.0	U
74-97-5	Bromochloromethane	1	1.0	0.15	1.0	U
75-27-4	Bromodichloromethane	1	1.0	0.13	1.0	U
75-25-2	Bromoform	1	1.0	0.18	1.0	U
74-83-9	Bromomethane	1	1.0	0.22	1.0	U
104-51-8	n-Butylbenzene	1	1.0	0.11	1.0	U
135-98-8	sec-Butylbenzene	1	1.0	0.12	1.0	U
98-06-6	tert-Butylbenzene	1	1.0	0.13	1.0	U
75-15-0	Carbon Disulfide	1	5.0	0.10	5.0	U
56-23-5	Carbon Tetrachloride	1	1.0	0.16	1.0	U
108-90-7	Chlorobenzene	1	1.0	0.20	1.0	U
75-00-3	Chloroethane	1	1.0	0.23	1.0	U
67-66-3	Chloroform	1	0.51	0.14	1.0	J
74-87-3	Chloromethane	1	1.0	0.26	1.0	U
95-49-8	2-Chlorotoluene	1	1.0	0.16	1.0	U
106-43-4	4-Chlorotoluene	1	1.0	0.16	1.0	U
124-48-1	Dibromochloromethane	1	1.0	0.10	1.0	U
106-93-4	1,2-Dibromoethane	1	5.0	0.11	5.0	U
74-95-3	Dibromomethane	1	1.0	0.14	1.0	U
95-50-1	1,2-Dichlorobenzene	1	1.0	0.20	1.0	U
541-73-1	1,3-Dichlorobenzene	1	1.0	0.10	1.0	U
106-46-7	1,4-Dichlorobenzene	1	1.0	0.20	1.0	U
75-71-8	Dichlorodifluoromethane	1	10	0.18	10	U
75-34-3	1,1-Dichloroethane	1	74	0.13	1.0	
107-06-2	1,2-Dichloroethane	1	1.0	0.17	1.0	U
75-35-4	1,1-Dichloroethene	1	15	0.22	1.0	
156-59-2	cis-1,2-Dichloroethene	1	23	0.13	1.0	
156-60-5	trans-1,2-Dichloroethene	1	0.29	0.27	1.0	J
540-59-0	1,2-Dichloroethene (Total)	1	23	0.40	2.0	
78-87-5	1,2-Dichloropropane	1	1.0	0.15	1.0	U
142-28-9	1,3-Dichloropropane	1	1.0	0.20	1.0	U
594-20-7	2,2-Dichloropropane	1	1.0	0.14	1.0	U

000205



ORGANIC ANALYSIS DATA SHEET

USEPA-8260B

C-4

Laboratory: TriMatrix Laboratories, Inc.

SDG: 1410508

Client: MWH Americas - Farmington Hills, MI

Project: GE Caribe - Vieques, PR

Matrix: Water

Laboratory ID: 1410508-05

File ID: 1410508-05A.D

Sampled: 10/23/14 10:24

Prepared: 10/31/14 07:00

Analyzed: 10/31/14 18:41

Solids:

Preparation: 5030B Aqueous Purge &

Initial/Final: 5 mL / 5 mL

QC Batch: 1412194

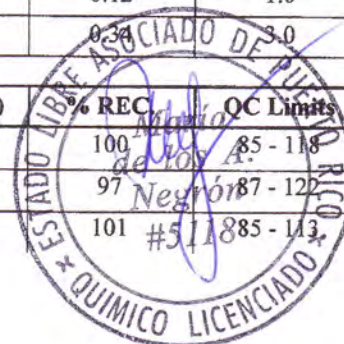
Sequence: 4K03010

Calibration: 4J27001

Instrument: 224

CAS No.	Analyte	Dilution	CONC. (ug/L)	MDL	MRL	Q
563-58-6	1,1-Dichloropropene	1	1.0	0.11	1.0	U
10061-01-5	cis-1,3-Dichloropropene	1	1.0	0.14	1.0	U
10061-02-6	trans-1,3-Dichloropropene	1	1.0	0.20	1.0	U
100-41-4	Ethylbenzene	1	1.0	0.20	1.0	U
591-78-6	2-Hexanone	1	10	0.35	10	U
98-82-8	Isopropylbenzene	1	1.0	0.14	1.0	U
99-87-6	4-Isopropyltoluene	1	1.0	0.14	1.0	U
1634-04-4	Methyl tert-Butyl Ether	1	5.0	0.10	5.0	U
75-09-2	Methylene Chloride	1	5.0	0.35	5.0	U
78-93-3	2-Butanone (MEK)	1	10	0.52	10	U
108-10-1	4-Methyl-2-pentanone (MIBK)	1	10	0.41	10	U
103-65-1	n-Propylbenzene	1	1.0	0.16	1.0	U
100-42-5	Styrene	1	1.0	0.11	1.0	U
630-20-6	1,1,1,2-Tetrachloroethane	1	1.0	0.12	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1	1.0	0.14	1.0	U
127-18-4	Tetrachloroethene	1	6.4	0.13	1.0	
108-88-3	Toluene	1	1.0	0.20	1.0	U
71-55-6	1,1,1-Trichloroethane	1	1.0	0.080	1.0	U
79-00-5	1,1,2-Trichloroethane	1	0.71	0.11	1.0	J
79-01-6	Trichloroethene	1	160	0.10	1.0	
75-69-4	Trichlorofluoromethane	1	1.0	0.19	1.0	U
96-18-4	1,2,3-Trichloropropane	1	1.0	0.14	1.0	U
95-63-6	1,2,4-Trimethylbenzene	1	1.0	0.15	1.0	U
108-67-8	1,3,5-Trimethylbenzene	1	1.0	0.13	1.0	U
108-05-4	Vinyl Acetate	1	10	0.21	10	U
75-01-4	Vinyl Chloride	1	2.0	0.16	2.0	U
179601-23-1	Xylene, Meta + Para	1	2.0	0.22	2.0	U
95-47-6	Xylene, Ortho	1	1.0	0.12	1.0	U
1330-20-7	Xylene (Total)	1	3.0	0.34	3.0	U

System Monitoring Compound	ADDED (ug/L)	CONC (ug/L)	% REC	QC Limits	Q
Dibromofluoromethane	40.0	40.2	100	85 - 118	
1,2-Dichloroethane-d4	40.0	38.8	97	87 - 122	
Toluene-d8	40.0	40.6	101	85 - 113	



000206

ORGANIC ANALYSIS DATA SHEET

USEPA-8260B

C-4-D

Laboratory: TriMatrix Laboratories, Inc.

SDG: 1410508

Client: MWH Americas - Farmington Hills, MI

Project: GE Caribe - Vieques, PR

Matrix: Water

Laboratory ID: 1410508-06

File ID: 1410508-06.D

Sampled: 10/23/14 10:24

Prepared: 10/31/14 07:00

Analyzed: 10/31/14 15:03

Solids:

Preparation: 5030B Aqueous Purge &

Initial/Final: 5 mL / 5 mL

QC Batch: 1412194

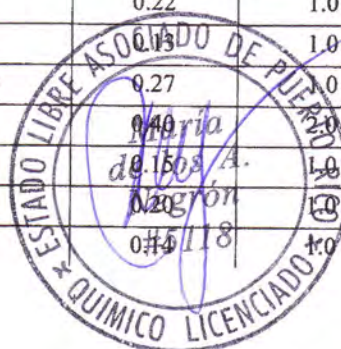
Sequence: 4K03010

Calibration: 4J27001

Instrument: 224

CAS No.	Analyte	Dilution	CONC. (ug/L)	MDL	MRL	Q
67-64-1	Acetone	1	10	1.6	10	U
71-43-2	Benzene	1	1.0	0.20	1.0	U
108-86-1	Bromobenzene	1	1.0	0.14	1.0	U
74-97-5	Bromochloromethane	1	1.0	0.15	1.0	U
75-27-4	Bromodichloromethane	1	1.0	0.13	1.0	U
75-25-2	Bromoform	1	1.0	0.18	1.0	U
74-83-9	Bromomethane	1	1.0	0.22	1.0	U
104-51-8	n-Butylbenzene	1	1.0	0.11	1.0	U
135-98-8	sec-Butylbenzene	1	1.0	0.12	1.0	U
98-06-6	tert-Butylbenzene	1	1.0	0.13	1.0	U
75-15-0	Carbon Disulfide	1	5.0	0.10	5.0	U
56-23-5	Carbon Tetrachloride	1	1.0	0.16	1.0	U
108-90-7	Chlorobenzene	1	1.0	0.20	1.0	U
75-00-3	Chloroethane	1	1.0	0.23	1.0	U
67-66-3	Chloroform	1	0.56	0.14	1.0	J
74-87-3	Chloromethane	1	1.0	0.26	1.0	U
95-49-8	2-Chlorotoluene	1	1.0	0.16	1.0	U
106-43-4	4-Chlorotoluene	1	1.0	0.16	1.0	U
124-48-1	Dibromochloromethane	1	1.0	0.10	1.0	U
106-93-4	1,2-Dibromoethane	1	5.0	0.11	5.0	U
74-95-3	Dibromomethane	1	1.0	0.14	1.0	U
95-50-1	1,2-Dichlorobenzene	1	1.0	0.20	1.0	U
541-73-1	1,3-Dichlorobenzene	1	1.0	0.10	1.0	U
106-46-7	1,4-Dichlorobenzene	1	1.0	0.20	1.0	U
75-71-8	Dichlorodifluoromethane	1	10	0.18	10	U
75-34-3	1,1-Dichloroethane	1	79	0.13	1.0	
107-06-2	1,2-Dichloroethane	1	1.0	0.17	1.0	U
75-35-4	1,1-Dichloroethene	1	16	0.22	1.0	
156-59-2	cis-1,2-Dichloroethene	1	24		1.0	
156-60-5	trans-1,2-Dichloroethene	1	0.40	0.27	1.0	J
540-59-0	1,2-Dichloroethene (Total)	1	25		1.0	
78-87-5	1,2-Dichloropropane	1	1.0		1.0	U
142-28-9	1,3-Dichloropropane	1	1.0		1.0	U
594-20-7	2,2-Dichloropropane	1	1.0		1.0	U

000216



ORGANIC ANALYSIS DATA SHEET

USEPA-8260B

C-4-D

Laboratory: TriMatrix Laboratories, Inc.

SDG: 1410508

Client: MWH Americas - Farmington Hills, MI

Project: GE Caribe - Vieques, PR

Matrix: Water

Laboratory ID: 1410508-06

File ID: 1410508-06.D

Sampled: 10/23/14 10:24

Prepared: 10/31/14 07:00

Analyzed: 10/31/14 15:03

Solids:

Preparation: 5030B Aqueous Purge &

Initial/Final: 5 mL / 5 mL

QC Batch: 1412194

Sequence: 4K03010

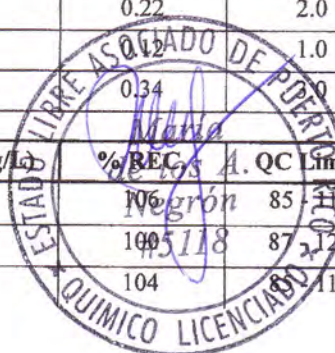
Calibration: 4J27001

Instrument: 224

CAS No.	Analyte	Dilution	CONC. (ug/L)	MDL	MRL	Q
563-58-6	1,1-Dichloropropene	1	1.0	0.11	1.0	U
10061-01-5	cis-1,3-Dichloropropene	1	1.0	0.14	1.0	U
10061-02-6	trans-1,3-Dichloropropene	1	1.0	0.20	1.0	U
100-41-4	Ethylbenzene	1	1.0	0.20	1.0	U
591-78-6	2-Hexanone	1	10	0.35	10	U
98-82-8	Isopropylbenzene	1	1.0	0.14	1.0	U
99-87-6	4-Isopropyltoluene	1	1.0	0.14	1.0	U
1634-04-4	Methyl tert-Butyl Ether	1	5.0	0.10	5.0	U
75-09-2	Methylene Chloride	1	5.0	0.35	5.0	U
78-93-3	2-Butanone (MEK)	1	10	0.52	10	U
108-10-1	4-Methyl-2-pentanone (MIBK)	1	10	0.41	10	U
103-65-1	n-Propylbenzene	1	1.0	0.16	1.0	U
100-42-5	Styrene	1	1.0	0.11	1.0	U
630-20-6	1,1,1,2-Tetrachloroethane	1	1.0	0.12	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1	1.0	0.14	1.0	U
127-18-4	Tetrachloroethene	1	6.3	0.13	1.0	
108-88-3	Toluene	1	1.0	0.20	1.0	U
71-55-6	1,1,1-Trichloroethane	1	1.0	0.080	1.0	U
79-00-5	1,1,2-Trichloroethane	1	0.74	0.11	1.0	J
79-01-6	Trichloroethene	1	170	0.10	1.0	
75-69-4	Trichlorofluoromethane	1	1.0	0.19	1.0	U
96-18-4	1,2,3-Trichloropropane	1	1.0	0.14	1.0	U
95-63-6	1,2,4-Trimethylbenzene	1	1.0	0.15	1.0	U
108-67-8	1,3,5-Trimethylbenzene	1	1.0	0.13	1.0	U
108-05-4	Vinyl Acetate	1	10	0.21	10	U
75-01-4	Vinyl Chloride	1	2.0	0.16	2.0	U
179601-23-1	Xylene, Meta + Para	1	2.0	0.22	2.0	U
95-47-6	Xylene, Ortho	1	1.0		1.0	U
1330-20-7	Xylene (Total)	1	3.0			U

System Monitoring Compound	ADDED (ug/L)	CONC (ug/L)	% REC	A. QC Limits	Q
Dibromofluoromethane	40.0	42.3	106	85 - 118	
1,2-Dichloroethane-d4	40.0	40.0	100	87 - 122	
Toluene-d8	40.0	41.6	104	113	

000217



ORGANIC ANALYSIS DATA SHEET

USEPA-8260B

C-5

Laboratory: TriMatrix Laboratories, Inc.

SDG: 1410508

Client: MWH Americas - Farmington Hills, MI

Project: GE Caribe - Vieques, PR

Matrix: Water

Laboratory ID: 1410508-07

File ID: 1410508-07.D

Sampled: 10/23/14 10:16

Prepared: 10/31/14 07:00

Analyzed: 10/31/14 15:30

Solids:

Preparation: 5030B Aqueous Purge &

Initial/Final: 5 mL / 5 mL

QC Batch: 1412194

Sequence: 4K03010

Calibration: 4J27001

Instrument: 224

CAS No.	Analyte	Dilution	CONC. (ug/L)	MDL	MRL	Q
67-64-1	Acetone	1	10	1.6	10	U
71-43-2	Benzene	1	1.0	0.20	1.0	U
108-86-1	Bromobenzene	1	1.0	0.14	1.0	U
74-97-5	Bromochloromethane	1	1.0	0.15	1.0	U
75-27-4	Bromodichloromethane	1	1.0	0.13	1.0	U
75-25-2	Bromoform	1	1.0	0.18	1.0	U
74-83-9	Bromomethane	1	1.0	0.22	1.0	U
104-51-8	n-Butylbenzene	1	1.0	0.11	1.0	U
135-98-8	sec-Butylbenzene	1	1.0	0.12	1.0	U
98-06-6	tert-Butylbenzene	1	1.0	0.13	1.0	U
75-15-0	Carbon Disulfide	1	5.0	0.10	5.0	U
56-23-5	Carbon Tetrachloride	1	1.0	0.16	1.0	U
108-90-7	Chlorobenzene	1	1.0	0.20	1.0	U
75-00-3	Chloroethane	1	1.0	0.23	1.0	U
67-66-3	Chloroform	1	1.0	0.14	1.0	U
74-87-3	Chloromethane	1	1.0	0.26	1.0	U
95-49-8	2-Chlorotoluene	1	1.0	0.16	1.0	U
106-43-4	4-Chlorotoluene	1	1.0	0.16	1.0	U
124-48-1	Dibromochloromethane	1	1.0	0.10	1.0	U
106-93-4	1,2-Dibromoethane	1	5.0	0.11	5.0	U
74-95-3	Dibromomethane	1	1.0	0.14	1.0	U
95-50-1	1,2-Dichlorobenzene	1	1.0	0.20	1.0	U
541-73-1	1,3-Dichlorobenzene	1	1.0	0.10	1.0	U
106-46-7	1,4-Dichlorobenzene	1	1.0	0.20	1.0	U
75-71-8	Dichlorodifluoromethane	1	10	0.18	10	U
75-34-3	1,1-Dichloroethane	1	1.0	0.13	1.0	U
107-06-2	1,2-Dichloroethane	1	1.0	0.17	1.0	U
75-35-4	1,1-Dichloroethene	1	1.0	0.22	1.0	U
156-59-2	cis-1,2-Dichloroethene	1	0.24	0.15	1.0	J
156-60-5	trans-1,2-Dichloroethene	1	1.0	0.27	1.0	U
540-59-0	1,2-Dichloroethene (Total)	1	2.0	0.40	2.0	U
78-87-5	1,2-Dichloropropane	1	1.0	0.15	1.0	U
142-28-9	1,3-Dichloropropane	1	1.0	0.20	1.0	U
594-20-7	2,2-Dichloropropane	1	1.0	0.14	1.0	U



000226

ORGANIC ANALYSIS DATA SHEET

USEPA-8260B

C-5

Laboratory: TriMatrix Laboratories, Inc.

SDG: 1410508

Client: MWH Americas - Farmington Hills, MI

Project: GE Caribe - Vieques, PR

Matrix: Water

Laboratory ID: 1410508-07

File ID: 1410508-07.D

Sampled: 10/23/14 10:16

Prepared: 10/31/14 07:00

Analyzed: 10/31/14 15:30

Solids:

Preparation: 5030B Aqueous Purge &

Initial/Final: 5 mL / 5 mL

QC Batch: 1412194

Sequence: 4K03010

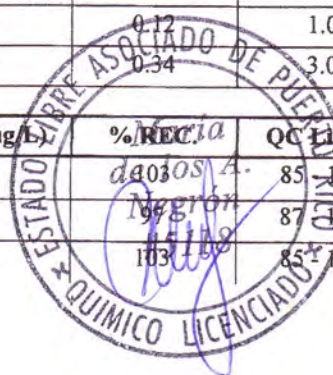
Calibration: 4J27001

Instrument: 224

CAS No.	Analyte	Dilution	CONC. (ug/L)	MDL	MRL	Q
563-58-6	1,1-Dichloropropene	1	1.0	0.11	1.0	U
10061-01-5	cis-1,3-Dichloropropene	1	1.0	0.14	1.0	U
10061-02-6	trans-1,3-Dichloropropene	1	1.0	0.20	1.0	U
100-41-4	Ethylbenzene	1	1.0	0.20	1.0	U
591-78-6	2-Hexanone	1	10	0.35	10	U
98-82-8	Isopropylbenzene	1	1.0	0.14	1.0	U
99-87-6	4-Isopropyltoluene	1	1.0	0.14	1.0	U
1634-04-4	Methyl tert-Butyl Ether	1	5.0	0.10	5.0	U
75-09-2	Methylene Chloride	1	5.0	0.35	5.0	U
78-93-3	2-Butanone (MEK)	1	10	0.52	10	U
108-10-1	4-Methyl-2-pentanone (MIBK)	1	10	0.41	10	U
103-65-1	n-Propylbenzene	1	1.0	0.16	1.0	U
100-42-5	Styrene	1	1.0	0.11	1.0	U
630-20-6	1,1,1,2-Tetrachloroethane	1	1.0	0.12	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1	1.0	0.14	1.0	U
127-18-4	Tetrachloroethene	1	1.0	0.13	1.0	U
108-88-3	Toluene	1	1.0	0.20	1.0	U
71-55-6	1,1,1-Trichloroethane	1	1.0	0.080	1.0	U
79-00-5	1,1,2-Trichloroethane	1	1.0	0.11	1.0	U
79-01-6	Trichloroethene	1	1.0	0.10	1.0	U
75-69-4	Trichlorofluoromethane	1	1.0	0.19	1.0	U
96-18-4	1,2,3-Trichloropropane	1	1.0	0.14	1.0	U
95-63-6	1,2,4-Trimethylbenzene	1	1.0	0.15	1.0	U
108-67-8	1,3,5-Trimethylbenzene	1	1.0	0.13	1.0	U
108-05-4	Vinyl Acetate	1	10	0.21	10	U
75-01-4	Vinyl Chloride	1	2.0	0.16	2.0	U
179601-23-1	Xylene, Meta + Para	1	2.0	0.22	2.0	U
95-47-6	Xylene, Ortho	1	1.0	0.12	1.0	U
1330-20-7	Xylene (Total)	1	3.0	0.34	3.0	U

System Monitoring Compound	ADDED (ug/L)	CONC (ug/L)	%REC'd	QC Limits	Q
Dibromofluoromethane	40.0	41.1	102.75%	85-118	
1,2-Dichloroethane-d4	40.0	38.9	97.25%	87-122	
Toluene-d8	40.0	41.3	103.25%	85-113	

000227



ORGANIC ANALYSIS DATA SHEET

USEPA-8260B

C-6

Laboratory: TriMatrix Laboratories, Inc.

SDG: 1410508

Client: MWH Americas - Farmington Hills, MI

Project: GE Caribe - Vieques, PR

Matrix: Water

Laboratory ID: 1410508-08

File ID: 1410508-08.D

Sampled: 10/23/14 08:45

Prepared: 10/31/14 07:00

Analyzed: 10/31/14 15:57

Solids:

Preparation: 5030B Aqueous Purge &

Initial/Final: 5 mL / 5 mL

QC Batch: 1412194

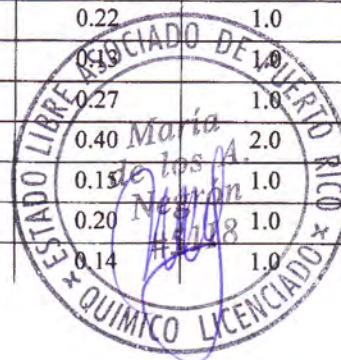
Sequence: 4K03010

Calibration: 4J27001

Instrument: 224

CAS No.	Analyte	Dilution	CONC. (ug/L)	MDL	MRL	Q
67-64-1	Acetone	1	10	1.6	10	U
71-43-2	Benzene	1	1.0	0.20	1.0	U
108-86-1	Bromobenzene	1	1.0	0.14	1.0	U
74-97-5	Bromochloromethane	1	1.0	0.15	1.0	U
75-27-4	Bromodichloromethane	1	1.0	0.13	1.0	U
75-25-2	Bromoform	1	1.0	0.18	1.0	U
74-83-9	Bromomethane	1	1.0	0.22	1.0	U
104-51-8	n-Butylbenzene	1	1.0	0.11	1.0	U
135-98-8	sec-Butylbenzene	1	1.0	0.12	1.0	U
98-06-6	tert-Butylbenzene	1	1.0	0.13	1.0	U
75-15-0	Carbon Disulfide	1	5.0	0.10	5.0	U
56-23-5	Carbon Tetrachloride	1	1.0	0.16	1.0	U
108-90-7	Chlorobenzene	1	1.0	0.20	1.0	U
75-00-3	Chloroethane	1	1.0	0.23	1.0	U
67-66-3	Chloroform	1	1.0	0.14	1.0	U
74-87-3	Chloromethane	1	1.0	0.26	1.0	U
95-49-8	2-Chlorotoluene	1	1.0	0.16	1.0	U
106-43-4	4-Chlorotoluene	1	1.0	0.16	1.0	U
124-48-1	Dibromochloromethane	1	1.0	0.10	1.0	U
106-93-4	1,2-Dibromoethane	1	5.0	0.11	5.0	U
74-95-3	Dibromomethane	1	1.0	0.14	1.0	U
95-50-1	1,2-Dichlorobenzene	1	1.0	0.20	1.0	U
541-73-1	1,3-Dichlorobenzene	1	1.0	0.10	1.0	U
106-46-7	1,4-Dichlorobenzene	1	1.0	0.20	1.0	U
75-71-8	Dichlorodifluoromethane	1	10	0.18	10	U
75-34-3	1,1-Dichloroethane	1	2.7	0.13	1.0	
107-06-2	1,2-Dichloroethane	1	1.0	0.17	1.0	U
75-35-4	1,1-Dichloroethene	1	2.0	0.22	1.0	
156-59-2	cis-1,2-Dichloroethene	1	1.2	0.19	1.0	
156-60-5	trans-1,2-Dichloroethene	1	1.0	0.27	1.0	U
540-59-0	1,2-Dichloroethene (Total)	1	1.2	0.40	2.0	J
78-87-5	1,2-Dichloropropane	1	1.0	0.15	1.0	U
142-28-9	1,3-Dichloropropane	1	1.0	0.20	1.0	U
594-20-7	2,2-Dichloropropane	1	1.0	0.14	1.0	U

000233



ORGANIC ANALYSIS DATA SHEET

USEPA-8260B

C-6

Laboratory: TriMatrix Laboratories, Inc.

SDG: 1410508

Client: MWH Americas - Farmington Hills, MI

Project: GE Caribe - Vieques, PR

Matrix: Water

Laboratory ID: 1410508-08

File ID: 1410508-08.D

Sampled: 10/23/14 08:45

Prepared: 10/31/14 07:00

Analyzed: 10/31/14 15:57

Solids:

Preparation: 5030B Aqueous Purge &

Initial/Final: 5 mL / 5 mL

QC Batch: 1412194

Sequence: 4K03010

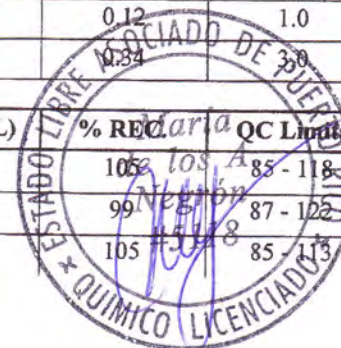
Calibration: 4J27001

Instrument: 224

CAS No.	Analyte	Dilution	CONC. (ug/L)	MDL	MRL	Q
563-58-6	1,1-Dichloropropene	1	1.0	0.11	1.0	U
10061-01-5	cis-1,3-Dichloropropene	1	1.0	0.14	1.0	U
10061-02-6	trans-1,3-Dichloropropene	1	1.0	0.20	1.0	U
100-41-4	Ethylbenzene	1	1.0	0.20	1.0	U
591-78-6	2-Hexanone	1	10	0.35	10	U
98-82-8	Isopropylbenzene	1	1.0	0.14	1.0	U
99-87-6	4-Isopropyltoluene	1	1.0	0.14	1.0	U
1634-04-4	Methyl tert-Butyl Ether	1	5.0	0.10	5.0	U
75-09-2	Methylene Chloride	1	5.0	0.35	5.0	U
78-93-3	2-Butanone (MEK)	1	10	0.52	10	U
108-10-1	4-Methyl-2-pentanone (MIBK)	1	10	0.41	10	U
103-65-1	n-Propylbenzene	1	1.0	0.16	1.0	U
100-42-5	Styrene	1	1.0	0.11	1.0	U
630-20-6	1,1,1,2-Tetrachloroethane	1	1.0	0.12	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1	1.0	0.14	1.0	U
127-18-4	Tetrachloroethene	1	0.54	0.13	1.0	J
108-88-3	Toluene	1	1.0	0.20	1.0	U
71-55-6	1,1,1-Trichloroethane	1	1.0	0.080	1.0	U
79-00-5	1,1,2-Trichloroethane	1	1.0	0.11	1.0	U
79-01-6	Trichloroethene	1	14	0.10	1.0	
75-69-4	Trichlorofluoromethane	1	1.0	0.19	1.0	U
96-18-4	1,2,3-Trichloropropane	1	1.0	0.14	1.0	U
95-63-6	1,2,4-Trimethylbenzene	1	1.0	0.15	1.0	U
108-67-8	1,3,5-Trimethylbenzene	1	1.0	0.13	1.0	U
108-05-4	Vinyl Acetate	1	10	0.21	10	U
75-01-4	Vinyl Chloride	1	2.0	0.16	2.0	U
179601-23-1	Xylene, Meta + Para	1	2.0	0.22	2.0	U
95-47-6	Xylene, Ortho	1	1.0	0.12	1.0	U
1330-20-7	Xylene (Total)	1	3.0	0.34		U

System Monitoring Compound	ADDED (ug/L)	CONC (ug/L)	% REC.	QC Limits	Q
Dibromofluoromethane	40.0	42.2	105.5	85 - 118	
1,2-Dichloroethane-d4	40.0	39.6	99.0	87 - 122	
Toluene-d8	40.0	42.0	105.0	85 - 118	

000234



ORGANIC ANALYSIS DATA SHEET

USEPA-8260B

C-7

Laboratory: TriMatrix Laboratories, Inc.

SDG: 1410508

Client: MWH Americas - Farmington Hills, MI

Project: GE Caribe - Vieques, PR

Matrix: Water

Laboratory ID: 1410508-09

File ID: 1410508-09.D

Sampled: 10/23/14 09:20

Prepared: 11/03/14 08:00

Analyzed: 11/03/14 12:04

Solids:

Preparation: 5030B Aqueous Purge &

Initial/Final: 5 mL / 5 mL

QC Batch: 1412276

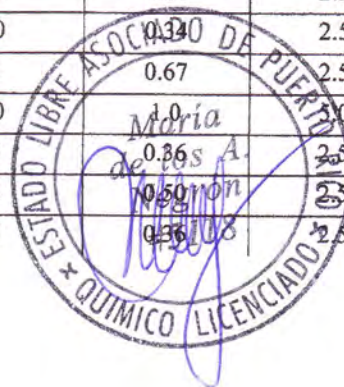
Sequence: 4K04017

Calibration: 4J27001

Instrument: 224

CAS No.	Analyte	Dilution	CONC. (ug/L)	MDL	MRL	Q
67-64-1	Acetone	2.5	5.6	3.9	25	J
71-43-2	Benzene	2.5	2.5	0.50	2.5	U
108-86-1	Bromobenzene	2.5	2.5	0.34	2.5	U
74-97-5	Bromochloromethane	2.5	2.5	0.37	2.5	U
75-27-4	Bromodichloromethane	2.5	2.5	0.32	2.5	U
75-25-2	Bromoform	2.5	2.5	0.46	2.5	U
74-83-9	Bromomethane	2.5	2.5	0.54	2.5	U
104-51-8	n-Butylbenzene	2.5	2.5	0.27	2.5	U
135-98-8	sec-Butylbenzene	2.5	2.5	0.29	2.5	U
98-06-6	tert-Butylbenzene	2.5	2.5	0.33	2.5	U
75-15-0	Carbon Disulfide	2.5	12	0.26	12	U
56-23-5	Carbon Tetrachloride	2.5	2.5	0.39	2.5	U
108-90-7	Chlorobenzene	2.5	2.5	0.50	2.5	U
75-00-3	Chloroethane	2.5	2.5	0.58	2.5	U
67-66-3	Chloroform	2.5	2.5	0.34	2.5	U
74-87-3	Chloromethane	2.5	2.5	0.66	2.5	U
95-49-8	2-Chlorotoluene	2.5	2.5	0.40	2.5	U
106-43-4	4-Chlorotoluene	2.5	2.5	0.39	2.5	U
124-48-1	Dibromochloromethane	2.5	2.5	0.26	2.5	U
106-93-4	1,2-Dibromoethane	2.5	12	0.28	12	U
74-95-3	Dibromomethane	2.5	2.5	0.34	2.5	U
95-50-1	1,2-Dichlorobenzene	2.5	2.5	0.50	2.5	U
541-73-1	1,3-Dichlorobenzene	2.5	2.5	0.26	2.5	U
106-46-7	1,4-Dichlorobenzene	2.5	2.5	0.50	2.5	U
75-71-8	Dichlorodifluoromethane	2.5	25	0.45	25	U
75-34-3	1,1-Dichloroethane	2.5	15	0.32	2.5	
107-06-2	1,2-Dichloroethane	2.5	2.5	0.44	2.5	U
75-35-4	1,1-Dichloroethene	2.5	9.6	0.56	2.5	
156-59-2	cis-1,2-Dichloroethene	2.5	280	0.34	2.5	
156-60-5	trans-1,2-Dichloroethene	2.5	15	0.67	2.5	
540-59-0	1,2-Dichloroethene (Total)	2.5	300	1.0	2.5	
78-87-5	1,2-Dichloropropane	2.5	2.5	0.36	2.5	U
142-28-9	1,3-Dichloropropane	2.5	2.5	0.50	2.5	U
594-20-7	2,2-Dichloropropane	2.5	2.5	0.36	2.5	U

000242



ORGANIC ANALYSIS DATA SHEET

USEPA-8260B

C-7

Laboratory: TriMatrix Laboratories, Inc.

SDG: 1410508

Client: MWH Americas - Farmington Hills, MI

Project: GE Caribe - Vieques, PR

Matrix: Water

Laboratory ID: 1410508-09

File ID: 1410508-09.D

Sampled: 10/23/14 09:20

Prepared: 11/03/14 08:00

Analyzed: 11/03/14 12:04

Solids:

Preparation: 5030B Aqueous Purge &

Initial/Final: 5 mL / 5 mL

QC Batch: 1412276

Sequence: 4K04017

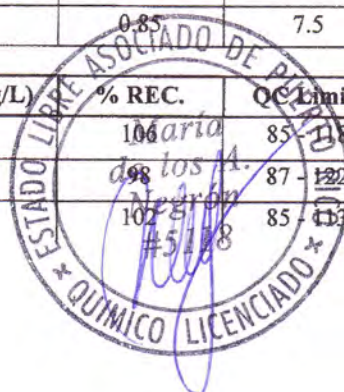
Calibration: 4J27001

Instrument: 224

CAS No.	Analyte	Dilution	CONC. (ug/L)	MDL	MRL	Q
563-58-6	1,1-Dichloropropene	2.5	2.5	0.27	2.5	U
10061-01-5	cis-1,3-Dichloropropene	2.5	2.5	0.34	2.5	U
10061-02-6	trans-1,3-Dichloropropene	2.5	2.5	0.50	2.5	U
100-41-4	Ethylbenzene	2.5	2.5	0.50	2.5	U
591-78-6	2-Hexanone	2.5	25	0.87	25	U
98-82-8	Isopropylbenzene	2.5	2.5	0.36	2.5	U
99-87-6	4-Isopropyltoluene	2.5	2.5	0.36	2.5	U
1634-04-4	Methyl tert-Butyl Ether	2.5	12	0.25	12	U
75-09-2	Methylene Chloride	2.5	12	0.86	12	U
78-93-3	2-Butanone (MEK)	2.5	25	1.3	25	U
108-10-1	4-Methyl-2-pentanone (MIBK)	2.5	25	1.0	25	U
103-65-1	n-Propylbenzene	2.5	2.5	0.41	2.5	U
100-42-5	Styrene	2.5	2.5	0.28	2.5	U
630-20-6	1,1,1,2-Tetrachloroethane	2.5	2.5	0.30	2.5	U
79-34-5	1,1,2,2-Tetrachloroethane	2.5	2.5	0.35	2.5	U
127-18-4	Tetrachloroethene	2.5	2.5	0.34	2.5	U
108-88-3	Toluene	2.5	2.5	0.50	2.5	U
71-55-6	1,1,1-Trichloroethane	2.5	2.5	0.20	2.5	U
79-00-5	1,1,2-Trichloroethane	2.5	2.5	0.28	2.5	U
79-01-6	Trichloroethene	2.5	2.4	0.26	2.5	J
75-69-4	Trichlorofluoromethane	2.5	2.5	0.48	2.5	U
96-18-4	1,2,3-Trichloropropane	2.5	2.5	0.35	2.5	U
95-63-6	1,2,4-Trimethylbenzene	2.5	2.5	0.38	2.5	U
108-67-8	1,3,5-Trimethylbenzene	2.5	2.5	0.33	2.5	U
108-05-4	Vinyl Acetate	2.5	25	0.52	25	U
75-01-4	Vinyl Chloride	2.5	4.9	0.40	5.0	J
179601-23-1	Xylene, Meta + Para	2.5	5.0	0.55	5.0	U
95-47-6	Xylene, Ortho	2.5	2.5	0.30	2.5	U
1330-20-7	Xylene (Total)	2.5	7.5	0.85	7.5	U

System Monitoring Compound	ADDED (ug/L)	CONC (ug/L)	% REC.	QC Limits	Q
Dibromofluoromethane	40.0	42.5	106.25	85 - 118	
1,2-Dichloroethane-d4	40.0	39.0	97.5	87 - 122	
Toluene-d8	40.0	40.9	102.25	85 - 113	

000243



ORGANIC ANALYSIS DATA SHEET

USEPA-8260B

C-8

Laboratory: TriMatrix Laboratories, Inc.

SDG: 1410508

Client: MWH Americas - Farmington Hills, MI

Project: GE Caribe - Vieques, PR

Matrix: Water

Laboratory ID: 1410508-10

File ID: 1410508-10.D

Sampled: 10/23/14 10:05

Prepared: 10/31/14 07:00

Analyzed: 10/31/14 16:52

Solids:

Preparation: 5030B Aqueous Purge &

Initial/Final: 5 mL / 5 mL

QC Batch: 1412194

Sequence: 4K03010

Calibration: 4J27001

Instrument: 224

CAS No.	Analyte	Dilution	CONC. (ug/L)	MDL	MRL	Q
67-64-1	Acetone	1	10	1.6	10	U
71-43-2	Benzene	1	1.0	0.20	1.0	U
108-86-1	Bromobenzene	1	1.0	0.14	1.0	U
74-97-5	Bromochloromethane	1	1.0	0.15	1.0	U
75-27-4	Bromodichloromethane	1	1.0	0.13	1.0	U
75-25-2	Bromoform	1	1.0	0.18	1.0	U
74-83-9	Bromomethane	1	1.0	0.22	1.0	U
104-51-8	n-Butylbenzene	1	1.0	0.11	1.0	U
135-98-8	sec-Butylbenzene	1	1.0	0.12	1.0	U
98-06-6	tert-Butylbenzene	1	1.0	0.13	1.0	U
75-15-0	Carbon Disulfide	1	5.0	0.10	5.0	U
56-23-5	Carbon Tetrachloride	1	1.0	0.16	1.0	U
108-90-7	Chlorobenzene	1	1.0	0.20	1.0	U
75-00-3	Chloroethane	1	1.0	0.23	1.0	U
67-66-3	Chloroform	1	0.14	0.14	1.0	J
74-87-3	Chloromethane	1	1.0	0.26	1.0	U
95-49-8	2-Chlorotoluene	1	1.0	0.16	1.0	U
106-43-4	4-Chlorotoluene	1	1.0	0.16	1.0	U
124-48-1	Dibromochloromethane	1	1.0	0.10	1.0	U
106-93-4	1,2-Dibromoethane	1	5.0	0.11	5.0	U
74-95-3	Dibromomethane	1	1.0	0.14	1.0	U
95-50-1	1,2-Dichlorobenzene	1	1.0	0.20	1.0	U
541-73-1	1,3-Dichlorobenzene	1	1.0	0.10	1.0	U
106-46-7	1,4-Dichlorobenzene	1	1.0	0.20	1.0	U
75-71-8	Dichlorodifluoromethane	1	10	0.18	10	U
75-34-3	1,1-Dichloroethane	1	4.8	0.13	1.0	
107-06-2	1,2-Dichloroethane	1	1.0	0.17	1.0	U
75-35-4	1,1-Dichloroethene	1	1.7	0.22	1.0	
156-59-2	cis-1,2-Dichloroethene	1	2.4	0.13	1.0	
156-60-5	trans-1,2-Dichloroethene	1	1.0			U
540-59-0	1,2-Dichloroethene (Total)	1	2.4	0.40	2.0	
78-87-5	1,2-Dichloropropane	1	1.0	0.15	1.0	U
142-28-9	1,3-Dichloropropane	1	1.0	0.20	1.0	U
594-20-7	2,2-Dichloropropane	1	1.0	0.14	1.0	U

000252



ORGANIC ANALYSIS DATA SHEET

USEPA-8260B

C-8

Laboratory: TriMatrix Laboratories, Inc.

SDG: 1410508

Client: MWH Americas - Farmington Hills, MI

Project: GE Caribe - Vieques, PR

Matrix: Water

Laboratory ID: 1410508-10

File ID: 1410508-10.D

Sampled: 10/23/14 10:05

Prepared: 10/31/14 07:00

Analyzed: 10/31/14 16:52

Solids:

Preparation: 5030B Aqueous Purge &

Initial/Final: 5 mL / 5 mL

QC Batch: 1412194

Sequence: 4K03010

Calibration: 4J27001

Instrument: 224

CAS No.	Analyte	Dilution	CONC. (ug/L)	MDL	MRL	Q
563-58-6	1,1-Dichloropropene	1	1.0	0.11	1.0	U
10061-01-5	cis-1,3-Dichloropropene	1	1.0	0.14	1.0	U
10061-02-6	trans-1,3-Dichloropropene	1	1.0	0.20	1.0	U
100-41-4	Ethylbenzene	1	1.0	0.20	1.0	U
591-78-6	2-Hexanone	1	10	0.35	10	U
98-82-8	Isopropylbenzene	1	1.0	0.14	1.0	U
99-87-6	4-Isopropyltoluene	1	1.0	0.14	1.0	U
1634-04-4	Methyl tert-Butyl Ether	1	5.0	0.10	5.0	U
75-09-2	Methylene Chloride	1	5.0	0.35	5.0	U
78-93-3	2-Butanone (MEK)	1	10	0.52	10	U
108-10-1	4-Methyl-2-pentanone (MIBK)	1	10	0.41	10	U
103-65-1	n-Propylbenzene	1	1.0	0.16	1.0	U
100-42-5	Styrene	1	1.0	0.11	1.0	U
630-20-6	1,1,1,2-Tetrachloroethane	1	1.0	0.12	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1	1.0	0.14	1.0	U
127-18-4	Tetrachloroethene	1	0.34	0.13	1.0	J
108-88-3	Toluene	1	1.0	0.20	1.0	U
71-55-6	1,1,1-Trichloroethane	1	1.0	0.080	1.0	U
79-00-5	1,1,2-Trichloroethane	1	1.0	0.11	1.0	U
79-01-6	Trichloroethene	1	13	0.10	1.0	
75-69-4	Trichlorofluoromethane	1	1.0	0.19	1.0	U
96-18-4	1,2,3-Trichloropropane	1	1.0	0.14	1.0	U
95-63-6	1,2,4-Trimethylbenzene	1	1.0	0.15	1.0	U
108-67-8	1,3,5-Trimethylbenzene	1	1.0	0.13	1.0	U
108-05-4	Vinyl Acetate	1	10	0.21	10	U
75-01-4	Vinyl Chloride	1	2.0	0.16	2.0	U
179601-23-1	Xylene, Meta + Para	1	2.0	0.22	2.0	U
95-47-6	Xylene, Ortho	1	1.0	0.12	1.0	U
1330-20-7	Xylene (Total)	1	3.0	0.34	3.0	U

System Monitoring Compound	ADDED (ug/L)	CONC (ug/L)	% REC.	QC Limits	Q
Dibromofluoromethane	40.0	42.2	106	85 - 118	
1,2-Dichloroethane-d4	40.0	39.8	99	87 - 122	
Toluene-d8	40.0	41.5	104	85 - 113	

000253



ORGANIC ANALYSIS DATA SHEET

USEPA-8260B

C-9

Laboratory: TriMatrix Laboratories, Inc.

SDG: 1410508

Client: MWH Americas - Farmington Hills, MI

Project: GE Caribe - Vieques, PR

Matrix: Water

Laboratory ID: 1410508-11

File ID: 1410508-11.D

Sampled: 10/23/14 14:05

Prepared: 10/31/14 07:00

Analyzed: 10/31/14 17:19

Solids:

Preparation: 5030B Aqueous Purge &

Initial/Final: 5 mL / 5 mL

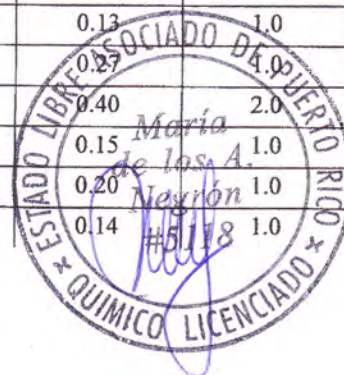
QC Batch: 1412194

Sequence: 4K03010

Calibration: 4J27001

Instrument: 224

CAS No.	Analyte	Dilution	CONC. (ug/L)	MDL	MRL	Q
67-64-1	Acetone	1	10	1.6	10	U
71-43-2	Benzene	1	1.0	0.20	1.0	U
108-86-1	Bromobenzene	1	1.0	0.14	1.0	U
74-97-5	Bromochloromethane	1	1.0	0.15	1.0	U
75-27-4	Bromodichloromethane	1	1.0	0.13	1.0	U
75-25-2	Bromoform	1	1.0	0.18	1.0	U
74-83-9	Bromomethane	1	1.0	0.22	1.0	U
104-51-8	n-Butylbenzene	1	1.0	0.11	1.0	U
135-98-8	sec-Butylbenzene	1	1.0	0.12	1.0	U
98-06-6	tert-Butylbenzene	1	1.0	0.13	1.0	U
75-15-0	Carbon Disulfide	1	5.0	0.10	5.0	U
56-23-5	Carbon Tetrachloride	1	1.0	0.16	1.0	U
108-90-7	Chlorobenzene	1	1.0	0.20	1.0	U
75-00-3	Chloroethane	1	1.0	0.23	1.0	U
67-66-3	Chloroform	1	1.0	0.14	1.0	U
74-87-3	Chloromethane	1	1.0	0.26	1.0	U
95-49-8	2-Chlorotoluene	1	1.0	0.16	1.0	U
106-43-4	4-Chlorotoluene	1	1.0	0.16	1.0	U
124-48-1	Dibromochloromethane	1	1.0	0.10	1.0	U
106-93-4	1,2-Dibromoethane	1	5.0	0.11	5.0	U
74-95-3	Dibromomethane	1	1.0	0.14	1.0	U
95-50-1	1,2-Dichlorobenzene	1	1.0	0.20	1.0	U
541-73-1	1,3-Dichlorobenzene	1	1.0	0.10	1.0	U
106-46-7	1,4-Dichlorobenzene	1	1.0	0.20	1.0	U
75-71-8	Dichlorodifluoromethane	1	10	0.18	10	U
75-34-3	1,1-Dichloroethane	1	1.0	0.13	1.0	U
107-06-2	1,2-Dichloroethane	1	1.0	0.17	1.0	U
75-35-4	1,1-Dichloroethene	1	1.0	0.22	1.0	U
156-59-2	cis-1,2-Dichloroethene	1	1.0	0.13	1.0	U
156-60-5	trans-1,2-Dichloroethene	1	1.0	0.27	1.0	U
540-59-0	1,2-Dichloroethene (Total)	1	2.0	0.40	2.0	U
78-87-5	1,2-Dichloropropane	1	1.0	0.15	1.0	U
142-28-9	1,3-Dichloropropane	1	1.0	0.20	1.0	U
594-20-7	2,2-Dichloropropane	1	1.0	0.14	1.0	U



000261

ORGANIC ANALYSIS DATA SHEET

USEPA-8260B

C-9

Laboratory: TriMatrix Laboratories, Inc.

SDG: 1410508

Client: MWH Americas - Farmington Hills, MI

Project: GE Caribe - Vieques, PR

Matrix: Water

Laboratory ID: 1410508-11

File ID: 1410508-11.D

Sampled: 10/23/14 14:05

Prepared: 10/31/14 07:00

Analyzed: 10/31/14 17:19

Solids:

Preparation: 5030B Aqueous Purge &

Initial/Final: 5 mL / 5 mL

QC Batch: 1412194

Sequence: 4K03010

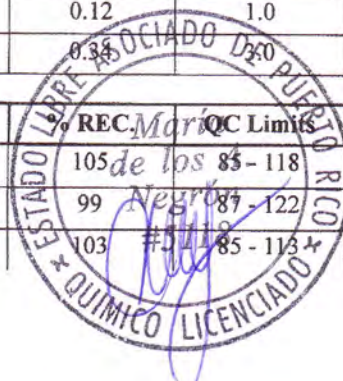
Calibration: 4J27001

Instrument: 224

CAS No.	Analyte	Dilution	CONC. (ug/L)	MDL	MRL	Q
563-58-6	1,1-Dichloropropene	1	1.0	0.11	1.0	U
10061-01-5	cis-1,3-Dichloropropene	1	1.0	0.14	1.0	U
10061-02-6	trans-1,3-Dichloropropene	1	1.0	0.20	1.0	U
100-41-4	Ethylbenzene	1	1.0	0.20	1.0	U
591-78-6	2-Hexanone	1	10	0.35	10	U
98-82-8	Isopropylbenzene	1	1.0	0.14	1.0	U
99-87-6	4-Isopropyltoluene	1	1.0	0.14	1.0	U
1634-04-4	Methyl tert-Butyl Ether	1	5.0	0.10	5.0	U
75-09-2	Methylene Chloride	1	5.0	0.35	5.0	U
78-93-3	2-Butanone (MEK)	1	10	0.52	10	U
108-10-1	4-Methyl-2-pentanone (MIBK)	1	10	0.41	10	U
103-65-1	n-Propylbenzene	1	1.0	0.16	1.0	U
100-42-5	Styrene	1	1.0	0.11	1.0	U
630-20-6	1,1,1,2-Tetrachloroethane	1	1.0	0.12	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1	1.0	0.14	1.0	U
127-18-4	Tetrachloroethene	1	1.0	0.13	1.0	U
108-88-3	Toluene	1	1.0	0.20	1.0	U
71-55-6	1,1,1-Trichloroethane	1	1.0	0.080	1.0	U
79-00-5	1,1,2-Trichloroethane	1	1.0	0.11	1.0	U
79-01-6	Trichloroethene	1	1.0	0.10	1.0	U
75-69-4	Trichlorofluoromethane	1	1.0	0.19	1.0	U
96-18-4	1,2,3-Trichloropropane	1	1.0	0.14	1.0	U
95-63-6	1,2,4-Trimethylbenzene	1	1.0	0.15	1.0	U
108-67-8	1,3,5-Trimethylbenzene	1	1.0	0.13	1.0	U
108-05-4	Vinyl Acetate	1	10	0.21	10	U
75-01-4	Vinyl Chloride	1	2.0	0.16	2.0	U
179601-23-1	Xylene, Meta + Para	1	2.0	0.22	2.0	U
95-47-6	Xylene, Ortho	1	1.0	0.12	1.0	U
1330-20-7	Xylene (Total)	1	3.0			U

System Monitoring Compound	ADDED (ug/L)	CONC (ug/L)	REC. QC Limits	Q
Dibromofluoromethane	40.0	41.9	105 de los 85 - 118	
1,2-Dichloroethane-d4	40.0	39.7	99 de los 85 - 122	
Toluene-d8	40.0	41.4	103 de los 85 - 113	

000262



ORGANIC ANALYSIS DATA SHEET

USEPA-8260B

C-10

Laboratory: TriMatrix Laboratories, Inc.

SDG: 1410508

Client: MWH Americas - Farmington Hills, MI

Project: GE Caribe - Vieques, PR

Matrix: Water

Laboratory ID: 1410508-12

File ID: 1410508-12.D

Sampled: 10/23/14 14:11

Prepared: 10/31/14 07:00

Analyzed: 10/31/14 17:46

Solids:

Preparation: 5030B Aqueous Purge &

Initial/Final: 5 mL / 5 mL

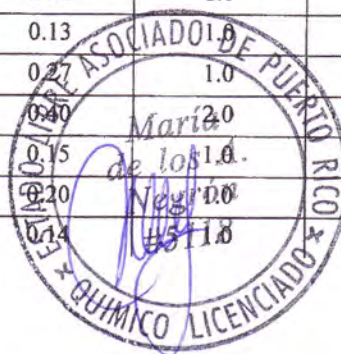
QC Batch: 1412194

Sequence: 4K03010

Calibration: 4J27001

Instrument: 224

CAS No.	Analyte	Dilution	CONC. (ug/L)	MDL	MRL	Q
67-64-1	Acetone	1	150	1.6	10	
71-43-2	Benzene	1	0.26	0.20	1.0	J
108-86-1	Bromobenzene	1	1.0	0.14	1.0	U
74-97-5	Bromochloromethane	1	1.0	0.15	1.0	U
75-27-4	Bromodichloromethane	1	1.0	0.13	1.0	U
75-25-2	Bromoform	1	1.0	0.18	1.0	U
74-83-9	Bromomethane	1	1.0	0.22	1.0	U
104-51-8	n-Butylbenzene	1	1.0	0.11	1.0	U
135-98-8	sec-Butylbenzene	1	1.0	0.12	1.0	U
98-06-6	tert-Butylbenzene	1	1.0	0.13	1.0	U
75-15-0	Carbon Disulfide	1	8.1	0.10	5.0	
56-23-5	Carbon Tetrachloride	1	1.0	0.16	1.0	U
108-90-7	Chlorobenzene	1	1.0	0.20	1.0	U
75-00-3	Chloroethane	1	1.0	0.23	1.0	U
67-66-3	Chloroform	1	1.0	0.14	1.0	U
74-87-3	Chloromethane	1	1.0	0.26	1.0	U
95-49-8	2-Chlorotoluene	1	1.0	0.16	1.0	U
106-43-4	4-Chlorotoluene	1	1.0	0.16	1.0	U
124-48-1	Dibromochloromethane	1	1.0	0.10	1.0	U
106-93-4	1,2-Dibromoethane	1	5.0	0.11	5.0	U
74-95-3	Dibromomethane	1	1.0	0.14	1.0	U
95-50-1	1,2-Dichlorobenzene	1	1.0	0.20	1.0	U
541-73-1	1,3-Dichlorobenzene	1	1.0	0.10	1.0	U
106-46-7	1,4-Dichlorobenzene	1	1.0	0.20	1.0	U
75-71-8	Dichlorodifluoromethane	1	10	0.18	10	U
75-34-3	1,1-Dichloroethane	1	1.0	0.13	1.0	U
107-06-2	1,2-Dichloroethane	1	1.0	0.17	1.0	U
75-35-4	1,1-Dichloroethene	1	1.0	0.22	1.0	U
156-59-2	cis-1,2-Dichloroethene	1	0.24	0.13		J
156-60-5	trans-1,2-Dichloroethene	1	1.0	0.27	1.0	U
540-59-0	1,2-Dichloroethene (Total)	1	2.0	0.40	2.0	U
78-87-5	1,2-Dichloropropane	1	1.0	0.15	1.0	U
142-28-9	1,3-Dichloropropane	1	1.0	0.20		U
594-20-7	2,2-Dichloropropane	1	1.0	0.14		U



000267

ORGANIC ANALYSIS DATA SHEET

USEPA-8260B

C-10

Laboratory: TriMatrix Laboratories, Inc.

SDG: 1410508

Client: MWH Americas - Farmington Hills, MI

Project: GE Caribe - Vieques, PR

Matrix: Water

Laboratory ID: 1410508-12

File ID: 1410508-12.D

Sampled: 10/23/14 14:11

Prepared: 10/31/14 07:00

Analyzed: 10/31/14 17:46

Solids:

Preparation: 5030B Aqueous Purge &

Initial/Final: 5 mL / 5 mL

QC Batch: 1412194

Sequence: 4K03010

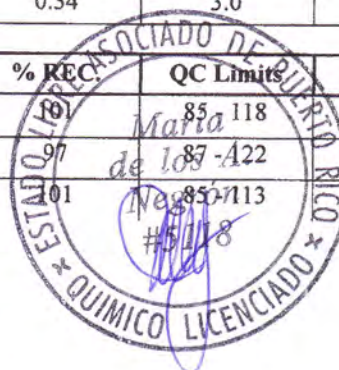
Calibration: 4J27001

Instrument: 224

CAS No.	Analyte	Dilution	CONC. (ug/L)	MDL	MRL	Q
563-58-6	1,1-Dichloropropene	1	1.0	0.11	1.0	U
10061-01-5	cis-1,3-Dichloropropene	1	1.0	0.14	1.0	U
10061-02-6	trans-1,3-Dichloropropene	1	1.0	0.20	1.0	U
100-41-4	Ethylbenzene	1	1.0	0.20	1.0	U
591-78-6	2-Hexanone	1	12	0.35	10	
98-82-8	Isopropylbenzene	1	1.0	0.14	1.0	U
99-87-6	4-Isopropyltoluene	1	1.0	0.14	1.0	U
1634-04-4	Methyl tert-Butyl Ether	1	5.0	0.10	5.0	U
75-09-2	Methylene Chloride	1	5.0	0.35	5.0	U
78-93-3	2-Butanone (MEK)	1	32	0.52	10	
108-10-1	4-Methyl-2-pentanone (MIBK)	1	0.63	0.41	10	J
103-65-1	n-Propylbenzene	1	1.0	0.16	1.0	U
100-42-5	Styrene	1	1.0	0.11	1.0	U
630-20-6	1,1,1,2-Tetrachloroethane	1	1.0	0.12	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1	1.0	0.14	1.0	U
127-18-4	Tetrachloroethene	1	1.0	0.13	1.0	U
108-88-3	Toluene	1	0.49	0.20	1.0	J
71-55-6	1,1,1-Trichloroethane	1	1.0	0.080	1.0	U
79-00-5	1,1,2-Trichloroethane	1	1.0	0.11	1.0	U
79-01-6	Trichloroethene	1	1.0	0.10	1.0	U
75-69-4	Trichlorofluoromethane	1	1.0	0.19	1.0	U
96-18-4	1,2,3-Trichloropropane	1	1.0	0.14	1.0	U
95-63-6	1,2,4-Trimethylbenzene	1	0.25	0.15	1.0	J
108-67-8	1,3,5-Trimethylbenzene	1	1.0	0.13	1.0	U
108-05-4	Vinyl Acetate	1	10	0.21	10	U
75-01-4	Vinyl Chloride	1	2.0	0.16	2.0	U
179601-23-1	Xylene, Meta + Para	1	0.64	0.22	2.0	J
95-47-6	Xylene, Ortho	1	0.29	0.12	1.0	J
1330-20-7	Xylene (Total)	1	0.93	0.34	3.0	J

System Monitoring Compound	ADDED (ug/L)	CONC (ug/L)	% REC	QC Limits	Q
Dibromofluoromethane	40.0	40.2	100	85-118	
1,2-Dichloroethane-d4	40.0	39.0	97	87-122	
Toluene-d8	40.0	40.3	101	85-113	

000268



ORGANIC ANALYSIS DATA SHEET

USEPA-8260B

C-11

Laboratory: TriMatrix Laboratories, Inc.

SDG: 1410508

Client: MWH Americas - Farmington Hills, MI

Project: GE Caribe - Vieques, PR

Matrix: Water

Laboratory ID: 1410508-13

File ID: 1410508-13.D

Sampled: 10/23/14 15:25

Prepared: 10/31/14 07:00

Analyzed: 10/31/14 18:14

Solids:

Preparation: 5030B Aqueous Purge &

Initial/Final: 5 mL / 5 mL

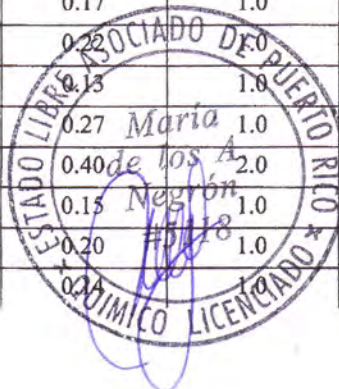
QC Batch: 1412194

Sequence: 4K03010

Calibration: 4J27001

Instrument: 224

CAS No.	Analyte	Dilution	CONC. (ug/L)	MDL	MRL	Q
67-64-1	Acetone	1	10	1.6	10	U
71-43-2	Benzene	1	1.0	0.20	1.0	U
108-86-1	Bromobenzene	1	1.0	0.14	1.0	U
74-97-5	Bromochloromethane	1	1.0	0.15	1.0	U
75-27-4	Bromodichloromethane	1	1.0	0.13	1.0	U
75-25-2	Bromoform	1	1.0	0.18	1.0	U
74-83-9	Bromomethane	1	1.0	0.22	1.0	U
104-51-8	n-Butylbenzene	1	1.0	0.11	1.0	U
135-98-8	sec-Butylbenzene	1	1.0	0.12	1.0	U
98-06-6	tert-Butylbenzene	1	1.0	0.13	1.0	U
75-15-0	Carbon Disulfide	1	5.0	0.10	5.0	U
56-23-5	Carbon Tetrachloride	1	1.0	0.16	1.0	U
108-90-7	Chlorobenzene	1	1.0	0.20	1.0	U
75-00-3	Chloroethane	1	1.0	0.23	1.0	U
67-66-3	Chloroform	1	1.0	0.14	1.0	U
74-87-3	Chloromethane	1	1.0	0.26	1.0	U
95-49-8	2-Chlorotoluene	1	1.0	0.16	1.0	U
106-43-4	4-Chlorotoluene	1	1.0	0.16	1.0	U
124-48-1	Dibromochloromethane	1	1.0	0.10	1.0	U
106-93-4	1,2-Dibromoethane	1	5.0	0.11	5.0	U
74-95-3	Dibromomethane	1	1.0	0.14	1.0	U
95-50-1	1,2-Dichlorobenzene	1	1.0	0.20	1.0	U
541-73-1	1,3-Dichlorobenzene	1	1.0	0.10	1.0	U
106-46-7	1,4-Dichlorobenzene	1	1.0	0.20	1.0	U
75-71-8	Dichlorodifluoromethane	1	10	0.18	10	U
75-34-3	1,1-Dichloroethane	1	1.0	0.13	1.0	U
107-06-2	1,2-Dichloroethane	1	1.0	0.17	1.0	U
75-35-4	1,1-Dichloroethene	1	9.7	0.13	1.0	J
156-59-2	cis-1,2-Dichloroethene	1	0.32	0.27	1.0	U
156-60-5	trans-1,2-Dichloroethene	1	1.0	0.40	2.0	U
540-59-0	1,2-Dichloroethene (Total)	1	2.0	0.15	1.0	U
78-87-5	1,2-Dichloropropane	1	1.0	0.20	1.0	U
142-28-9	1,3-Dichloropropane	1	1.0	0.20	1.0	U
594-20-7	2,2-Dichloropropane	1	1.0	0.24	1.0	U



000279

ORGANIC ANALYSIS DATA SHEET

USEPA-8260B

C-11

Laboratory: TriMatrix Laboratories, Inc.

SDG: 1410508

Client: MWH Americas - Farmington Hills, MI

Project: GE Caribe - Vieques, PR

Matrix: Water

Laboratory ID: 1410508-13

File ID: 1410508-13.D

Sampled: 10/23/14 15:25

Prepared: 10/31/14 07:00

Analyzed: 10/31/14 18:14

Solids:

Preparation: 5030B Aqueous Purge &

Initial/Final: 5 mL / 5 mL

QC Batch: 1412194

Sequence: 4K03010

Calibration: 4J27001

Instrument: 224

CAS No.	Analyte	Dilution	CONC. (ug/L)	MDL	MRL	Q
563-58-6	1,1-Dichloropropene	1	1.0	0.11	1.0	U
10061-01-5	cis-1,3-Dichloropropene	1	1.0	0.14	1.0	U
10061-02-6	trans-1,3-Dichloropropene	1	1.0	0.20	1.0	U
100-41-4	Ethylbenzene	1	1.0	0.20	1.0	U
591-78-6	2-Hexanone	1	10	0.35	10	U
98-82-8	Isopropylbenzene	1	1.0	0.14	1.0	U
99-87-6	4-Isopropyltoluene	1	1.0	0.14	1.0	U
1634-04-4	Methyl tert-Butyl Ether	1	5.0	0.10	5.0	U
75-09-2	Methylene Chloride	1	5.0	0.35	5.0	U
78-93-3	2-Butanone (MEK)	1	10	0.52	10	U
108-10-1	4-Methyl-2-pentanone (MIBK)	1	10	0.41	10	U
103-65-1	n-Propylbenzene	1	1.0	0.16	1.0	U
100-42-5	Styrene	1	1.0	0.11	1.0	U
630-20-6	1,1,1,2-Tetrachloroethane	1	1.0	0.12	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1	1.0	0.14	1.0	U
127-18-4	Tetrachloroethene	1	0.18	0.13	1.0	J
108-88-3	Toluene	1	1.0	0.20	1.0	U
71-55-6	1,1,1-Trichloroethane	1	1.0	0.080	1.0	U
79-00-5	1,1,2-Trichloroethane	1	1.0	0.11	1.0	U
79-01-6	Trichloroethene	1	53	0.10	1.0	
75-69-4	Trichlorofluoromethane	1	1.0	0.19	1.0	U
96-18-4	1,2,3-Trichloropropane	1	1.0	0.14	1.0	U
95-63-6	1,2,4-Trimethylbenzene	1	1.0	0.15	1.0	U
108-67-8	1,3,5-Trimethylbenzene	1	1.0	0.13	1.0	U
108-05-4	Vinyl Acetate	1	10	0.21	10	U
75-01-4	Vinyl Chloride	1	2.0	0.16	2.0	U
179601-23-1	Xylene, Meta + Para	1	2.0	0.22	2.0	U
95-47-6	Xylene, Ortho	1	1.0	0.12	1.0	U
1330-20-7	Xylene (Total)	1	3.0	0.34		U

System Monitoring Compound	ADDED (ug/L)	CONC (ug/L)	REC.	QC Limits	Q
Dibromofluoromethane	40.0	40.1	100	85 - 118	
1,2-Dichloroethane-d4	40.0	38.7	97	87 - 122	
Toluene-d8	40.0	40.6	102	88 - 113	

000280



ORGANIC ANALYSIS DATA SHEET

USEPA-8260B

TB-102314

Laboratory: TriMatrix Laboratories, Inc.

SDG: 1410508

Client: MWH Americas - Farmington Hills, MI

Project: GE Caribe - Vieques, PR

Matrix: Water

Laboratory ID: 1410508-14

File ID: 1410508-14.D

Sampled: 10/23/14 00:00

Prepared: 10/31/14 07:00

Analyzed: 10/31/14 12:19

Solids:

Preparation: 5030B Aqueous Purge &

Initial/Final: 5 mL / 5 mL

QC Batch: 1412194

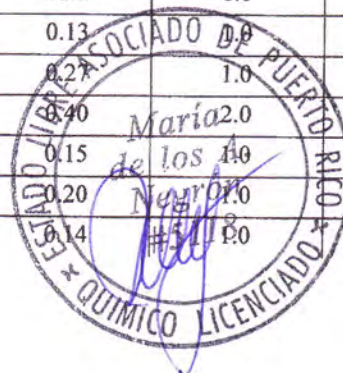
Sequence: 4K03010

Calibration: 4J27001

Instrument: 224

CAS No.	Analyte	Dilution	CONC. (ug/L)	MDL	MRL	Q
67-64-1	Acetone	1	10	1.6	10	U
71-43-2	Benzene	1	1.0	0.20	1.0	U
108-86-1	Bromobenzene	1	1.0	0.14	1.0	U
74-97-5	Bromochloromethane	1	1.0	0.15	1.0	U
75-27-4	Bromodichloromethane	1	1.0	0.13	1.0	U
75-25-2	Bromoform	1	1.0	0.18	1.0	U
74-83-9	Bromomethane	1	1.0	0.22	1.0	U
104-51-8	n-Butylbenzene	1	1.0	0.11	1.0	U
135-98-8	sec-Butylbenzene	1	1.0	0.12	1.0	U
98-06-6	tert-Butylbenzene	1	1.0	0.13	1.0	U
75-15-0	Carbon Disulfide	1	5.0	0.10	5.0	U
56-23-5	Carbon Tetrachloride	1	1.0	0.16	1.0	U
108-90-7	Chlorobenzene	1	1.0	0.20	1.0	U
75-00-3	Chloroethane	1	1.0	0.23	1.0	U
67-66-3	Chloroform	1	1.0	0.14	1.0	U
74-87-3	Chloromethane	1	1.0	0.26	1.0	U
95-49-8	2-Chlorotoluene	1	1.0	0.16	1.0	U
106-43-4	4-Chlorotoluene	1	1.0	0.16	1.0	U
124-48-1	Dibromochloromethane	1	1.0	0.10	1.0	U
106-93-4	1,2-Dibromoethane	1	5.0	0.11	5.0	U
74-95-3	Dibromomethane	1	1.0	0.14	1.0	U
95-50-1	1,2-Dichlorobenzene	1	1.0	0.20	1.0	U
541-73-1	1,3-Dichlorobenzene	1	1.0	0.10	1.0	U
106-46-7	1,4-Dichlorobenzene	1	1.0	0.20	1.0	U
75-71-8	Dichlorodifluoromethane	1	10	0.18	10	U
75-34-3	1,1-Dichloroethane	1	1.0	0.13	1.0	U
107-06-2	1,2-Dichloroethane	1	1.0	0.17	1.0	U
75-35-4	1,1-Dichloroethene	1	1.0	0.22	1.0	U
156-59-2	cis-1,2-Dichloroethene	1	1.0	0.13	1.0	U
156-60-5	trans-1,2-Dichloroethene	1	1.0	0.20	1.0	U
540-59-0	1,2-Dichloroethene (Total)	1	2.0	0.15	2.0	U
78-87-5	1,2-Dichloropropane	1	1.0	0.20	1.0	U
142-28-9	1,3-Dichloropropane	1	1.0	0.14	1.0	U
594-20-7	2,2-Dichloropropane	1	1.0			U

000288



ORGANIC ANALYSIS DATA SHEET

USEPA-8260B

TB-102314

Laboratory: TriMatrix Laboratories, Inc.

SDG: 1410508

Client: MWH Americas - Farmington Hills, MI

Project: GE Caribe - Vieques, PR

Matrix: Water

Laboratory ID: 1410508-14

File ID: 1410508-14.D

Sampled: 10/23/14 00:00

Prepared: 10/31/14 07:00

Analyzed: 10/31/14 12:19

Solids:

Preparation: 5030B Aqueous Purge &

Initial/Final: 5 mL / 5 mL

QC Batch: 1412194

Sequence: 4K03010

Calibration: 4J27001

Instrument: 224

CAS No.	Analyte	Dilution	CONC. (ug/L)	MDL	MRL	Q
563-58-6	1,1-Dichloropropene	1	1.0	0.11	1.0	U
10061-01-5	cis-1,3-Dichloropropene	1	1.0	0.14	1.0	U
10061-02-6	trans-1,3-Dichloropropene	1	1.0	0.20	1.0	U
100-41-4	Ethylbenzene	1	1.0	0.20	1.0	U
591-78-6	2-Hexanone	1	10	0.35	10	U
98-82-8	Isopropylbenzene	1	1.0	0.14	1.0	U
99-87-6	4-Isopropyltoluene	1	1.0	0.14	1.0	U
1634-04-4	Methyl tert-Butyl Ether	1	5.0	0.10	5.0	U
75-09-2	Methylene Chloride	1	5.0	0.35	5.0	U
78-93-3	2-Butanone (MEK)	1	10	0.52	10	U
108-10-1	4-Methyl-2-pentanone (MIBK)	1	10	0.41	10	U
103-65-1	n-Propylbenzene	1	1.0	0.16	1.0	U
100-42-5	Styrene	1	1.0	0.11	1.0	U
630-20-6	1,1,1,2-Tetrachloroethane	1	1.0	0.12	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1	1.0	0.14	1.0	U
127-18-4	Tetrachloroethene	1	1.0	0.13	1.0	U
108-88-3	Toluene	1	1.0	0.20	1.0	U
71-55-6	1,1,1-Trichloroethane	1	1.0	0.080	1.0	U
79-00-5	1,1,2-Trichloroethane	1	1.0	0.11	1.0	U
79-01-6	Trichloroethene	1	1.0	0.10	1.0	U
75-69-4	Trichlorofluoromethane	1	1.0	0.19	1.0	U
96-18-4	1,2,3-Trichloropropane	1	1.0	0.14	1.0	U
95-63-6	1,2,4-Trimethylbenzene	1	1.0	0.15	1.0	U
108-67-8	1,3,5-Trimethylbenzene	1	1.0	0.13	1.0	U
108-05-4	Vinyl Acetate	1	10	0.21	10	U
75-01-4	Vinyl Chloride	1	2.0	0.16	2.0	U
179601-23-1	Xylene, Meta + Para	1	2.0	0.22	2.0	U
95-47-6	Xylene, Ortho	1	1.0	0.12	1.0	U
1330-20-7	Xylene (Total)	1	3.0			U

System Monitoring Compound	ADDED (ug/L)	CONC (ug/L)	% REC	QC Limits	Q
Dibromofluoromethane	40.0	42.8	107	85 - 118	
1,2-Dichloroethane-d4	40.0	40.0	100	87 - 122	
Toluene-d8	40.0	42.0	105	85 - 113	

000289



ORGANIC ANALYSIS DATA SHEET

USEPA-8260B

Storage Blank

Laboratory: TriMatrix Laboratories, Inc.

SDG: 1410508

Client: MWH Americas - Farmington Hills, MI

Project: GE Caribe - Vieques, PR

Matrix: Water

Laboratory ID: 1410508-15

File ID: 1410508-15.D

Sampled: 10/25/14 11:00

Prepared: 10/31/14 07:00

Analyzed: 10/31/14 12:46

Solids:

Preparation: 5030B Aqueous Purge &

Initial/Final: 5 mL / 5 mL

QC Batch: 1412194

Sequence: 4K03010

Calibration: 4J27001

Instrument: 224

CAS No.	Analyte	Dilution	CONC. (ug/L)	MDL	MRL	Q
67-64-1	Acetone	1	10	1.6	10	U
71-43-2	Benzene	1	1.0	0.20	1.0	U
108-86-1	Bromobenzene	1	1.0	0.14	1.0	U
74-97-5	Bromochloromethane	1	1.0	0.15	1.0	U
75-27-4	Bromodichloromethane	1	1.0	0.13	1.0	U
75-25-2	Bromoform	1	1.0	0.18	1.0	U
74-83-9	Bromomethane	1	1.0	0.22	1.0	U
104-51-8	n-Butylbenzene	1	1.0	0.11	1.0	U
135-98-8	sec-Butylbenzene	1	1.0	0.12	1.0	U
98-06-6	tert-Butylbenzene	1	1.0	0.13	1.0	U
75-15-0	Carbon Disulfide	1	5.0	0.10	5.0	U
56-23-5	Carbon Tetrachloride	1	1.0	0.16	1.0	U
108-90-7	Chlorobenzene	1	1.0	0.20	1.0	U
75-00-3	Chloroethane	1	1.0	0.23	1.0	U
67-66-3	Chloroform	1	1.0	0.14	1.0	U
74-87-3	Chloromethane	1	1.0	0.26	1.0	U
95-49-8	2-Chlorotoluene	1	1.0	0.16	1.0	U
106-43-4	4-Chlorotoluene	1	1.0	0.16	1.0	U
124-48-1	Dibromochloromethane	1	1.0	0.10	1.0	U
106-93-4	1,2-Dibromoethane	1	5.0	0.11	5.0	U
74-95-3	Dibromomethane	1	1.0	0.14	1.0	U
95-50-1	1,2-Dichlorobenzene	1	1.0	0.20	1.0	U
541-73-1	1,3-Dichlorobenzene	1	1.0	0.10	1.0	U
106-46-7	1,4-Dichlorobenzene	1	1.0	0.20	1.0	U
75-71-8	Dichlorodifluoromethane	1	10	0.18	10	U
75-34-3	1,1-Dichloroethane	1	1.0	0.13	1.0	U
107-06-2	1,2-Dichloroethane	1	1.0	0.17	1.0	U
75-35-4	1,1-Dichloroethene	1	1.0	0.22	1.0	U
156-59-2	cis-1,2-Dichloroethene	1	1.0	0.13	1.0	U
156-60-5	trans-1,2-Dichloroethene	1	1.0	0.13	1.0	U
540-59-0	1,2-Dichloroethene (Total)	1	2.0	0.40	2.0	U
78-87-5	1,2-Dichloropropane	1	1.0	0.15	1.0	U
142-28-9	1,3-Dichloropropane	1	1.0	0.20	1.0	U
594-20-7	2,2-Dichloropropane	1	1.0	0.14	1.0	U

000294



ORGANIC ANALYSIS DATA SHEET

USEPA-8260B

Storage Blank

Laboratory: TriMatrix Laboratories, Inc.

SDG: 1410508

Client: MWH Americas - Farmington Hills, MI

Project: GE Caribe - Vieques, PR

Matrix: Water

Laboratory ID: 1410508-15

File ID: 1410508-15.D

Sampled: 10/25/14 11:00

Prepared: 10/31/14 07:00

Analyzed: 10/31/14 12:46

Solids:

Preparation: 5030B Aqueous Purge &

Initial/Final: 5 mL / 5 mL

QC Batch: 1412194

Sequence: 4K03010

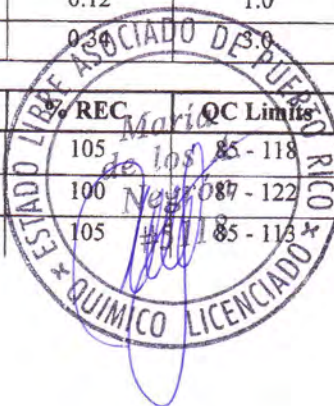
Calibration: 4J27001

Instrument: 224

CAS No.	Analyte	Dilution	CONC. (ug/L)	MDL	MRL	Q
563-58-6	1,1-Dichloropropene	1	1.0	0.11	1.0	U
10061-01-5	cis-1,3-Dichloropropene	1	1.0	0.14	1.0	U
10061-02-6	trans-1,3-Dichloropropene	1	1.0	0.20	1.0	U
100-41-4	Ethylbenzene	1	1.0	0.20	1.0	U
591-78-6	2-Hexanone	1	10	0.35	10	U
98-82-8	Isopropylbenzene	1	1.0	0.14	1.0	U
99-87-6	4-Isopropyltoluene	1	1.0	0.14	1.0	U
1634-04-4	Methyl tert-Butyl Ether	1	5.0	0.10	5.0	U
75-09-2	Methylene Chloride	1	5.0	0.35	5.0	U
78-93-3	2-Butanone (MEK)	1	10	0.52	10	U
108-10-1	4-Methyl-2-pentanone (MIBK)	1	10	0.41	10	U
103-65-1	n-Propylbenzene	1	1.0	0.16	1.0	U
100-42-5	Styrene	1	1.0	0.11	1.0	U
630-20-6	1,1,1,2-Tetrachloroethane	1	1.0	0.12	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1	1.0	0.14	1.0	U
127-18-4	Tetrachloroethene	1	1.0	0.13	1.0	U
108-88-3	Toluene	1	1.0	0.20	1.0	U
71-55-6	1,1,1-Trichloroethane	1	1.0	0.080	1.0	U
79-00-5	1,1,2-Trichloroethane	1	1.0	0.11	1.0	U
79-01-6	Trichloroethene	1	1.0	0.10	1.0	U
75-69-4	Trichlorofluoromethane	1	1.0	0.19	1.0	U
96-18-4	1,2,3-Trichloropropane	1	1.0	0.14	1.0	U
95-63-6	1,2,4-Trimethylbenzene	1	1.0	0.15	1.0	U
108-67-8	1,3,5-Trimethylbenzene	1	1.0	0.13	1.0	U
108-05-4	Vinyl Acetate	1	10	0.21	10	U
75-01-4	Vinyl Chloride	1	2.0	0.16	2.0	U
179601-23-1	Xylene, Meta + Para	1	2.0	0.22	2.0	U
95-47-6	Xylene, Ortho	1	1.0	0.12	1.0	U
1330-20-7	Xylene (Total)	1	3.0			U

System Monitoring Compound	ADDED (ug/L)	CONC (ug/L)	REC	QC Limits	Q
Dibromofluoromethane	40.0	41.9	105	85 - 118	
1,2-Dichloroethane-d4	40.0	39.8	100	87 - 122	
Toluene-d8	40.0	42.0	105	85 - 115	

000295



USEPA
Hazardous Waste Support Branch
Validating Volatile Organic Compounds
By Gas Chromatography/Mass Spectrometry
SW-846 Method 8260B



Prepared by: George Karras Date: 12/8/06
George Karras, Chemist
Hazardous Waste Support Section

Prepared by: Russell Amone Date: 12/8/06
Russell Amone, Chemist
Hazardous Waste Support Section

Concurred by: Linda M. Mauel Date: 12/8/06
Linda Mauel, Chief
Hazardous Waste Support Section

Approved by: Robert Runyon Date: 12/11/06
Robert Runyon, Chief
Hazardous Waste Support Branch

Annual Review

Reviewed by: _____ Date: _____
Name

Reviewed by: _____ Date: _____
Name

Scope and Applicability

This SOP offers detailed guidance in evaluating laboratory data generated according to the USEPA SW-846, Method 8260B December 1996. The validation methods and actions discussed in this document are based on the requirements set forth in USEPA SW-846, Method 8260B and Method 8000C, Rev 3, March 2003; and "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review," January, 2005. This document covers technical as well as method specific problems; however situations may arise where data limitations must be assessed based on the reviewer's own professional judgement.

Summary

To ensure a thorough evaluation of each result in a data case, the reviewer must complete the checklist within this SOP, answering specific questions while performing the prescribed "ACTIONS" in each section. Qualifiers (or flags) are applied to questionable or unusable results as instructed. The data qualifiers discussed in this document are defined on page 4.

The reviewer must prepare a detailed data assessment to be submitted along with the complete SOP checklist. The Data Assessment must list all data qualifications, reasons for qualifications, instances of missing data, and contract non-compliance.

DEFINITIONS

Acronyms

BNA - base neutral acid(another name for Semi Volatiles)
CLP - Contract Laboratory Program
CRQL - Contract Required Quantitation Limit
CF - calibration factor
%D - percent difference
DCB -decachlorobiphenyl
DDD - dichlorodiphenyldichloroethane
DDE - dichlorodiphenylethane
DDT - dichlorodiphenyltrichloroethane
DoC - Date of Collection
GC - gas chromatography
GC/ECD - gas chromatograph/electron capture detector
GC/MS - gas chromatograph/mass spectrometer
GPC - gel permeation chromatography
IS - internal standard
kg - kilogram
µg - microgram
MS - matrix spike
MSD - matrix spike duplicate
l - liter
ml - milliliter
PCB - Polychlorinated biphenyl
PE - performance evaluation
PEM - Performance Evaluation Mixture
QC - quality control
RAS - Routine Analytical Services
RIC - reconstructed ion chromatogram
RPD - relative percent difference
RRF - relative response factor
RRF - average relative response factor (from initial calibration)
RRT - relative retention time
RSD - relative standard deviation
RT - retention time
RSCC - Regional Sample Control Center
SDG - sample delivery group
SMC - system monitoring compound
SOP - standard operating procedure
SOW - Statement of Work
SVOA - semivolatile organic acid
TCL - Target Compound List
TCLP - Toxicity Characteristics Leachate Procedure
TCX -tetrachloro-m-xylene
TIC - tentatively identified compound

TOPO - Task Order Project Officer
TPO - Technical Project Officer
VOA - Volatile organic
VTSR - Validated Time of Sample Receipt

Data Qualifiers

- U -The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- J -The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
- N -The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification."
- JN -The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.
- UJ -The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
- R -The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

LAB QUALIFIERS:

- D - The positive value is the result of an analysis at a secondary dilution factor.
- B - The analyte is present in the associated method blank as well as in the sample. This qualifier has a different meaning when validating inorganic data.
- E - The concentration of this analyte exceeds the calibration range of the instrument.
- A - Indicates a Tentatively Identified Compound (TIC) is a suspected adul-condensation product.

X,Y,Z- Laboratory defined flags. The data reviewer must change these qualifiers during validation so that the data user may understand their impact on the data.

YES NO N/A

I. PACKAGE COMPLETENESS AND DELIVERABLES

CASE NUMBER: Vieques 1410508 LAB: Trimatrix Laboratories

SITE NAME: GE - Caribe Vieques Puerto Rico

1.0 Data Completeness and Deliverables

1.1 Has all data been submitted in CLP deliverable
format or CLP Forms Equivalent? ☒ X ☐ ☐

ACTION: If not, note the effect on review of the data in
the Data Assessment narrative.

2.0 Cover Letter, SDG Narrative

2.1 Is a laboratory narrative, and/or cover letter
signed release present? ☒ X ☐ ☐

2.2 Are case number and SDG number(s) contained
in the narrative or cover letter? ☒ X ☐ ☐

ACTION: If not, note the effect on review of the data in
the Data Assessment narrative.

II. VOLATILE ANALYSES

1.0 Traffic Reports and Laboratory Narrative

1.1 Are the Traffic Reports, and/or Chain of Custodies
from the field samplers present for all samples
sign release present? ☒ X ☐ ☐

ACTION: If no, contact the laboratory/sampling team for replacement
of missing or illegible copies.

1.2 Is a sampling trip report present (if required)? ☒ X ☐ ☐

1.3 Sample Conditions/Problems

YES NO N/A

1.3.1 Do the Traffic Reports, Chain of Custodies, or Lab Narrative indicate any problems with sample receipt, condition of samples, analytical problems or special notations affecting the quality of the data? X

ACTION: If all the VOA vials for a sample have air bubbles or the VOA vial analyzed had air bubbles, flag all positive results "J" and all non-detects "R".

ACTION: If any sample analyzed as a soil, other than TCLP, contains 50%-90% water, all data should be flagged as estimated ("J"). If a soil sample, other than TCLP, contains more than 90% water, flag all positive results "J" and all non-detects "R".

ACTION: If samples were not iced or if the ice was melted upon receipt at the laboratory and the temperature of the cooler was elevated ($>10^{\circ}\text{C}$), flag all positive results "J" and all non-detects non"UJ".

2.0 Holding Times

2.1 Have any volatile holding times, determined from date of collection to date of analysis, been exceeded? X

The maximum holding time for aqueous samples is 14 days.

The maximum holding time for soils non aqueous samples is 14 days.

NOTE: If unpreserved, aqueous samples maintained at 4°C for aromatic hydrocarbons analysis must be analyzed within 7 days. If preserved with HCL acid to a $\text{pH}<2$ and stored at 4°C , then aqueous samples must be analyzed within 14 days from time of collection. For non-aqueous samples for volatile components that are frozen (less than 7°C) or are properly cooled ($4^{\circ}\text{C} \pm 2^{\circ}\text{C}$) and perserved with NaHSO_4 , the maximum holding time is 14 days from sample collection. If

YES NO N/A

uncertain about preservation, contact the laboratory /sampling team to determine whether or not samples were preserved.

ACTION: Qualify sample results according to Table 1:

Table 1. Holding Time Actions for Trace Volatile Analysis

Matrix	Preserved	Criteria	Action	
			Detected Associated Compounds	Non-Detected Associated Compounds
Aqueous	No	≤ 7 days	No qualifications	
	No	> 7 days	J	R
	Yes	≤ 14 days	No qualifications	
	Yes	> 14 days	J	R
Non Aqueous	No	≤ 14 days	J	R
	Yes	≤ 14 days	No qualifications	
	Yes/No	> 14 days	J	R

3.0 Surrogate Recovery (CLP Form II Equivalent)

3.1 Have the volatile surrogate recoveries been listed on Surrogate Recovery forms for each of the following matrices:

a. Water [X] — —

b. Soil [] — X

3.2 If so, are all the samples listed on the appropriate Surrogate Recovery forms for each matrix:

a. Water [X] — —

b. Soil [] — X

ACTION: If large errors exist, deliverables are unavailable or information is missing, document the effect(s) in Data

YES NO N/A

Assessments and contact the laboratory/project officer/appropriate official for an explanation /resubmittal, make any necessary corrections and document effect in the Data Assessment.

- 3.3 Were the surrogate recovery limits followed per Table 2. If Table 2 criteria were not followed, the laboratory may use in-house performance criteria (per SW-846, Method 8000C, section 9.7). Other compounds may be used as surrogates, depending upon the analysis requirements. [X]

Table 2. Surrogate Spike Recovery Limits for Water and Soil/Sediments

DMC	IN-HOUSE	Recovery Limits (%)Water	Recovery Limits Soil/Sediment
4-Bromofluorobenzene		80-120	70-130
Dibromofluoromethane		80-120	70-130
Toluene-d ₈		80-120	70-130
Dichloroethane-d ₄		80-120	70-130

Note: Use above table if laboratory did not provide in house recovery criteria.

Note: Other compounds may be used as surrogated depending upon the analysis requirements.

- 3.4 Were outliers marked correctly with an asterisk? [] X

ACTION: Circle all outliers with a red pencil.

- 3.5 Were one or more volatile surrogate recoveries out of specification for any sample or method blank. Table 2. [] X

If yes, were samples reanalyzed? [] X

Were method blanks reanalyzed? [] X

YES NO N/A

ACTION: If all surrogate recoveries are > 10% but 1 or more compounds do not meet method specifications:

1. Flag all positive results as estimated ("J").
2. Flag all non-detects as estimated detection limits ("UJ") when recoveries are less than the lower acceptance limit.
3. If recoveries are greater than the upper acceptance limit, do not qualify non-detects, but qualify positive results as estimated "J".

If any surrogate has a recovery of < 10%:

1. Positive results are qualified with ("J").
2. Non-detects for that should be qualified as unusable ("R").

NOTE: Professional judgement should be used to qualify data that have method blank surrogate recoveries out of specification in both original and reanalyses. The basic concern is whether the blank problems represent an isolated problem with the blank alone or whether there is a fundamental problem with the analytical process. If one or more samples in the batch show acceptable surrogate recoveries, the reviewer may choose the blank problem to be an isolated occurrence.

3.6 Are there any transcription/calculation errors between raw data and reported data?

1 1 X

ACTION: If large errors exist, take action as specified in section 3.2 above.

4.0 Laboratory Control Sample (Form III/Equivalent)

4.1 Is the LCS prepared, extracted, analyzed, and reported once for every 20 field samples of a similar matrix, per SDG.

X

YES NO N/A

Note: LCS consists of an aliquot of a clean (control) matrix similar to the sample matrix and of the same weight or volume.

ACTION: If any Laboratory Control Sample data are missing, call the lab for explanation /resubmittals. Make note in the data assessment.

4.2 Were the Laboratory Control Samples analyzed at the required frequency for each of the following matrices:

A. Water	☒	☐	☐
B. Soil	☐	☐	☒
C. Med Soil	☐	☐	☒

Note: The LCS is spiked with the same analytes at the same concentrations as the matrix spike (SW-846 8000C, Section 9.5). If different make note in data assessment. Matrix/LCS spiking standards should be prepared from volatile organic compounds which are representative of the compounds being investigating. At a minimum, the matrix spike should include 1,1-dichloroethene, trichloroethene, chlorobenzene, toluene, and benzene.

ACTION: If any MS/MD, MS/MSD or replicate data are missing, take the action specified in 3.2 above.

4.3 Have in house LCS recovery limits been developed (Method 8000C, Sect 9.7). ☒ ☐ ☐

4.4 If in house limits are not developed, are LCS acceptance recovery limits between 70 - 130% (Method 8000c Sect 9.5)? ☐ ☐ ☒

4.5 Were one or more of the volatile LCS recoveries outside the in house laboratory recovery criteria for spiked analytes? If in house limits are not present use 70 - 130% recovery limits.

☐ ☒ ☐

YES NO N/A

Table 3. LCS Actions for Volatile Analysis

Criteria	Action	
	Detected Spiked Compounds	Non-Detected Spiked Compounds
%R > Upper Acceptance Limit	J	No Qualifiers
%R < Lower Acceptance Limit	J	UJ
Lower Acceptance Limit $\leq$ %R	No Qualifications	

5.0 Matrix Spikes (Form III or equivalent)

5.1 Are all data for matrix spike and matrix duplicate or matrix spike duplicate (MS/MD or MS/MSD) present and complete for each matrix? ☒ ☐ ☐

NOTE: The laboratory should use one matrix spike and a duplicate analysis of an unspiked field sample if target analytes are expected in the sample. If the sample is not expected to contain target analytes, a MS/MSD should be analyzed (SW-846, Method 8260B, Sect 8.4.2).

5.2 Have MS/MD or MS/MSD results been summarized on modified CLP Form III? ☒ ☐ ☐

ACTION: If any data are missing take action as specified in section 3.2 above.

5.3 Were matrix spikes analyzed at the required frequency for each of the following matrices? (One MS/MD, MS/MSD or laboratory replicate must be performed for every 20 samples)

YES NO N/A

of similar matrix or concentration level. Laboratories analyzing one to ten samples per month are required to analyze at least one MS per month [page 8000C, section 9.5.]

a. Water	☒	☐	☐
b. Waste	☐	☐	☒
c. Soil/Solid	☐	☐	☒

Note: The LCS is spiked with the same analytes at the same concentrations as the matrix spike (SW-846 8000C, Section 9.5). If different make note in data assessment. Matrix/LCS spiking standards should be prepared from volatile organic compounds which are representative of the compounds being investigating. At a minimum, the matrix spike should include 1,1-dichloroethene, trichloroethene, chlorobenzene, toluene, and benzene. The concentration of the LCS should be determined as described SW-Method 8000C Section 9.5.

ACTION: If any MS/MD, MS/MSD or replicate data are missing, take the action specified in 3.2 above.

5.4 Have in house MS recovery limits been developed (Method 8000C, Sect 9.7) for each matrix. ☒ ☐ ☐

5.5 Were one or more of the volatile MS/MSD recoveries outside of the in-house laboratory recovery criteria for spiked analytes? If none are present, then use 70-130% recovery as per SW-846, 8000C, Sect. 9.5.4. ☐ ☒ ☐

ACTION: Circle all outliers with a red pencil.

NOTE: If any individual % recovery in the MS (or MSD) falls outside the designated range for recovery the reviewer should determine if there is a matrix effect. A matrix effect is indicated if the LCS data are within limits but the MS data exceeds the limits.

YES NO N/A

NOTE: No qualification of data is necessary on MS and MSD data alone. However, using informed professional judgement, the data reviewer may use MS and MSD results in conjunction with other QC criteria to determine the need for some qualifications.

Note: The data reviewer should first try to determine to what extent the results of the MS and MSD affect the associated data. This determination should be made with regard to the MS and MSD sample itself, as well as specific analytes for all samples associated with the MS and MSD.

Note: In those instances where it can be determined that the results of the MS and MSD affect only the sample spiked, limit qualification to this sample only. However, it may be determined through the MS and MSD results that a laboratory is having a systematic problem in the analysis of one or more analytes that affect all associated samples, and the reviewer must use professional judgement to qualify the data from all associated samples.

Note: The reviewer must use professional judgement to determine the need for qualification of non-spiked compounds.

ACTION: Follow criteria in Table 4 when professional judgement deems qualification of sample.

Table 4. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Actions for Volatile Analysis

Criteria	Action	
	Detected Spiked Compounds	Non-Detected Spiked Compounds
%R > Upper Acceptance Limit	J	No Qualifiers
%R < Lower Acceptance Limit	J	UJ
Lower Acceptance Limit ≤ %R	No Qualifications	

6.0 Blank (CLP Form IV Equivalent)

6.1 Is the Method Blank Summary form present? ☒ ☐ ☐

6.2 Frequency of Analysis: Has a method blank been analyzed for every 20 (or less) samples of similar matrix or concentration or each extraction batch? ☒ ☐ ☐

6.3 Has a method blank been analyzed for each GC/MS system used ? ☒ ☐ ☐

ACTION: If any blank data are missing, take action as specified above (section 3.2). If blank data is not available, reject (R) all associated positive data. However, using professional judgement, the data reviewer may substitute field blank data for missing method blank data.

6.4 Chromatography: review the blank raw data - chromatograms, quant reports or data system printouts.

Is the chromatographic performance (baseline stability) for each instrument acceptable for volatile organic compounds? ☒ ☐ ☐

7.0 Contamination

NOTE: "Water blanks", "drill blanks" and "distilled water blanks" are validated like any other sample and are not used to qualify the data. Do not confuse them with the other QC blanks discussed below.

7.1 Do any method/instrument/reagent blanks have positive results for target analytes and/or TICs? When applied as described below, the contaminant concentration in these blanks are multiplied by the sample dilution factor and corrected for percent moisture where necessary. ☐ ☒ ☐

YES NO N/A

7.2 Do any field/rinse blanks have positive
volatile organic compound results?

___ X ___

ACTION: Prepare a list of the samples associated with each
of the contaminated blanks. (Attach a separate
sheet.)

NOTE: All field blank results associated to a particular
group of samples (may exceed one per case or one
per day) may be used to qualify data. Blanks may
not be qualified because of contamination in
another blank. Field blanks must be qualified
for surrogate, or calibration QC problems.

ACTION: Follow the directions in Table 5 below to qualify
sample results due to contamination. Use the
largest value from all the associated blanks.

Table 5. Volatile Organic Analysis Blank Contamination Criteria

Blank Type	Blank Result	Sample Result	Action for Samples
Method, Storage, Field, Trip, Instrument**	Detects	Not detected	No qualification
	< CRQL*	< CRQL	Report CRQL value with a U
		≥ CRQL	Use professional judgement
	> CRQL*	< CRQL	Report CRQL value with a U
		≥ CRQL and < blank contamination	Report the concentration for the sample with a U, or quantify the data as unusable R
		≥ CRQL and ≥ blank contamination	Use professional judgement
	= CRQL*	< CRQL	Report CRQL value with a U
		≥ CRQL	Use professional judgement
	Gross contamination	Detects	Qualify results as unusable R

* 2x the CRQL for methylene chloride, 2-butanone, and acetone

** Qualifications based on instrument blank results affect only the sample analyzed immediately after the sample that has target compounds that exceed the calibration range or non-target compounds that exceed 100 ug/L.

NOTE: If gross blank contamination exists (e.g., saturated peaks, "hump-o-grams," "junk" peaks), all affected positive compounds in the associated samples should be qualified as unusable "R", due to interference. Non-detected volatile organic target compounds do not require qualification unless the contamination is so high that it interferes with the analyses of non-detected compounds.

YES NO N/A

7.3 Are there field/rinse/equipment blanks associated with every sample?

☐ ☒ ☐

ACTION: For low level samples, note in data assessment that there is no associated field/rinse/equipment blank. Exception: samples taken from a drinking water tap do not have associated field blanks.

8.0 GC/MS Apparatus and Materials

8.1 Did the lab use the proper gas chromatographic column(s) for analysis of volatiles by Method 8260B? Check raw data, instrument logs or contact the lab to determine what type of column(s) was (were) used.

☒ ☐ ☐

NOTE: For the analysis of volatiles, the method requires requires the use of 60 m. x 0.75 mm capillary column, coated with VOCOL(Supelco) or equivalent column. (see SW-846, page 8260B-7, section 4.9.2)

ACTION: If the specified column, or equivalent, was not used, document the effects in the Data Assessment. Use professional judgement to determine the acceptability of the data.

9.0 GC/MS Instrument Performance Check (CLP Form V Equivalent)

9.1 Are the GC/MS Instrument Performance Check forms present for Bromofluorobenzene (BFB), and do these forms list the associated samples with date/time analyzed?

☒ ☐ ☐

9.2 Are the enhanced bar graph spectrum and mass/charge (m/z) listing for the BFB provided for each twelve hour shift?

☒ ☐ ☐

9.3 Has an instrument performance check solution (BFB)

YES NO N/A

been analyzed for every twelve hours of sample
analysis per instrument?(see Table 4, SW-846,
page 8260B-36)

☒ ☐ ☐

ACTION: List date, time, instrument ID, and sample
analyses for which no associated GC/MS GC/MS tuning data are
available.

ACTION: If the laboratory/project officer cannot provide missing
data, reject ("R") all data generated outside an acceptable
twelve hour calibration interval.

ACTION: If mass assignment is in error, flag all associated sample
data as unusable, "R".

9.4 Have the ion abundances been normalized to m/z 95?

☒ ☐ ☐

9.5 Have the ion abundance criteria been met for
each instrument used?

☒ ☐ ☐

ACTION: List all data which do not meet ion abundance
criteria (attach a separate sheet).

ACTION: If ion abundance criteria are not met, take action as
specified in section 3.2.

9.6 Are there any transcription/calculation errors
between mass lists and reported values? (Check at least
two values but if errors are found, check more.)

☐ ☒ ☐

9.7 Have the appropriate number of significant
figures (two) been reported?

☒ ☐ ☐

ACTION: If large errors exist, take action as specified in
section 3.2.

9.8 Are the spectra of the mass calibration compounds acceptable.

☒ ☐ ☐

ACTION: Use professional judgement to determine wheather associated
data should be accepted, qualified, or rejected.

YES NO N/A

10.0 Target Analytes (CLP Form I Equivalent)

10.1 Are the Organic Analysis reporting forms present with required header information on each page, for each of the following:

- | | | | |
|--|------------|-----|-----|
| a. Samples and/or fractions as appropriate | <u>[X]</u> | ___ | ___ |
| b. Matrix spikes and matrix spike duplicates | <u>[X]</u> | ___ | ___ |
| c. Blanks | <u>[X]</u> | ___ | ___ |
| d. Laboratory Control Samples | <u>[X]</u> | ___ | ___ |

10.2 Are the reconstructed Ion Chromatograms, mass spectra for the identified compounds, and the data system printouts (Quant Reports) included in the sample package for each of the following?

- | | | | |
|---|------------|-----|----------|
| a. Samples and/or fractions as appropriate | <u>[X]</u> | ___ | ___ |
| b. Matrix spikes and matrix spike duplicates
(Mass spectra not required) | <u>[]</u> | ___ | <u>X</u> |
| c. Blanks | <u>[X]</u> | ___ | ___ |
| d. Laboratory Control Samples | <u>[X]</u> | ___ | ___ |

ACTION: If any data are missing, take action specified in 3.2 above.

10.3 Is chromatographic performance acceptable with respect to:

Baseline stability?	<u>[X]</u>	___	___
---------------------	------------	-----	-----

YES NO N/A

Resolution?

☒ YES ☐ NO ☐ N/A

Peak shape?

☒ YES ☐ NO ☐ N/A

Full-scale graph (attenuation)?

☒ YES ☐ NO ☐ N/A

Other: _____

ACTION: Use professional judgement to determine the acceptability of the data.

10.4 Are the lab-generated standard mass spectra of identified volatile compounds present for each sample?

☒ YES ☐ NO ☐ N/A

ACTION: If any mass spectra are missing, take action specified in 3.2 above. If the lab does not generate their own standard spectra, make a note in the Data Assessment. If spectra are missing, contact the lab.

10.5 Is the RRT of each reported compound within 0.06 RRT units of the standard RRT in the continuing calibration?

☒ YES ☐ NO ☐ N/A

10.6 Are all ions present in the standard mass spectrum at a relative intensity greater than 10% (of the most abundant ion) also present in the sample mass spectrum?

☒ YES ☐ NO ☐ N/A

10.7 Do the relative intensities of the characteristic ions in the sample agree within $\pm 30\%$ of the corresponding relative intensities in the reference spectrum?

☒ YES ☐ NO ☐ N/A

ACTION: Use professional judgement to determine acceptability of data. If it is determined that incorrect identifications were made, all such data should be rejected ("R"), flagged ("N") - Presumptive evidence of the presence of the compound) or changed to non detected ("U") at the calculated detection limit. In order to be

YES NO N/A

positively identified, the data must comply with the criteria listed in 9.6, 9.7, and 9.8.

ACTION: When sample carry-over is a possibility, professional judgement should be used to determine if instrument cross-contamination has affected any positive compound identification.

11.0 Tentatively Identified Compounds (TIC) (CLP Form I/TIC Equivalent)

11.1 If Tentatively Identified Compound were required for this project, are all Tentatively Identified Compound reporting forms present; and do listed TICs include scan number or retention time, estimated concentration and a qualifier? ☐ ☒ ☐ ☒

NOTE: Add "N" qualifier to all TICs which have CAS number, if missing.

NOTE: Have the project officer/appropriate official check the project plan to determine if lab was required to identify non-target analytes (SW-846, page 8260B-23, Sect. 7.6.2).

11.2 Are the mass spectra for the tentatively identified compounds and associated "best match" spectra included in the sample package for each of the following:

- a. Samples and/or fractions as appropriate ☐ ☐ ☒
- b. Blanks ☐ ☐ ☒

ACTION: If any TIC data are missing, take action specified in 3.2 above.

ACTION: Add "JN" qualifier only to analytes identified by a CAS#.

NOTE: If TICs are present in the associated blanks take action as specified in section 3.2 above.

YES NO N/A

11.3 Are any priority pollutants listed as TIC compounds (i.e., an BNA compound listed as a VOA TIC)? ☐ ☐ ☒

ACTION: 1. Flag with "R" any target compound listed as a TIC.
2. Make sure all rejected compounds are properly reported if they are target compounds.

11.4 Are all ions present in the reference mass spectrum with a relative intensity greater than 10% (of the most abundant ion) also present in the sample mass spectrum? ☐ ☐ ☒

11.5 Do TIC and "best match" standard relative ion intensities agree within $\pm 20\%$? ☐ ☐ ☒

ACTION: Use professional judgement to determine acceptability of TIC identifications. If it is determined that an incorrect identification was made, change the identification to "unknown" or to some less specific identification (example: "C3 substituted benzene") as appropriate. Also, when a compound is not found in any blank, but is a suspected artifact of a common laboratory contaminant, the result should be qualified as unusable, "R". (Common lab contaminants: CO₂ (M/E 44), Siloxanes (M/E 73), Hexane, Aldol Condensation Products, Solvent Preservatives, and related byproducts).

12.0 Compound Quantitation and Reported Detection Limits

12.1 Are there any transcription/calculation errors in organic analysis reporting form results? Check at least two positive values. Verify that the correct internal standard, quantitation ion, and average initial RRF/CF were used to calculate organic analysis reporting form result. Were any errors found? ☐ ☒ ☐

NOTE: Structural isomers with similar mass spectra, but insufficient GC resolution (i.e. percent valley between the two peaks > 25%) should be

YES NO N/A

reported as isomeric pairs. The reviewer should check the raw data to ensure that all such isomers were included in the quantitation (i.e., add the areas of the two coeluting peaks to calculate the total concentration).

12.2 Are the method CRQL's adjusted to reflect sample dilutions and, for soils, sample moisture? ☐ ☐ ☒

ACTION: If errors are large, take action as specified in section 3.2 above.

ACTION: When a sample is analyzed at more than one dilution, the lowest detection limits are used (unless a QC exceedance dictates the use of the higher detection limit from the diluted sample data). Replace concentrations that exceed the calibration range in the original analysis by crossing out the "E" and it's associated value on the original reporting form (if present) and substituting the data from the analysis of the diluted sample. Specify which organic analysis reporting form is to be used, then draw a red "X" across the entire page of all reporting forms that should not be used, including any in the summary package.

13.0 Standards Data (GC/MS)

13.1 Are the Reconstructed Ion Chromatograms, and data system printouts (Quant Reports) present for initial and continuing calibration? ☒ ☐ ☐

ACTION: If any calibration standard data are missing, take action specified in section 3.2 above.

14.0 GC/MS Initial Calibration (CLP Form VI Equivalent)

YES NO N/A

14.1 Are the Initial Calibration reporting forms present and complete for the volatile fraction? [X]

ACTION: If any calibration forms or standard raw data are missing, take action specified in section 3.2 above.

ACTION: If the percent relative standard deviation (% RSD) is > 20%, (8000C-39) qualify positive results for that analyte "J". When % RSD > 90%,. Qualify all positive results for that analyte "J" and all non-detects results for that analyte "R".

14.2 Are all average RRFs > 0.050? [X]

NOTE: (Method Requirement) For SPCC compounds, the individual RRF values must be $\geq$ the values in the following list. If individual RRF values reported are below the listed values document in the Data Assessment.

Chloromethane	0.10
1,1-Dichloroethane	0.10
Bromoform	0.10
Chlorobenzene	0.30
1,1,2,2-Tetrachloroethane	0.30

ACTION: Circle all outliers with red pencil.

ACTION: For any target analyte with average RRF < 0.05, or for the requirements for the 5 compounds in 14.2 above, qualify all positive results for that analyte "J" and all non-detect results for that analyte "R".

14.3 Are response factors stable over the concentration range of the calibration. [X]

NOTE: (Method Requirement) For the following CCC compounds, the %RSD values must be $\leq$ 30.0%. If %RSD values reported are > 30.0% document in the Data Assessment.

YES NO N/A

1,1-Dichloroethene
Chloroform
1,2-Dichloropropane
Toluene
Ethylbenzene
Vinyl chloride

ACTION: Circle all outliers with a red pencil.

ACTION: If the % RSD is > 20.0%, or > 30% for the 6 compounds in 14.3 above, qualify positive results for that analyte "J" and non-detects using professional judgement. When RSD > 90%, qualify all positive results for that analyte "J" and all non-detect results for that analyte "R".

NOTE: The above data qualification action applies regardless of method requirements.

NOTE: Analytes previously qualified "U" due to blank contamination are still considered as "hits" when qualifying for calibration criteria.

14.4 Was the % RSD determined using RRF or CF? ☒ ☐ ☐

If no, what method was used to determine the linearity of the initial calibration? Document any effects to the case in the Data Assessment.

14.5 Are there any transcription/calculation errors in the reporting of RRF or % RSD? (Check at least two values but if errors are found, check more.) ☐ ☒ ☐

ACTION: Circle errors with a red pencil.

ACTION: If errors are large, take action as specified in section 3.2 above.

15.0 GC/MS Calibration Verification (CLP Form VII Equivalent)

YES NO N/A

15.1 Are the Calibration Verification reporting forms present and complete for all compounds of interest? ☒ ☐ ☐

15.2 Has a calibration verification standard been analyzed for every twelve hours of sample analysis per instrument? ☒ ☐ ☐

ACTION: List below all sample analyses that were not within twelve hours of a calibration verification analysis for each instrument used.

ACTION: If any forms are missing or no calibration verification standard has been analyzed twelve hours prior to sample analysis, take action as specified in section 3.2 above. If calibration verification data are not available, flag all associated sample data as unusable ("R").

15.3 Was the % D determined from the calibration verification determined using RRF or CF? ☒ ☐ ☐

If no, what method was used to determine the calibration verification? Document any effects to the case in the Data Assessment.

15.4 Do any volatile compounds have a % D (difference or drift) between the initial and continuing RRF or CF which exceeds 20% (SW-846, page 8260B-19, section 7.4.5.2). ☐ ☒ ☐

NOTE: (Method Requirement) For the following CCC compounds, the %D values must be $\leq 20.0\%$. If %D values reported are $> 20.0\%$ document in the Data Assessment.

1,1-Dichloroethene
Chloroform
1,2-Dichloropropane
Toluene
Ethylbenzene
Vinyl chloride

YES NO N/A

ACTION: Circle all outliers with a red pencil.

ACTION: Qualify both positive results and non-detects for the outlier compound(s) as estimated, "J". When %D is above 90%, qualify all positive results for that analyte "J" and all non-detect results for that analyte "R".

NOTE: The above data qualification action applies regardless of method requirements.

15.5 Do any volatile compounds have a RRF < 0.05? ☐ ☒ ☐

NOTE: (Method Requirement) For SPCC compounds, the individual RRF values must be $\geq$ the values in the following list for each calibration verification. If average RRF values reported are below the listed values document in the data assessment.

Chloromethane	0.10
1,1-Dichloroethane	0.10
Bromoform	0.10
Chlorobenzene	0.30
1,1,2,2-Tetrachloroethane	0.30

ACTION: Circle all outliers with a red pencil.

ACTION: If RRF < 0.05, or < the requirements for the 5 compounds in section 15.5 above, qualify all positive results for that analyte "J" and all non-detect results for that analyte "R".

NOTE: The above data qualification action applies regardless of method requirements.

16.0 Internal Standards (CLP Form VIII Equivalent)

16.1 Are the internal standard (IS) areas on the internal standard reporting forms of every sample and blank within the upper and lower limits (-50% to + 100%) for each initial mid-point calibration (SW-846, 8260B-20, Sect. 7.4.7)? ☒ ☐ ☐

YES NO N/A

ACTION: If errors are large or information is missing, take action as specified in section 3.2 above.

ACTION: List each outlying internal standard below.

Sample ID	IS #	Area Lower Limit	Area Upper Limit
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

(Attach additional sheets if necessary.)

- ACTION:
1. If the internal standard area count is outside the upper or lower limit, flag with "J" all positive results quantitated with this internal standard.
 2. Do not qualify non-detects when the associated IS are counts area > + 100%.
 3. If the IS area is below the lower limit (< - 50%), qualify all associated non-detects (U-values) "J".
 4. If extremely low area counts are reported (< - 25%) or if performance exhibits a major abrupt drop off, flag all associated non-detects as unusable "R" and positive results as estimated "J".

16.2 Are the retention times of all internal standards within 30 seconds of the associated initial mid-point calibration standard (SW-846, 8260B-20, Sect. 7.4.6)? ☒ _____

ACTION: Professional judgement should be used to qualify data if the retention times differ by more than 30 seconds.

YES NO N/A

17.0 Field Duplicates

17.1 Were any field duplicates submitted for
volatile analysis?

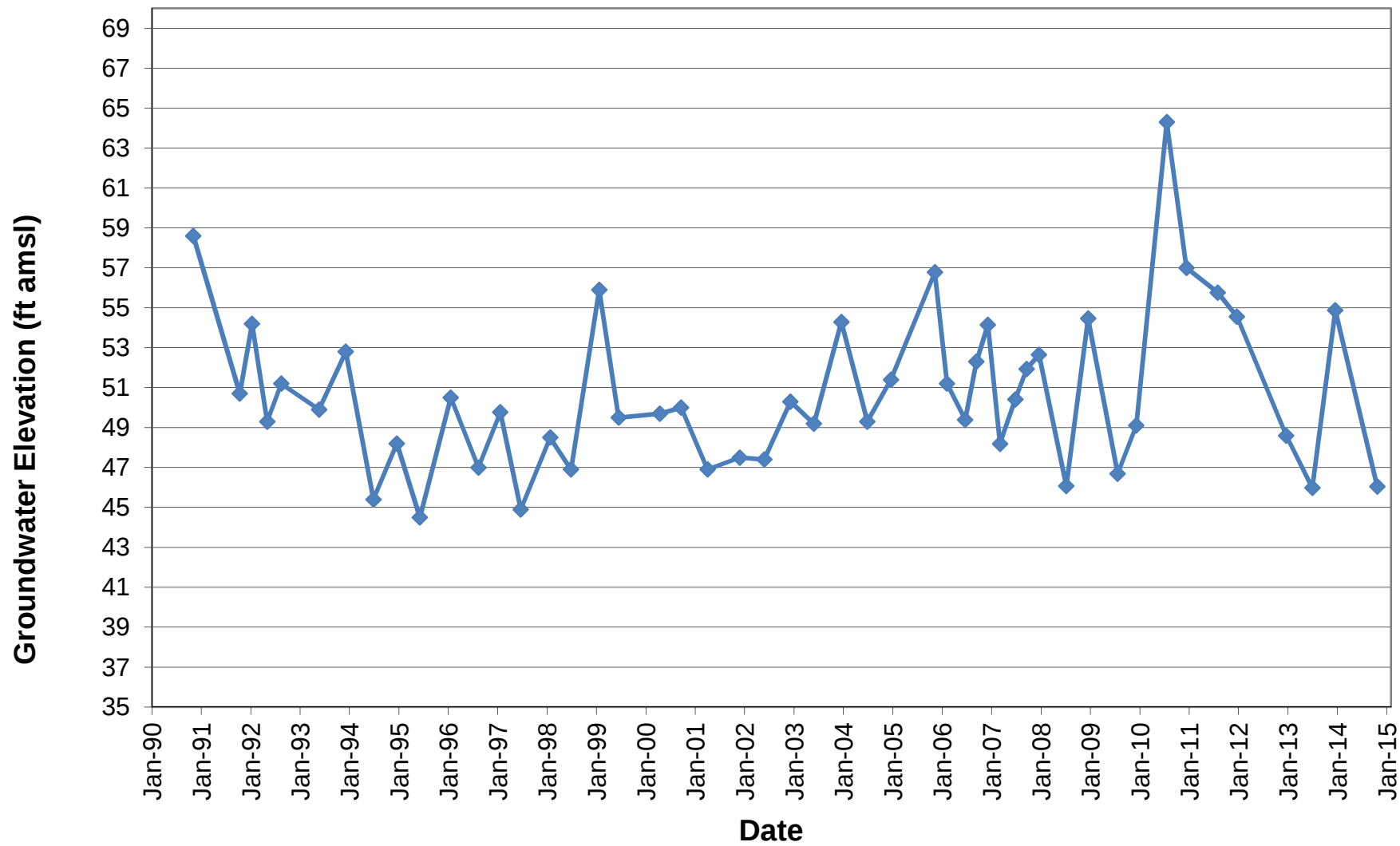
☒ X — —

ACTION: Compare the reported results for field duplicates and
calculate the relative percent difference.

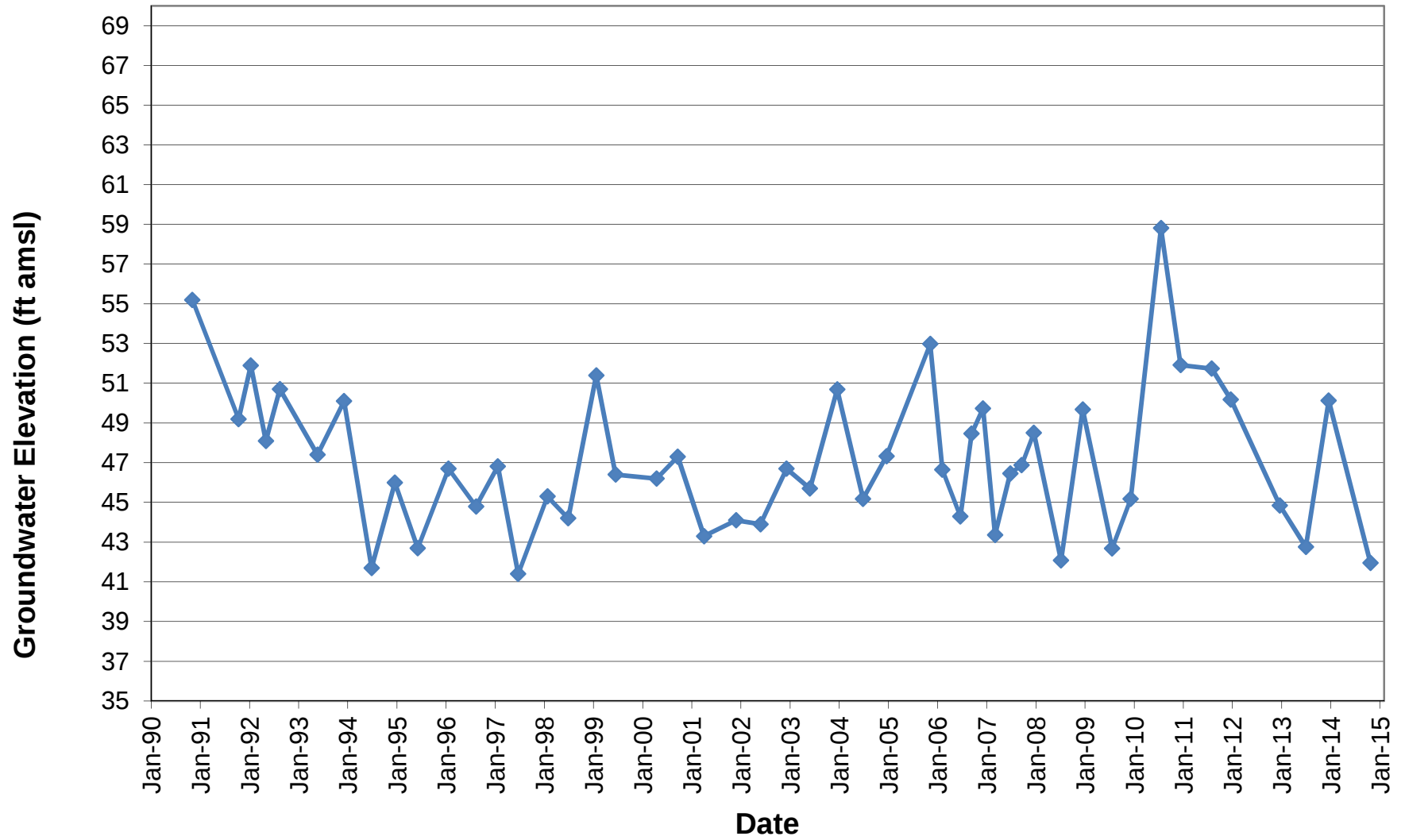
ACTION: Any gross variation between field duplicate
results must be addressed in the Data Assessment.
However, if large differences exist, take action
specified in section 3.2 above.

APPENDIX D
LONG-TERM HYDROGRAPHS

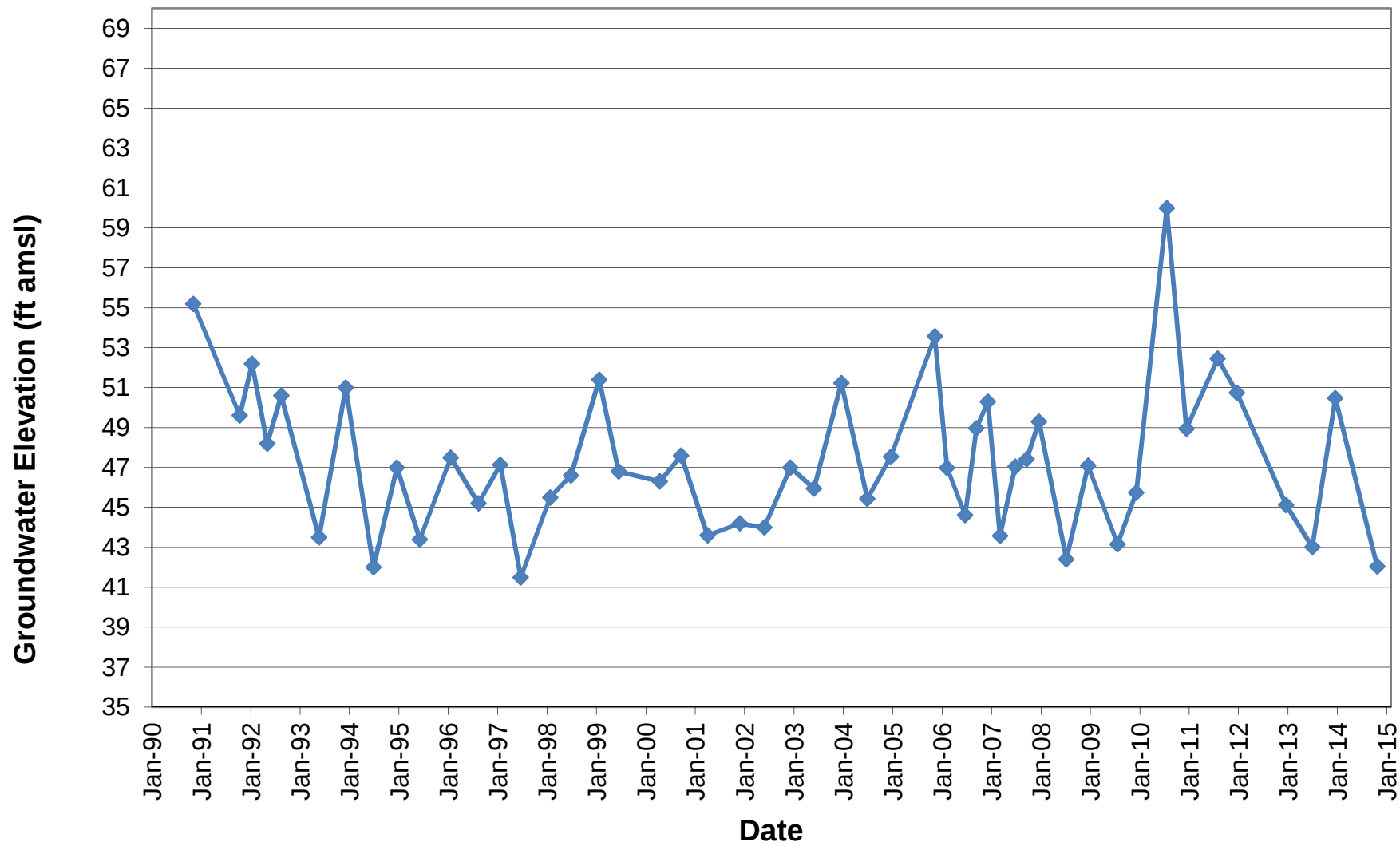
C-1 Historical Groundwater Elevation



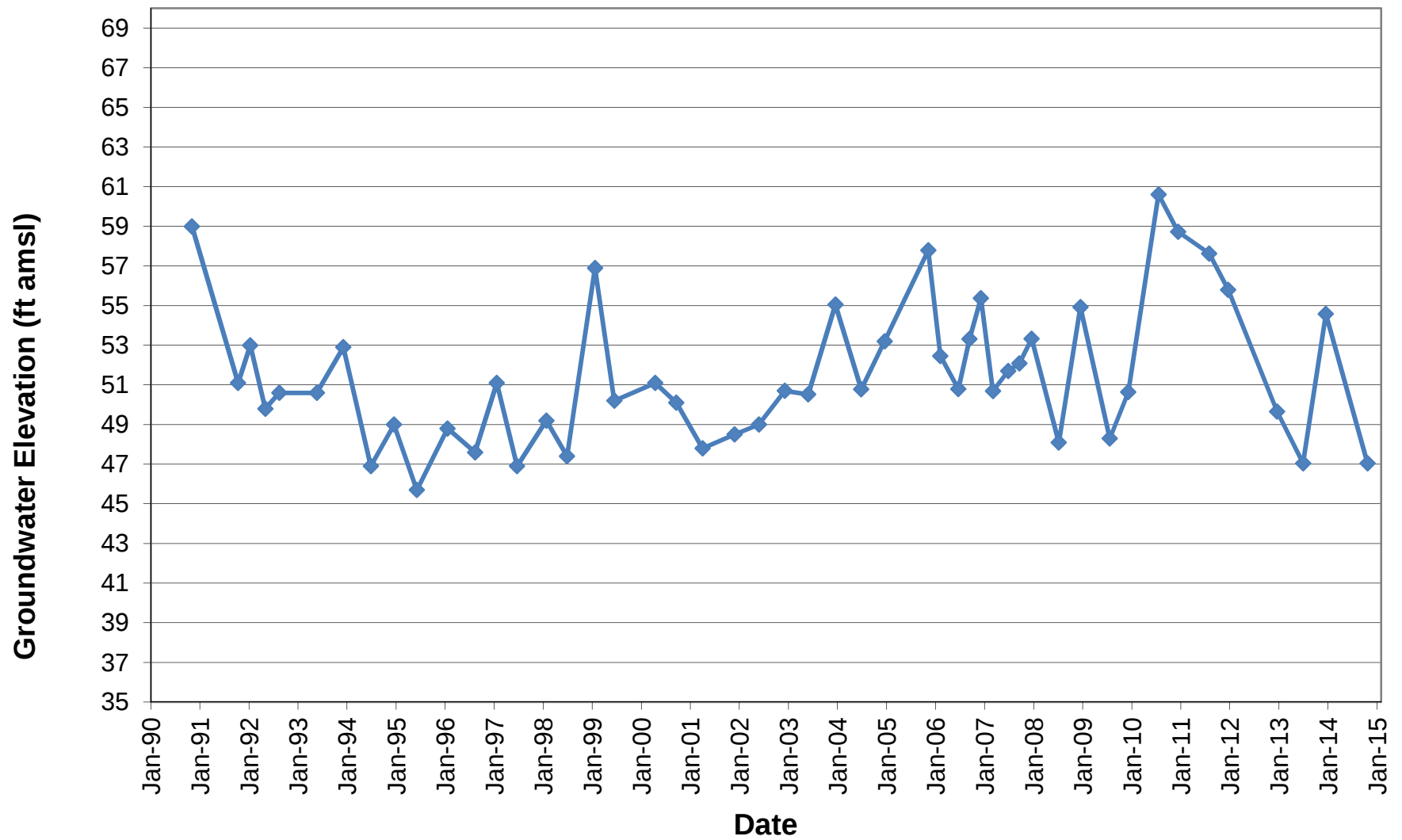
C-2 Historical Groundwater Elevation



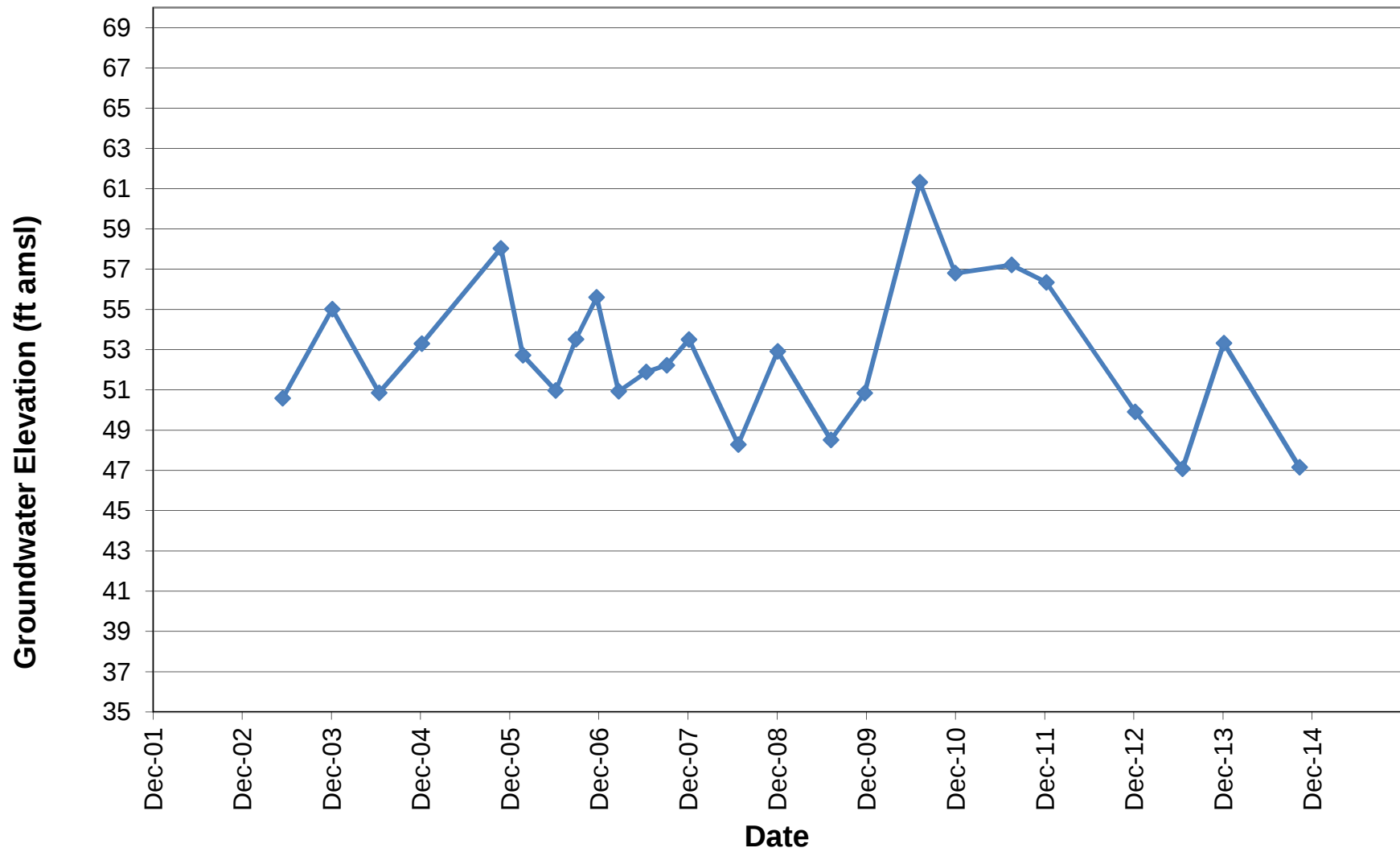
C-3 Historical Groundwater Elevation



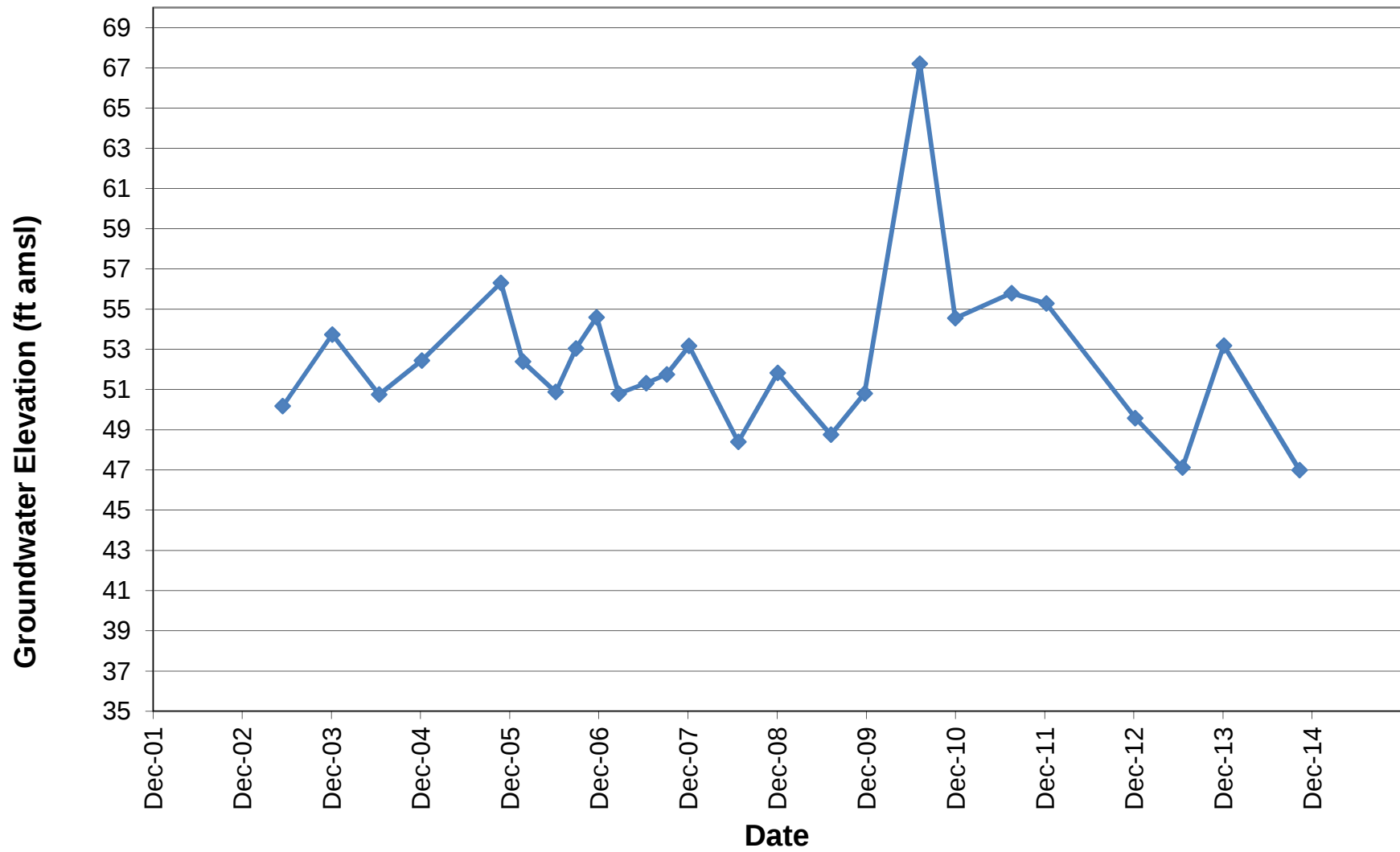
C-4 Historical Groundwater Elevation



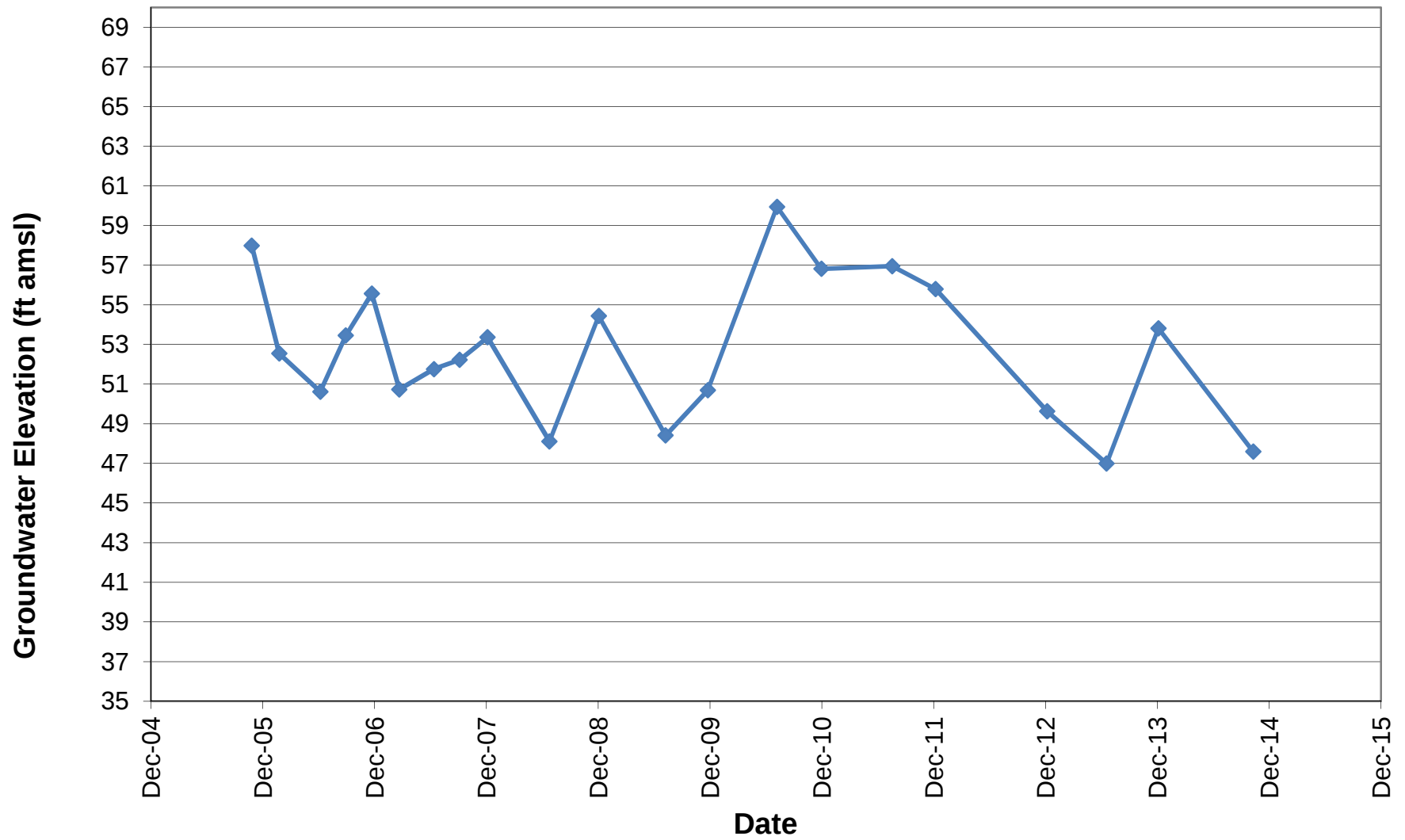
C-5 Historical Groundwater Elevation



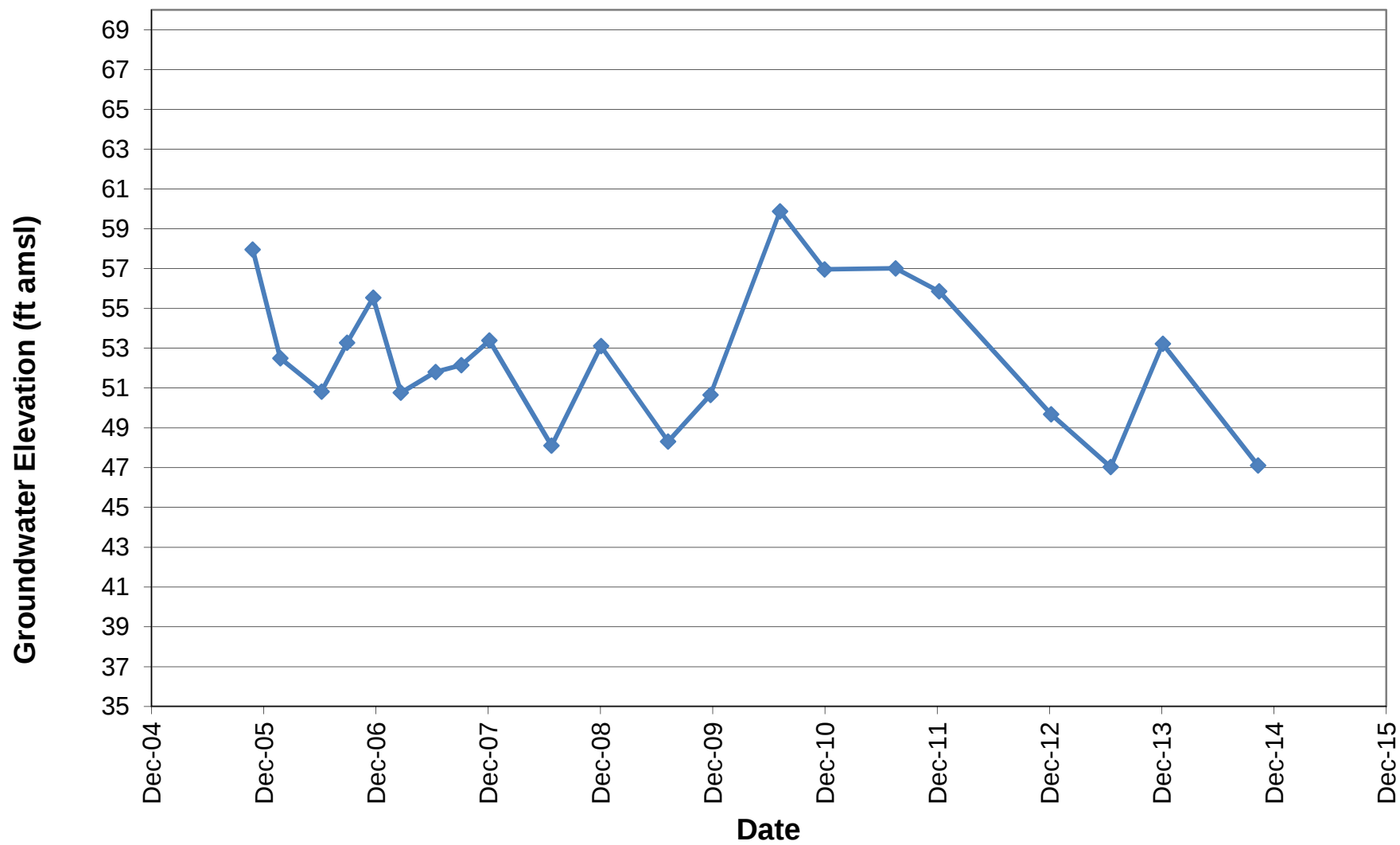
C-6 Historical Groundwater Elevation



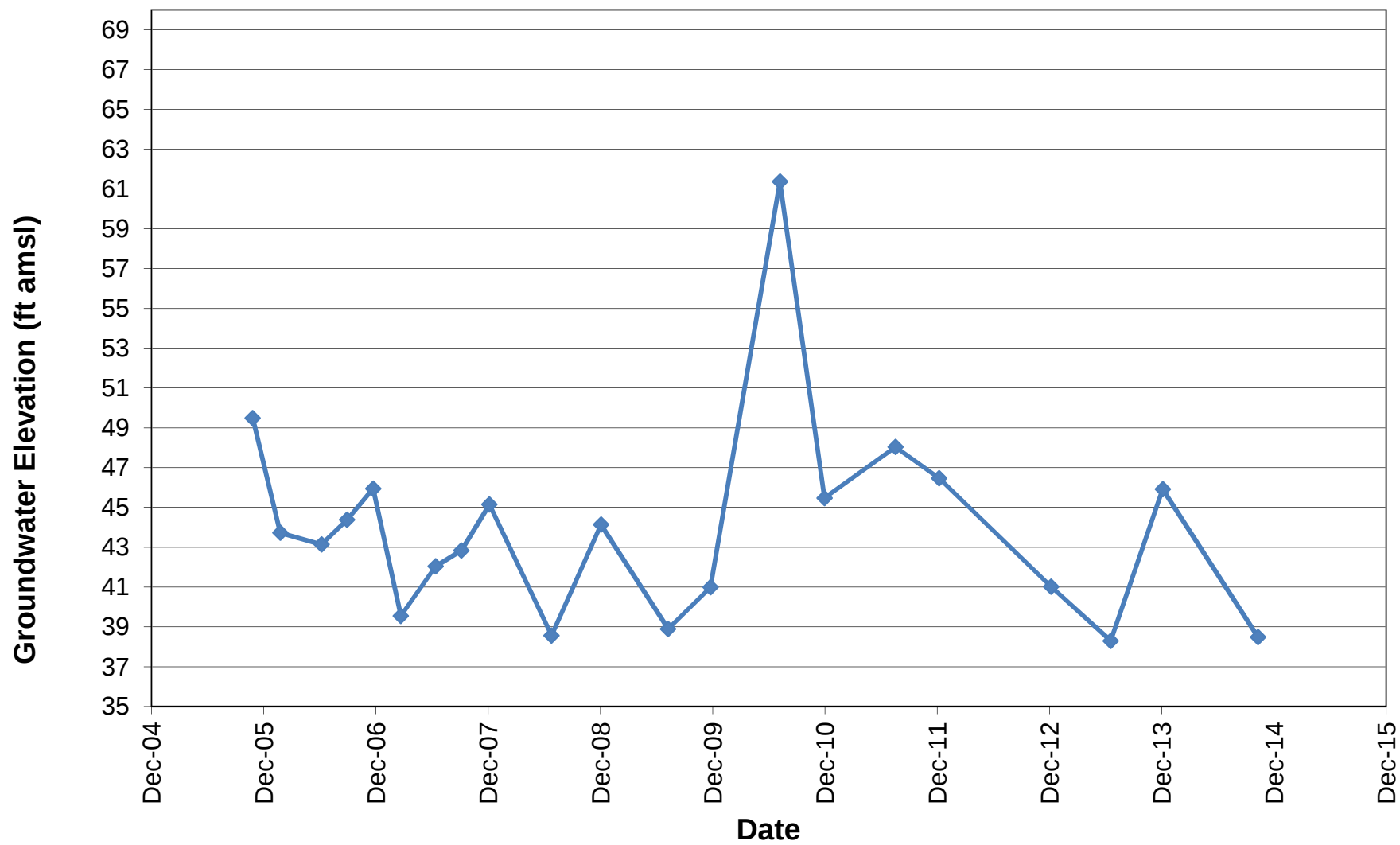
C-7 Historical Groundwater Elevation



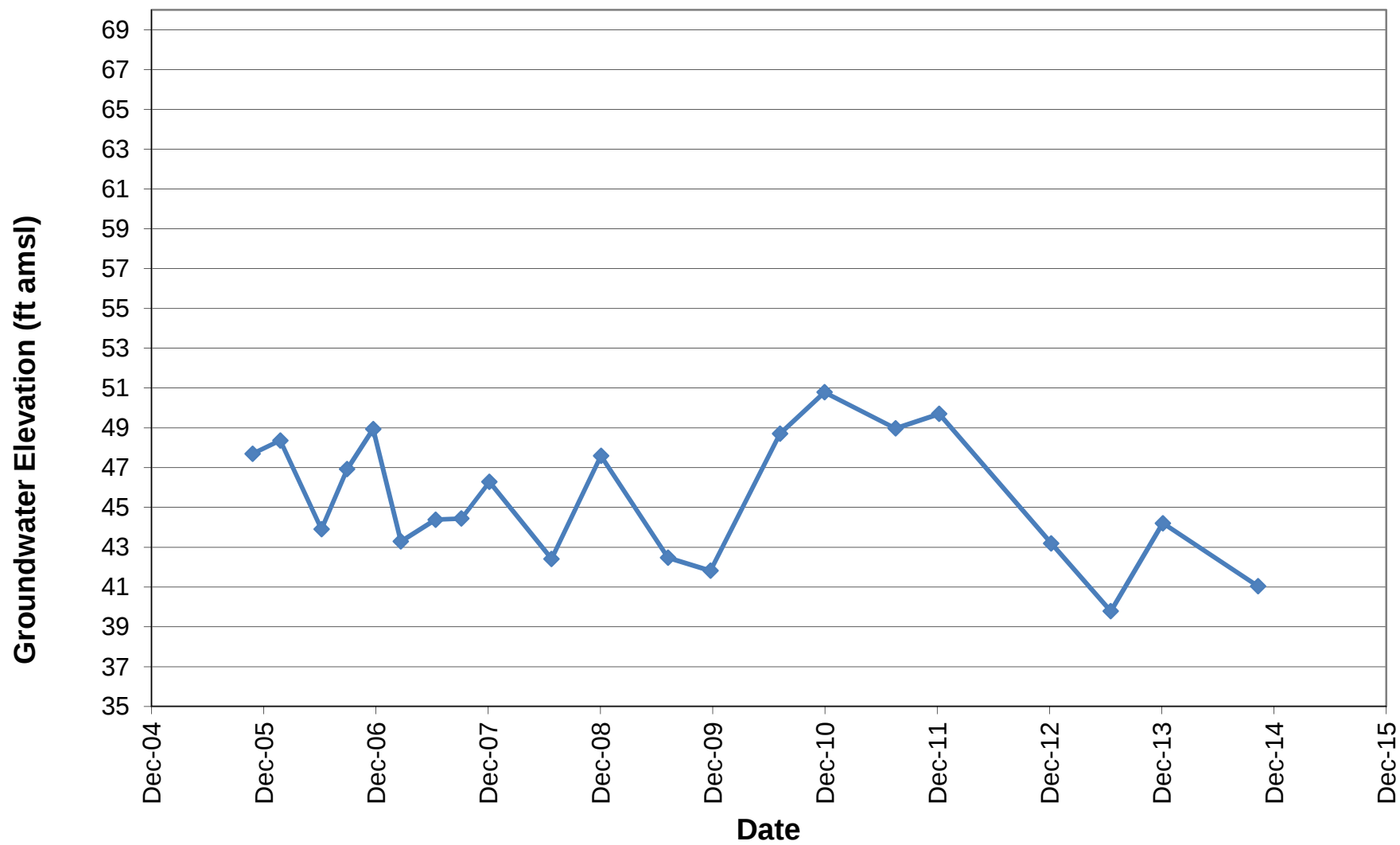
C-8 Historical Groundwater Elevation



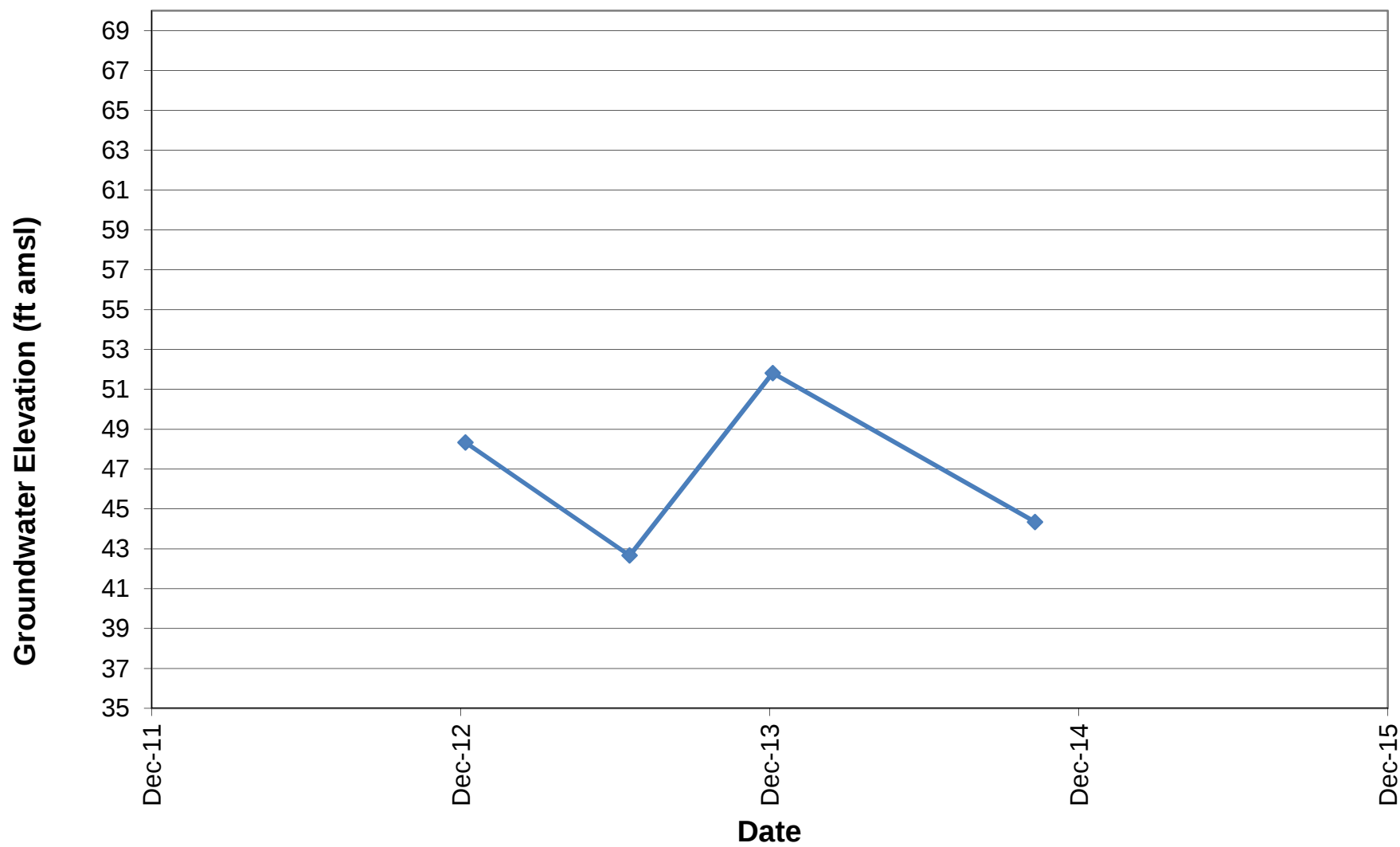
C-9 Historical Groundwater Elevation



C-10 Historical Groundwater Elevation

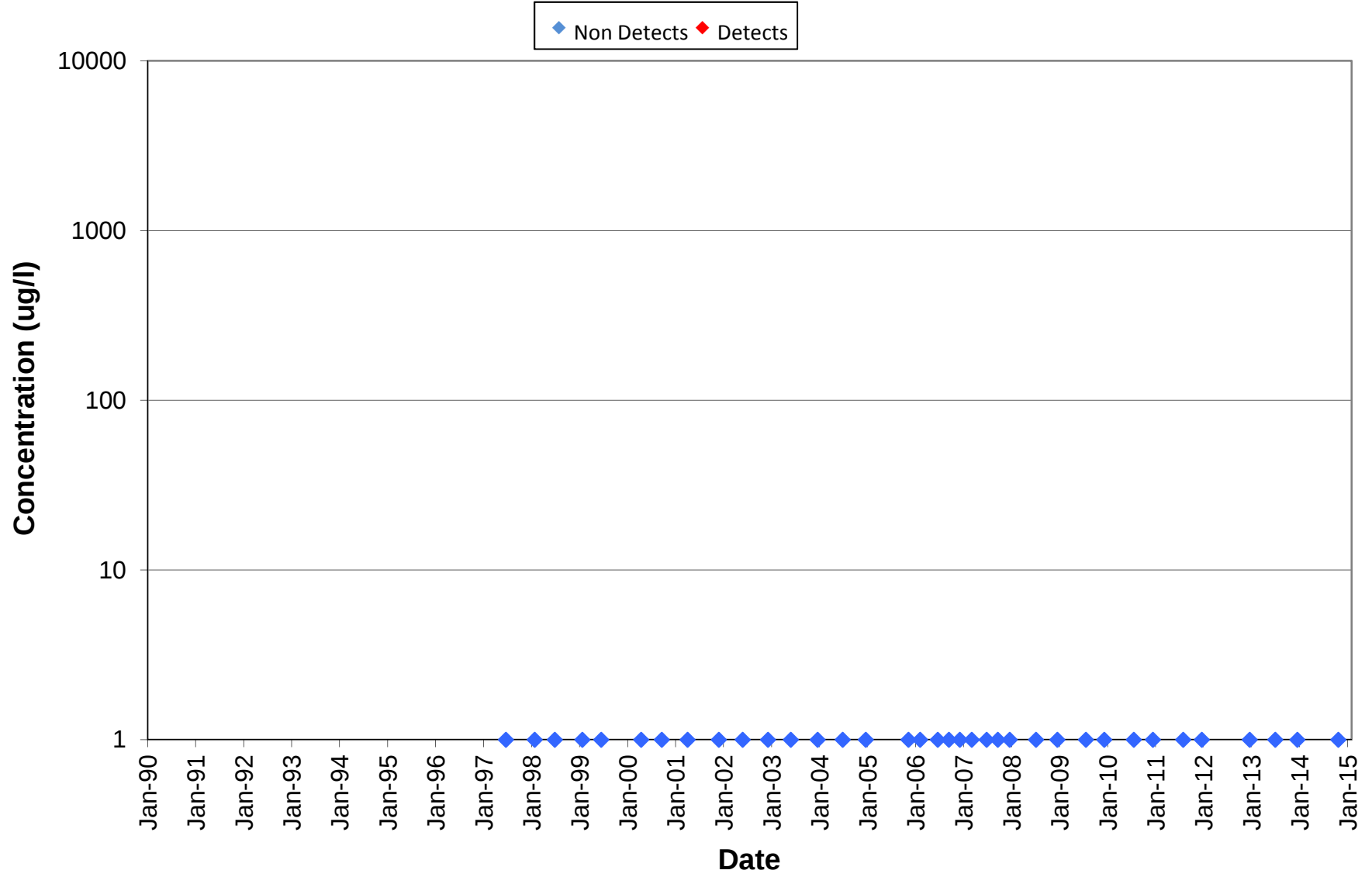


C-11 Historical Groundwater Elevation

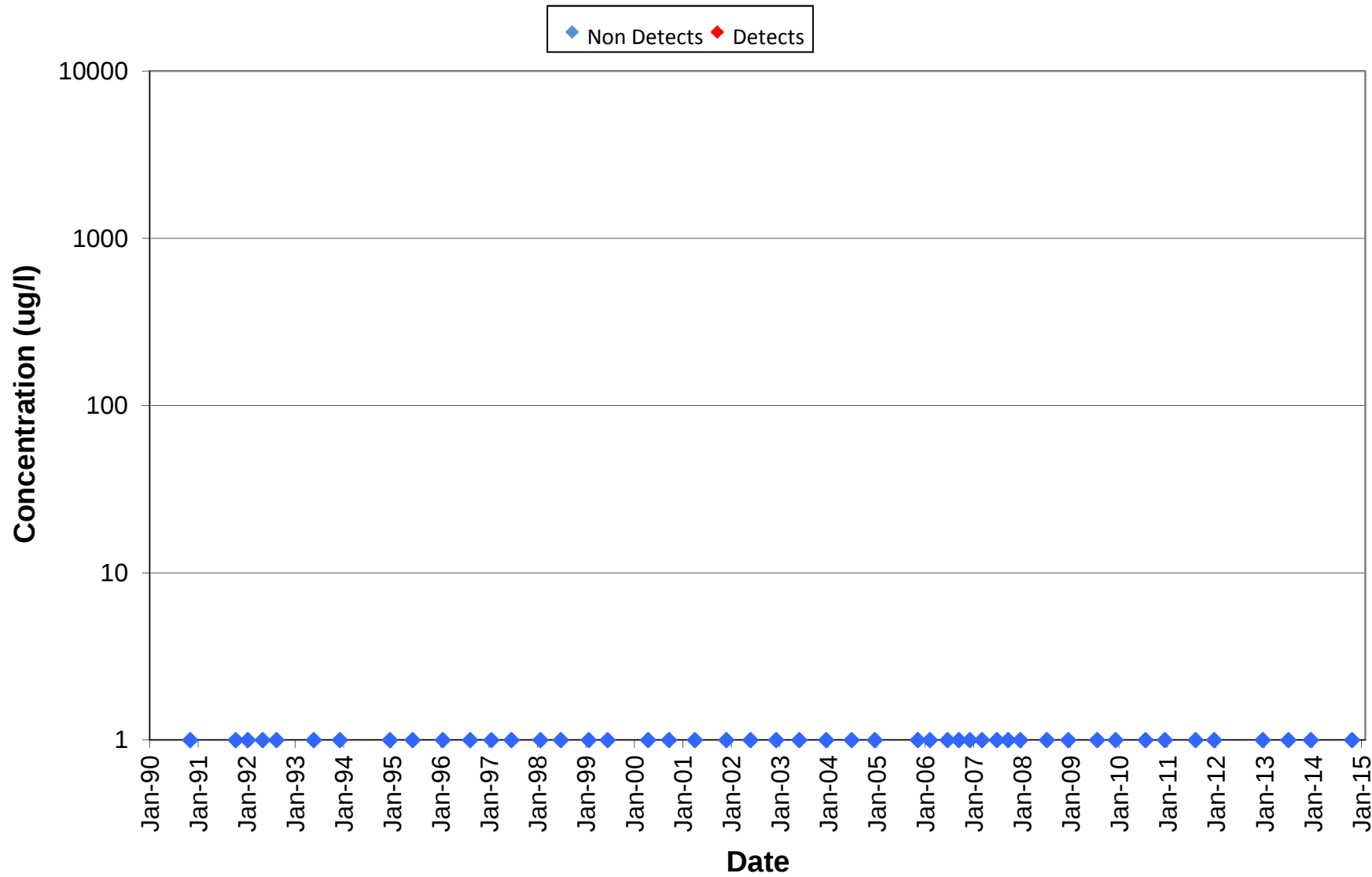


APPENDIX E
TIME SERIES PLOTS OF HISTORICAL VOC CONCENTRATIONS

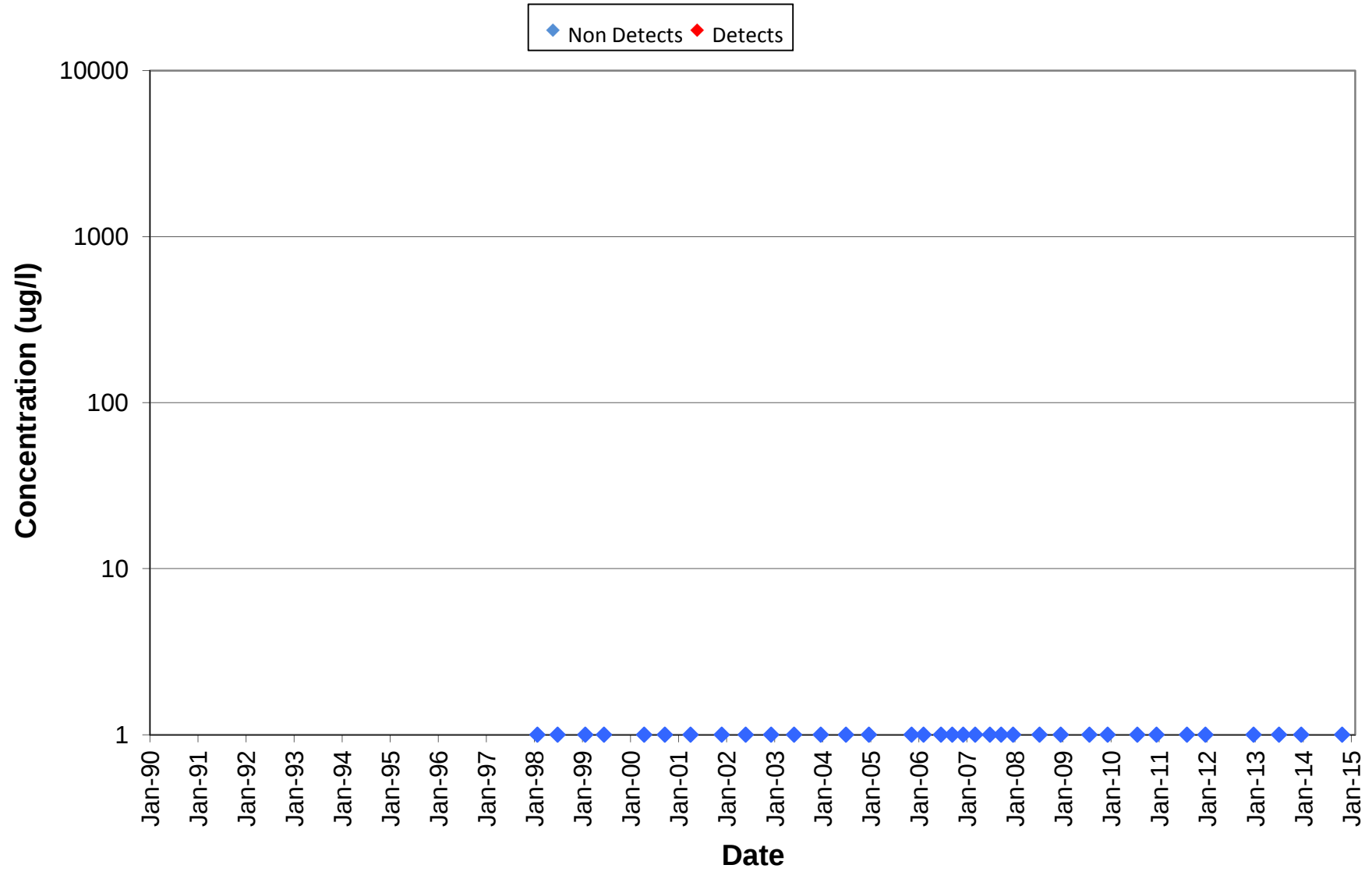
C-1 1,1 DCA Concentrations



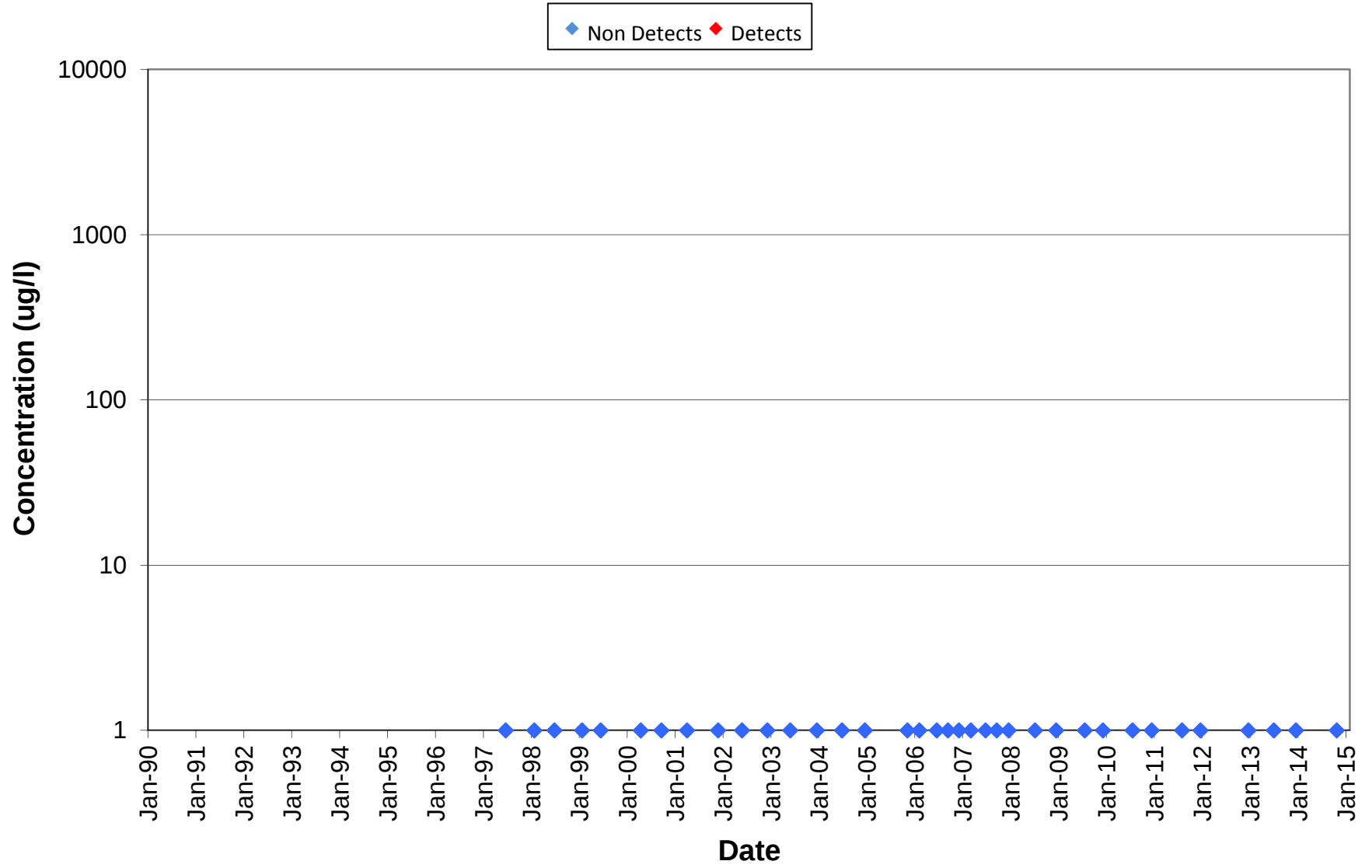
C-1 1,1 DCE Concentrations



C-1 cis 1,2 DCE Concentrations

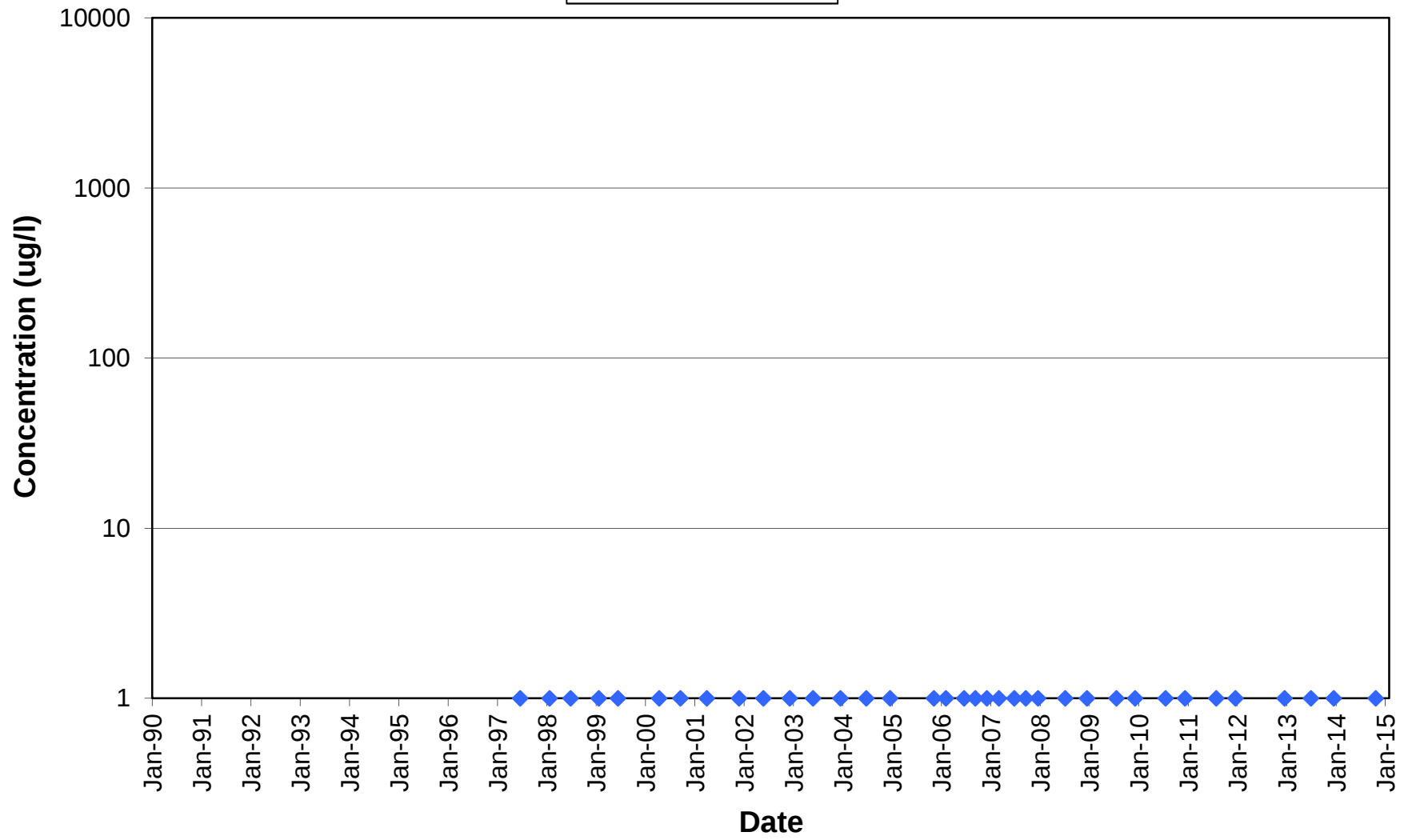


C-1 TCE Concentrations

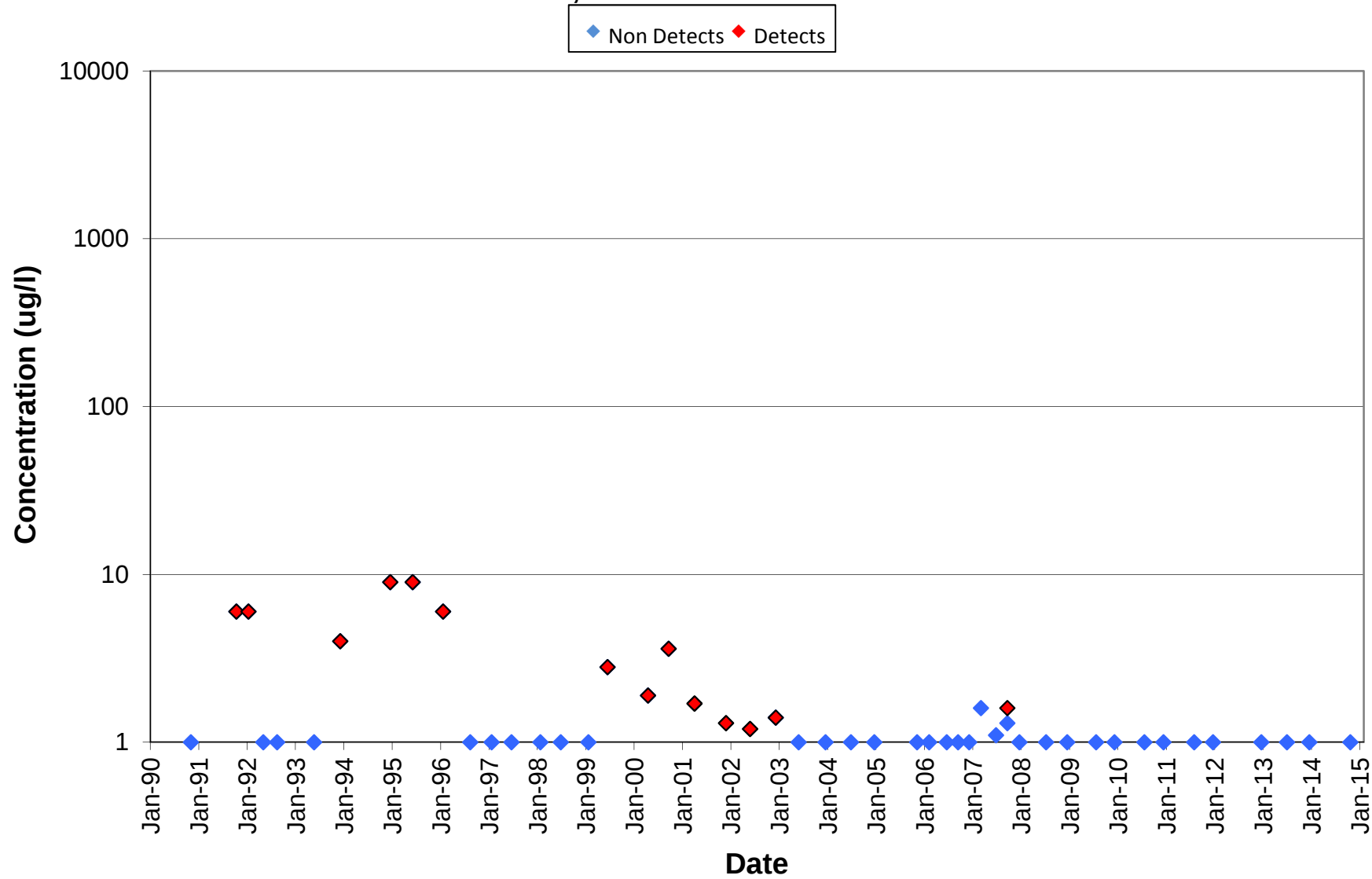


C-1 Vinyl Chloride

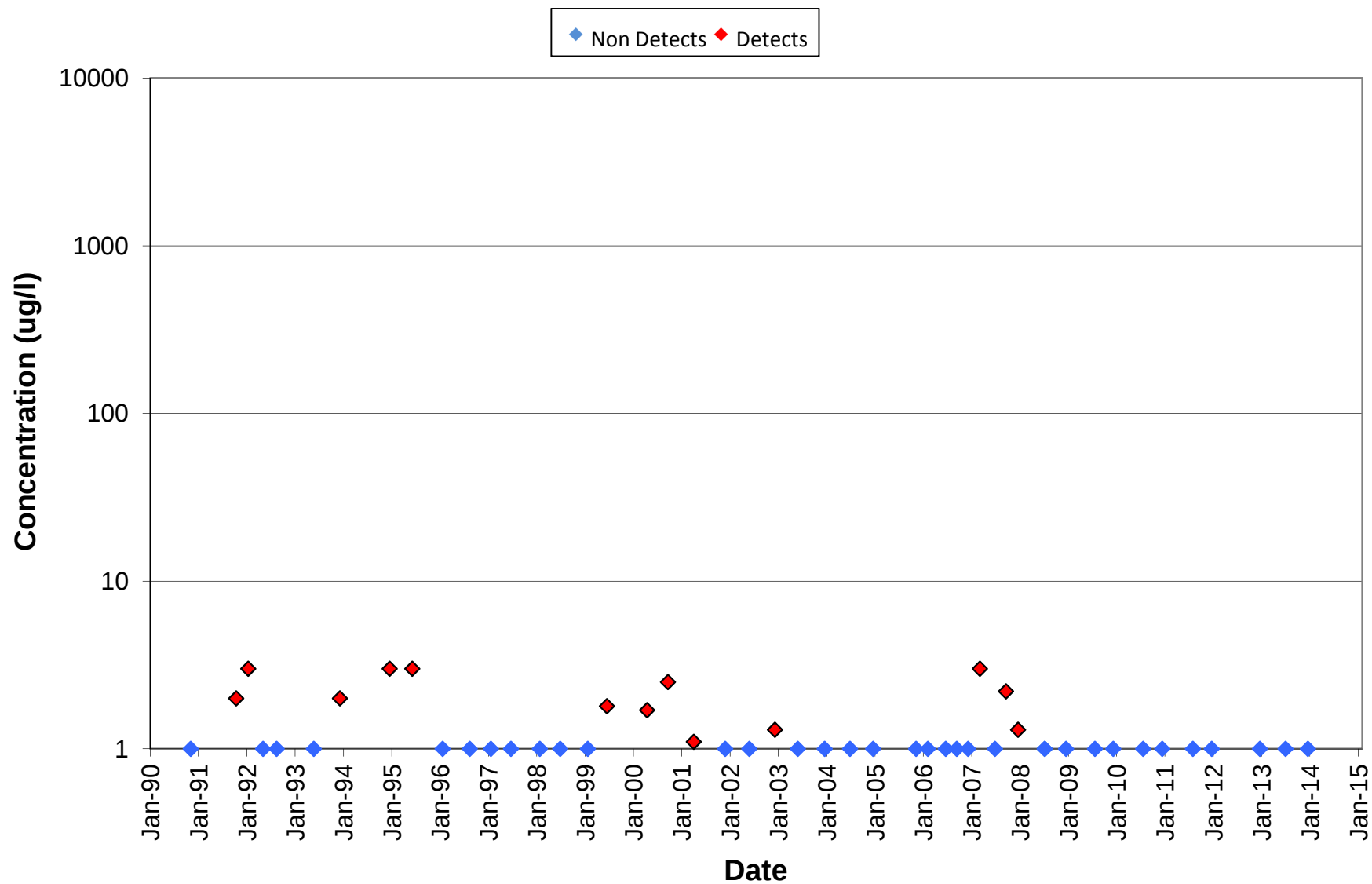
◆ Non Detects ◆ Detects



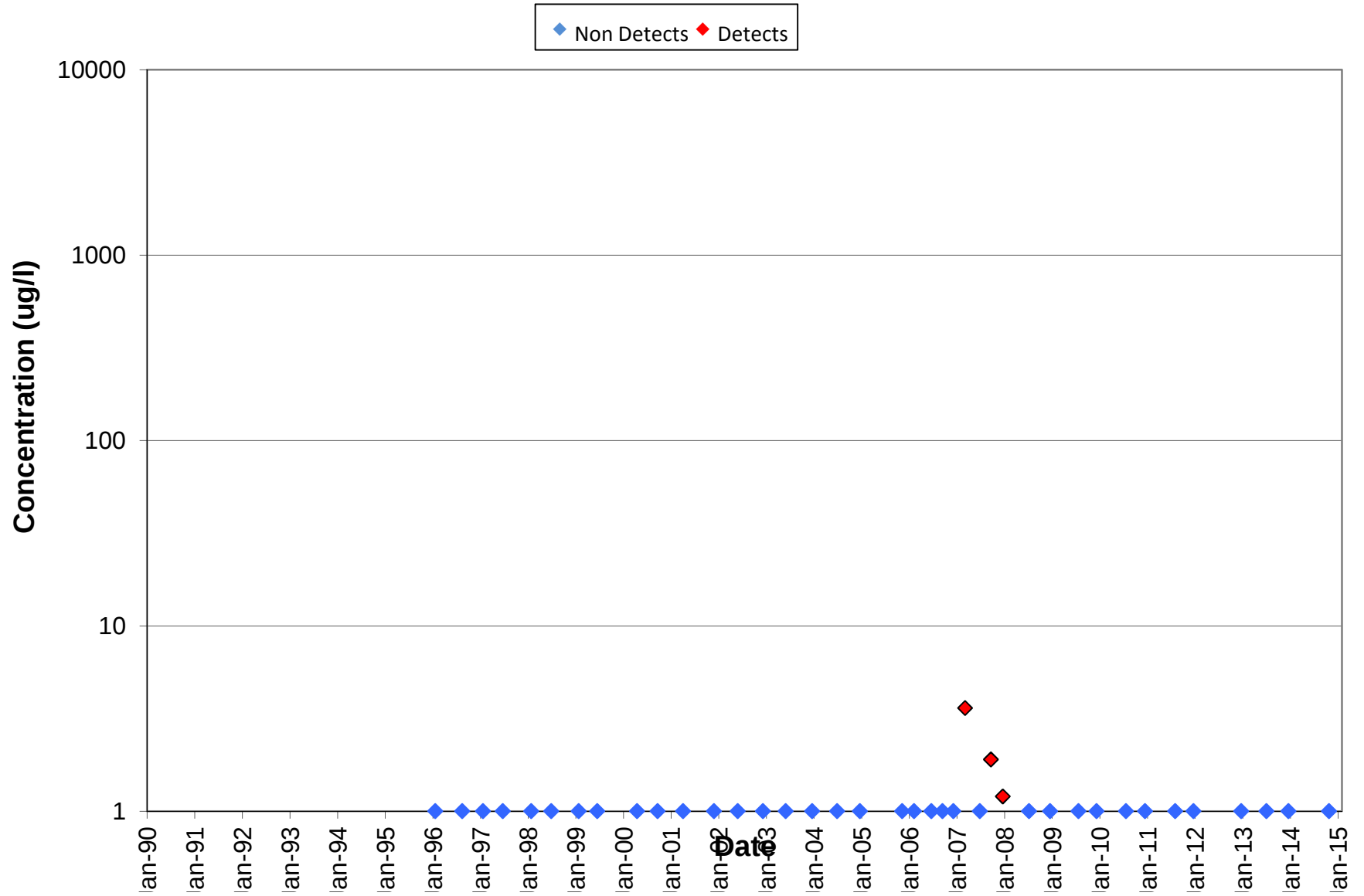
C-2 1,1 DCA Concentrations



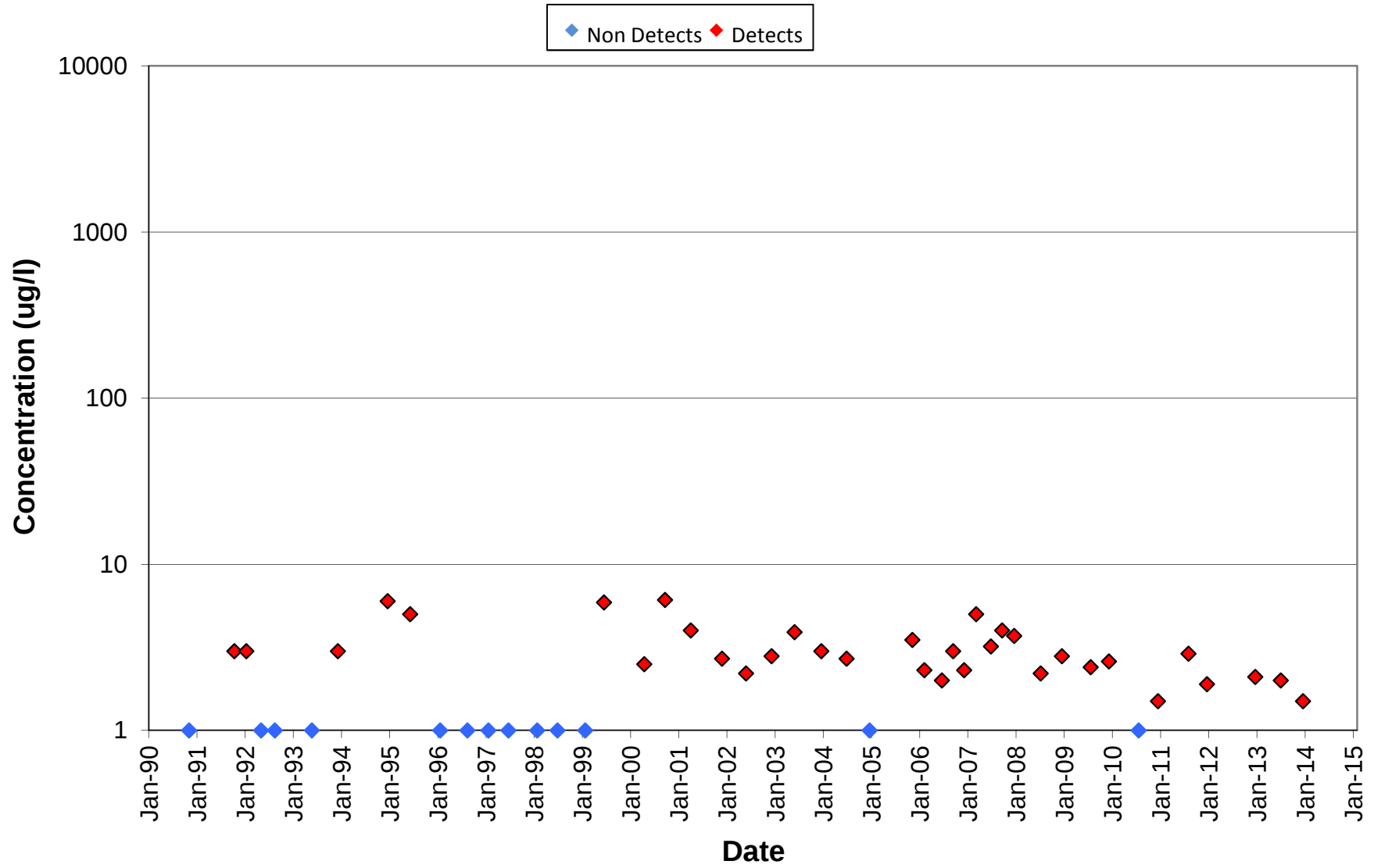
C-2 1,1 DCE Concentrations



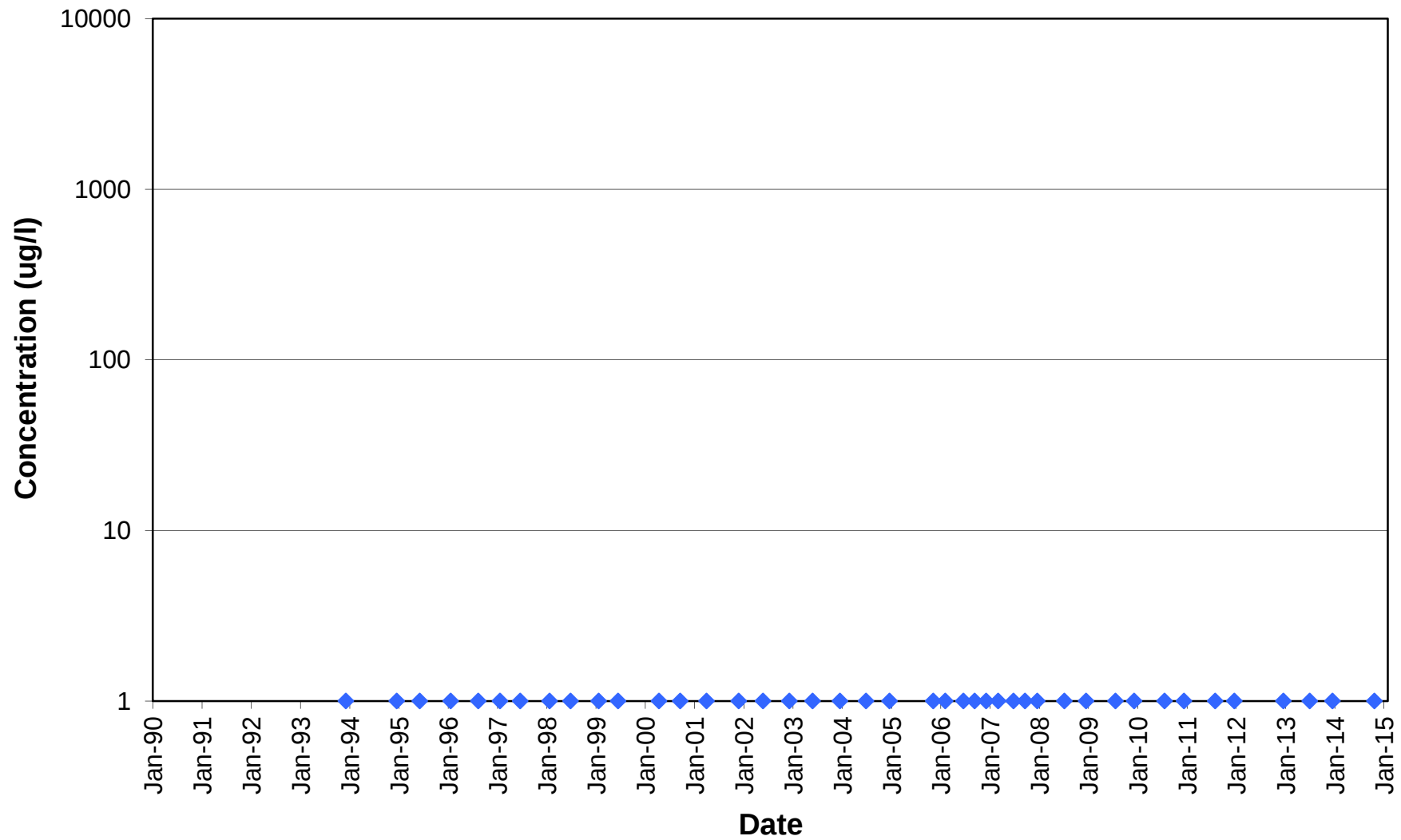
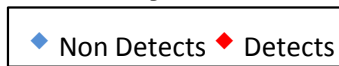
C-2 cis 1,2 DCE Concentrations



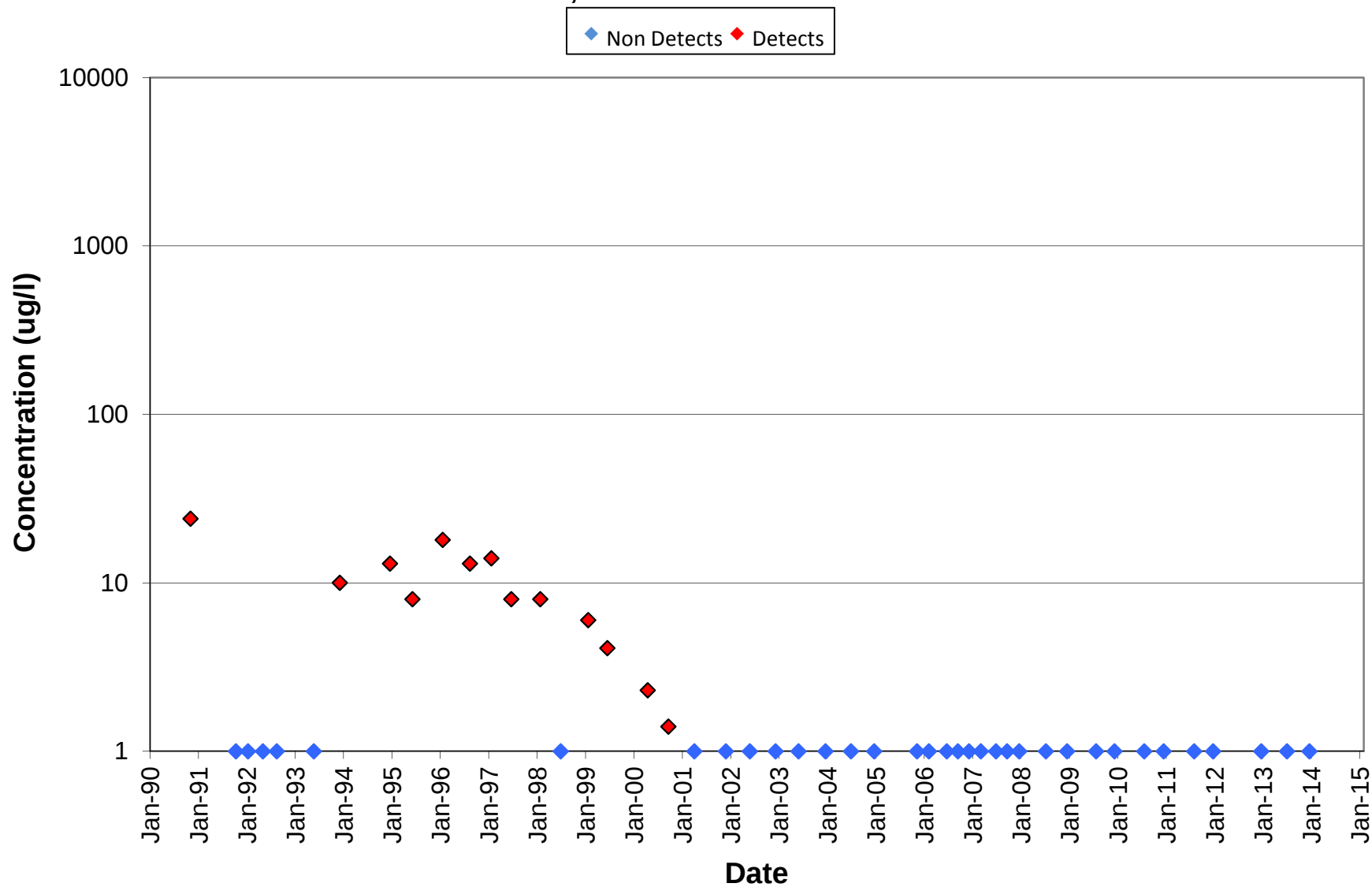
C-2 TCE Concentrations



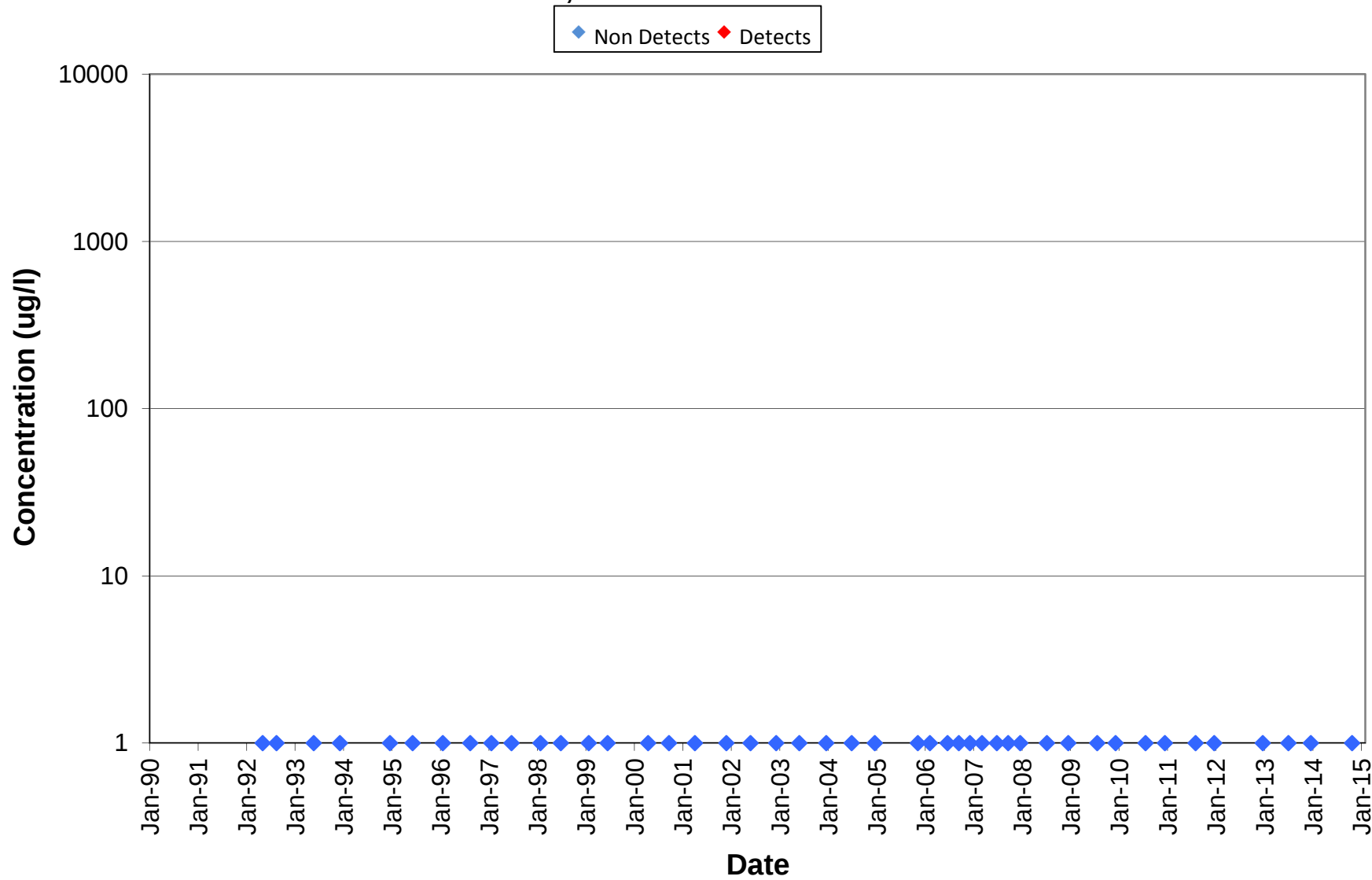
C-2 Vinyl Chloride



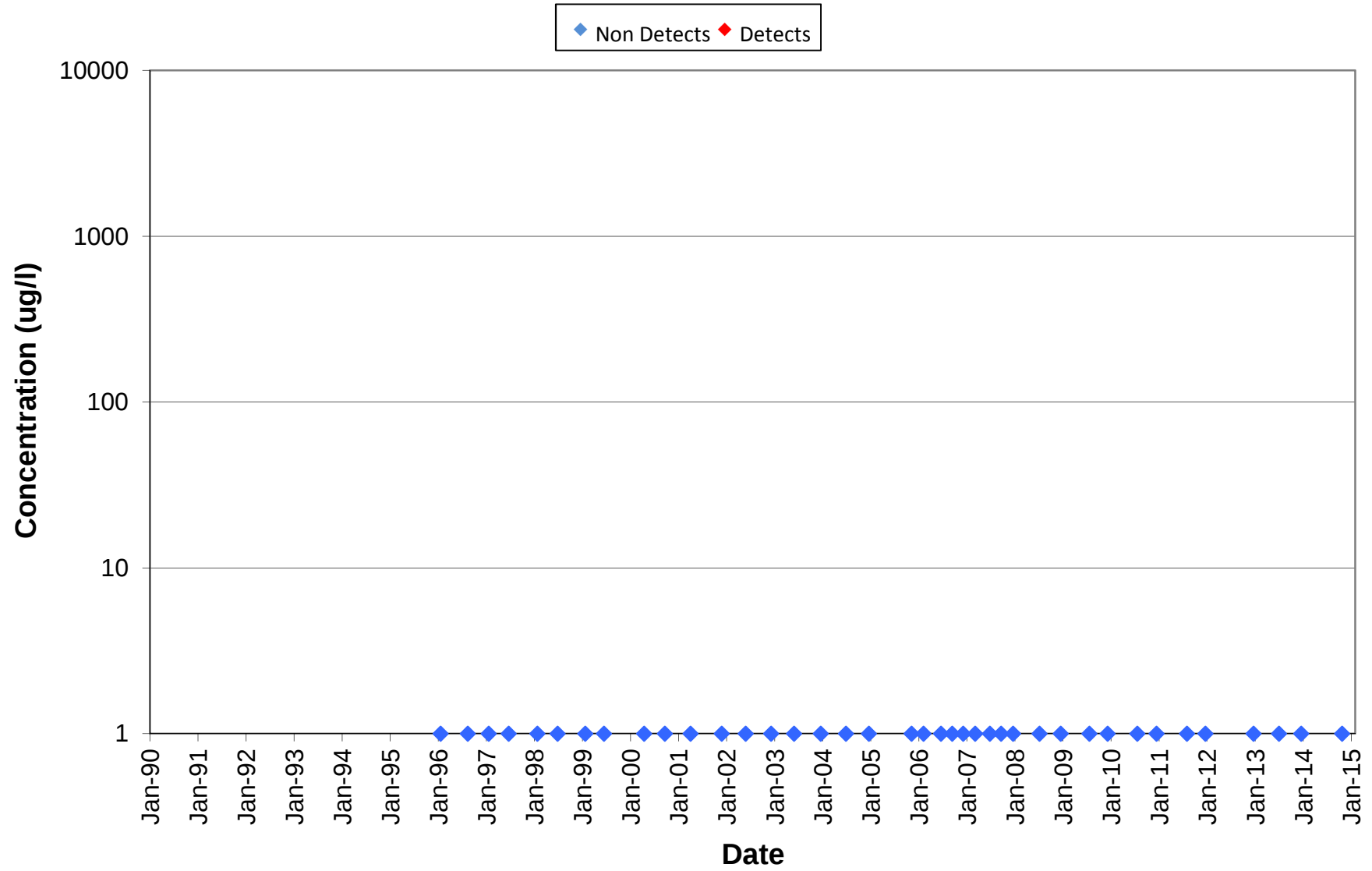
C-3 1,1 DCA Concentrations



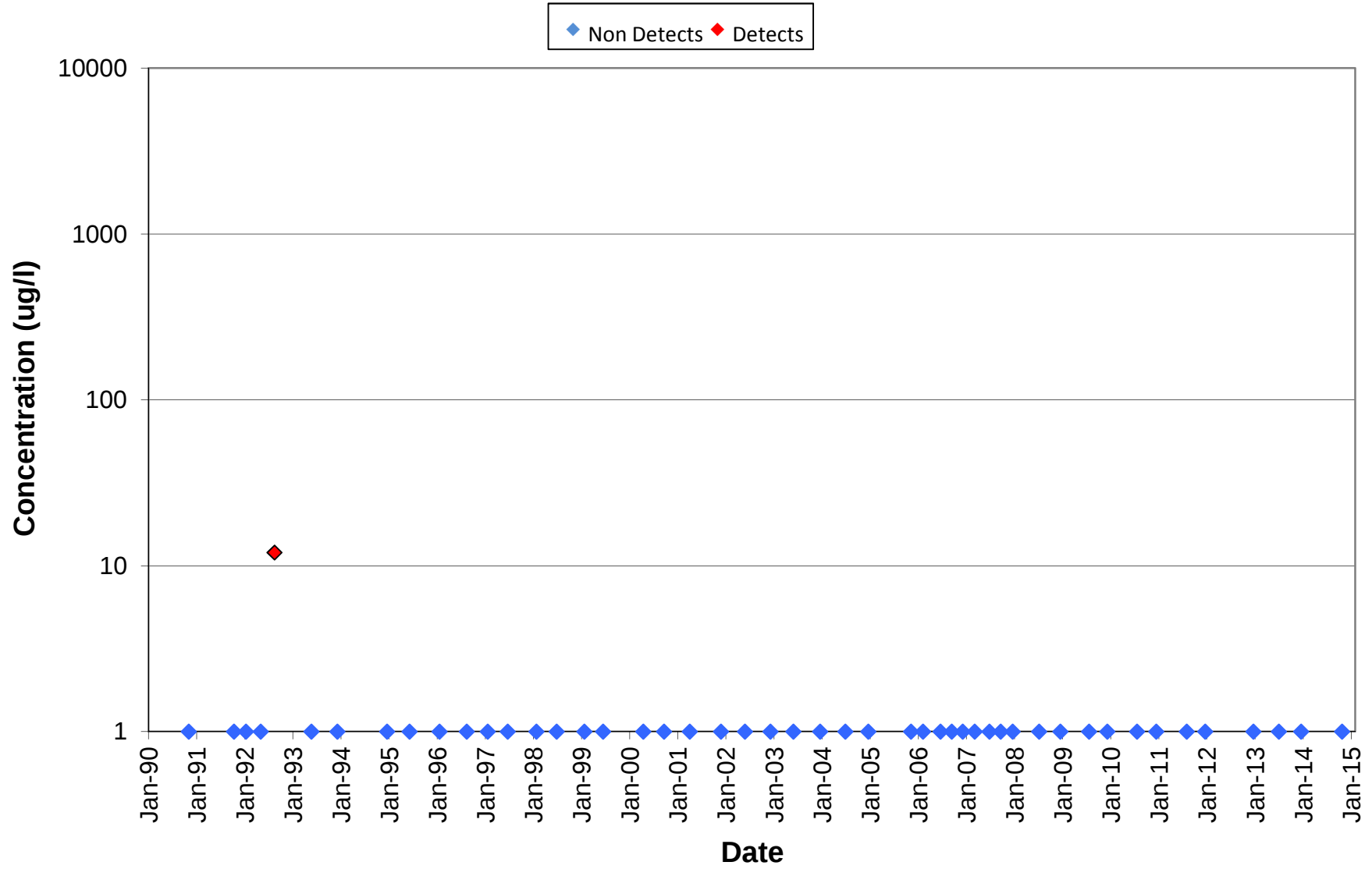
C-3 1,1 DCE Concentrations



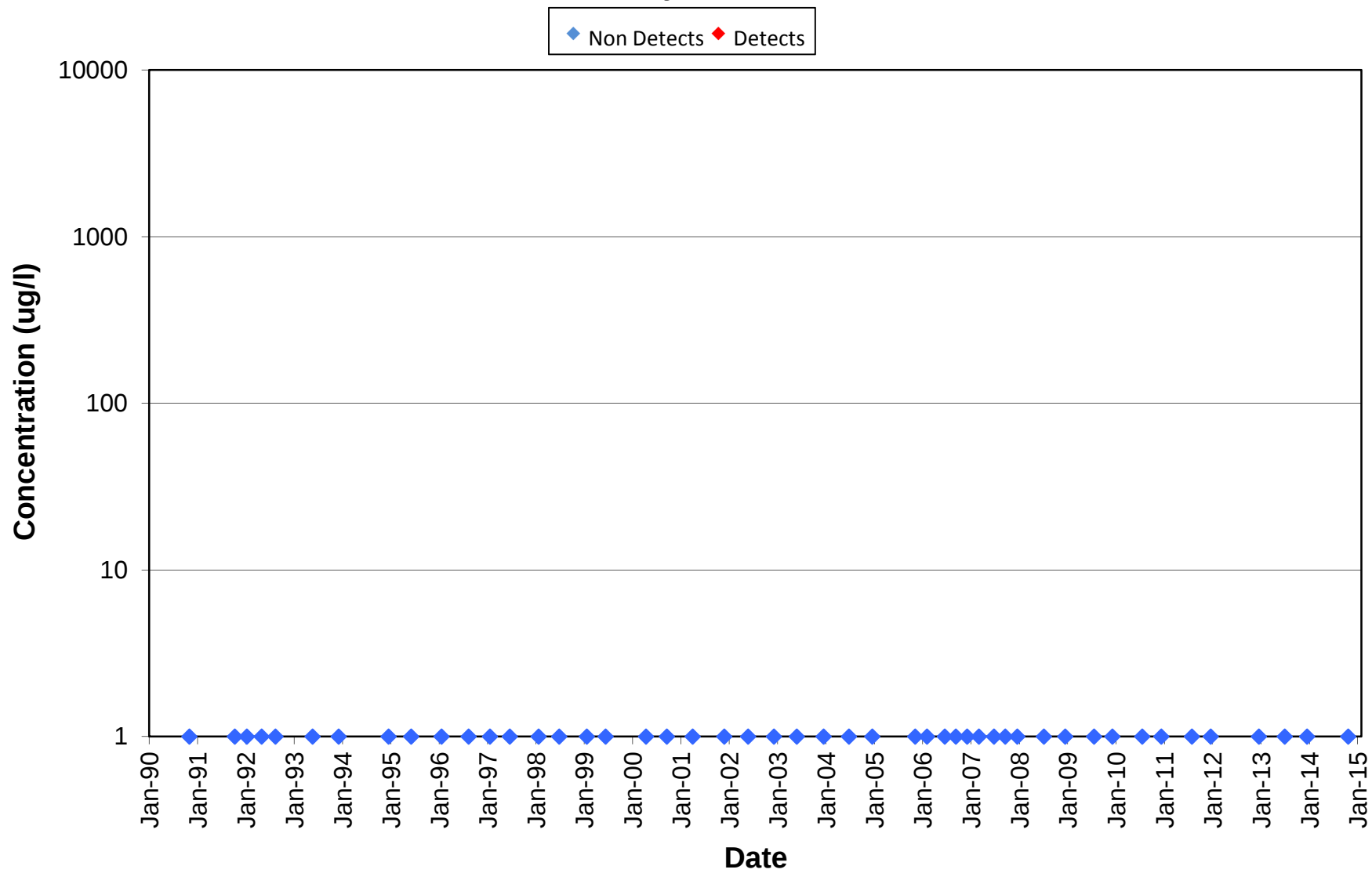
C-3 cis 1,2 DCE Concentrations



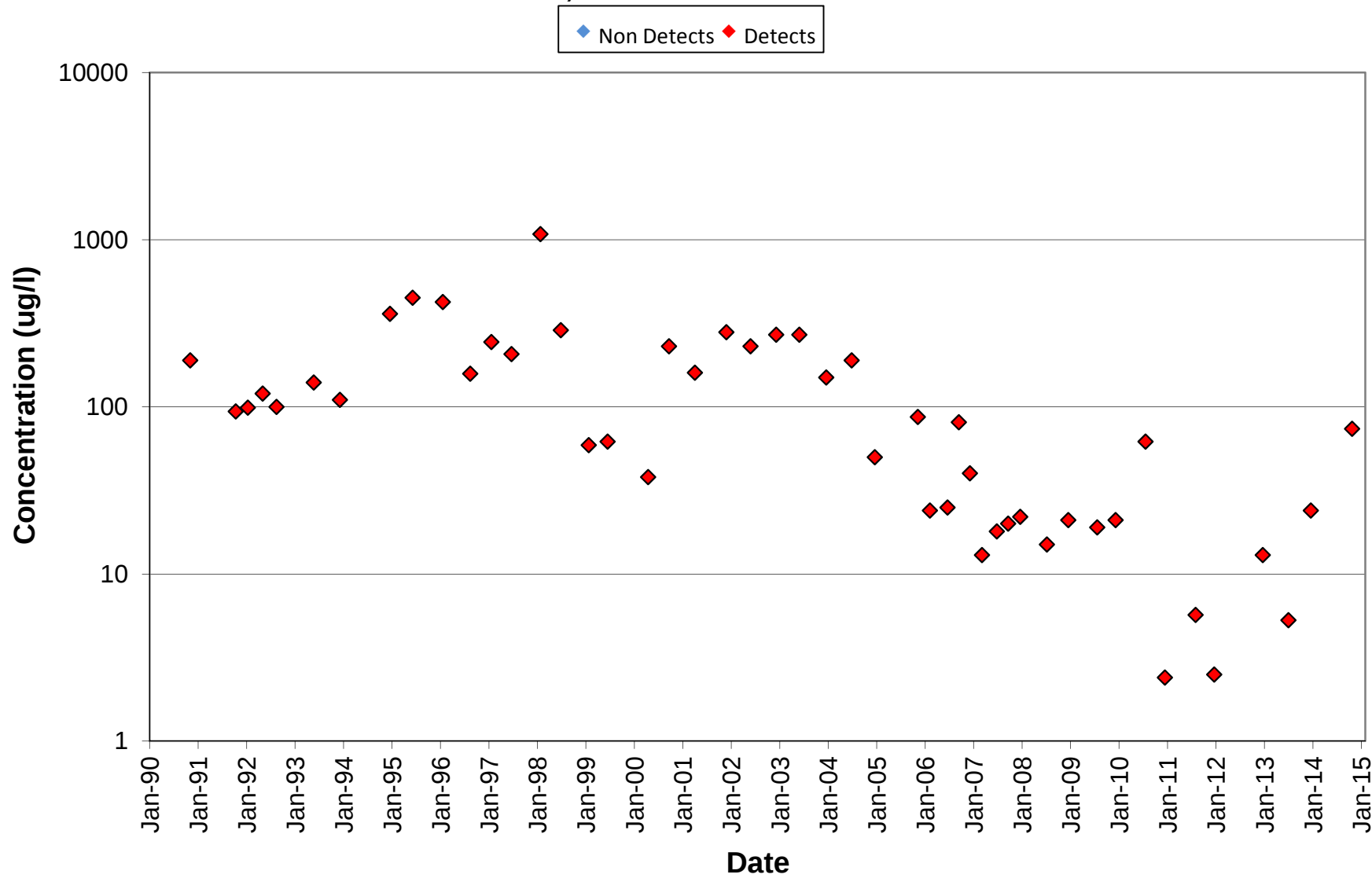
C-3 TCE Concentrations



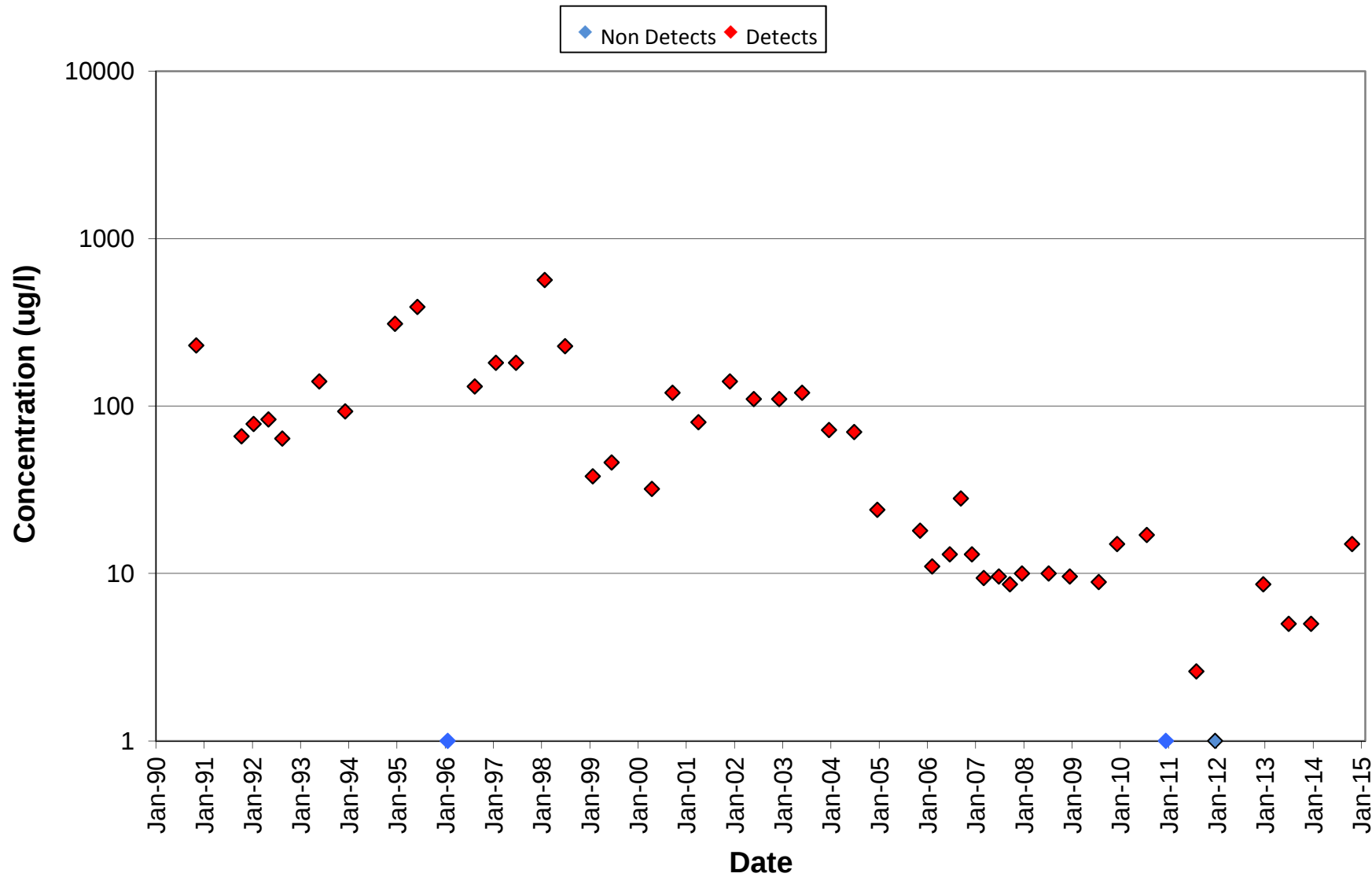
C-3 Vinyl Chloride



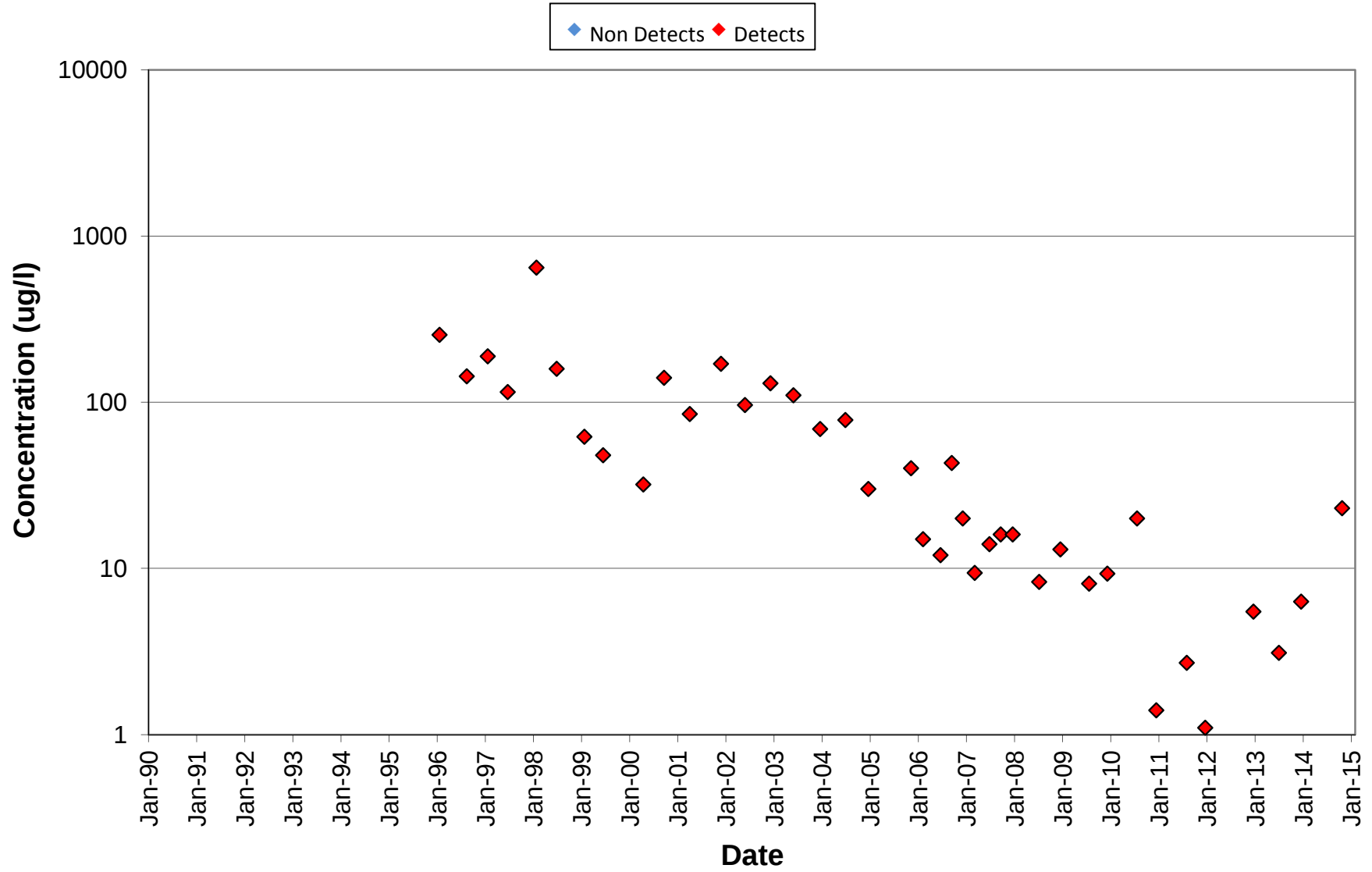
C-4 1,1 DCA Concentrations



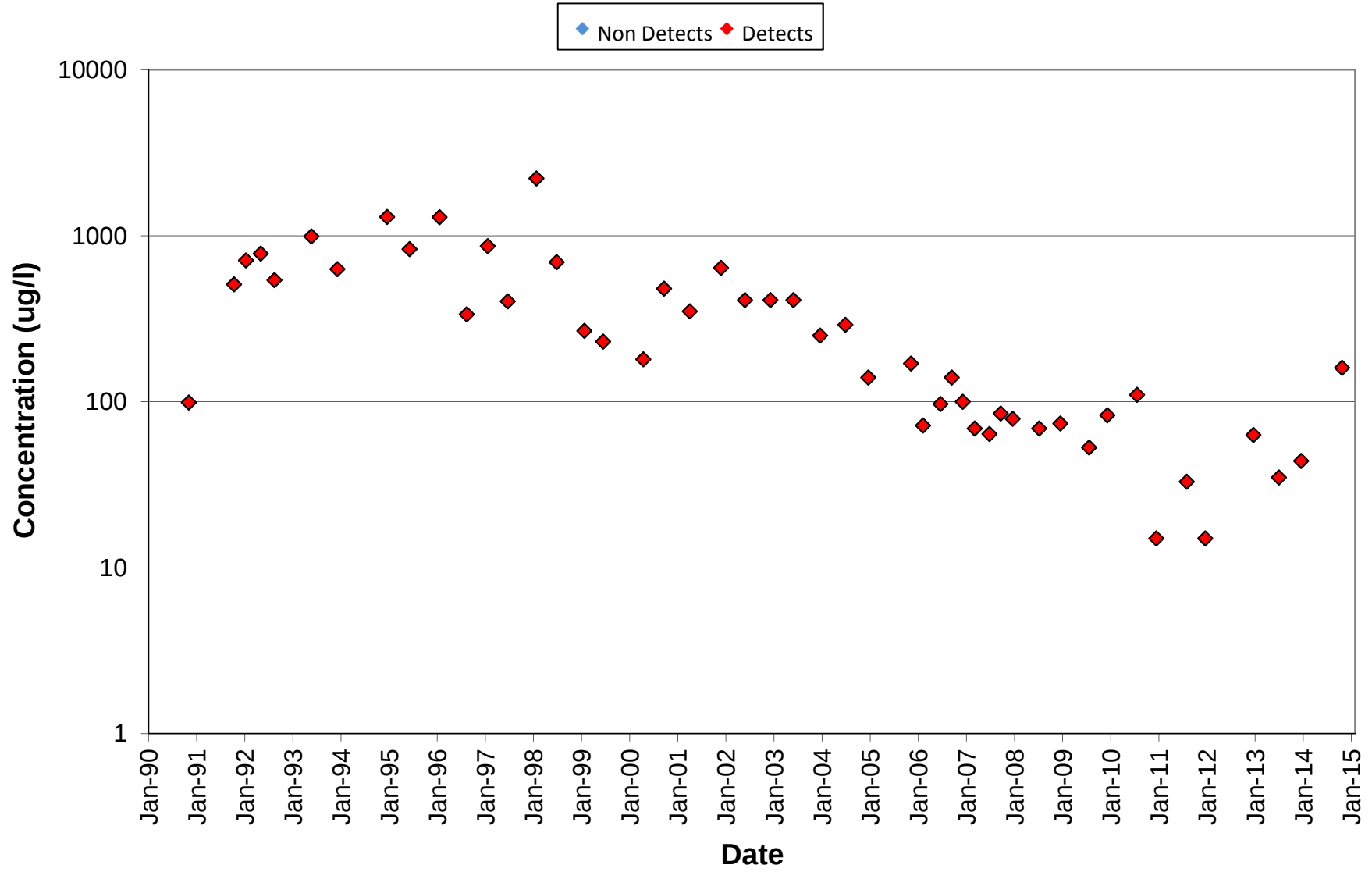
C-4 1,1 DCE Concentrations



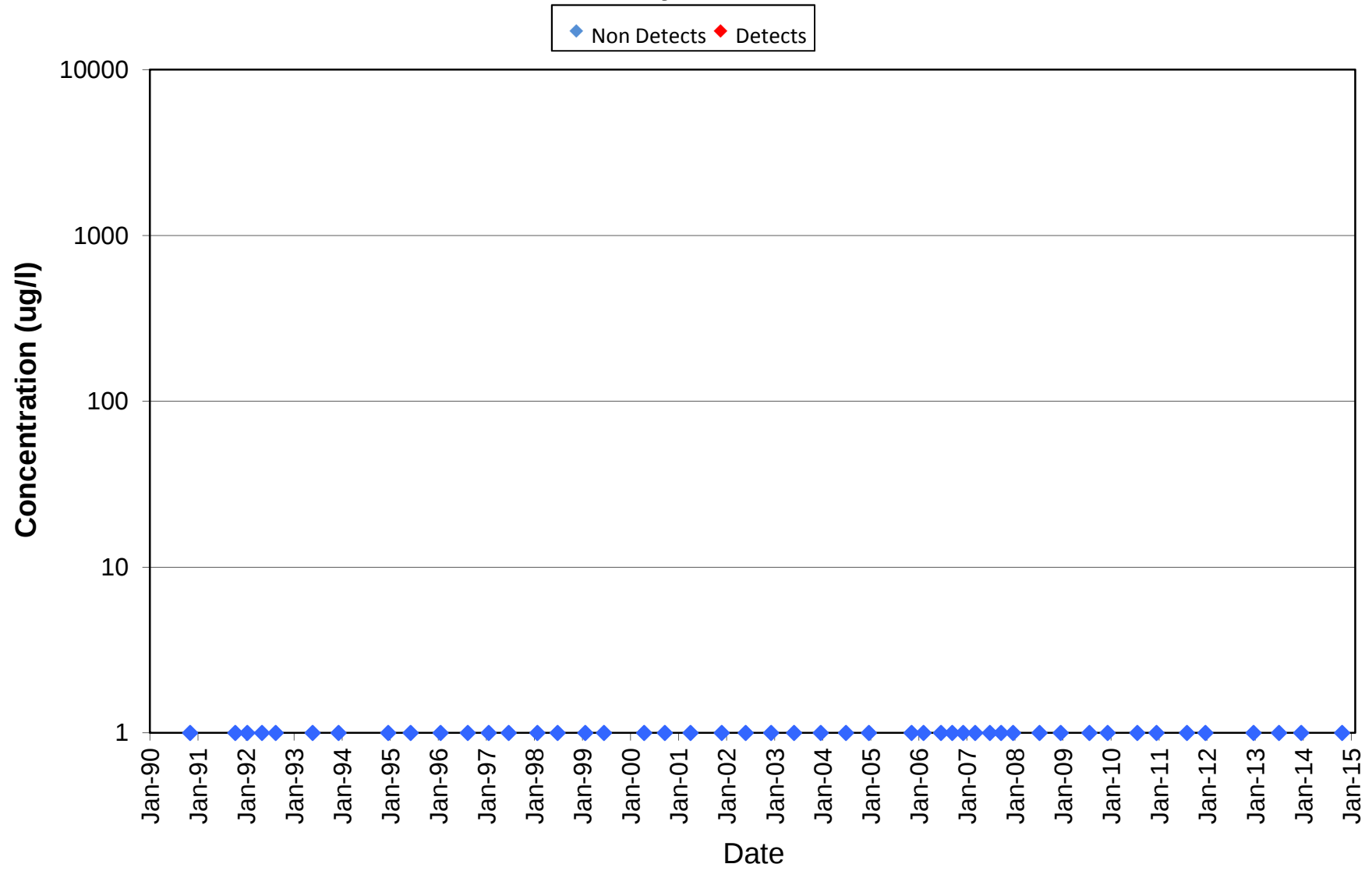
C-4 cis 1,2 DCE Concentrations



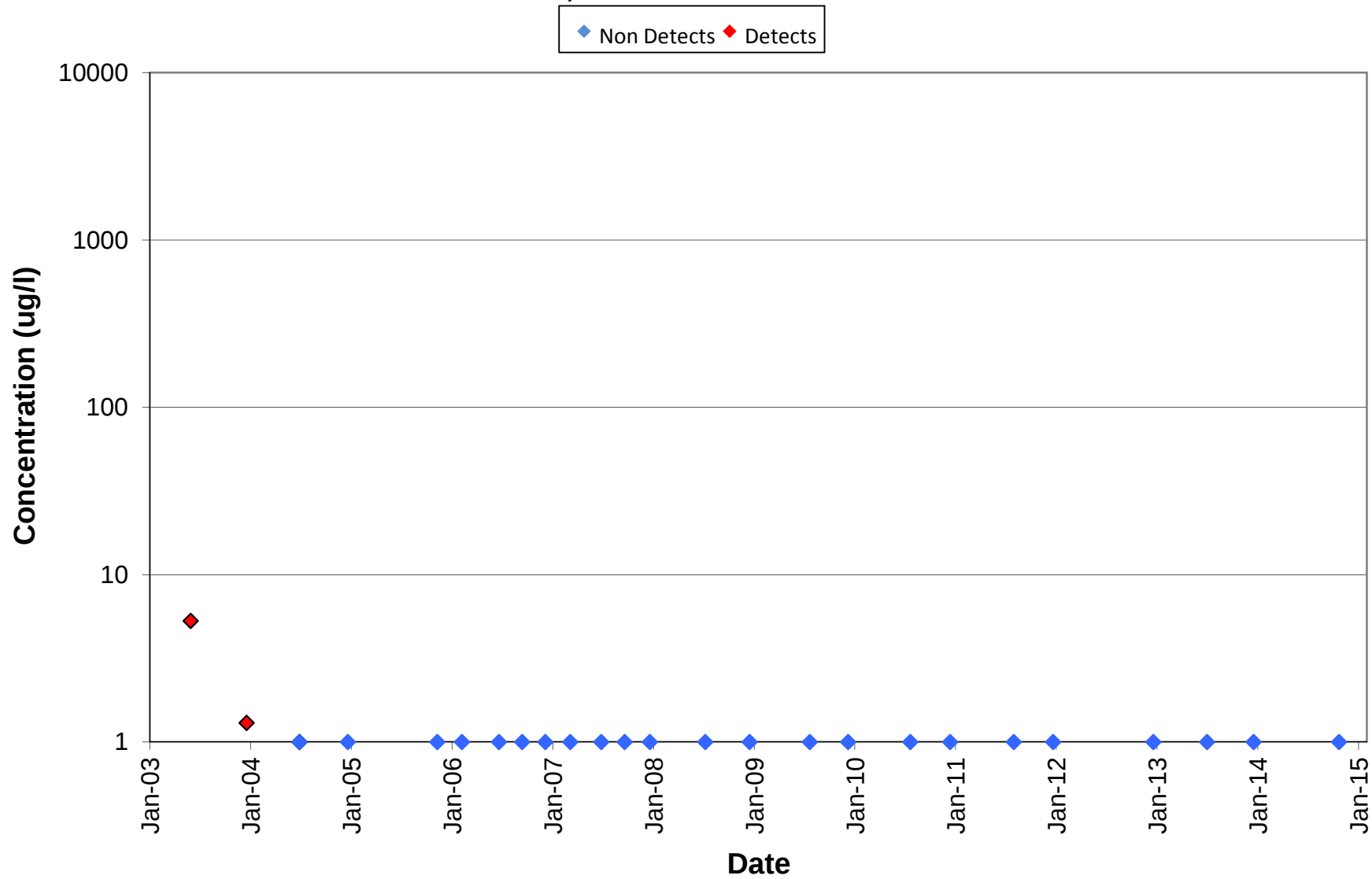
C-4 TCE Concentrations



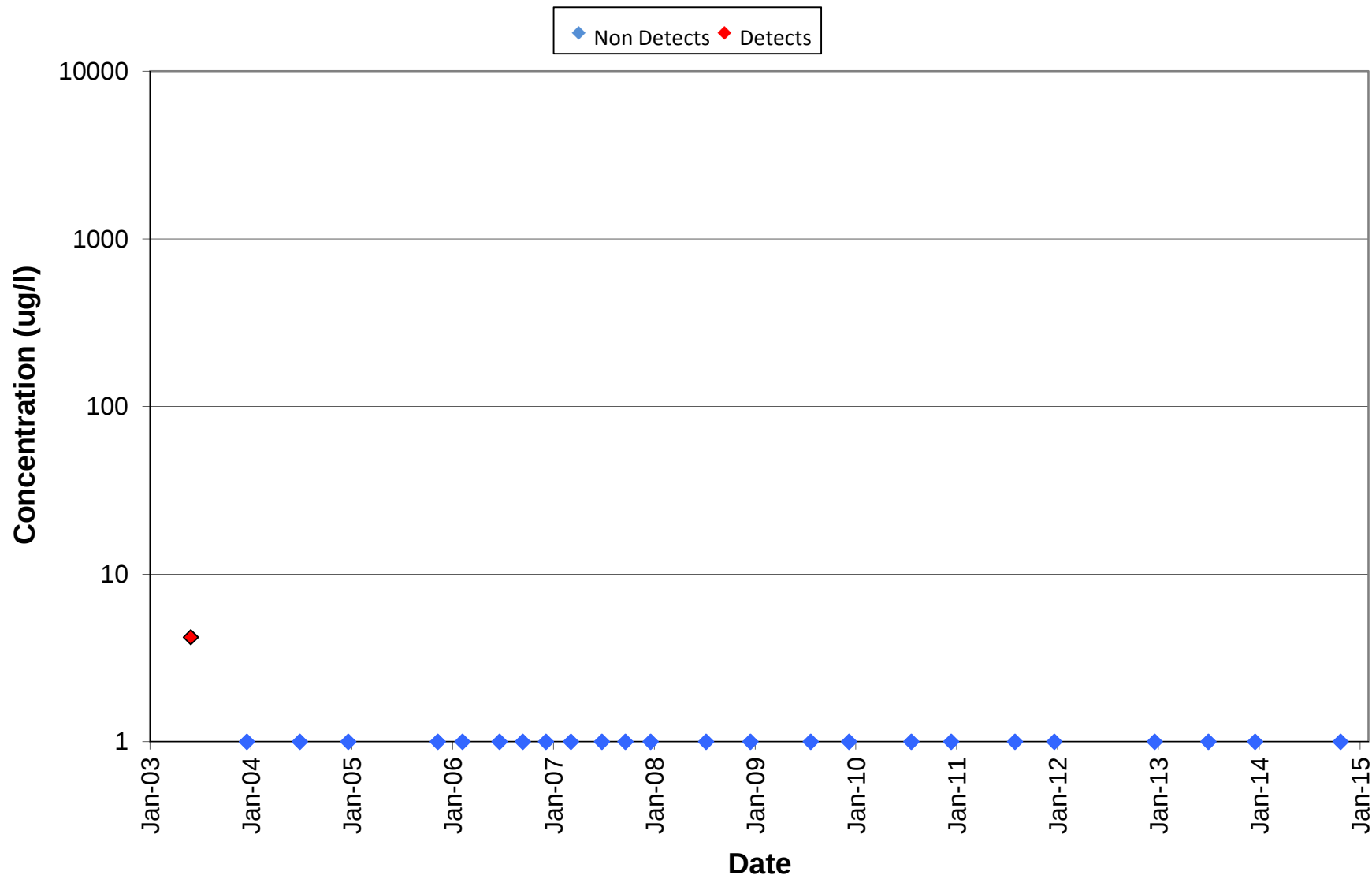
C-4 Vinyl Chloride



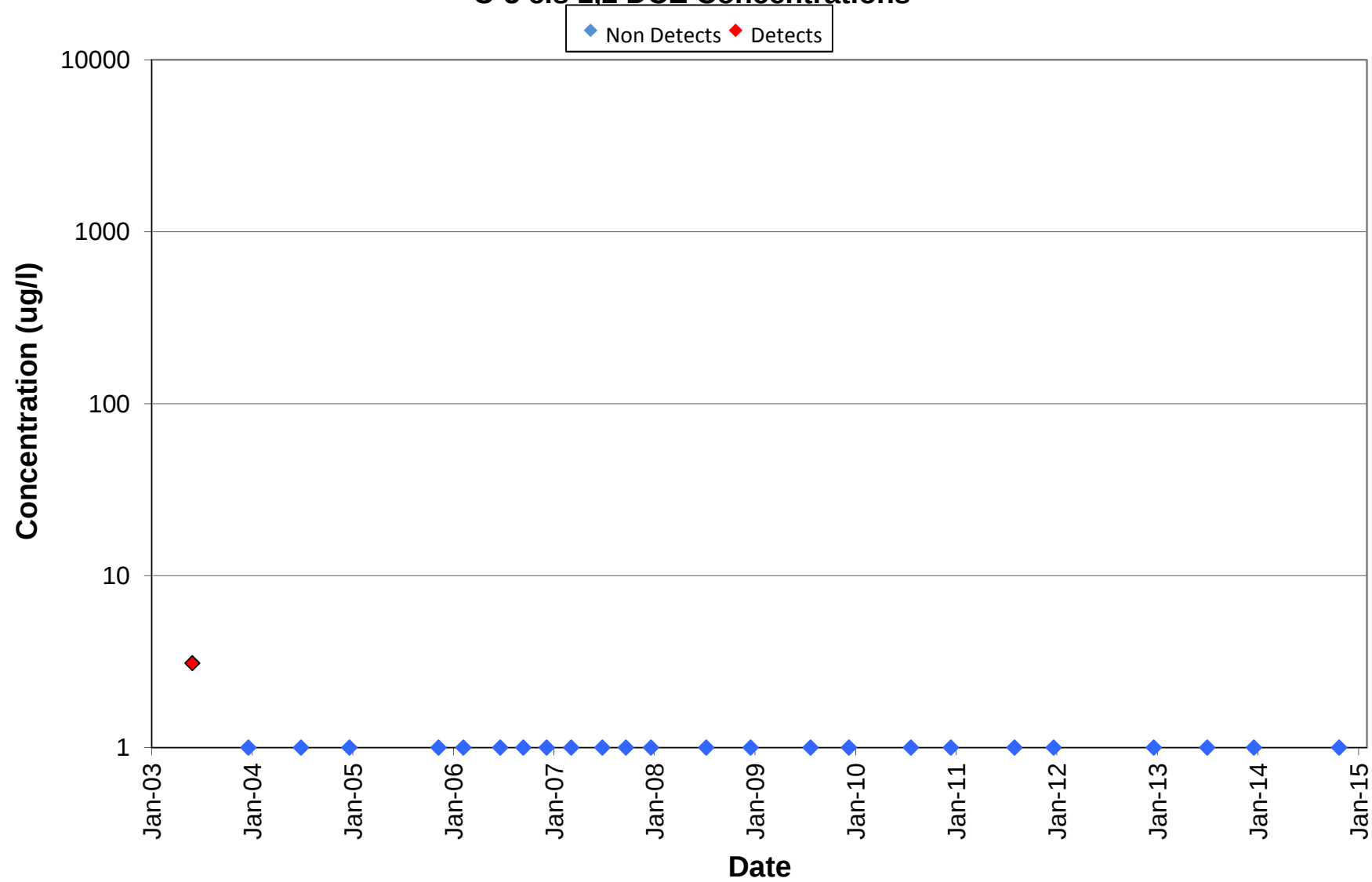
C-5 1,1 DCA Concentrations



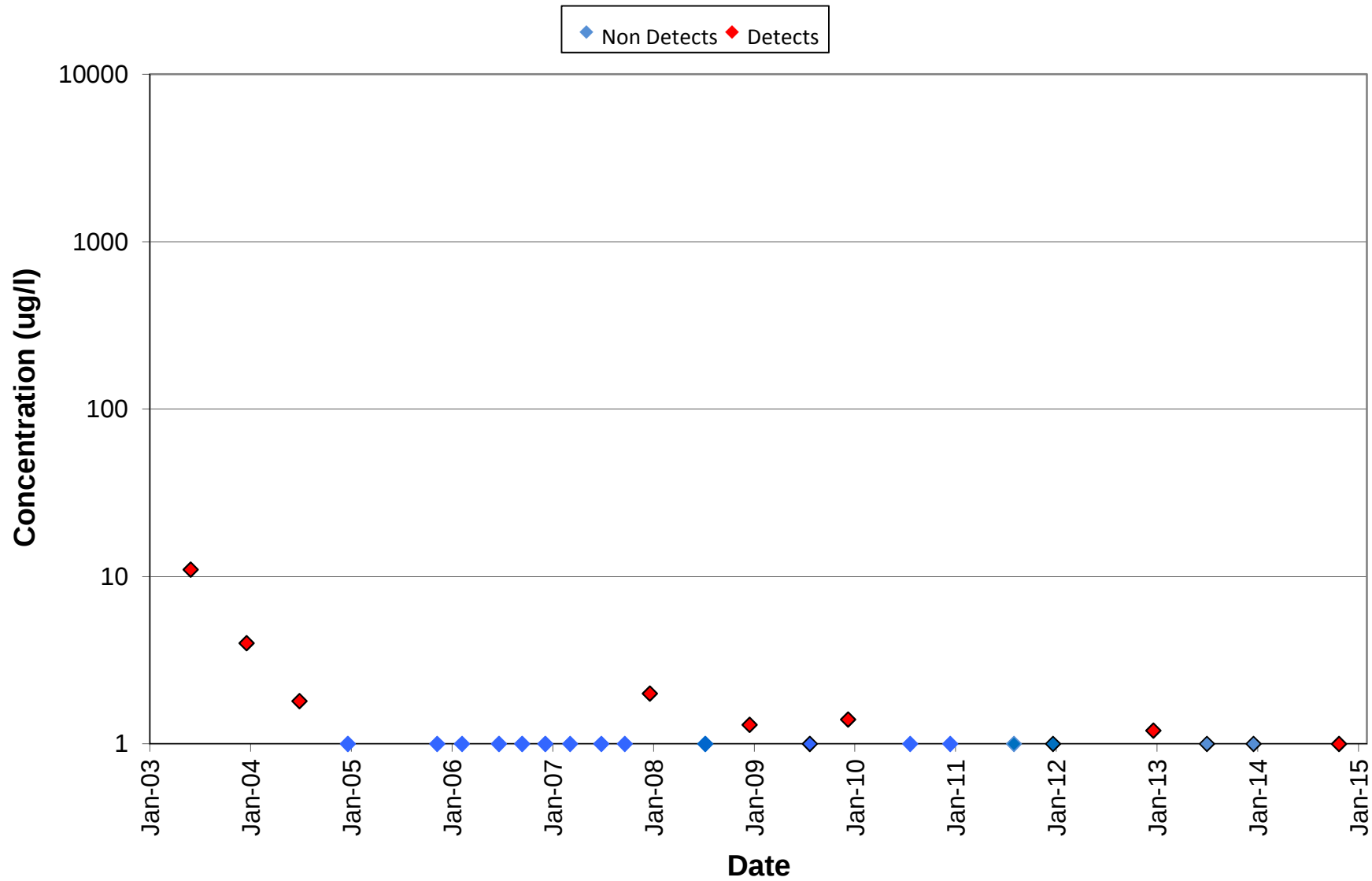
C-5 1,1 DCE Concentrations



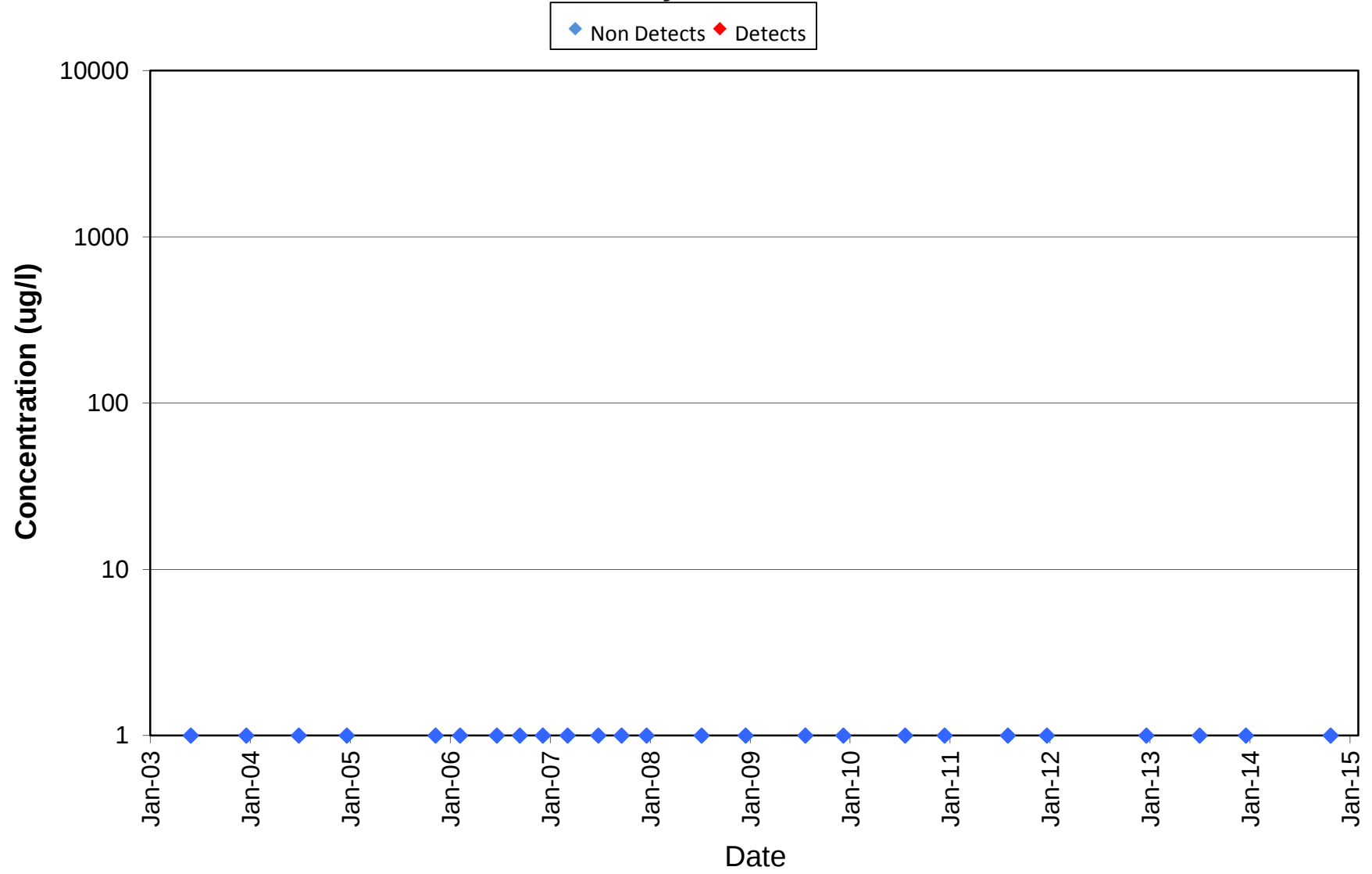
C-5 cis 1,2 DCE Concentrations



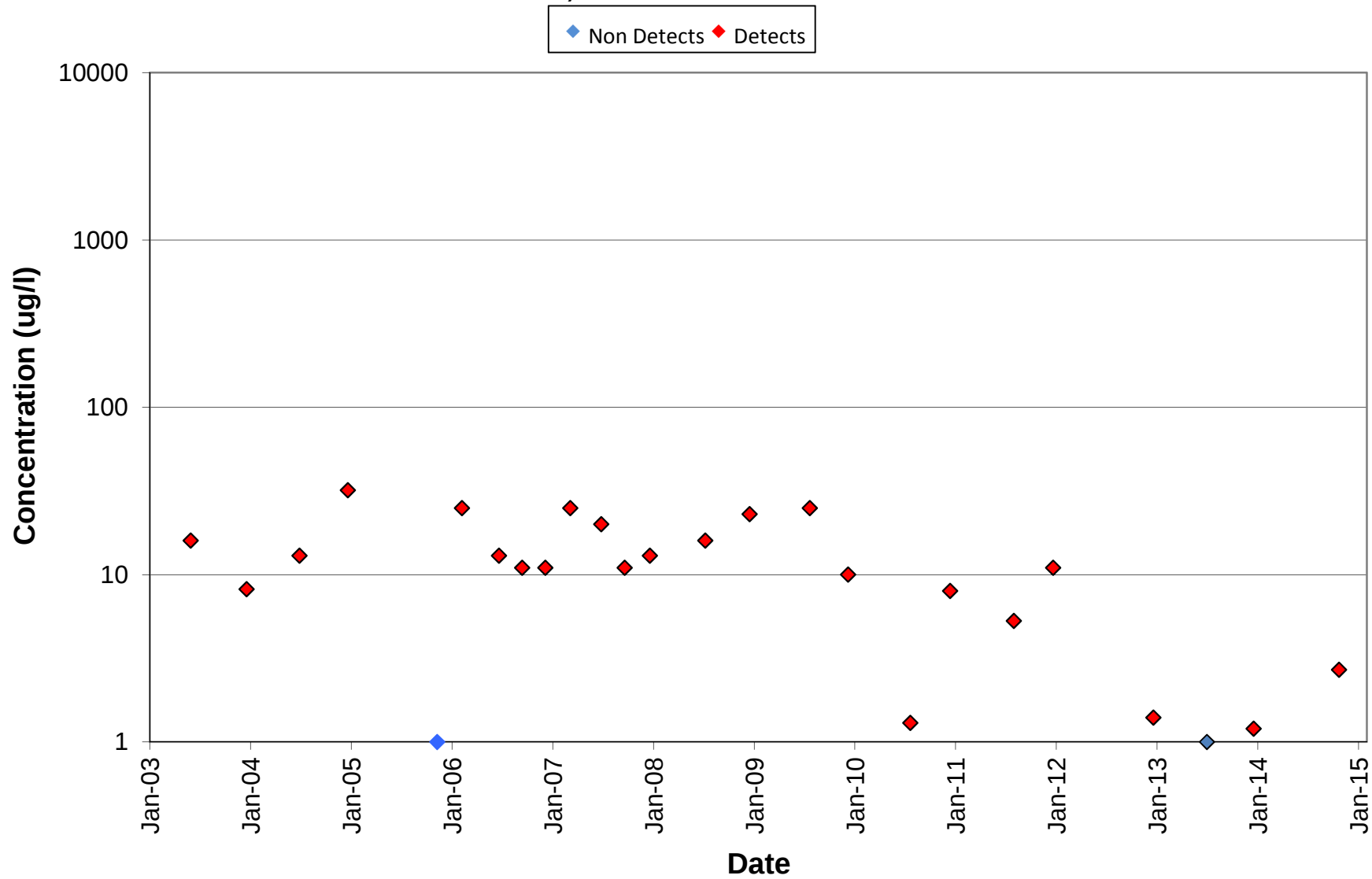
C-5 TCE Concentrations



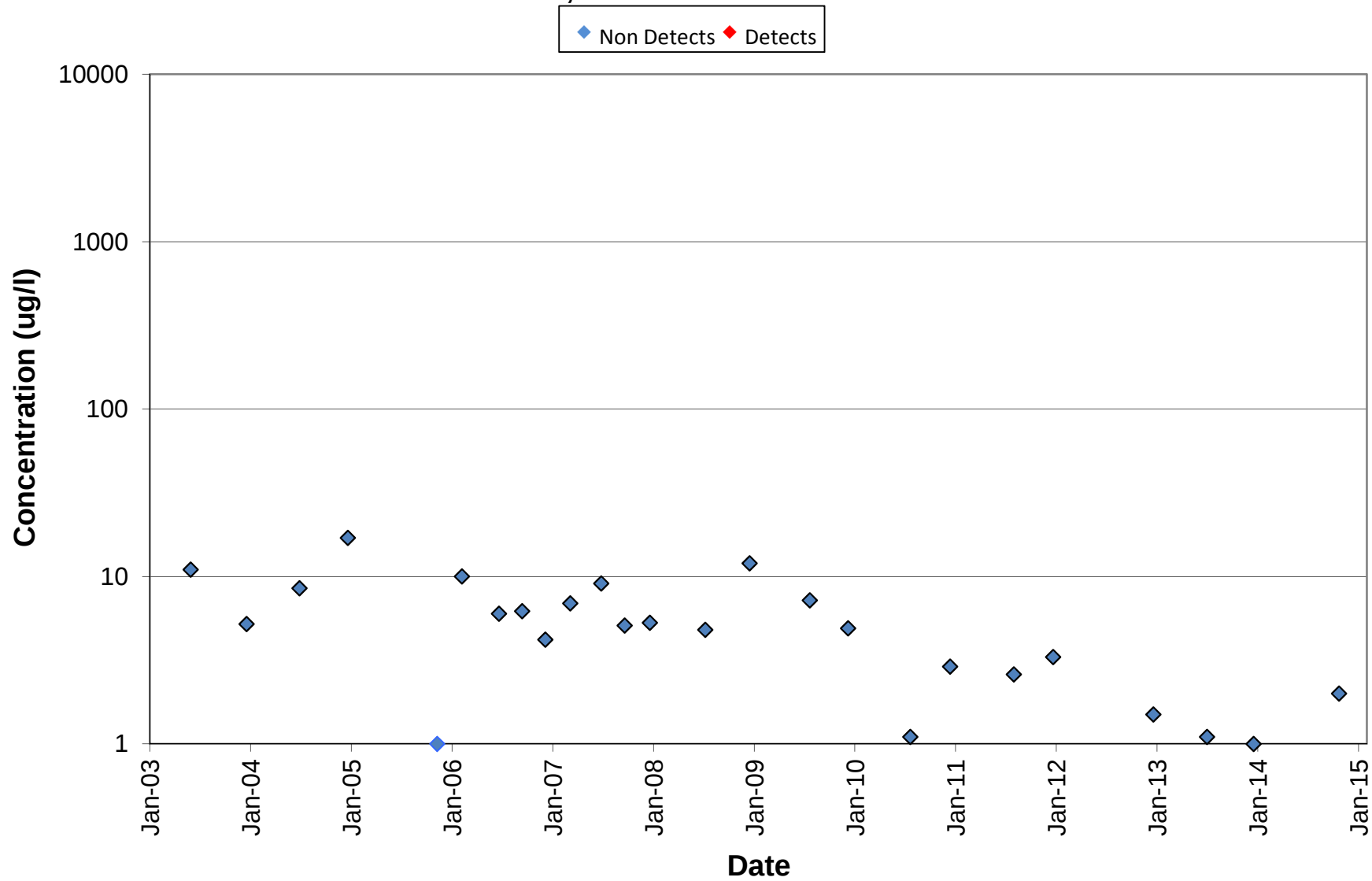
C-5 Vinyl Chloride



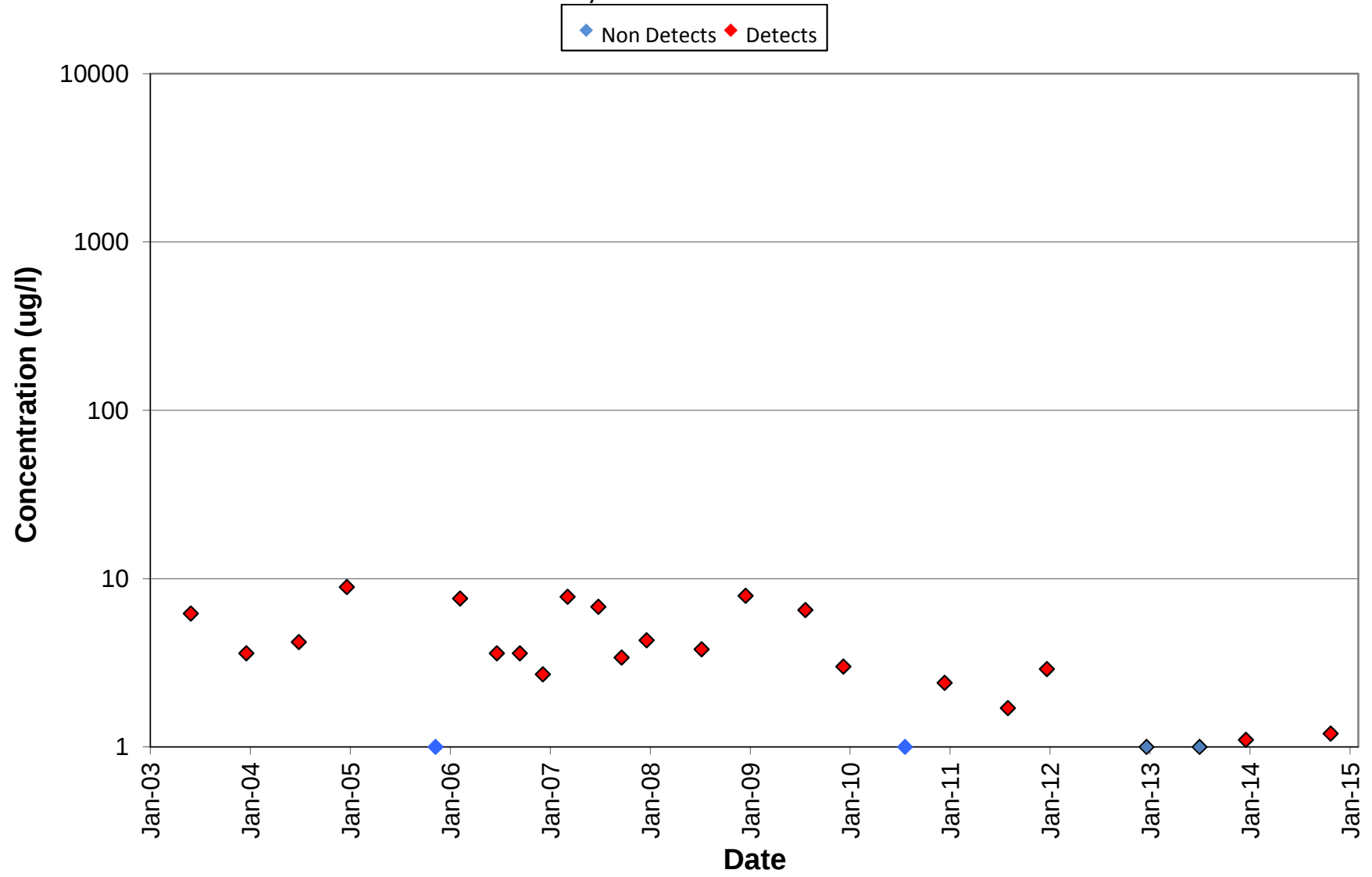
C-6 1,1 DCA Concentrations



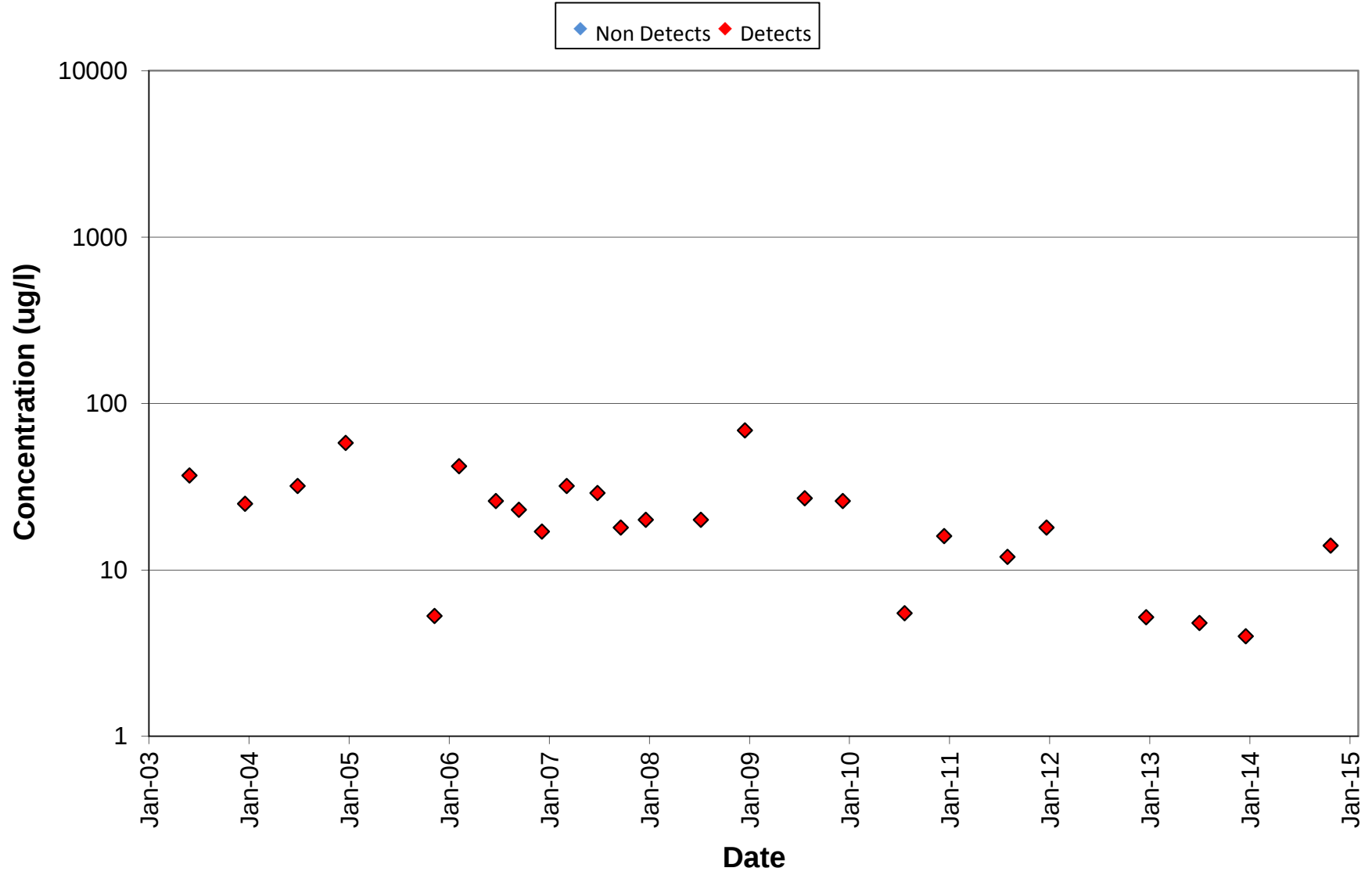
C-6 1,1 DCE Concentrations



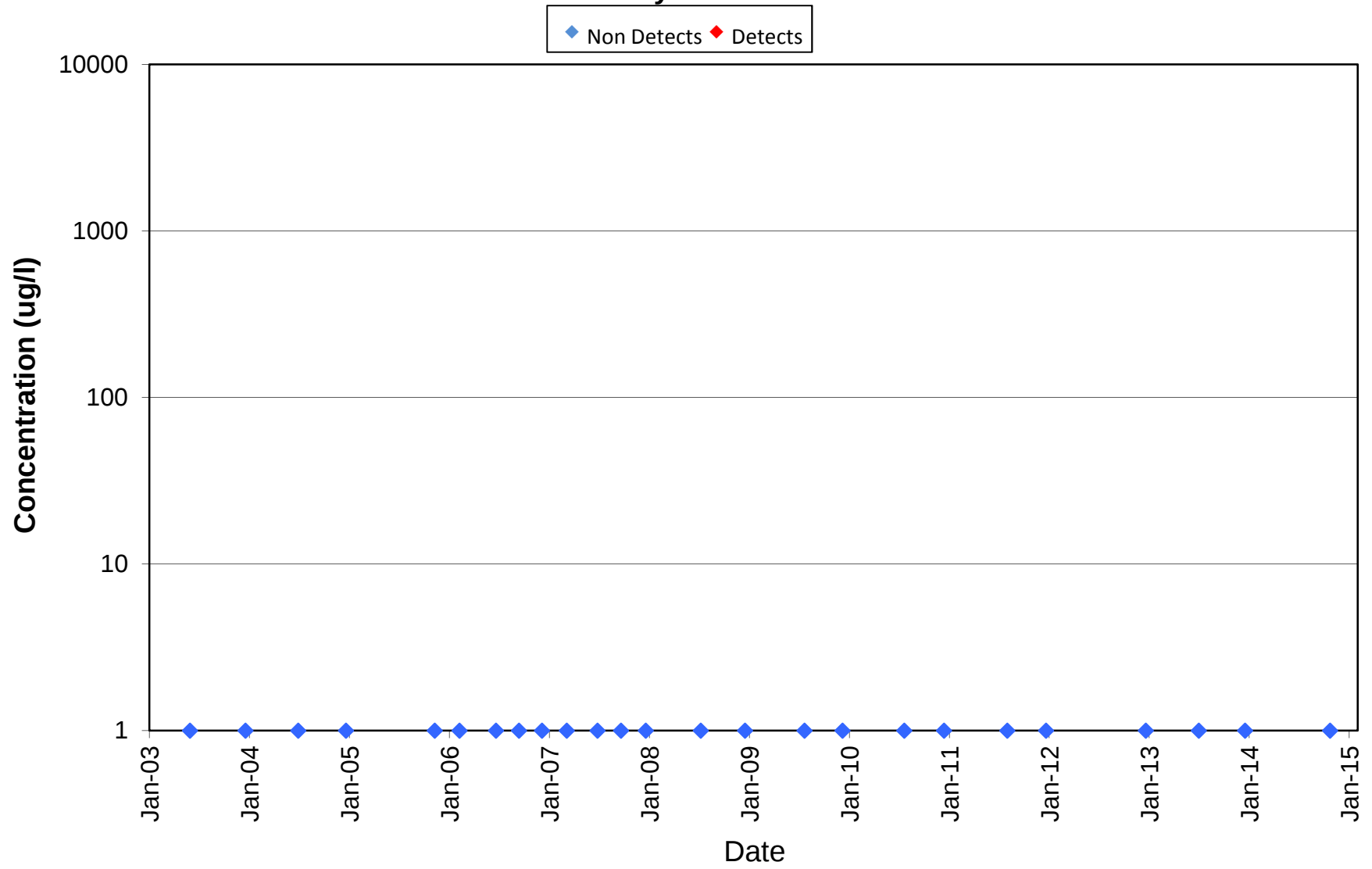
C-6 cis 1,2 DCE Concentrations



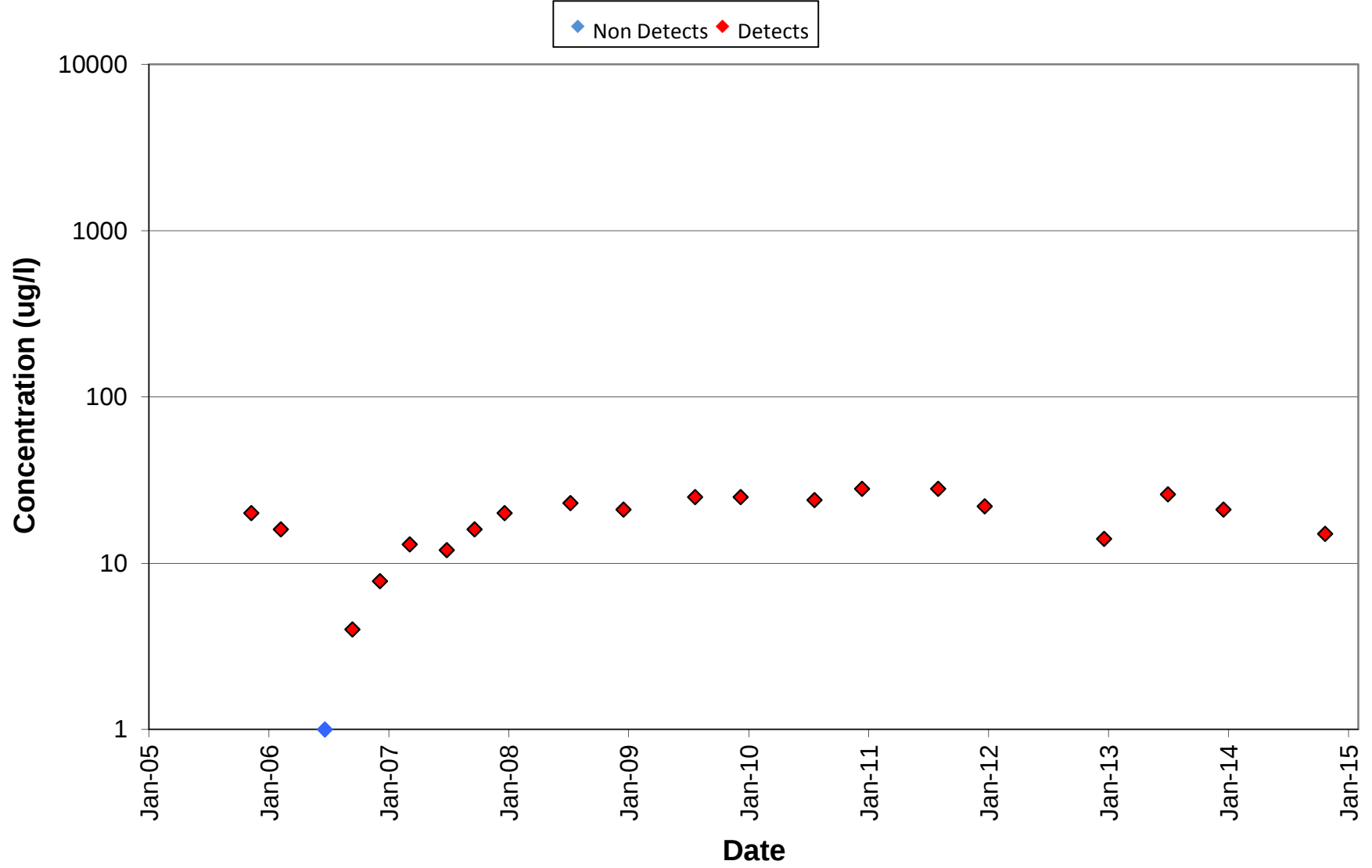
C-6 TCE Concentrations



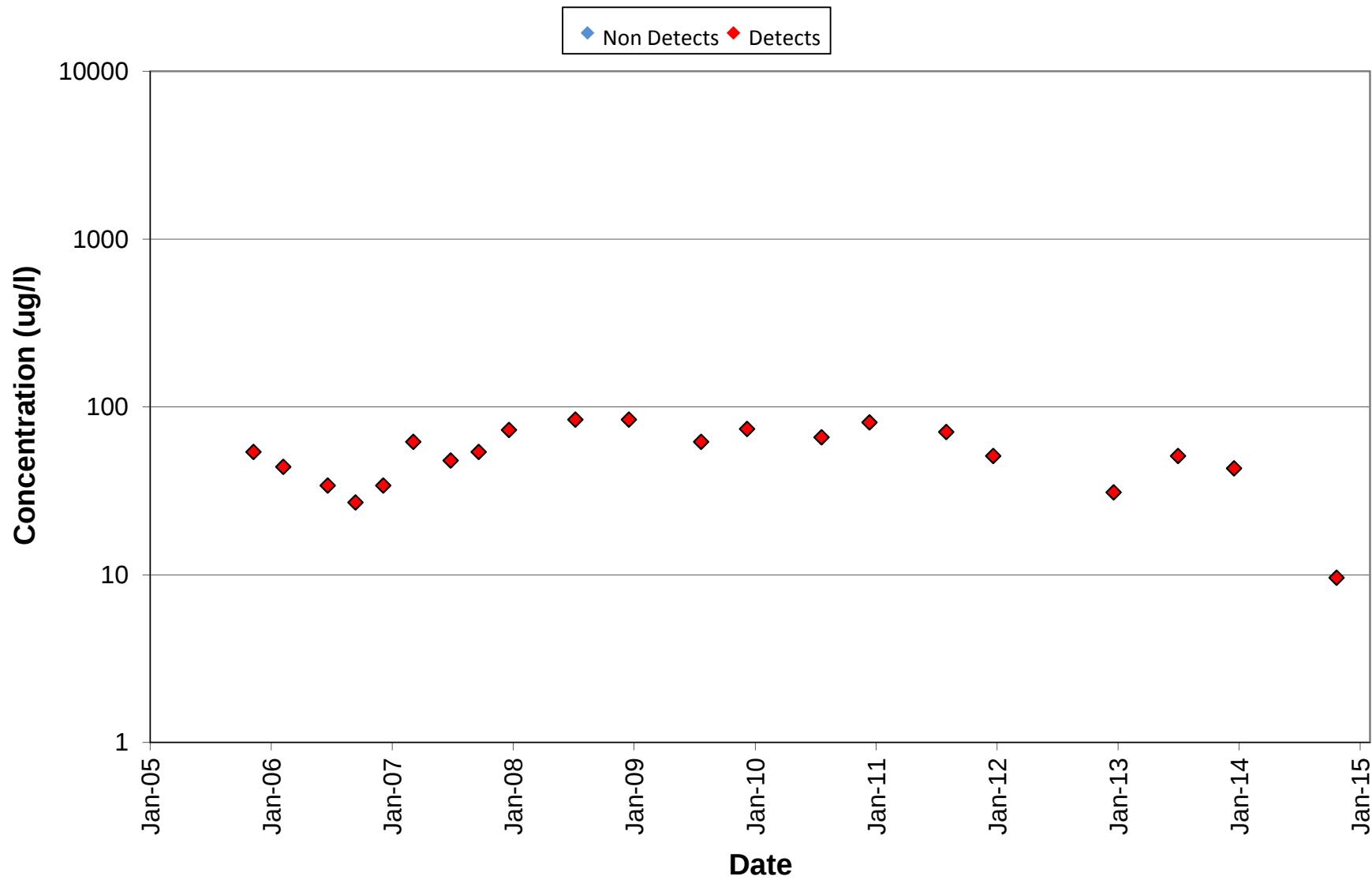
C-6 Vinyl Chloride



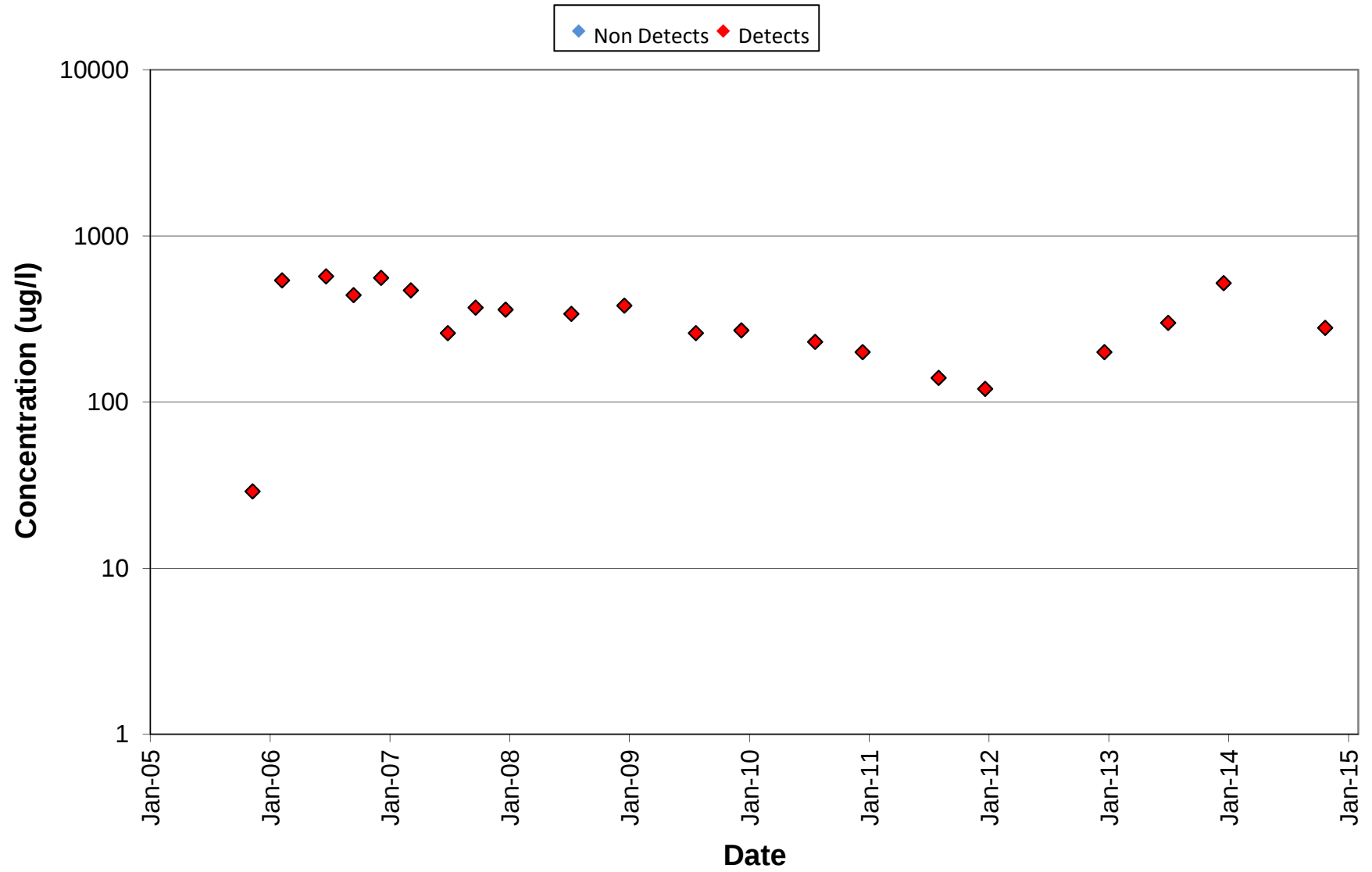
C-7 1,1 DCA Concentrations



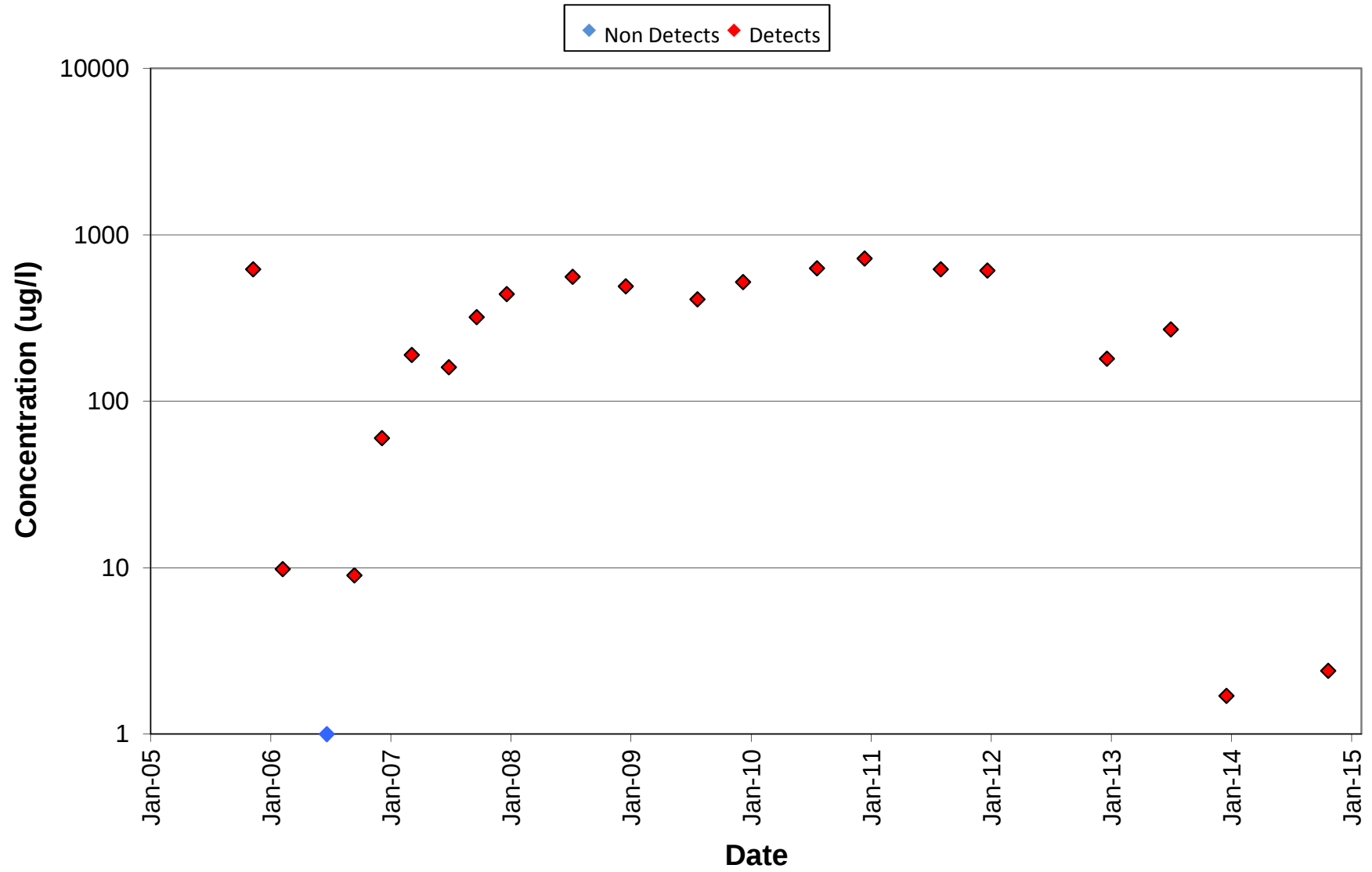
C-7 1,1 DCE Concentrations



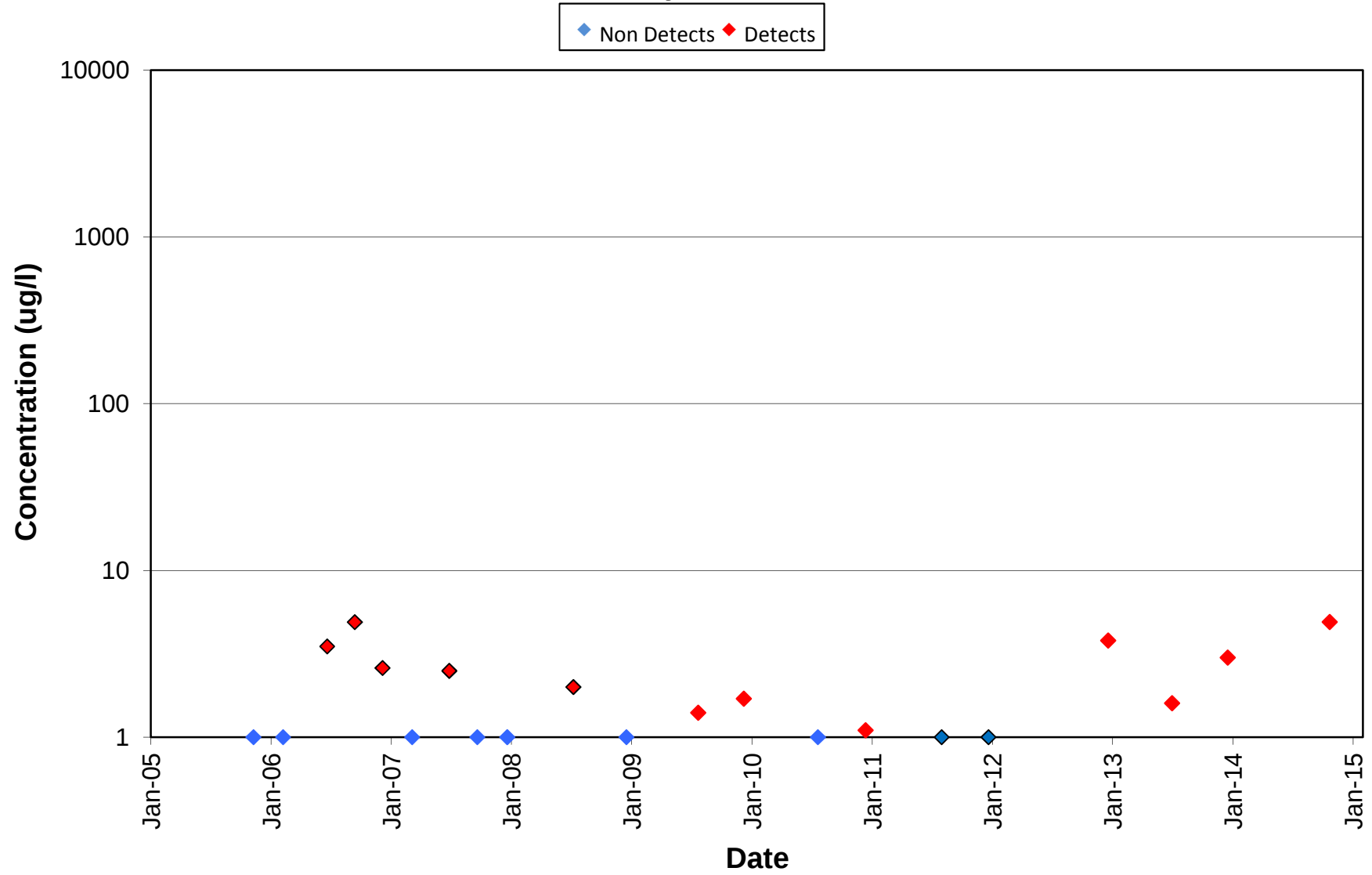
C-7 cis 1,2 DCE Concentrations



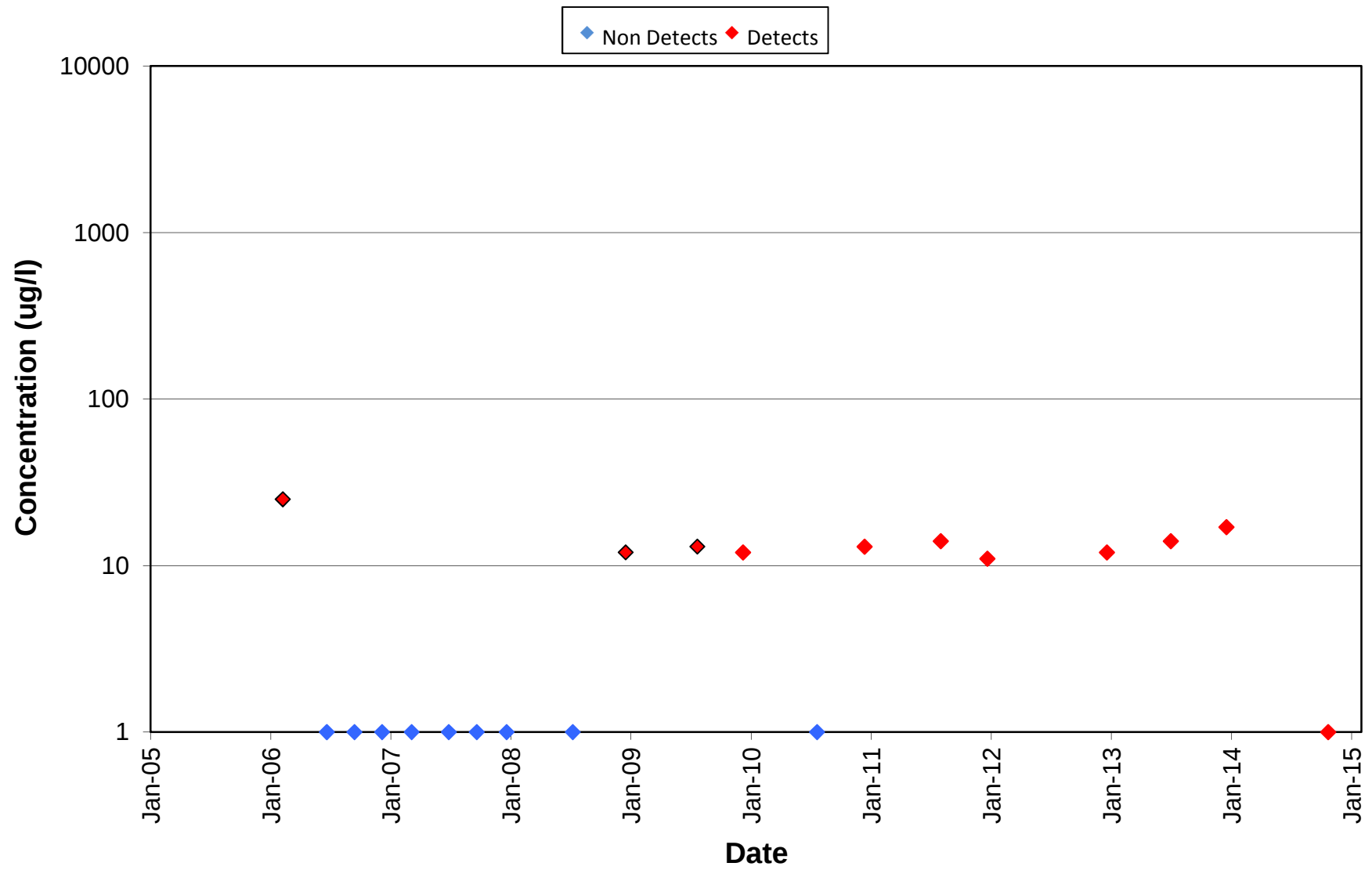
C-7 TCE Concentrations



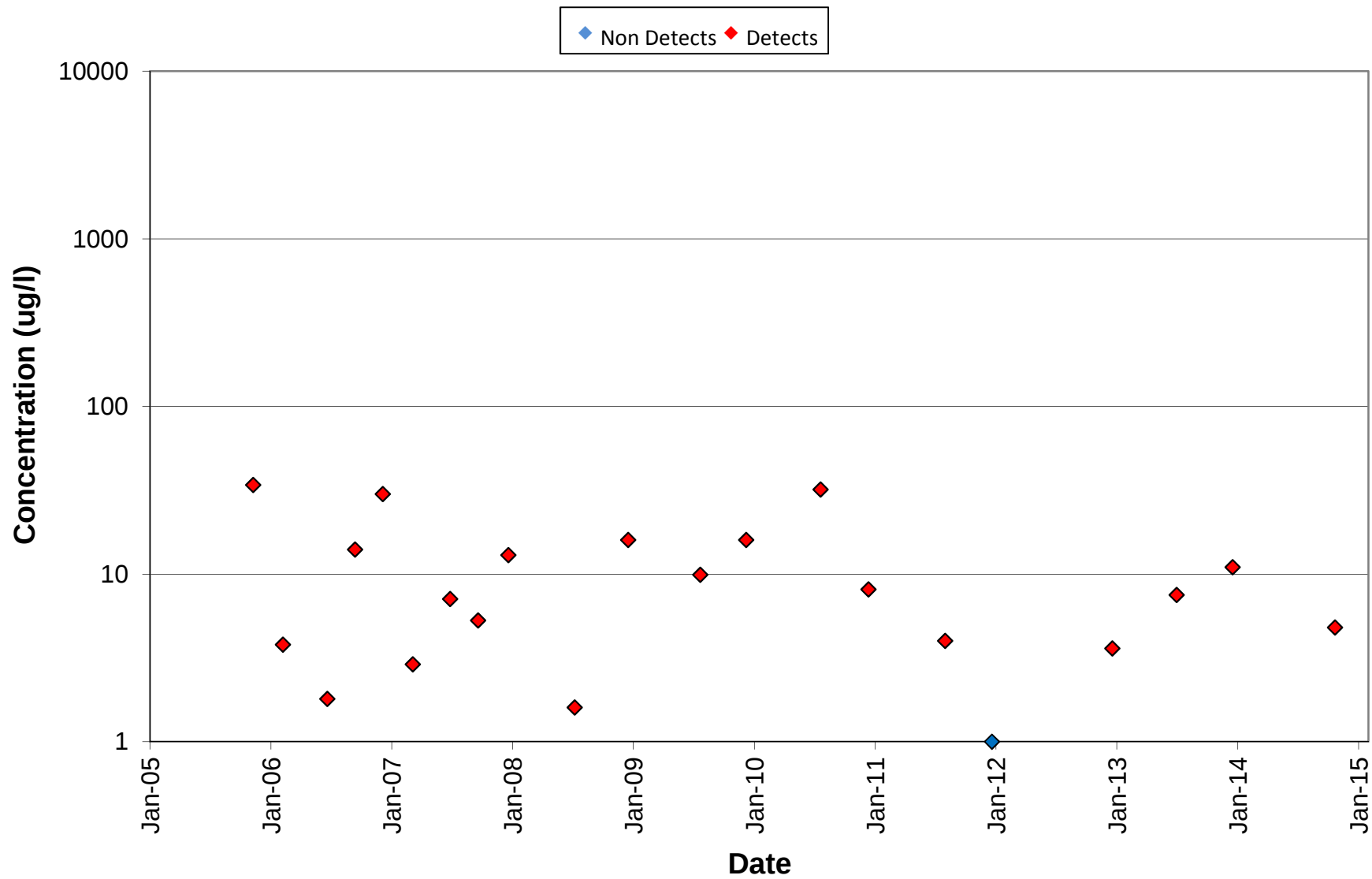
C-7 Vinyl Chloride



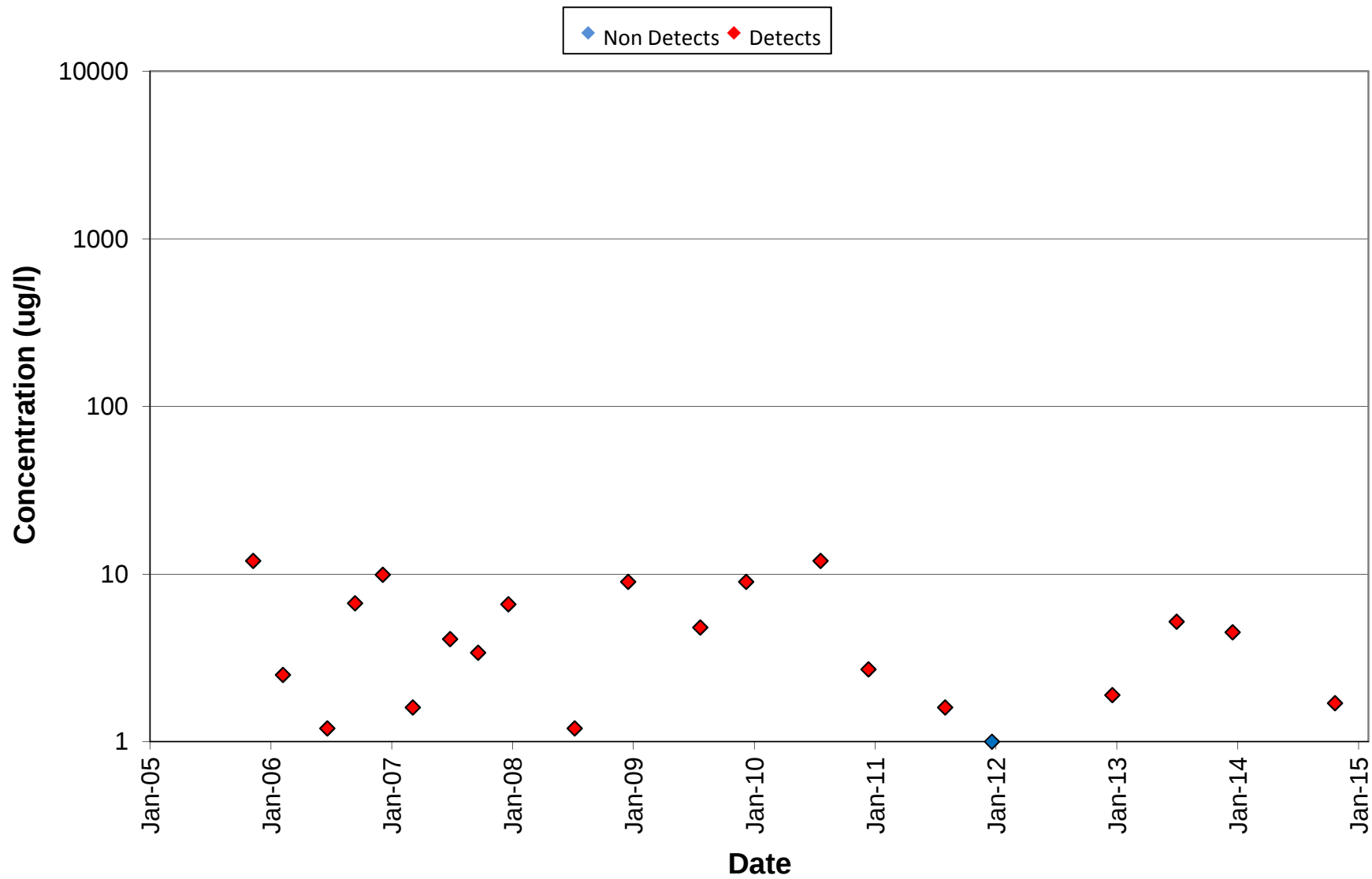
C-7 Ethene



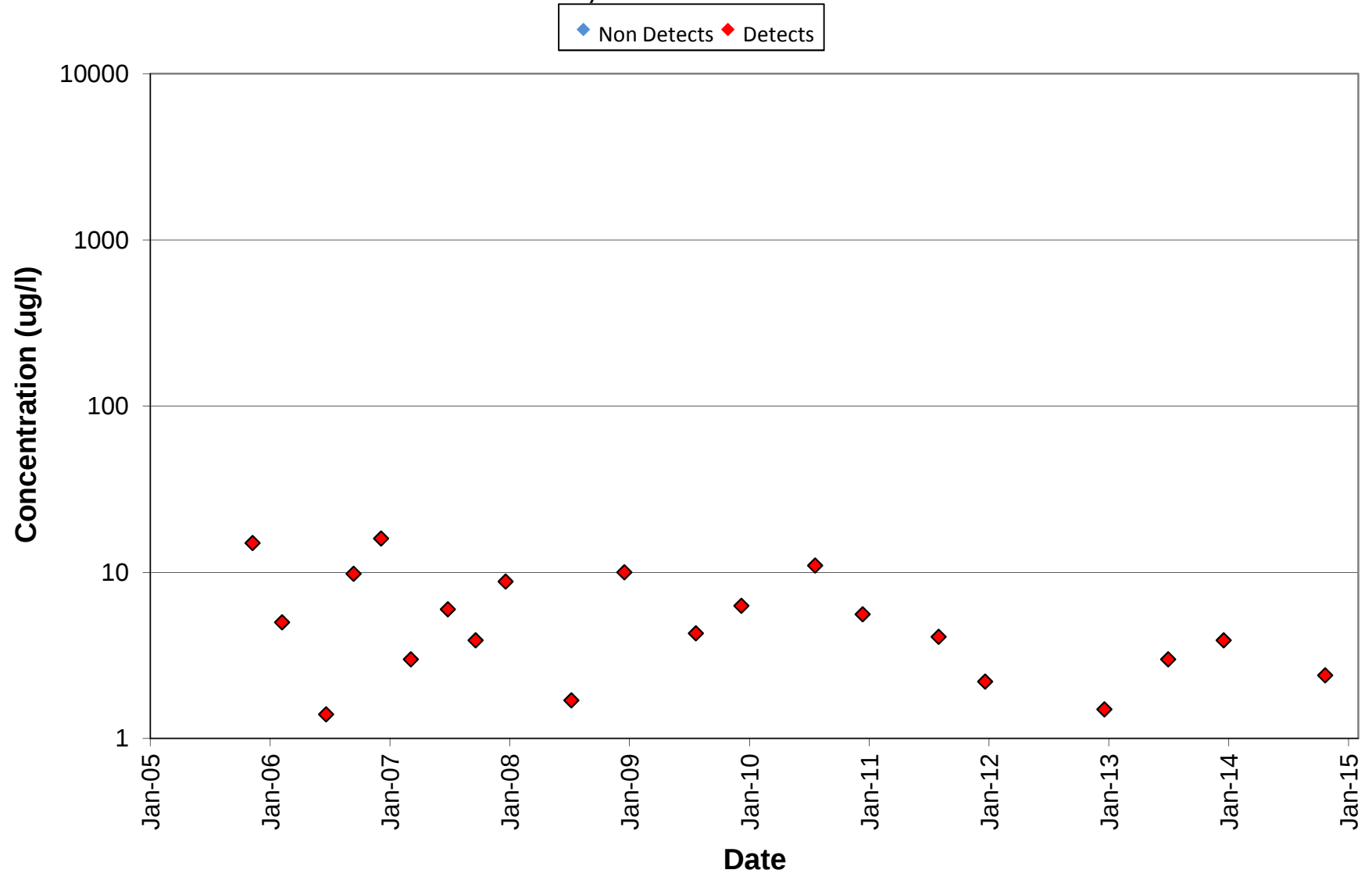
C-8 1,1 DCA Concentrations



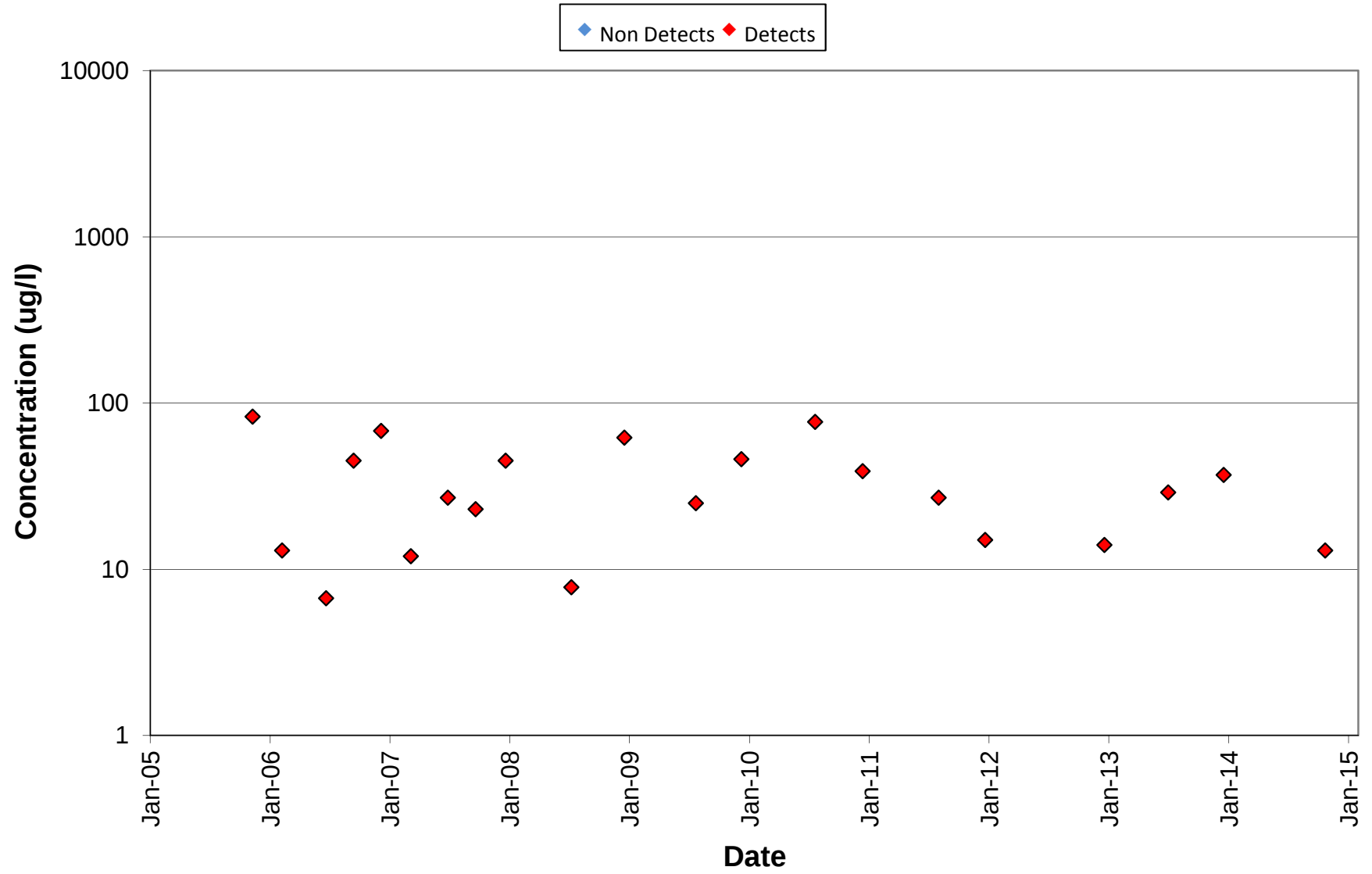
C-8 1,1 DCE Concentrations



C-8 cis 1,2 DCE Concentrations

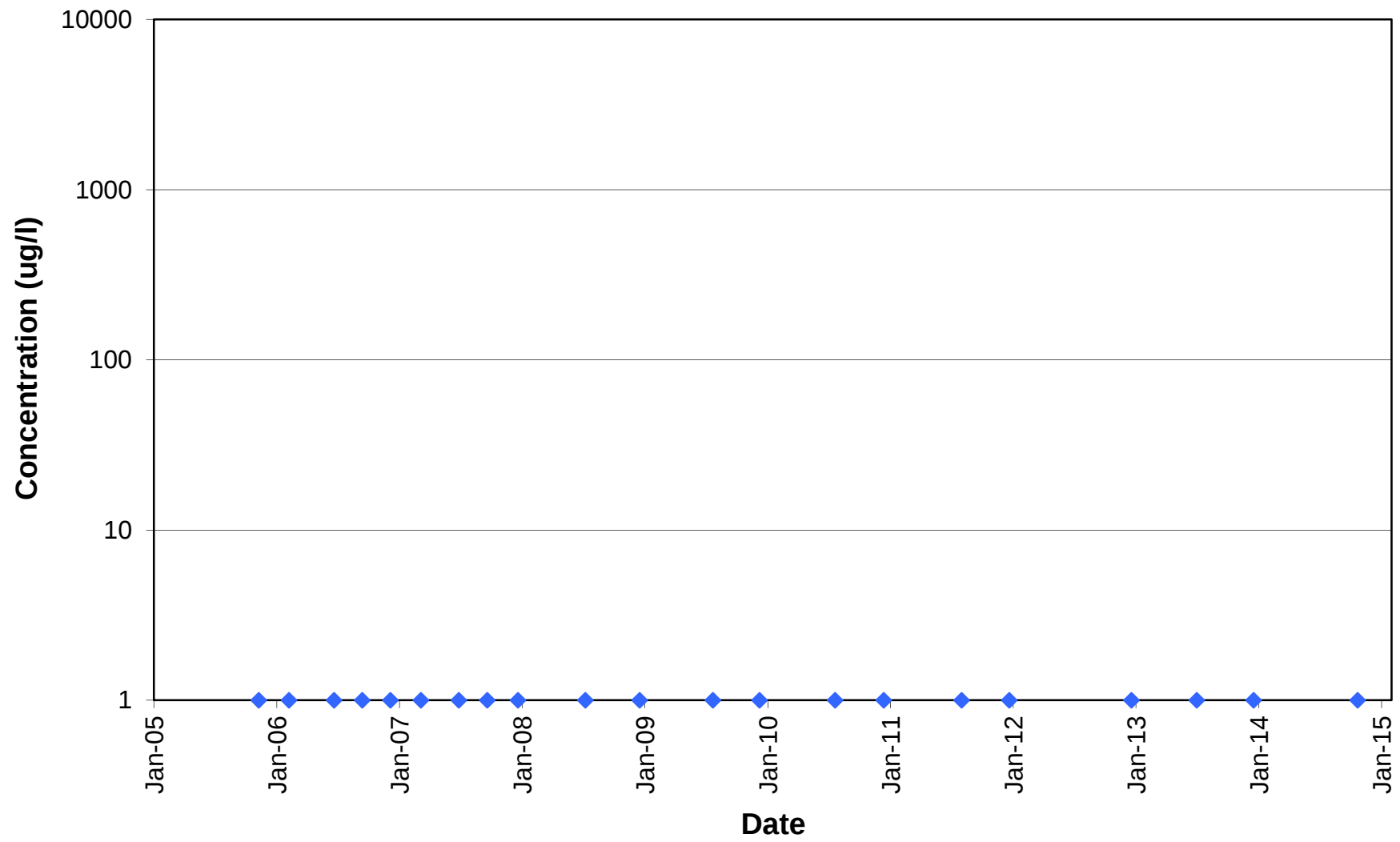


C-8 TCE Concentrations

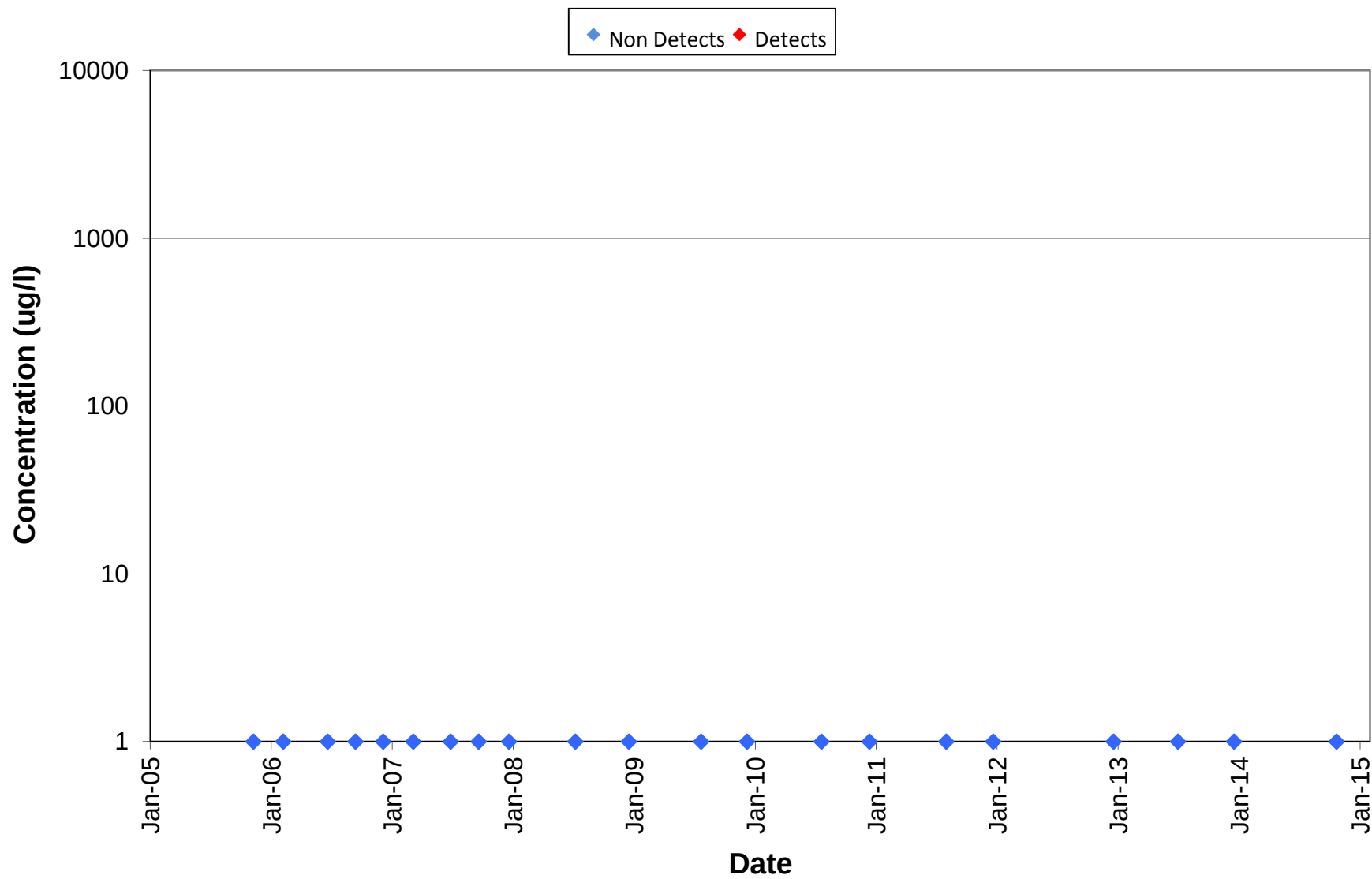


C-8 Vinyl Chloride

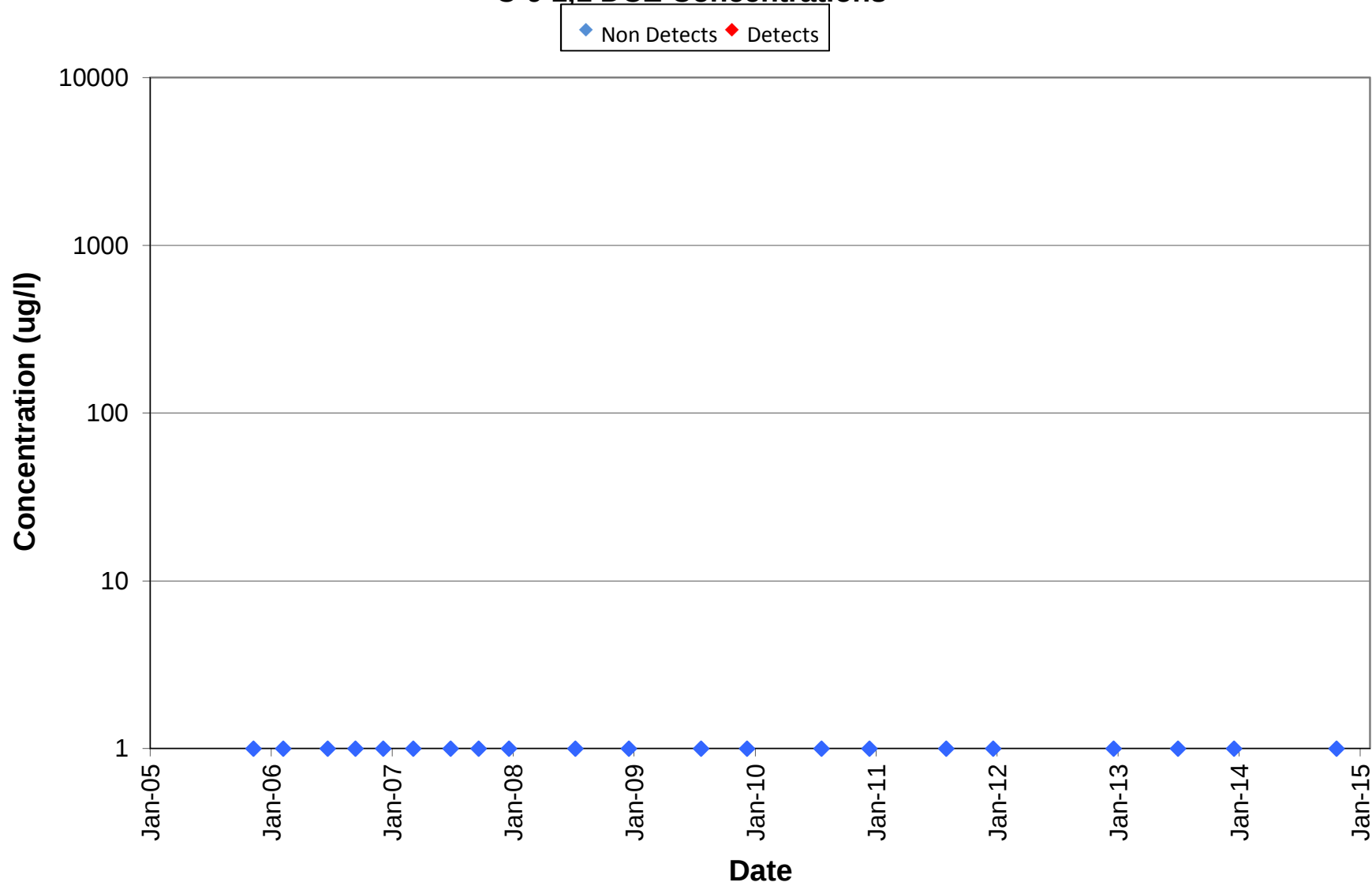
◆ Non Detects ◆ Detects



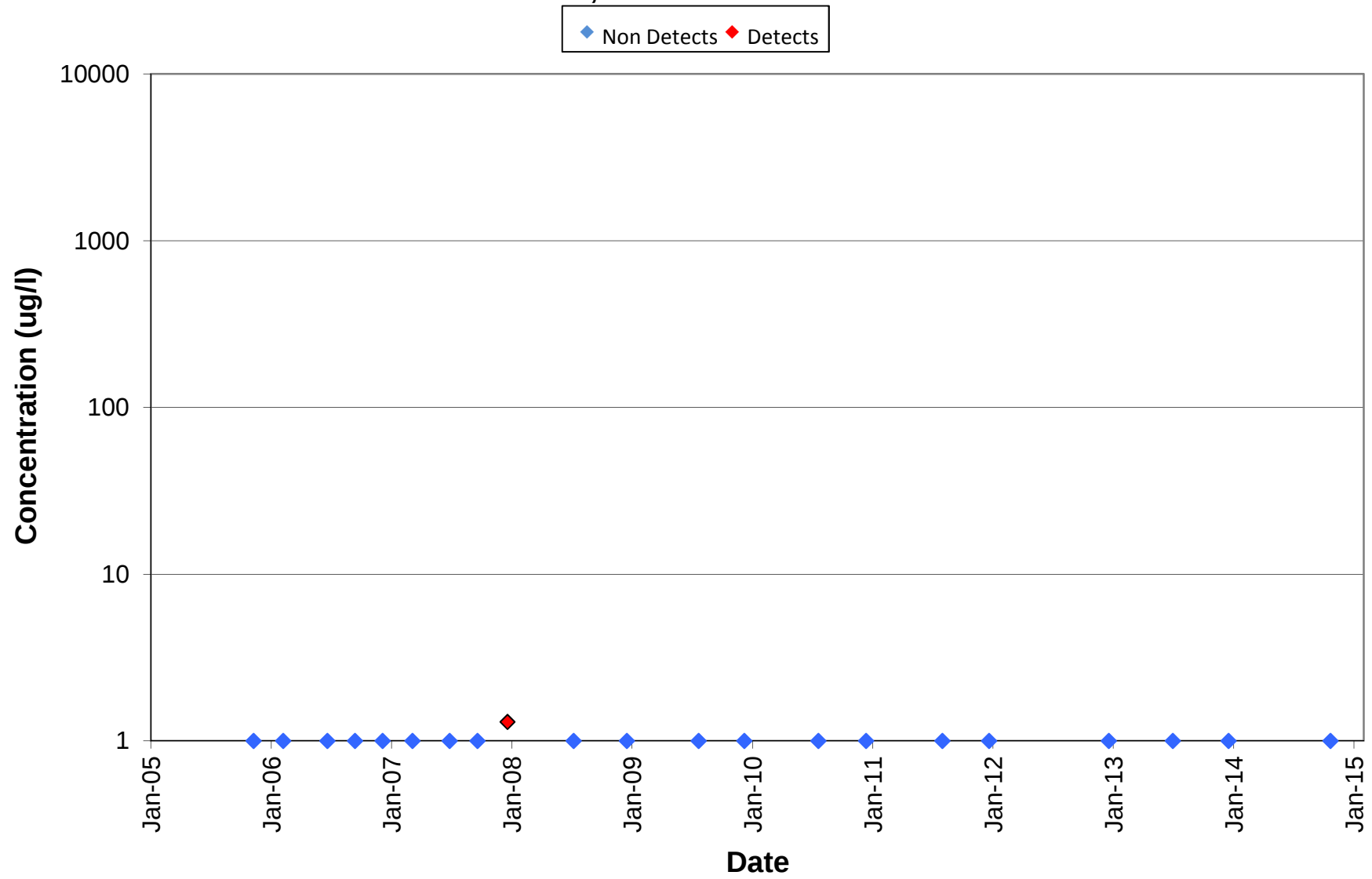
C-9 1,1 DCA Concentrations



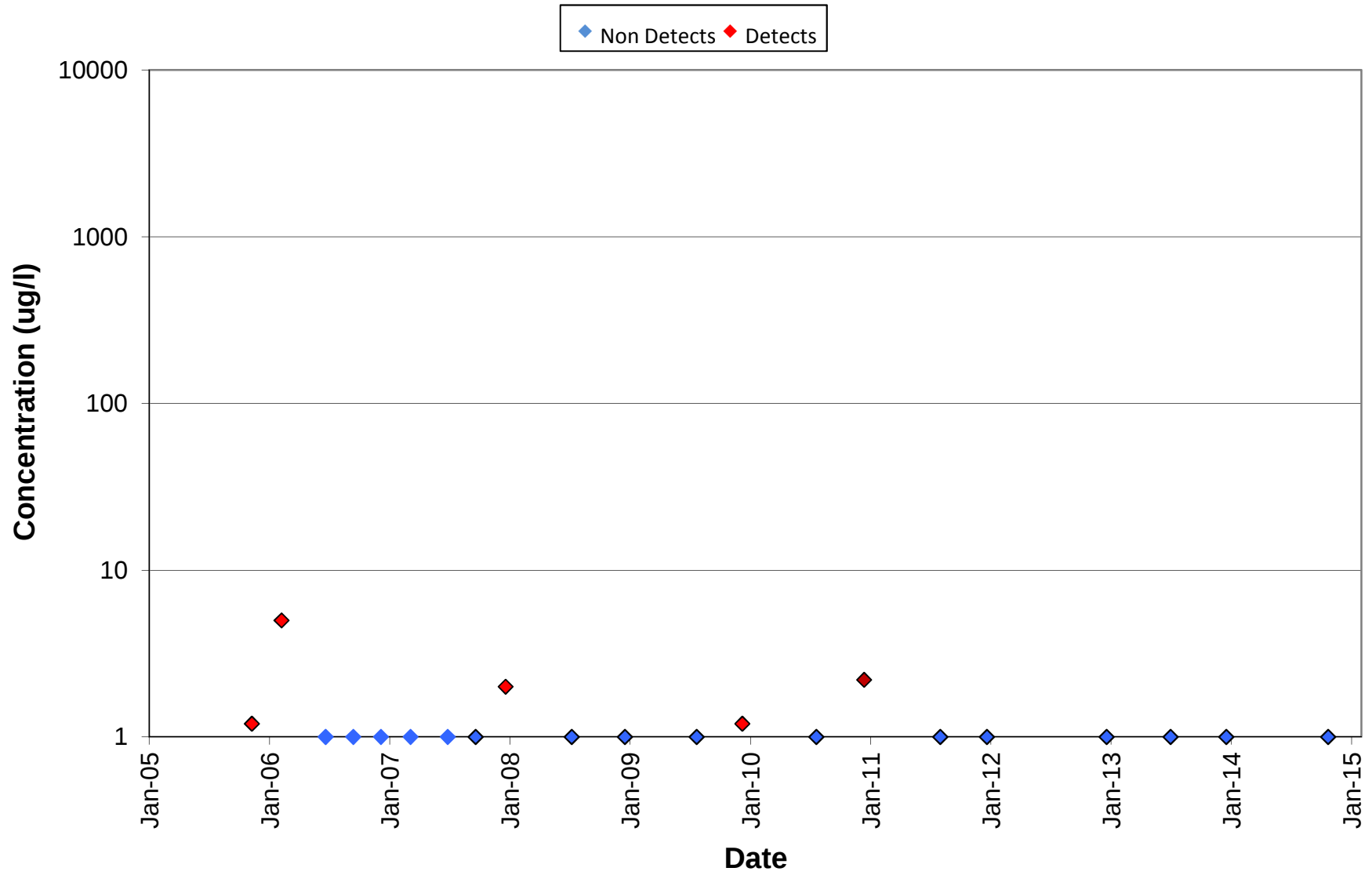
C-9 1,1 DCE Concentrations



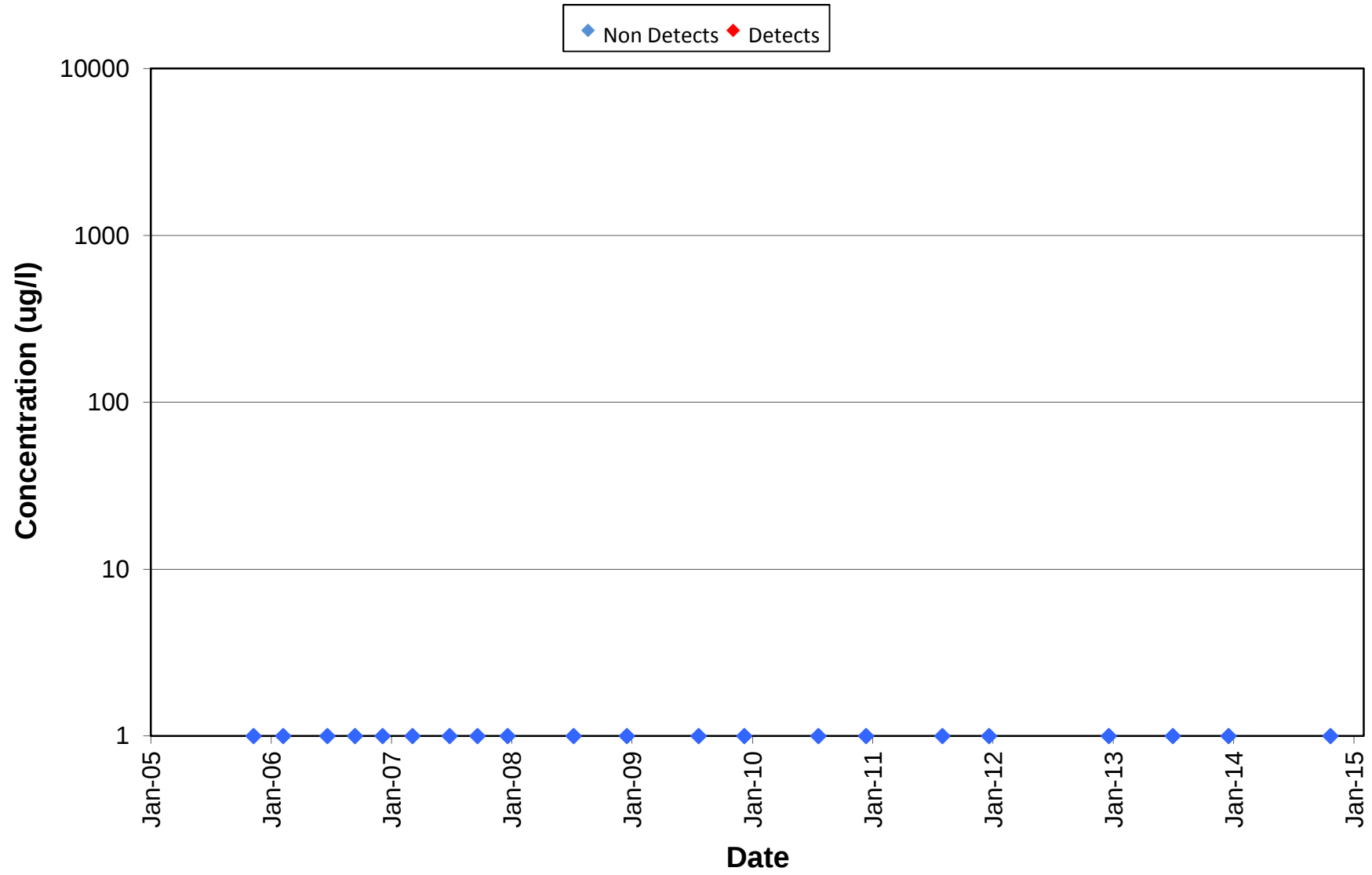
C-9 cis 1,2 DCE Concentrations



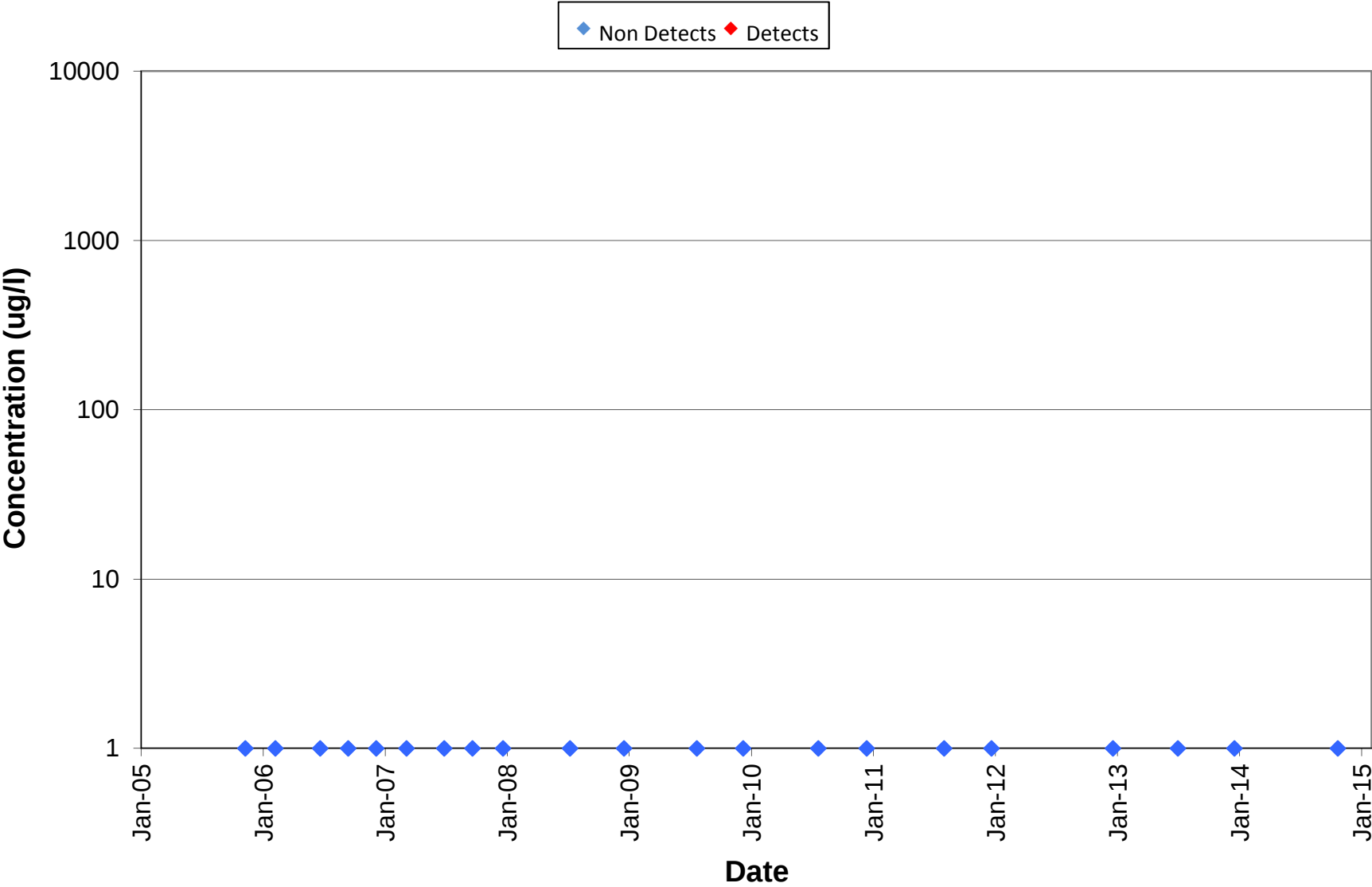
C-9 TCE Concentrations



C-9 Vinyl Chloride

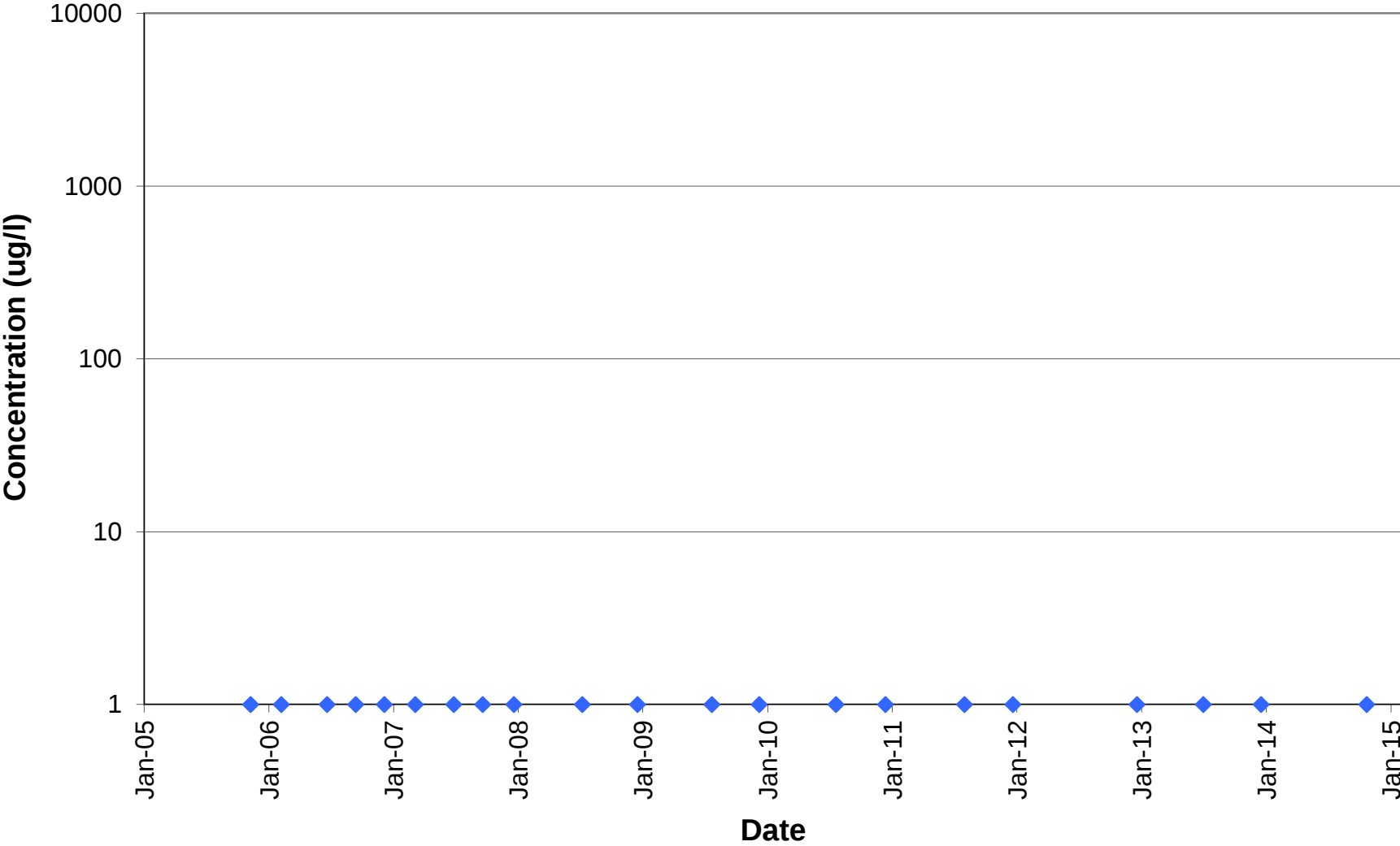


C-10 1,1 DCA Concentrations

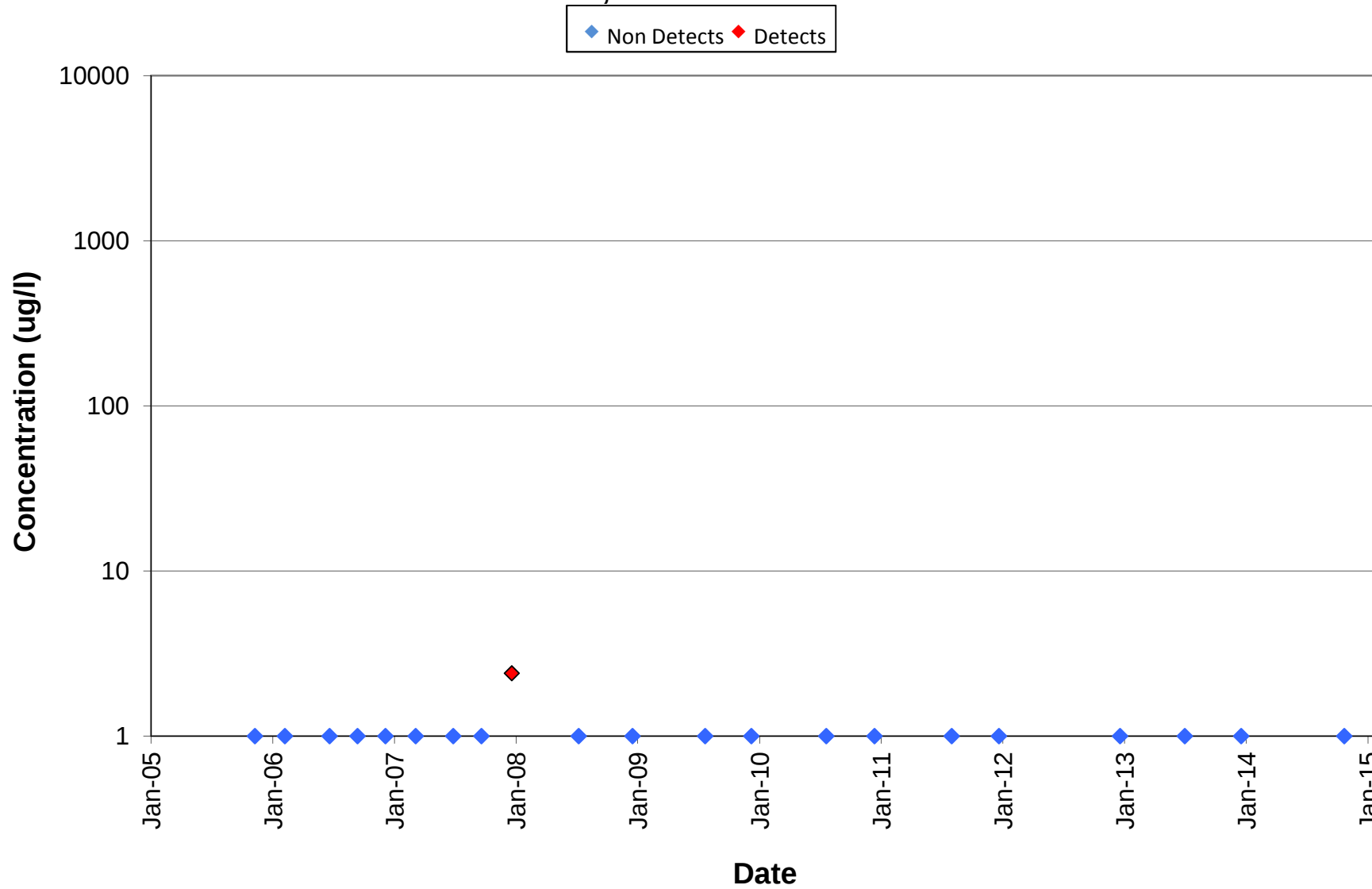


C-10 1,1 DCE Concentrations

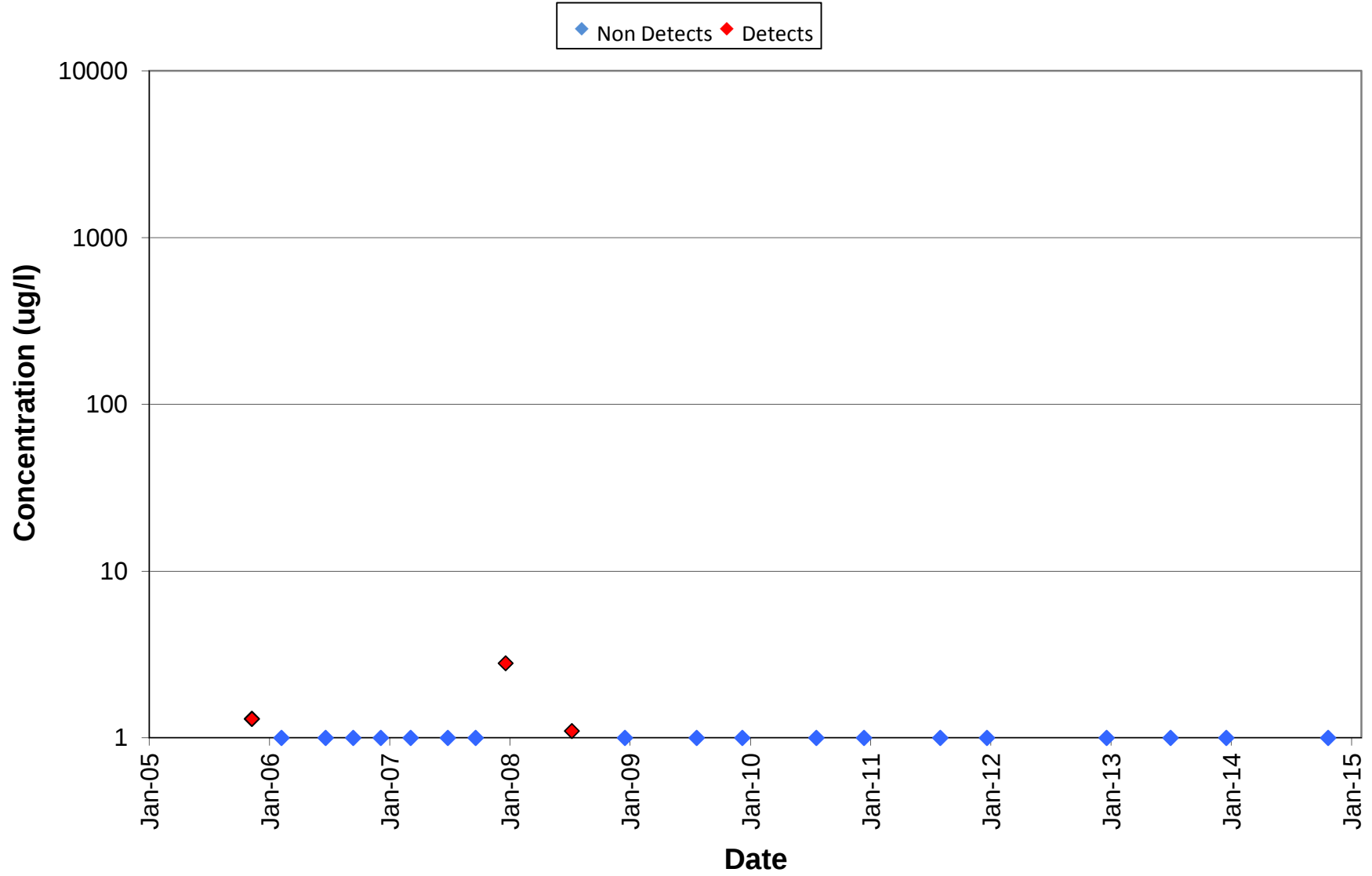
◆ Non Detects ◆ Detects



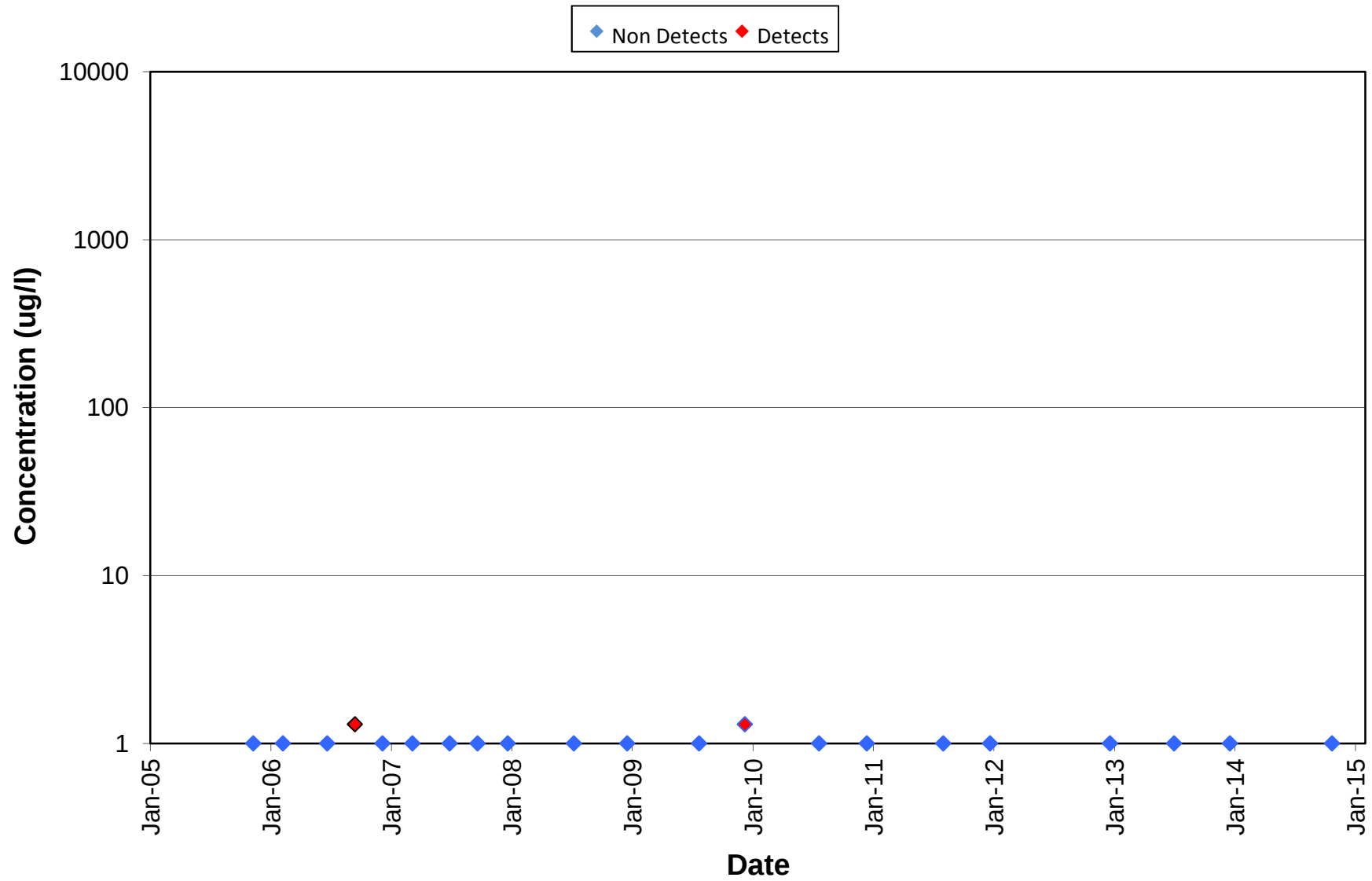
C-10 cis 1,2 DCE Concentrations



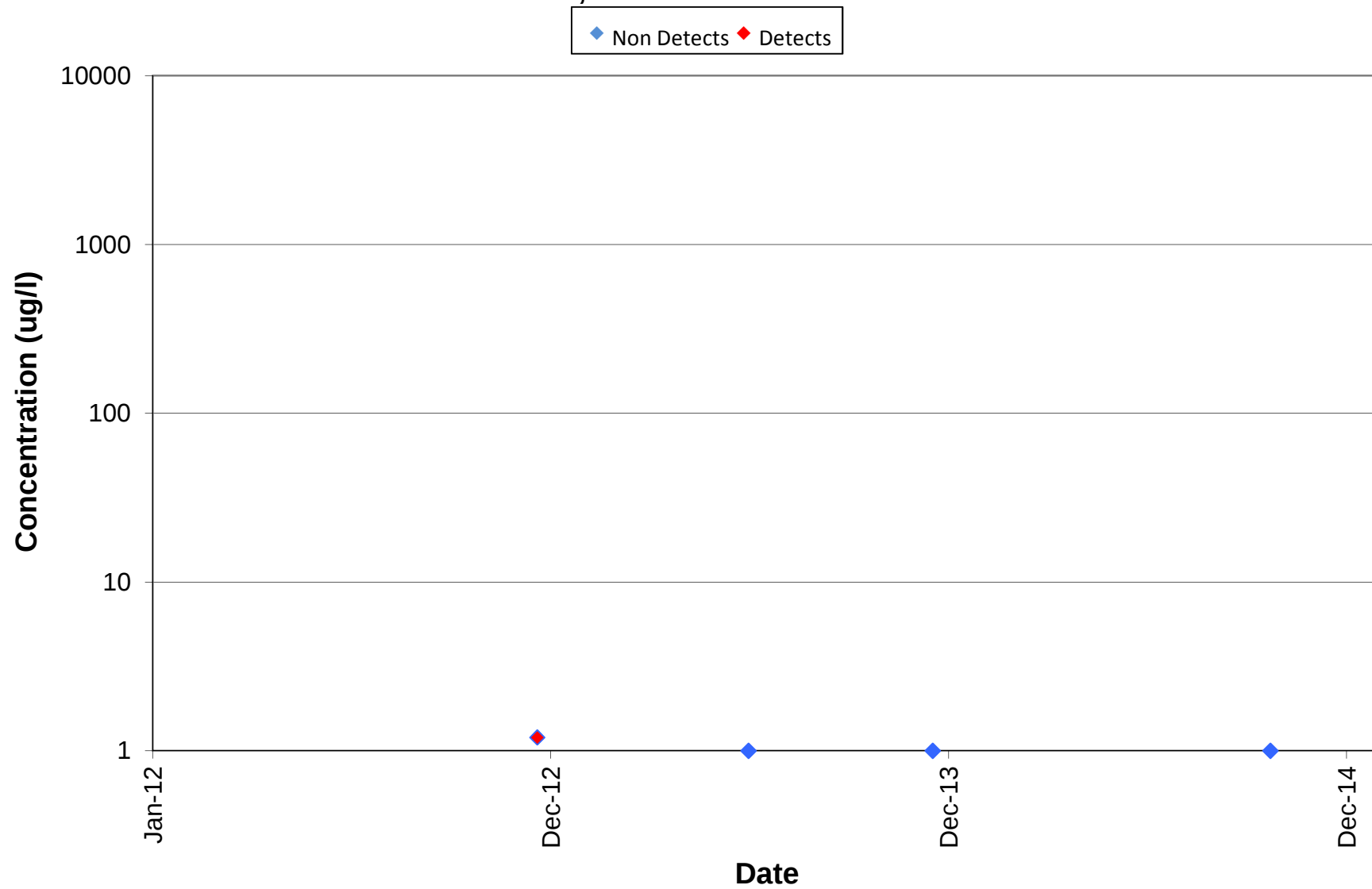
C-10 TCE Concentrations



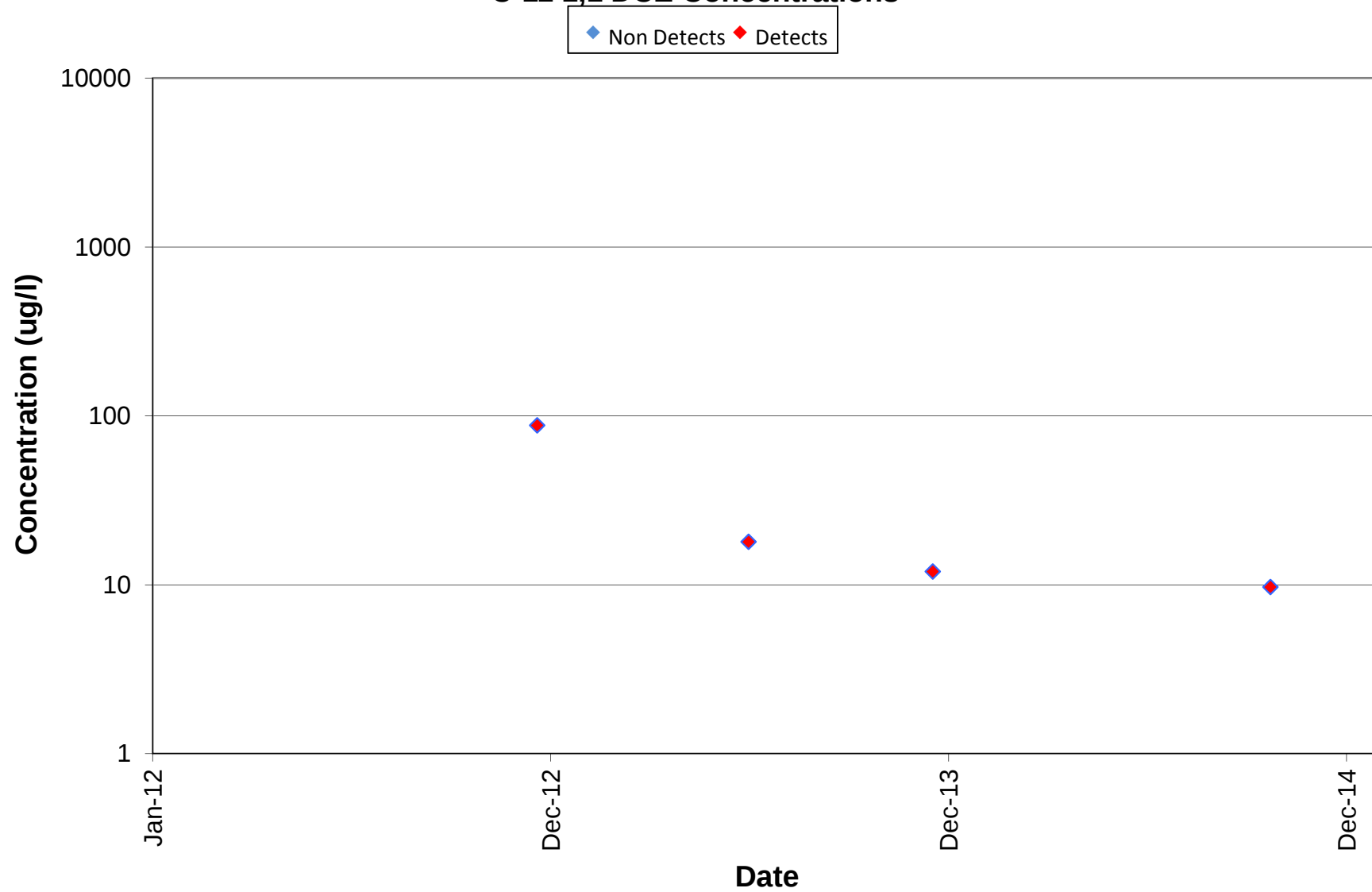
C-10 Vinyl Chloride



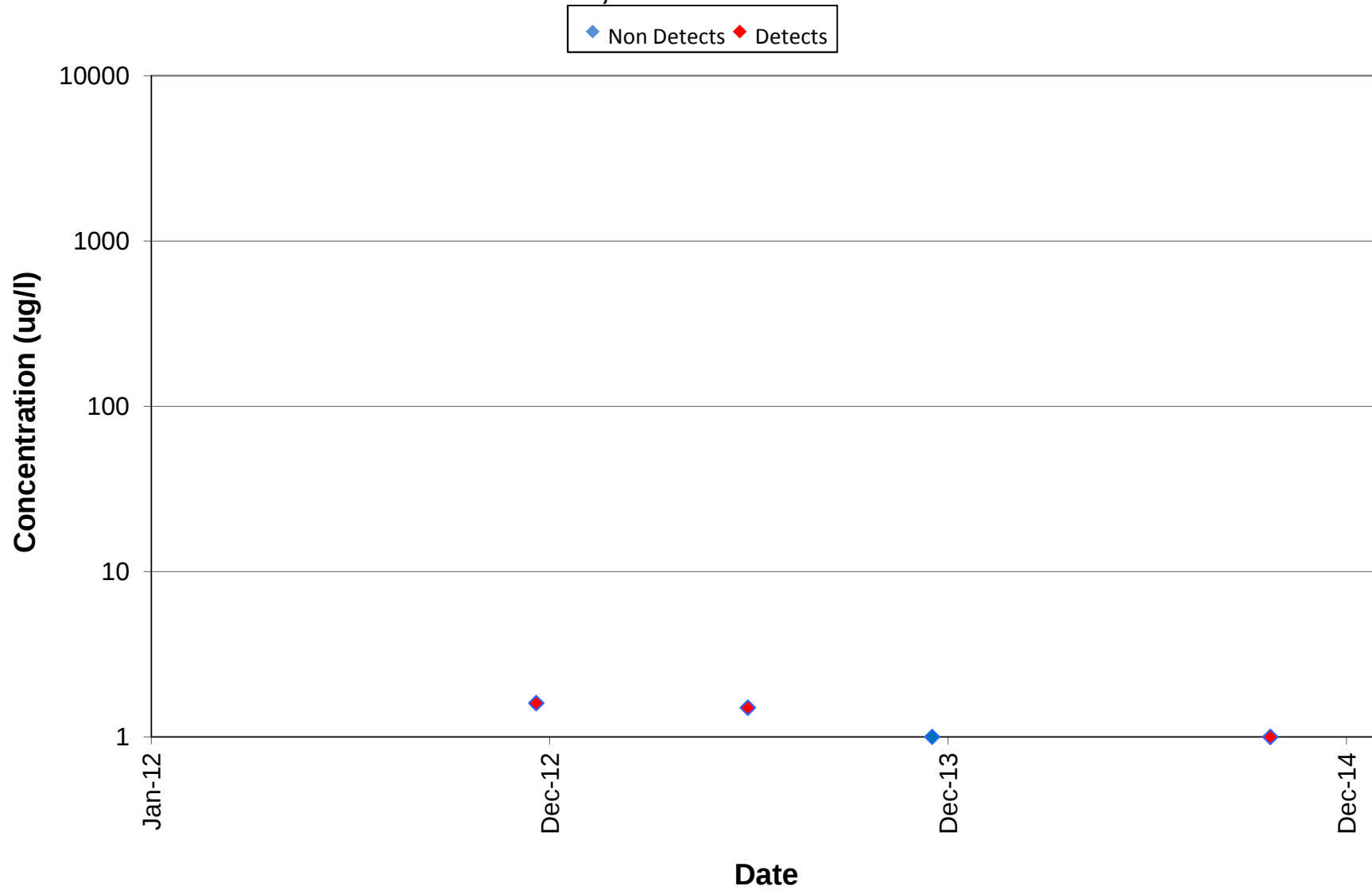
C-11 1,1 DCA Concentrations



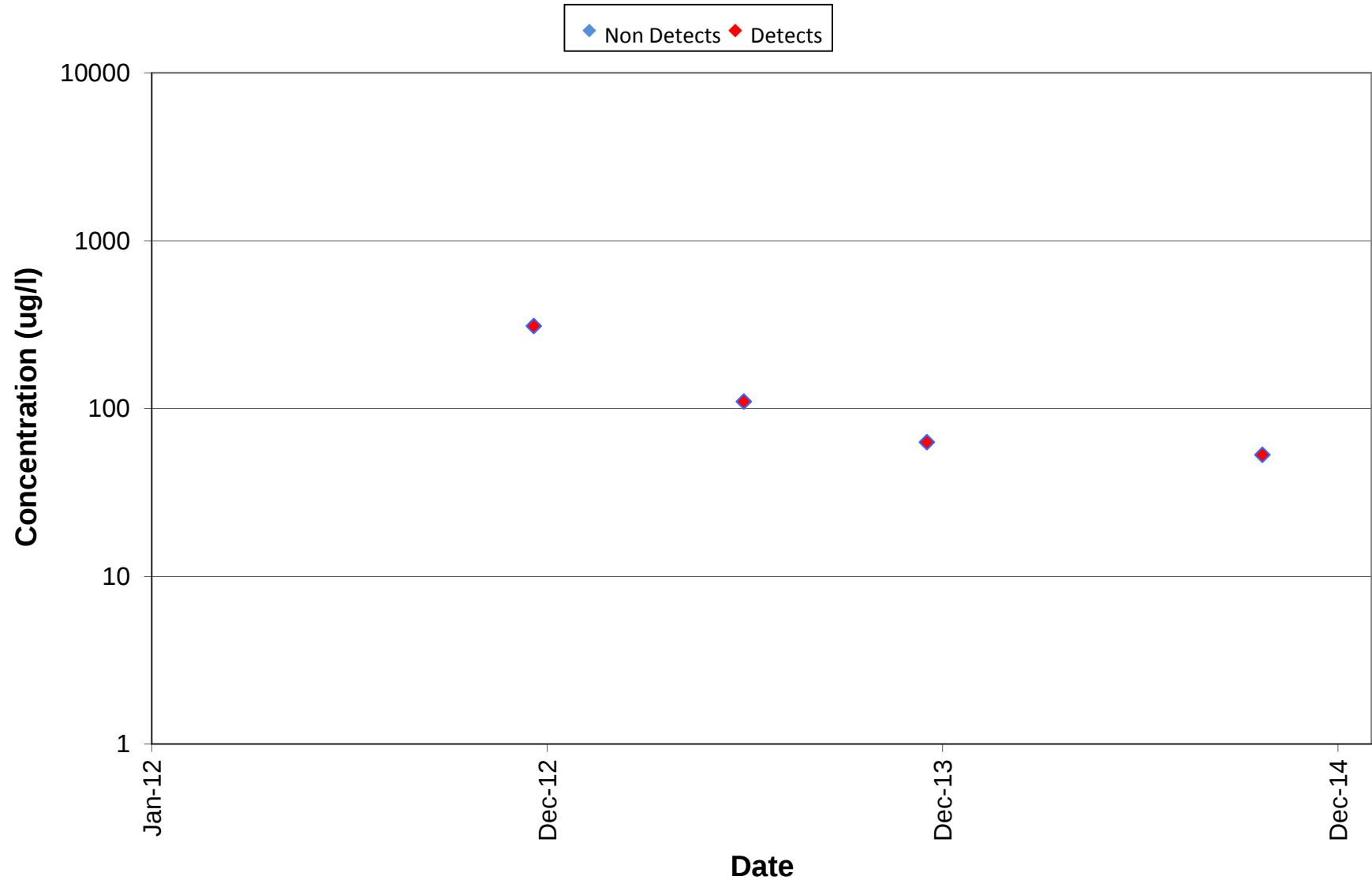
C-11 1,1 DCE Concentrations



C-11 cis 1,2 DCE Concentrations



C-11 TCE Concentrations



C-11 Vinyl Chloride

