THIRD FIVE-YEAR REVIEW REPORT
Ripon FF/NN Landfill
Ripon, Wisconsin

Prepared for:

FF/NN PRP Group

Prepared by:

GeoTrans Inc.
175 N. Corporate Drive, Suite 100
Brookfield, WI 53045

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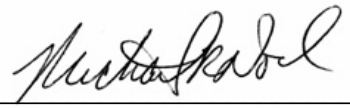
Michael R. Noel, P.G.
Principal Hydrogeologist, Project Manager

Kevin F. Lincicum, P.G.
Project Hydrogeologist

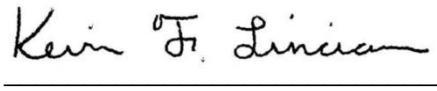
CERTIFICATION

"I, Michael R. Noel, hereby certify that I am a scientist as that term is defined in s. NR 712.03 (3), Wis. Adm. Code, and that, to the best of my knowledge, all of the information contained in this document is correct and the document was prepared in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm. Code."



Michael R. Noel, P.G. — 2/1/11 Date
Vice President, Principal Hydrogeologist

"I, Kevin Lincicum, hereby certify that I am a hydrogeologist as that term is defined in s. NR712.03 (1), Wis. Adm. Code, and that, to the best of my knowledge, all of the information contained in this document is correct and the document was prepared in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm. Code."



Kevin F. Lincicum — 2/1/11 Date
Project Hydrogeologist

TABLE OF CONTENTS

Section No. and Title *Page No.*

LIST OF FIGURES

LIST OF TABLES

LIST OF CHARTS

Groundwater VOC Charts

1.0 EXECUTIVE SUMMARY

The Settling PRPs for the FF/NN Landfill NPL Site (the Site) contracted GeoTrans, Inc. to conduct this five-year review summary for the Site pursuant to the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) Section 121, National Contingency Plan (NCP) Section 300.430(f)(4)(ii) and the Record of Decision (ROD) for the Site. The purpose of the five-year review is to ensure that the remedy implemented at the Site remains protective of human health and the environment and is functioning as designed. This is the third five-year review report for the site. The first five-year review report was prepared by the WDNR and approved by the EPA in May, 2001. The second five-year review report was prepared by the EPA in September, 2006.

The Wisconsin Department of Natural Resources (WDNR) evaluated remedial alternatives for two operable units at the site: source control and groundwater. The selected source control remedy for the site was a composite landfill cap and passive gas venting system in conjunction with groundwater monitoring. For the groundwater operable unit the WDNR selected the No Action alternative because the groundwater contamination was not severe enough to warrant active measures to restore groundwater quality.

During semi-annual sampling in October 2001, vinyl chloride was detected in a private water supply well. Subsequent sampling of a water supply well at a newly constructed home revealed vinyl chloride in the groundwater at a concentration exceeding the WDNR enforcement standard (ES). The impacted residences were initially provided with bottled water. A treatment system consisting of an air stripper with carbon filtration was installed in each of the households. The two impacted residences were eventually connected to the municipal water supply. Three other residences were since connected to the municipal water supply.

As a result of the impacts to private water supply wells additional site investigations were performed. Four additional piezometers were completed to further describe the hydrogeology and define the area of vinyl chloride impacts to groundwater. These wells include P-111D, P-113A, P-113B and P-103D. Wells MW-3A and MW-3B, which were constructed by Alliant Energy for another investigation in 1991, were initially sampled in April 2002 and added to the monitoring schedule. Three private water supply wells were reconstructed as piezometers including P-114 (the Ehster former well), P-115 (the former Wiese well) and P-116 (the former Hadel well). Eleven gas probes were installed around the perimeter of the landfill.

Based on the results of these investigations, the WDNR requested that the PRP group evaluate alternatives to address the groundwater plume that was found since the ROD was issued. A Focused FS was submitted to the WDNR in October 2005. The institutional control of municipal water supply for the potentially affected area was selected as an interim measure and has been partially implemented by connecting residents to the municipal water supply. Active gas extraction was a selected interim action to address off-site landfill gas migration which may be introducing vinyl chloride into groundwater. In March 2006 an active gas extraction system was installed and started up at the site using the existing gas vents and leachate head wells as extraction points within the system.

Groundwater and gas monitoring have been conducted to evaluate the effectiveness of the interim active gas extraction system to control landfill gas and reduce vinyl chloride in groundwater. Results of the active gas extraction system monitoring indicate that methane gas concentrations inside the landfill are being reduced and gas migration outside the landfill is being controlled. The concentration of vinyl chloride in the landfill gas has been reduced by 100%.

The concentrations of vinyl chloride in the groundwater monitoring wells have been reduced by over 90% since the gas extraction system startup. Vinyl chloride was detected in eleven groundwater monitoring wells in May 2006. With the startup and operation of the interim gas extraction system, three of those wells now have non-detectable concentrations of vinyl chloride. The remaining eight monitoring wells have stable or decreasing concentrations. Incorporating the interim active gas extraction system into the final remedy for the FF/NN Landfill NPL Site is protective of human health and the environment and complies with Federal and State requirements that are legally applicable or relevant and appropriate to the Remedial Action.

2.0 INTRODUCTION

The Settling PRPs for the FF/NN Landfill NPL Site (the Site) contracted GeoTrans, Inc. to conduct this five-year review for the Site pursuant to the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) section 121, National Contingency Plan (NCP) section 300.430(f)(4)(ii) and the Record of Decision (ROD) for the Site. The purpose of the five-year review is to ensure that the remedy implemented at the Site remains protective of human health and the environment and is functioning as designed. The first five-year review report was completed in 2001 and the second report was completed in 2006. This is the third five-year review report for the Site.

2.1 Site Chronology

The FF/NN Landfill occupies approximately 7.3 acres in the northwest corner of Fon2d du Lac County in the Town of Ripon (Town), Wisconsin (SE ¼ of the SE ¼ of Section 7, T16N, R17E; Figure 2-1). The Site was operated as a landfill from 1967 to 1983. The Site was originally a gravel pit, and in 1967 was leased to Speed Queen for disposal of wastes from its facility in Ripon. In 1968, the City of Ripon (City) leased the property for waste disposal. In 1970, the City and Town contracted to share the cost of operating the landfill, and it was operated by the City and Town from 1970 to 1983. Throughout its operational history, the Site accepted municipal, commercial, and industrial solid wastes. Landfilling operations at the Site ceased in 1983, and it was capped with a clay cap in 1985. Vegetation was established to minimize erosion and a gas venting trench was placed along the western edge of the Site.

In 1984 VOCs were detected in a private water supply well located approximately 350 feet south of the Site. A replacement well was drilled for this property and, when sampled, was also found to contain VOCs. The well was abandoned in 1990 and the house was vacated. Later the house was relocated to another property and the City of Ripon purchased the land. A hazard assessment was completed by the WDNR using the EPA Hazard Ranking System and, based on the results, the Site was recommended by the WDNR to the EPA for inclusion on the NPL. The Site was listed on the NPL in May, 1994.

In response to the WDNR assessment and recommendation for NPL listing, several PRPs formed a group to investigate the Site. This group entered into a contract with the WDNR on August 14, 1992 to complete the following:

- Conduct a Remedial Investigation (RI) to adequately characterize the Site;
- Perform a Feasibility Study (FS) to identify and evaluate potential remedial options for the Site;
- Prepare plans and specifications for a landfill cap and landfill gas extraction system for the source control operable unit; and
- Implement the source control operable unit.

The RI was conducted to characterize contaminant migration pathways in the subsurface and to evaluate the nature, extent, and magnitude of contaminant migration along those pathways for the former FF/NN Landfill. The RI activities were documented in a report dated August 26, 1994. The FS report, dated December 30, 1994, presented remedial action alternatives for source

control and groundwater operable units. Based on the RI/FS and other information in the administrative record, the Record of Decision (ROD) for the FF/NN Landfill was prepared by the WDNR and signed October 31, 1995.

The WDNR evaluated remedial alternatives for two operable units at the Site: source control and groundwater. The selected source control remedy for the Site was a composite landfill cap and passive gas venting system in conjunction with groundwater monitoring. Components of the source control operable unit included:

- Constructing a composite landfill cover (i.e., a landfill cap made with both plastic membrane and soil materials) over the entire landfill;
- Installing a passive landfill gas venting system as part of the composite cap to effectively vent landfill gas from the waste;
- Monitoring of the groundwater quality to determine the effectiveness of the landfill cap towards improving groundwater quality;
- Monitoring the landfill gas probes around the landfill to make sure that landfill gas is not migrating away from the site in an uncontrolled manner;
- A deed restriction prohibiting the disturbance of the landfill cap except for maintenance purposes;
- Maintenance of the landfill cap to repair settling and erosion that may develop; and
- Fencing of the landfill perimeter with warning signs to restrict access.

For the groundwater operable unit the WDNR selected the No Action alternative because the groundwater contamination was not severe enough to warrant active measures to restore groundwater quality. In addition, the implementation of the source control remedy was expected to reduce the leaching of contaminants from the landfill to the groundwater.

A Design Report for the FF/NN Landfill, dated January 5, 1996, was submitted to the WDNR. The Design Report included plans, specifications, and a QA/QC plan to complete the cap construction. A Remedial Action Monitoring Plan dated January 26, 1996 was also prepared for the Site.

The Design Report was approved by the WDNR on January 26, 1996. This included the approval of the Badger Mining Company clay borrow source located in Auroraville, Wisconsin. The monitoring plan was approved and the first round of semiannual sampling was performed in May 1996. The source control remedy was constructed in 1996-1997 and the Construction Completion Report, dated June 23, 1997 was submitted to the WDNR.

On May 22, 2001 the EPA approved the first Five-Year Review Report that was prepared by the WDNR. The report found that the remedy selected for the Site remained protective of human health and the environment based upon the current evaluation of site conditions and the monitoring results. The deed restriction prevents/controls contact with waste that is present at the site. The cap is preventing exposures to wastes.

During routine groundwater monitoring in the fall of 2001, vinyl chloride was detected in one private drinking water supply well (Altnau, N8798 S. Koro Rd.) located in the sandstone aquifer

and down gradient of the FF/NN Landfill. Additional monitoring at a new home adjacent to this well (Ehster, W14271 Charles St.) indicated that its water supply well was also impacted. An additional twelve residences were sampled for VOCs in early 2002 and the results showed no detections of vinyl chloride. The PRP group cooperated fully with the WDNR and EPA in responding to the vinyl chloride detections. Initially, bottled water was provided to the two residences. Subsequently, air strippers with granular activated carbon treatment systems were installed at the two residences with impacted groundwater as an interim measure until the homes were hooked up to the municipal water supply.

Routine water level monitoring in May, 2002 found extremely low water levels that resulted in all nine water table monitoring wells being dry or containing insufficient water for sampling. Layer 2 piezometers had groundwater elevations that were more than 20 feet lower than normal resulting in a reversal of the groundwater flow direction from southwest to northeast. It was determined that the substantial water level decreases were a result of dewatering from Northeast Asphalt (NEA), a gravel pit operation on the Hollatz property located east of the landfill. The WDNR immediately ordered the operation to cease dewatering activities which it did in May, 2002. It took nearly two years before the water levels recovered from the dewatering activities. The impact of this dewatering appears to correlate with increases in VOC concentrations observed in P-102 (normally upgradient) and MW-107 and MW-112 (normally downgradient).

In November, 2002, a municipal water supply pipeline was extended from the City of Ripon along South Koro Road up to and along Charles Street by Alliant Energy. The two homes with impacted wells (Altnau and Ehster) were connected to this municipal water supply, as well as a third home with a non-impacted water supply (Miller, N8756 S. Koro Rd.). Municipal water was also offered to the other residents on Charles Street. In 2004, the Hadel (W14292 Charles St) and Wiese (N8778 S. Koro Rd) homes voluntarily connected to municipal water supply and their private wells were converted to piezometers.

Four additional piezometers were completed to further describe the hydrogeology and define the area of vinyl chloride impacts to groundwater. These new wells include P-111D which was completed in March, 2002, P-113A and P-113B which were completed in September, 2003, and P-103D which was completed in January, 2004. Wells MW-3A and MW-3B were initially sampled in April 2002 and added to the monitoring schedule. These wells were constructed in 1991 from a groundwater investigation funded by Alliant Energy who once owned the Ripon water supply. Three private water supply wells were reconstructed as piezometers. These wells include P-114 (the Ehster former well), P-115 (the former Wiese well) and P-116 (the former Hadel well).

The City and Town of Ripon filed a joint deed for the property which was recorded on February 13, 2004. Effective August 15, 2004 the WDNR established a “Special Well Casing Pipe Depth Area” surrounding the Site as a result of the contamination of several wells and the groundwater in this area with VOCs. The well casing advisory was designed to reduce the risk that new wells, constructed or reconstructed according to the requirements of this advisory, produce water contaminated with VOCs.

Because the concentration of methane exceeded the lower explosive limit (LEL) in a site monitoring well (MW-103), a total of eleven (11) gas probes (GP-1 to GP-8 and GP-10 to GP-12) were installed within 150 feet of the perimeter of the waste on all four sides of the landfill in 2004 and 2005 to investigate the presence of landfill gas beyond the limits of fill. Monitoring at the gas probes identified concentrations of methane exceeding the LEL at four of the gas probe locations. The presence of vinyl chloride was also detected in the landfill gas and was considered a potential source of the groundwater contamination. The presence of methane at concentrations greater than its LEL in gas probes located outside of the limits of fill exceeded an ARAR for the site, section NR504.04(4)(e) of the Wisconsin Administrative Code (WAC).

As a result of the vinyl chloride detections in groundwater and the presence of methane above the LEL outside the limits of fill, the WDNR requested that the PRP group evaluate alternatives to address the groundwater plume and methane that was found since the ROD was issued. A Focused FS was submitted to the WDNR in October, 2005 with the objective to develop and evaluate remedial action alternatives that are capable of mitigating unacceptable environmental risks from impacted groundwater and uncontrolled landfill gas.

One of the groundwater alternatives considered in the Focused FS was the institutional control of municipal water supply for the potentially affected area which had already been implemented as an interim measure by extending a water main and connecting affected residents to the City of Ripon municipal water supply. One of the alternatives considered for landfill gas was active gas extraction using existing leachate wells and passive gas vents as extraction points. This alternative also had the potential to reduce vinyl chloride in groundwater by removing landfill gas that contained vinyl chloride.

To further evaluate the active gas extraction alternative, pilot testing was performed in June of 2005. The pilot test demonstrated that conversion of the passive gas control system and leachate wells into an active gas extraction system was feasible and effective at gas control. Based upon the results of the pilot test, the FF/NN Landfill PRP Group proposed active gas extraction as an Interim Action. The design for this remedial system was submitted to the WDNR for review and was conditionally approved in October, 2005.

The interim active gas extraction system was installed and started up at the site in March, 2006 using temporary above ground piping to connect the existing gas vents and leachate head wells to a blower. In January, 2007 the piping was buried to prevent condensate freezing and facilitate year-round operation. A performance evaluation report was submitted in July, 2007 indicating that the system was performing well and achieving desired affects:

- System operation had reduced the landfill methane gas concentrations outside the limits of fill to below the LEL,
- Methane concentrations measured within the landfill had been reduced from an average of approximately 52% methane in 2006 down to 11.4% in June 2007,
- Vinyl chloride concentrations within the landfill gas had been reduced in nearly all gas extraction vents and leachate wells, and
- Vinyl chloride concentrations in groundwater indicated decreasing or stable trends in nearly all groundwater monitoring wells.

Based on the results of the performance evaluation it was recommended by the FF/NN Landfill PRP Group that the interim gas extraction system be selected as the final remedy for source control for the FF/NN Landfill (Alternative C1 of the Focused Feasibility Study modified to include the leachate head wells as part of the gas extraction system). The WDNR corresponded in October, 2007 that the landfill gases have been contained within the landfill boundary and are no longer escaping from the sides of the landfill meaning the landfill had returned to compliance with NR507. Regarding the groundwater the WDNR recommended that additional groundwater sampling be collected through the April 2008 sampling event. An updated performance evaluation was submitted in July, 2008 demonstrating that since the start-up of the interim gas extraction system, vinyl chloride concentrations in groundwater had decreased in all wells where it was detected except one.

In August, 2009 the PRP Group submitted a revised groundwater monitoring plan at the request of the WDNR that included the addition of natural attenuation parameters to demonstrate MNA as a remedial option for the deeper groundwater plume. The revised plan also included a request to reduce monitoring frequency from quarterly to semiannual. In October, 2009 correspondence the WDNR conditionally approved the MNA monitoring plan but not the reduction if monitoring frequency. Continued gas and groundwater monitoring show that the concentration of vinyl chloride in the landfill gas has been reduced by 100% and the concentrations of vinyl chloride in the groundwater monitoring wells have been reduced by over 90% since the gas extraction system startup.

2.2 Site Characteristics and Baseline Conditions

The following sections present the characteristics of the Site determined through the RI and are presented for background information and as the baseline for comparison to current conditions.

2.2.1 Topography

The Site is located in a glaciated area of south central Wisconsin. The area near the Site consists of poorly sorted ground and end moraine deposits. Outwash deposits of sand and gravel are evident in the quarry located just west of the site. The landscape slopes gently eastward. The landfill rises to an approximate elevation of County Trunk Highway (CTH) NN on the west (872 ft msl) and slopes approximately 20 feet lower (850 ft msl) on the east (Figure 2-2).

2.2.2 Geology and Hydrogeology

The Site is located in a glaciated area of south central Wisconsin. The area near the Site consists of poorly sorted ground and end moraine deposits. Outwash deposits of sand and gravel are evident in the quarry located just west of the Site. The landscape slopes gently eastward. The landfill rises to the approximate elevation of County Trunk Highway (CTH) NN on the west [872 ft above mean sea level (msl)] and slopes downward to the east where it is approximately 20 feet lower.

The geology at the site consists of approximately 180 feet of unconsolidated glacial deposits, primarily sand with some silty and clayey lenses and gravel overlying bedrock. The bedrock is the Cambrian Franconian Formation, a medium-grained sandstone approximately 150 feet thick

at the site.

The glacial unconsolidated deposits and the Cambrian sandstone are the two principal aquifers present in the area surrounding the FF/NN Landfill area. The municipal wells and most private water supply wells use the sandstone as their water source. The lower limit of the Cambrian sandstone aquifer is delineated by the granite Precambrian basement at a depth of approximately 330 feet.

Depth to ground water is variable and dependant on topography and precipitation. Ground water is present at depths ranging from approximately 5 to 50 feet below ground surface. The water table is located approximately 20 feet below the base of the landfill.

It was found during the RI and confirmed during follow-up monitoring events that the shallow ground water at or near the water table flows to the southwest toward a wetland area (Figure 2-3). This flow system has an average horizontal gradient of approximately 0.01. Shallow piezometers completed between 30 and 40 feet below the water table were used to confirm a southwesterly flow direction in the deeper unconsolidated deposits (Figure 2-4). The mean horizontal hydraulic gradient of the shallow potentiometric surface is approximately 0.005. Groundwater flow in the sandstone is to the west, based on regional information.

Vertical hydraulic gradients are primarily upward and range from 0.001 to 0.096. The highest upward vertical gradients were seen to the south and southwest of the landfill. Three locations had downward gradients ranging from 0.001 to 0.013.

Bail down testing was used to determine hydraulic conductivities. The highest hydraulic conductivities were observed in the sandstone while the lowest were noted in the wetland clay located to the northeast of the Site (2.0 x 10-5 ft/min). Horizontal gradients, hydraulic conductivities and estimated porosities were used to calculate average groundwater flow velocities. Velocities calculated in the unconsolidated sand and gravel ranged from 0.02 to 708 ft/yr, with an arithmetic mean of 99 ft/yr.

2.2.3 Landfill Characteristics

2.2.3.1 Waste

The refuse in the landfill is approximately 30 feet thick on the western side near CTH NN sloping to less than 10 feet thick on the eastern side of the landfill. The estimated volume of the landfill is approximately 180,000 cubic yards.

2.2.3.2 Leachate

In the 1994 RI Report the volume of leachate in the landfill was estimated to be between 6 and 11 million gallons. During the RI, samples collected from two leachate head wells were found to contain 10 VOCs. Both chlorinated solvent type compounds (including breakdown products) and petroleum hydrocarbon related compounds (benzene, ethylbenzene, toluene and xylenes) were detected in the leachate. In the 1994 FS Report, it was noted that leachate generation at the site

was minimal and that attempts in 1994 to perform a pump test on the leachate wells were not successful.

2.2.3.3 Gas

The landfill produces a small volume of landfill gas. Prior to active gas extraction beginning in 2006, the landfill gas composition as measured in the leachate wells was approximately 62% methane and 36% carbon dioxide. There are no buildings or confined spaces and ignition sources in the vicinity of the landfill which would allow the gas to collect and possibly ignite.

2.2.4 Groundwater Quality

During the RI a total of eight VOCs were detected in groundwater monitoring wells. Five of these compounds were present at concentrations exceeding NR 140 Preventive Action Limits (PALs) including vinyl chloride (VC), cis-1,2-dichloroethene (1,2-DCE), benzene, trichloroethene (TCE), and tetrachloroethene (PCE). Two of these compounds (VC and TCE) exceeded their respective NR 140 enforcement standards (ES). Three VOCs (TCE, 1,2-DCE and VC) were detected in samples from more than one location.

The lateral extent of VOCs exceeding NR 140 PALs was limited to the wells immediately adjacent to and downgradient from the landfill (Figure 2-5). The highest concentrations of VOCs were detected along the southern edge of the landfill. The concentrations decreased substantially with distance away from the landfill with a maximum lateral extent of approximately 500 feet. The discharge point for the contaminated groundwater is the wetland located southwest of the Site. Concentrations of VOCs in groundwater entering the wetland area were very low and below the PAL and did not pose a problem to the wetland area.

Contaminant concentrations in deeper groundwater (located more than 40 feet below the water table) were measured at several depths at one location south of the landfill during the RI and at several adjacent locations during previous investigations. The contaminants were detected in the unconsolidated deposits and the Cambrian sandstone south of the landfill. Modeling completed in 1991 indicated that the groundwater contamination did not pose a threat to the City of Ripon's municipal water supply wells. Private water supply wells located near the landfill are completed at the contact between the unconsolidated deposits and the sandstone. Sampling completed at the private water supply wells during the RI indicated that no VOCs were present.

3.0 MONITORING PROGRAM

Subsequent to the RI, groundwater samples were collected from up to twelve monitoring wells and seven private water supply wells. Leachate samples were collected from up to three leachate head wells depending upon a sufficient quantity of leachate being available for sample collection. Landfill gas was measured at gas vents and leachate head wells within the landfill and in groundwater monitoring wells around the perimeter of the landfill. The monitoring activities were performed semiannually except for private water supply well sampling which was performed annually. With the detection of vinyl chloride in 2001, the frequency of monitoring was increased to quarterly and gas measurements are taken from the newly constructed gas probes. The current monitoring schedule is presented in Table 3-1.

3.1 Groundwater

3.1.1 Monitoring Network

Twenty seven monitoring wells and piezometers were included in the groundwater monitoring program at the FF/NN Landfill during this review period. Three private water supply wells were sampled quarterly. The selected well locations are shown on Figure 3-1. Two of the private water supply wells are located to the southwest of the landfill along Charles Street and S. Koro Road and one well was located south of the landfill and west of S. Koro Rd. These wells are all located downgradient (Gaastra, Perry) or sidegradient (Rohde) of the landfill with respect to the ground-water flow direction.

Following the detection of vinyl chloride in the private wells in 2001, the monitoring of the site had been increased to quarterly. The frequency of sampling at the monitoring wells was decreased to semiannual from October, 2007 to October, 2009 while gas monitoring, private well sampling and water level measurements remained quarterly. The current monitoring plan includes 18 wells that are sampled quarterly and an additional 9 wells are added for the annual sampling event. Three private wells are sampled quarterly including the Gaastra, Baneck and Rohde residences. Sampling locations are provided in Figure 3-1.

3.1.2 Analytical Parameters

Three groups of parameters were included in the groundwater sampling during this five year period: field measurements, VOCs and natural attenuation parameters.

3.1.2.1 Field Measurements

Groundwater samples were screened in the field to determine the temperature, pH, conductivity, color, odor and turbidity. Temperature, pH and conductivity were measured with field instruments and recorded as numerical values. Color, odor and turbidity were determined by visual and olfactory examination.

Groundwater elevations and well depth were measured at all monitoring wells at the site during each sampling event. This information was used to confirm groundwater flow direction and to

confirm previous identification of likely contaminant migration routes.

3.1.2.2 Volatile Organic Compounds

Groundwater samples were analyzed for low concentration Target Compound List (TCL) VOCs (SOW 10/92). The groundwater samples were analyzed for VOCs using EPA Method 8260B. Each private water supply sample was analyzed for VOCs using EPA Method 524.2 (Safe Drinking Water Act). Samples were analyzed by Pace Analytical in Green Bay, Wisconsin

3.1.2.3 Natural Attenuation Parameters

Indirect lines of evidence that support monitored natural attenuation (MNA) typically include trends in geochemical or redox indicators which demonstrate biodegradation is occurring downgradient from a source area, or an increase in daughter product concentrations down gradient from a source area. Under anaerobic conditions, chlorinated VOC's can be biodegraded by reductive dechlorination which entails the sequential replacement of chlorine atoms by hydrogen to produce more reduced, less-chlorinated products. Rates of reduction are highest for the more chlorinated compounds like PCE and TCE and decrease with the degree of chlorination to a point when oxidation rates become faster. While the reductive dechlorination of PCE, TCE and DCE are dominated by anaerobic processes, the reduction of VC is typically an aerobic process, although anaerobic microbial VC oxidation can occur under iron-reducing conditions.

At the Site the parent and reductive dechlorination byproducts, PCE, TCE and DCE, have been nearly totally degraded and the only reductive dechlorination byproduct remaining above the ES is VC. The VC is only present in the deepest (Layers 3 and 4) and furthest wells from the Site. Sequential anaerobic/aerobic biodegradation of PCE and TCE can take place as reductive dechlorination proceeds under anaerobic conditions and then the dechlorination byproduct (VC) flows out of the anaerobic zone into an aerobic environment. In the Layer 3 and 4 groundwater units the dissolved oxygen has historically been >0.5 mg/L but <2.0 mg/L. DO greater than 0.5 mg/L is considered an aerobic state (EPA, 1998), which would not promote reductive dechlorination but could oxidize VC aerobically.

Because VC is the sole remaining contaminant of concern and because VC reduction is most commonly an aerobic process via direct oxidation, the PRP Group proposed that MNA parameters that can demonstrate oxidative conditions be monitored (iron II, nitrite, sulfide, dissolved methane, dissolved oxygen and ORP). The WDNR conditionally approved the proposed monitoring adding nitrate and sulfate in place of nitrite and sulfide to the parameter list. Dissolved methane was analyzed by Pace Labs in Green Bay, Wisconsin. All other parameters were measured in the field using CHEMetrics analyte-specific Vacu-vials® for photometric analysis using a CHEMetrics Model V-2000 LED photometer. Monitoring for these MNA parameters was carried out for one year and then in October, 2010 the WDNR approved discontinuation of monitoring for sulfate, nitrate and dissolved methane.

3.2 Leachate

Three leachate head wells (LC-1, LC-2 and LC-3) were sampled during the RI in 1993 and

included in the monitoring program in 1996 (Figure 3-1). When sufficient leachate was available, one leachate sample was collected annually from each well. Samples were analyzed for the same field and laboratory parameters as for the groundwater samples. Leachate head levels were also measured.

3.3 Landfill Gas

The interim active gas extraction system piping layout and monitoring points is provided in Figure 3-2. System monitoring has included quarterly gas sampling for TO-14A VOC analysis, biweekly landfill gas monitoring of the extraction wells and quarterly landfill gas monitoring for all the gas probes and four monitoring wells.

Methane, oxygen, and carbon dioxide concentrations, in percent by volume, were monitored quarterly in the four groundwater monitoring wells adjacent to the landfill (MW-101, MW-102, MW-103, and MW-104) and all the gas probes except GP-1. The extraction points (LC-1, LC-2, LC-3 and GV-6) along with GP-1 were monitored on a biweekly basis. Monitoring was done by taking field measurements using a RKI Eagle gas meter.

Landfill gas sampling was conducted using summa canisters. The canisters were provided by Pace Analytical Services Inc. of Minneapolis, MN. Each canister was sent with a regulator that allowed a sampling time of one hour. After sampling was completed, the canisters were shipped to Pace for analysis of VOCs using method EPA Method TO-14A.

3.4 Landfill Cap Inspection

The WDNR-approved Remedial Design included an inspection routine for the landfill. A visual inspection was completed semi-annually to look for evidence of settlement, seeps, vegetation problems, erosion, vandalism, or problems with gas vents, leachate wells, or monitoring wells. The condition of the fence and signs was also checked.

4.0 FIVE-YEAR REVIEW FINDINGS

4.1 Groundwater

During the 2005-2010 monitoring period, groundwater samples were collected from select monitoring wells and private water supply wells for analysis of field parameters and VOCs. Natural attenuation parameters were also sampled for beginning in October, 2009. Sampling frequency increased after the detection of vinyl chloride in the fall of 2001 and is currently conducted quarterly.

4.1.1 Groundwater Elevations

Each well is screened in one of the four hydrostratigraphic units (Layers 1-4). A listing of each well and its corresponding stratigraphic unit is presented in Table 4-1. Historical groundwater elevation data are summarized on Table 4-2 and plotted by hydrostratigraphic unit on Chart 4-1 to Chart 4-4. The lowest water levels occurred in May, 2002 when all nine water table wells (MW-101, MW-102, MW-103, MW-104, MW-106, MW-107, MW-108, MW-111 and MW-112) were either dry or had insufficient water in the well for sampling purposes (Figure 4-1). Piezometers P-101, P-102, P-103, P-104 and P-106 had groundwater elevations that were 21 to 24 feet lower than normal; P-107, P-107D, P-108 and P-111 had groundwater elevations that were 5 to 9 feet lower than normal (Figure 4-2). The water level decreases were a result of dewatering from Northeast Asphalt, a gravel pit operation on the Hollatz property that is east of the landfill. Dewatering may have been going on for several months but ceased in May, 2002.

Water levels have recovered from the dewatering event that occurred in 2002. Water table and potentiometric surface maps for October 2010 are included as Figures 4-3 to 4-6 for comparison to the December 1993 baseline conditions (Figures 2-3 and 2-4) and the May 2002 dewatering event (Figures 4-1 and 4-2).

The Layer 1 flow has historically had a southwest direction (Figure 4-3). Groundwater flow in Layer 2 has historically been to the southwest but the flow direction changed to the southeast during the dewatering activities at Northeast Asphalt in 2002 (Figure 4-4). In Layer 3, the October 2003 and April 2004 levels indicated a southwesterly groundwater flow. Subsequent events indicate a southwesterly flow that turns westerly based on the potentiometric surfaces measured in new wells P-113B and P-116 which were added subsequent to the April 2004 event (Figure 4-5). Groundwater flow directions did not change significantly during this five year review period for Layer 1, 2 and 3.

When pumping at the City of Ripon Municipal Well # 9 was terminated in May 2007, the flow direction in Layer 4 shifted from the southeast to the west. The City brought Well # 9 back on line in April 2010 but the groundwater flow direction continues to be toward the west (Figure 4-6).

4.1.2 Groundwater Chemistry

Groundwater sampling results for the period 2000 to 2005 are summarized in Table 4-3 through

Table 4-5.

4.1.2.1 Private Water Supply Wells

A total of three private wells in the vicinity of the landfill have been sampled quarterly for VOCs during this reporting period including Rohde (N8745 South Koro Road), Gaastra (W14297 Charles Street) and Perry formally known as Perry/Watkins or Baneck (W14298 Charles Street). Vinyl chloride was not detected in the water supply wells during this five year review period (Table 4-3).

4.1.2.2 Monitoring Wells

Groundwater samples were analyzed for VOCs using EPA Method 8260B. The historical groundwater quality data for each well is summarized on Table 4-4. Time concentration plots of all wells are presented in Charts 4-36 through 4-62.

The current condition at the Site is that PCE has totally degraded to non-detectable levels in all wells and TCE has totally degraded to non-detectable levels in 6 of 7 wells and in the 1 well where it is still present (MW-103) it is at a concentration below the ES. The PCE and TCE daughter product DCE has totally degraded to non-detectable levels in 7 of 11 wells and in the 4 wells where it is still present it is at a concentration below the PAL. The remaining daughter product VC has totally degraded to non-detectable levels in 9 of 13 wells and in the 4 wells that it is still present (3 wells in Layer 3 and 1well in Layer 4) the highest concentration is 5.4 ug/L.

The following is a summary of the VOC analytical results in this review period as they relate to groundwater standards for each well that was sampled. To better track impacts at various depths, the results are organized according to the hydrostratigraphic units. The only compound that exceeds the NR 140 ES is VC.

Layer 1 Wells

- MW-101: No detections of any VOC.
- MW-102: No detections of any VOC.
- MW-103: TCE has exceeded the PAL (but below the ES) throughout this five year period with concentrations remaining stable. DCE has not exceeded the PAL since March, 2009 and VC has not been detected in this well since October, 2007.
- MW-104: VC has not been detected in this well since April, 2006. Benzene has not been detected above PAL since October, 2007.
- MW-106: No detections of any VOC.
- MW-107: No detection of TCE since October 2007.
- MW-108: No detections of any VOC.
- MW-111: No detections of any VOC.
- MW-112: TCE has not been detected since May, 2008. DCE has not been over its PAL since October, 2008 and has not exceeded its ES since January, 2005. VC was detected once since May, 2008 at a level below the LOQ.

Layer 2 Wells

- P-101: No detections of any VOC.
- P-102: No detections of any VOC.
- P-103: VC detected twice since May 2008 at level below LOQ.
- P-104: No detections of any VOC.
- P-106: No detections of any VOC.
- P-107: VC was detected intermittently during the review period at 1.1 ug/L or less
- P-108: No detections of any VOC.
- P-111: No detections of any VOC.

Layer 3 Wells

- MW-3B: No detections of any VOC.
- P-103D: VC detected twice since October 2008 at level below LOQ.
- P-111D: VC exceeds the ES but concentrations decreased from 11 to 4.7 ug/L
- P-113B: No detections of any VOC.
- P-114: VC exceeds the ES but concentrations decreased from 8.9 to 5.4 ug/L
- P-115: VC was detected intermittently during the review period at 1.9 ug/L or less
- P-116: No detections of any VOC.

Layer 4 Wells

- MW-3A: No detections of any VOC.
- P-107D: VC exceeds the ES but concentrations decreased from 7.7 to 1.6 ug/L
- P-113A: No detections of any VOC.

Natural attenuation parameters were analyzed starting the October, 2009 round of sampling. The results are summarized in Table 4-5 and continue to indicate that the aquifer is marginally aerobic.

4.2 Leachate

Three leachate wells are included in the monitoring plan, LC-1, LC-2, and LC-3. Analytical data for these wells are summarized in Table 4-6.

Since the time the composite cap was constructed on the landfill in 1996, the levels of leachate in the leachate wells have fallen by 3 to 8 feet. This is consistent with the fact that the composite cap allows a negligible quantity of precipitation to enter the top of the landfill to produce leachate. In fact, two of the three leachate head wells, and specifically those in the thickest portion of the landfill, have been dry for years. The construction logs for these wells indicate that they actually extend beneath the bottom of the wastes in the landfill, which indicates that there is no leachate in the landfill at these locations. This lack of leachate generation continues at the site. Wells LC-1 and LC-3 routinely have no leachate in them.

The chemical constituents of leachate from LC-1 and LC-2 include primarily aromatic compounds such as benzene, toluene, ethylbenzene and xylene (BTEX) and trimethylbenzenes (TMB) with little or no chlorinated compounds. The one sample of leachate from LC-3 was

different and included mostly chlorinated compounds (1,2-DCE and VC) with very few aromatic compounds.

4.3 Landfill Gas

Prior to active gas extraction beginning in 2006, the landfill gas composition as measured in the leachate wells was approximately 62% methane and 36% carbon dioxide. Subsequent to active gas extraction the methane concentrations have decreased to a level ranging between 5-25% for LC-1 and LC-3 and 20-50% for LC-2. The operation of the gas extraction system is seasonally adjusted to maximize landfill gas extraction while minimizing the introduction of atmospheric oxygen in order to maintain O_2 levels <5%.

Results of the gas monitoring are in presented in Tables 4-7 and 4-8 and Charts 4-5 to 4-35. Monitoring of the gas probes and wells outside the limits of fill indicates that the gas extraction system has controlled gas migration from the fill area since startup in March 2006. Gas concentrations in all exterior wells and gas probes except at GP-1 have been consistently below the methane LEL (5%). The methane concentration in GP-1 has been lowered below the LEL with increased operation of the gas extraction system.

4.4 Landfill Cap Inspection

The final cover system is in excellent condition. There has been no visible settlement, ruptures or erosion in the soil cover, water does not pond on the cap, and the vegetation is thick and tall. Initially some stressed vegetation was noticed in the vicinity of MW-104, possibly related to methane gas, but the vegetation has subsequently been naturally re-established in this area. No landfill cap maintenance has been required except for mowing.

5.0 ASSESSMENT

The original remedies selected and implemented at the FF/NN Landfill NPL Site included a composite landfill cap and a passive gas control system. Additional remedies subsequently implemented include extension and hook-up of municipal water supply to private wells south of the Site, establishing a well casing advisory for the area around the Site, and installation and start-up of an interim active gas extraction system. The combination of these remedies is protective of human health and the environment and complies with Federal and State requirements that are legally applicable or relevant and appropriate to the Remedial Action. This statement of protectiveness is based on the assessment presented in the following sections.

5.1 Access and Institutional Controls

5.1.1 Protection of Site Remedy

The current site remedy is, for the most part, located on the landfill property and includes the landfill cap, site fencing with warning signs and the interim gas control system. For the property containing the landfill, the institutional controls are protective of the remedy. The City of Ripon and Town of Ripon are the owners of and possess control over the landfill property. The City of Ripon and Town of Ripon are also part of the PRP Group for the site. This makes enforcement of the site restrictions identified in the property deed and in NR 504 straightforward and effective. The site fencing and signage also discourages unauthorized site access and is protective of the remedy. The Site is also located on the WDNR GIS Registry of contaminated sites and is identified as having ongoing cleanup with continuing obligations.

Groundwater monitoring wells and landfill gas probes are protected with lockable steel casings that prevent vandalism and tampering. Protective fences are placed around the wells/probes located on the City property used as a dog park south of the landfill. Access agreements are in place for the monitoring wells (P-113 to P-116) located on private residential properties.

The selected groundwater remedy in the 1996 ROD was the no action alternative. In 2002 and to a lesser extent in 2008, the adjacent property owner NEA had implemented an aquifer dewatering program that adversely affected the hydrology at and around the landfill site. NEA has a WPDES general permit for its non-metallic mining operation but there is no restriction on discharge rate although they are required to report annually. The adverse pumping events indicate that the current ICs are ineffective to prevent this from happening. The WDNR has informed NEA in an October 14, 2008 non-compliance letter regarding their general WPDES water discharge permit to restrict their pumping but it is not enforceable. However, the letter states the WDNR could make them a responsible party for the site if they continued which would make them potentially liable for cleanup costs. So far, the warning seems to have been effective.

In 2009 a public notice was received from the Town of Ripon regarding a special use permit to operate a sand and gravel pit on property adjacent to the southeast part of the landfill. Such an operation could have had an adverse affect on the hydrology. Comments were submitted by the WDNR and the FF/NN Landfill PRP Group which resulted in the Town denying the permit. The

Town of Ripon special use permitting process was a very effective tool and enforceable in this case.

5.1.2 Minimizing Potential Exposure

Most of the institutional controls for the Site are for minimizing the potential for human and environmental exposure to site contaminants. Many of these ICs are layered to provide redundant coverage and minimize the potential breach of any one control.

NR 812 prohibits water supply well installations within 1200 feet of the landfill. The WDNR well advisory area overlaps and extends beyond the 1200-foot setback with well casing depth and construction restrictions. The setback is enforceable, however the advisory is informational but not enforceable. The effectiveness of these ICs could be limited if existing or new parcel owners within the areas of concern are not aware of these prohibitions and advisories. All water supply well drillers have received or should be aware of the well advisory area notice and therefore should notify anyone wanting to install a well in the affected area. The Town of Ripon requires building permits for any new building, structure or mobile home. Such construction may include construction of a new well. A formal request was submitted to the Town of Ripon to flag any such permits that include well construction so that the permittee can be informed about the restrictions and advisories up front.

City of Ripon Ordinance Section 10.24 requires abandonment of private wells located on premises served by the Ripon water utility water system located within the city of Ripon unless a well operation permit has been obtained by the well owner from the city of Ripon. This control is effective and enforceable. In 2002, the municipal water supply was extended to serve properties along S. Koro Road and Charles Street in the Town of Ripon. The municipal water provides an alternative water supply to those on private wells that have or could become contaminated. The contract agreement between a property owner and the FF/NN Landfill PRP Group requires abandonment of the private well or retrofit/conversion of the private well into groundwater monitoring well for anyone that elects hook up. This IC is effective but the requirement to hook up is voluntary.

5.2 Remedial Action Performance

5.2.1 Landfill Cap

The landfill cap has been successful at providing a barrier to the waste, promoting drainage off the surface of the landfill and minimizing the percolation of precipitation into the waste. As a result of the cap performance leachate head levels have decreased.

Inspections of the landfill cap indicate no signs of erosion or settlement. Other than cutting the grass, no maintenance of the cap has been required following implementation of the Site remedy.

5.2.2 Interim Active Gas Extraction System

Monitoring of the interim active gas extraction system indicates that the system is effective in

preventing the buildup of methane gas beneath the cap and in preventing the migration of methane beyond the limits of fill. Monitoring of VOCs in the landfill gas indicates a 100% reduction in the concentration of vinyl chloride.

5.2.3 Groundwater Quality

Groundwater sampling from site monitoring wells indicates that VOC concentrations are decreasing or stable. Reduction of VC in groundwater has occurred as the interim landfill gas extraction system removes landfill gas containing VC. The following is a comparison of the VC detections in April, 2006 (Figure 5-1) when active gas extraction was started compared to the most recent data from October, 2010 (Figure 5-2).

Well	Layer	Date	Concentration	Date	Concentration	Trend
MW-103	1	4/25/06	1.8	10/5/10	ND	Decreased to ND
MW-104	1	4/25/06	1.1	10/5/10	ND	Decreased to ND
MW-107	1	4/25/06	0.55 J	10/5/10	ND	Decreased to ND
MW-112	1	4/25/06	2.8	10/5/10	.033 J	Decreasing
P-103	2	4/25/06	2.9	10/5/10	.041 J	Decreasing
P-107	2	4/25/06	0.79	10/5/10	0.94 J	Sporadic detections
P-103D	3	4/25/06	2.6	10/5/10	0.71 J	Decreasing
P-111D	3	4/25/06	11	10/5/10	4.7	Decreasing
P-114	3	4/25/06	7.9	10/5/10	5.4	Decreasing
P-115	3	4/25/06	0.62	10/5/10	1.2	Stable
P-107D	4	4/25/06	7.7	10/5/10	1.6	Decreasing

As can be seen in the table above, VC was detected in eleven wells and in each of the hydrostratigraphic units in the beginning of the current five-year review period when the start-up of active gas extraction began in 2006. By comparison, VC is now detected in eight of the eleven wells it was previously detected. In six of those wells that still contain detectable VC the concentrations have been decreasing. In the other two wells the VC concentration is sporadic or stable.

5.3 ARARs Review

No new applicable or relevant and appropriate requirements (ARARs) will necessitate a change in the remedy or remedial action.

5.4 Exposure Pathways and Risk Assessment Methodologies

No changes in exposure pathways or risk assessment methodologies have occurred that would necessitate a change in the remedy or remedial action.

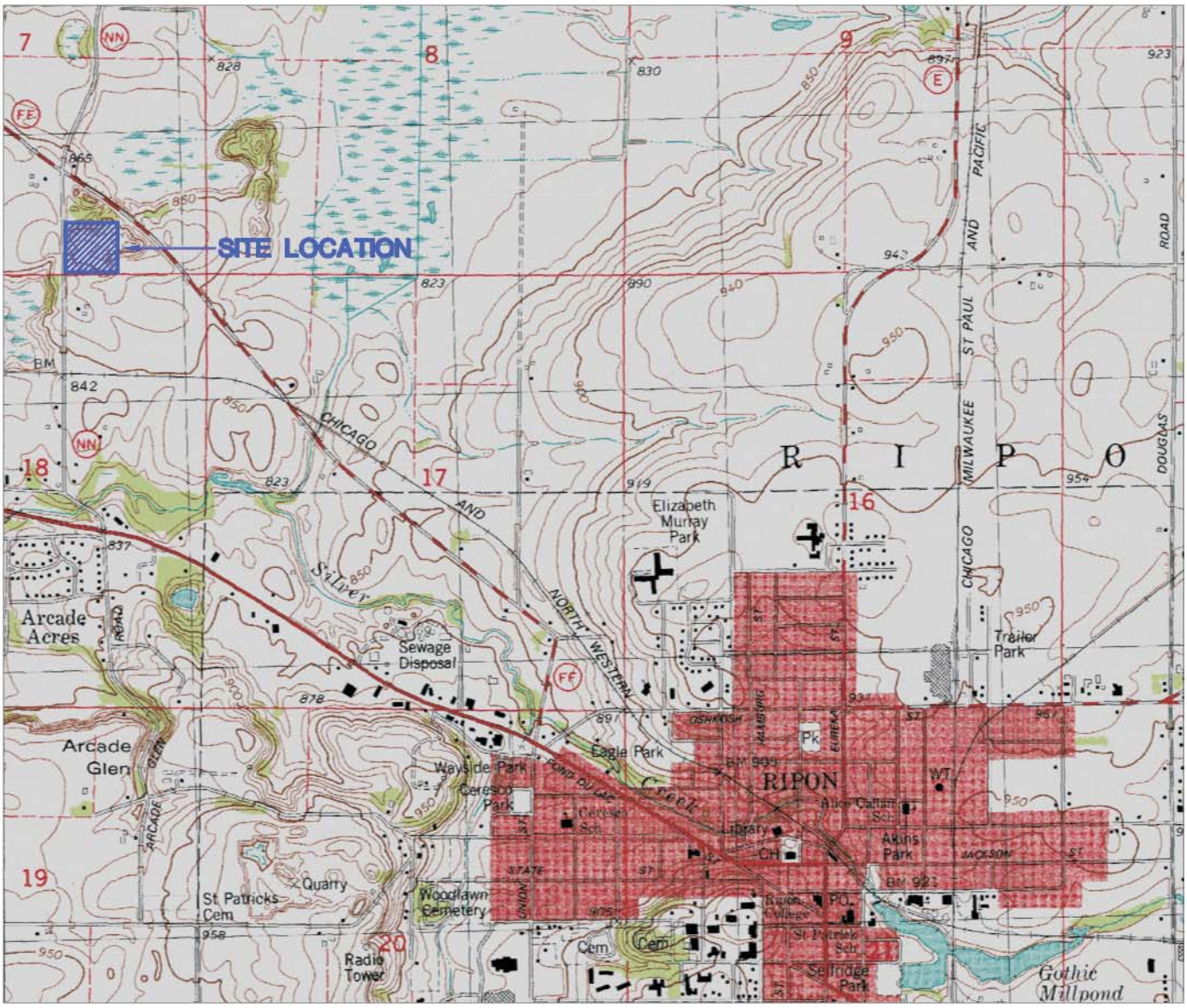
5.5 Contaminant Characteristics

No changes in contaminant characteristics have occurred that would necessitate a change in the

remedy or remedial action.

6.0 RECOMMENDATIONS

Based on the assessment presented in the previous section, the interim active gas extraction should be selected as the final remedy. Groundwater and gas monitoring should be continued to evaluate the performance of the interim gas extraction system but the frequency should be reduced from quarterly to semiannually based on over 17 years of groundwater monitoring data.



QUADRANGLE LOCATION

SCALE

0 6000

Feet

N

	RIPON FF/NN LANDFILL RIPON, WISCONSIN	DATE: 12/08/00
		DESIGNED: MCL
		CHECKED: VJF
	SITE LOCATION AND LOCAL TOPOGRAPHY	APPROVED: JEN
		DRAWN: MCL
		PROJ.: N734
	GeoTrans, Inc. A TETRA TECH COMPANY	Figure 2-1

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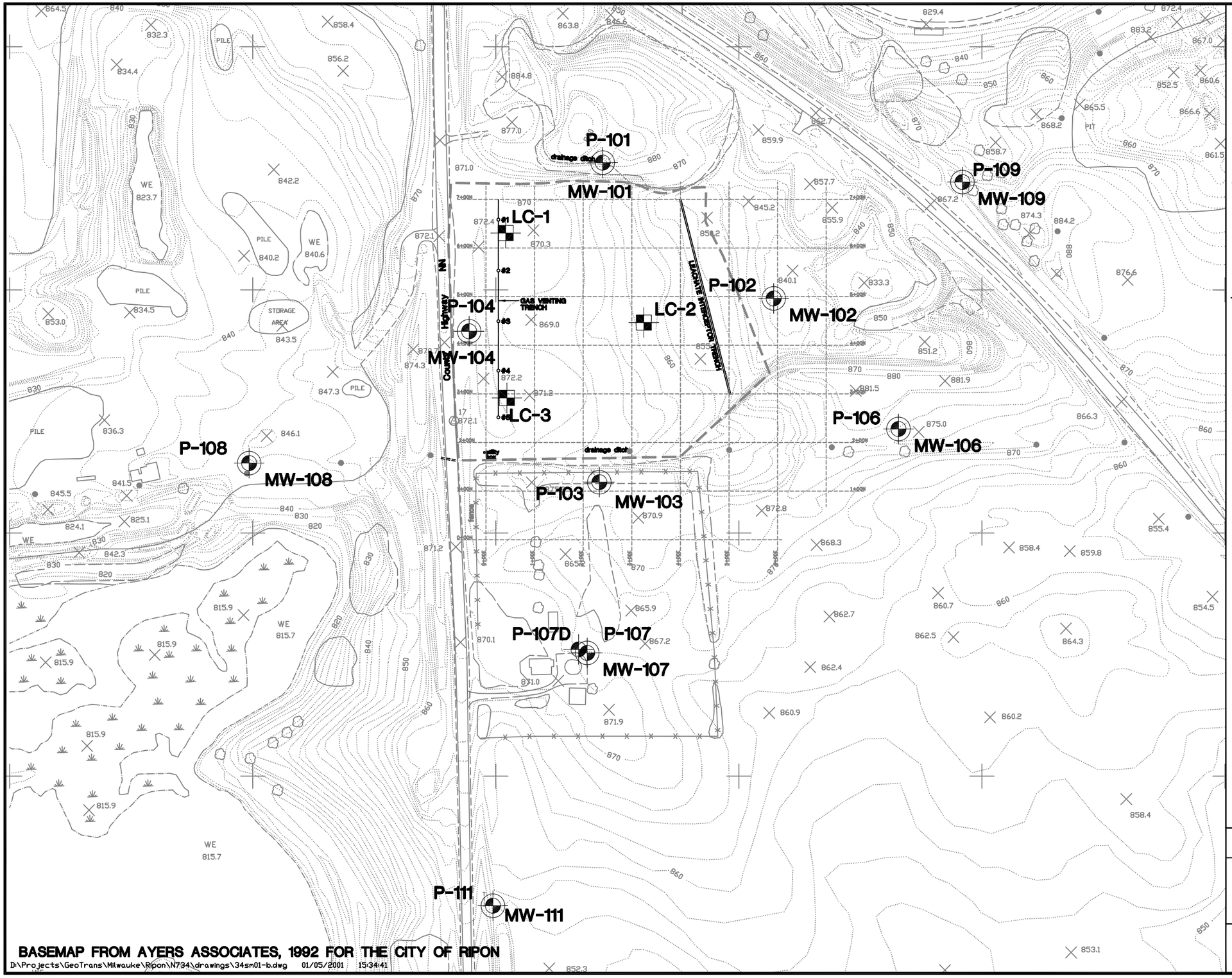

EXPLANATION

- MW-105 / P-105 — NESTED MONITOR WELL/PIEZOMETER LOCATION AND DESIGNATION
- LC-1 — LEACHATE WELL LOCATION AND DESIGNATION
- #1 — PASSIVE GAS VENT LOCATION AND DESIGNATION
- — — — — EXTENT OF LANDFILL CAP

N

SCALE

0 400

Feet

BASEMAP FROM AYERS ASSOCIATES, 1992 FOR THE CITY OF RIPON

D:\Projects\GeoTrans\Milwauke\Ripon\N734\drawings\34sm01-b.dwg 01/05/2001 15:34:41

RIPON FF/NN LANDFILL
RIPON, WISCONSIN

EXISTING CONDITIONS (AUGUST 1993)

DATE:	01/08/01
DESIGNED:	MCL
CHECKED:	JLF
APPROVED:	GLD
DRAWN:	RDH
PROJ.:	N734-104

GeoTrans, Inc. A TETRA TECH COMPANY

Figure 2-2

MW-105
(825.21)

MW-110
(825.31)

MW-101
(824.24)

MW-104
(824.21)

MW-102
(824.42)

MW-106
(824.37)

MW-108
(818.31)

MW-103
(821.19)

MW-107
(819.62)

825
824
823
822
821
820
819

Highway NN
County

LEACHATE INTERCEPTOR TRENCH
GAS VENTING TRENCH
drainage ditch

EXPLANATION

MW-110 (825.31) — MONITOR WELL LOCATION, DESIGNATION AND GROUND WATER ELEVATION (feet msl)

WATER TABLE CONTOUR
CONTOUR INTERVAL 1.0 ft.
(Dashed where inferred)

Note : Water level measurements obtained December 16, 1993.

N

SCALE
0 400
Feet

RIPON FF/NN LANDFILL
RIPON, WISCONSIN

WATER TABLE MAP (DECEMBER 16, 1993)

DATE:	12/08/00
DESIGNED:	RAG
CHECKED:	BK
APPROVED:	
DRAWN:	MCL
PROJ.:	N734-104

GeoTrans, Inc. A TETRA TECH COMPANY

Figure 2-3

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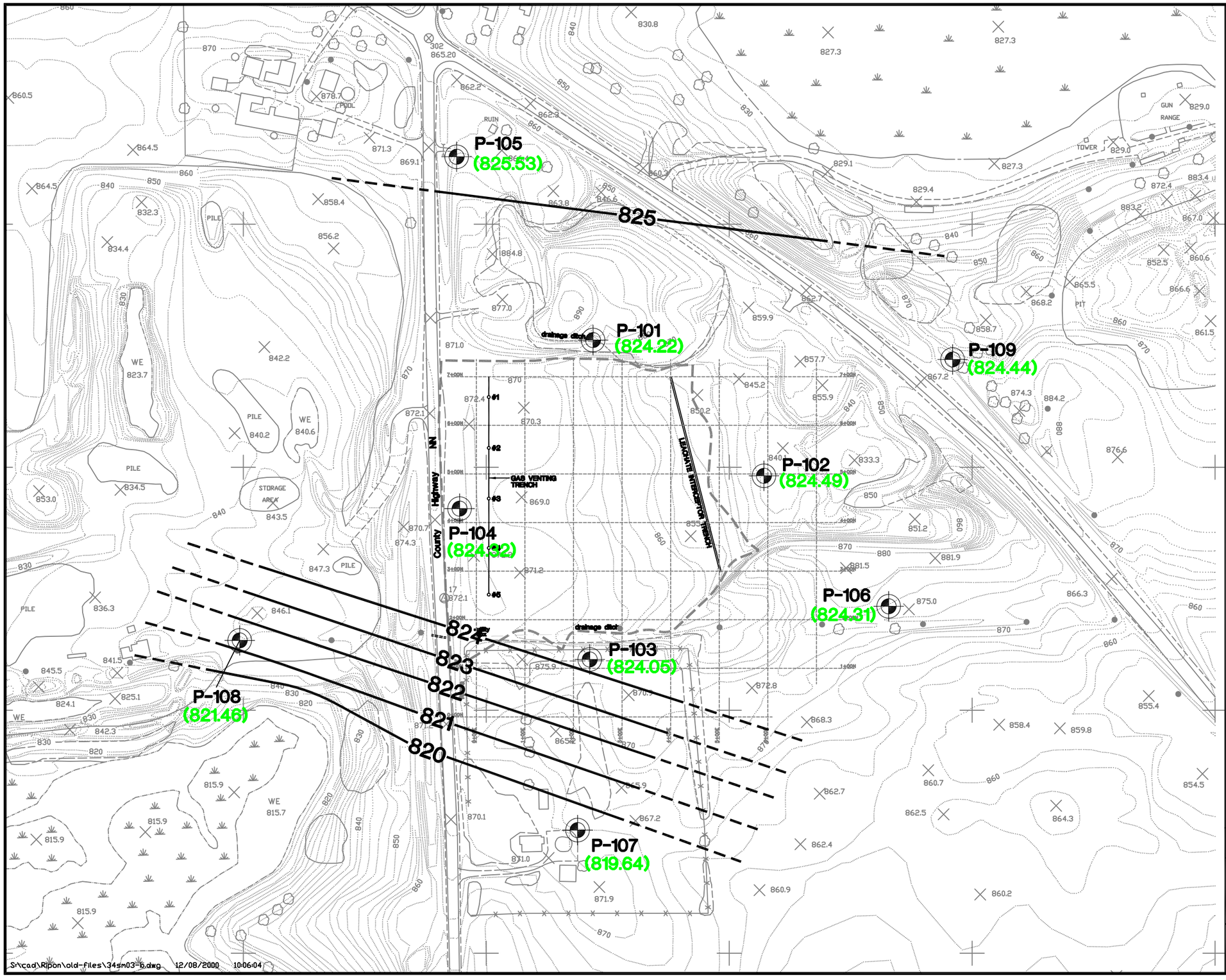

EXPLANATION

P-109 (824.15) — PIEZOMETER LOCATION, DESIGNATION AND POTENTIOMETRIC SURFACE SURFACE ELEVATION (feet msl)

POTENTIOMETRIC CONTOUR
CONTOUR INTERVAL 1.0 ft.
(Dashed where inferred)

Note : Water level measurements obtained December 16, 1993.

N

SCALE
0 400
Feet

RIPON FF/NN LANDFILL
RIPON, WISCONSIN

POTENTIOMETRIC SURFACE MAP (DECEMBER 16, 1993)

DATE:	12/08/00
DESIGNED:	RAG
CHECKED:	BK
APPROVED:	VJF
DRAWN:	MCL
PROJ.:	N734-104

GeoTrans, Inc. A TETRA TECH COMPANY

Figure 2-4

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P-105 [ND]
MW-105 [ND]
MW-110 [ND]
P-101 [ND]
MW-101 [*0.7]
P-109 [ND]
MW-109 [NOT SAMPLED]
P-102 [ND]
MW-102 [ND]
P-104 [ND]
MW-104 [*38]
P-106 [*0.6]
MW-106 [ND]
P-108 [ND]
MW-108 [11]
P-103 [ND]
MW-103 [**485]
[**8]P-107D
P-107 [**10]
MW-107 [**2]

Highway NN
County
LEACHATE INTERCEPTOR TRENCH
GAS VENTING TRENCH
drainage ditch
RUIN
POOL
GUN RANGE
TOWER
PIT
PILE
STORAGE AREA
WE

EXPLANATION

P-104 [ND]
MW-104 [38]
MONITOR WELL, PIEZOMETER LOCATION, DESIGNATION AND TOTAL VOC CONCENTRATION (in parts per billion)

LIMIT OF VOC CONCENTRATIONS EXCEEDING WDNR NR 140 PAL's

** ONE OR MORE COMPOUNDS DETECTED IN WELL EXCEEDS WDNR NR 140 ES

* ONE OR MORE COMPOUNDS DETECTED IN WELL EXCEEDS WDNR NR 140 PAL

Note : Water chemistry data obtained in October, 1993.

N

SCALE
0 400
Feet

RIPON FF/NN LANDFILL
RIPON, WISCONSIN

EXTENT OF VOCs EXCEEDING WDNR NR140 PALs AT THE WATER TABLE (OCT. 1993)

DATE:	12/08/00
DESIGNED:	RAG
CHECKED:	BK
APPROVED:	VJF
DRAWN:	MCL
PROJ.:	N734-104

GeoTrans, Inc. A TETRA TECH COMPANY

Figure 2-5

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BANECK
GAASTRA
P-116
(HADEL)
BICYCLE PATH
CHARLES STREET
P-113A
P-113B
P-114
(EHSTER)
P-115
(WIESE)
MILLER
(abandoned)
ALTNAU (abandoned)
SOUTH KORO ROAD
MW-108
P-108
GP-8
GP-2
GP-10
P-104
MW-104
GV-4
GP-11
MW-112
GP-3
LC-3
GP-7
GV-1
GV-2
GV-3
LC-1
P-111
P-111D
MW-111
GV-5
P-107D
P-107
MW-107
GP-6
GV-8
GV-7
GV-6
P-101
MW-101
P-103D
P-103
MW-103
LC-2
GV-9
GV-10
GV-11
GV-12
GP-4
GP-1
GP-12
P-102
MW-102
GP-5
ROHDE
MW-3A
MW-3B
P-106
MW-106
CTY HWY FF

EXPLANATION

- P-104 / MW-104 — MONITOR WELL, PIEZOMETER LOCATION, DESIGNATION
- LC-2 — LEACHATE HEAD WELL LOCATION, DESIGNATION
- OUTLINE OF CLOSED LANDFILL
- GP-1 — GAS PROBE LOCATION AND DESIGNATION
- GV-1 — GAS VENT LOCATION AND DESIGNATION

N

SCALE

0 500

Feet

FF/NN LANDFILL
RIPON, WISCONSIN

MONITORING
LOCATION MAP

DATE:	10/12/10
DESIGNED:	HJW
CHECKED:	MRN
APPROVED:	MRN
DRAWN:	HJW
PROJ.:	117-2202040

GeoTrans, Inc. A TETRA TECH COMPANY

Figure 3-1

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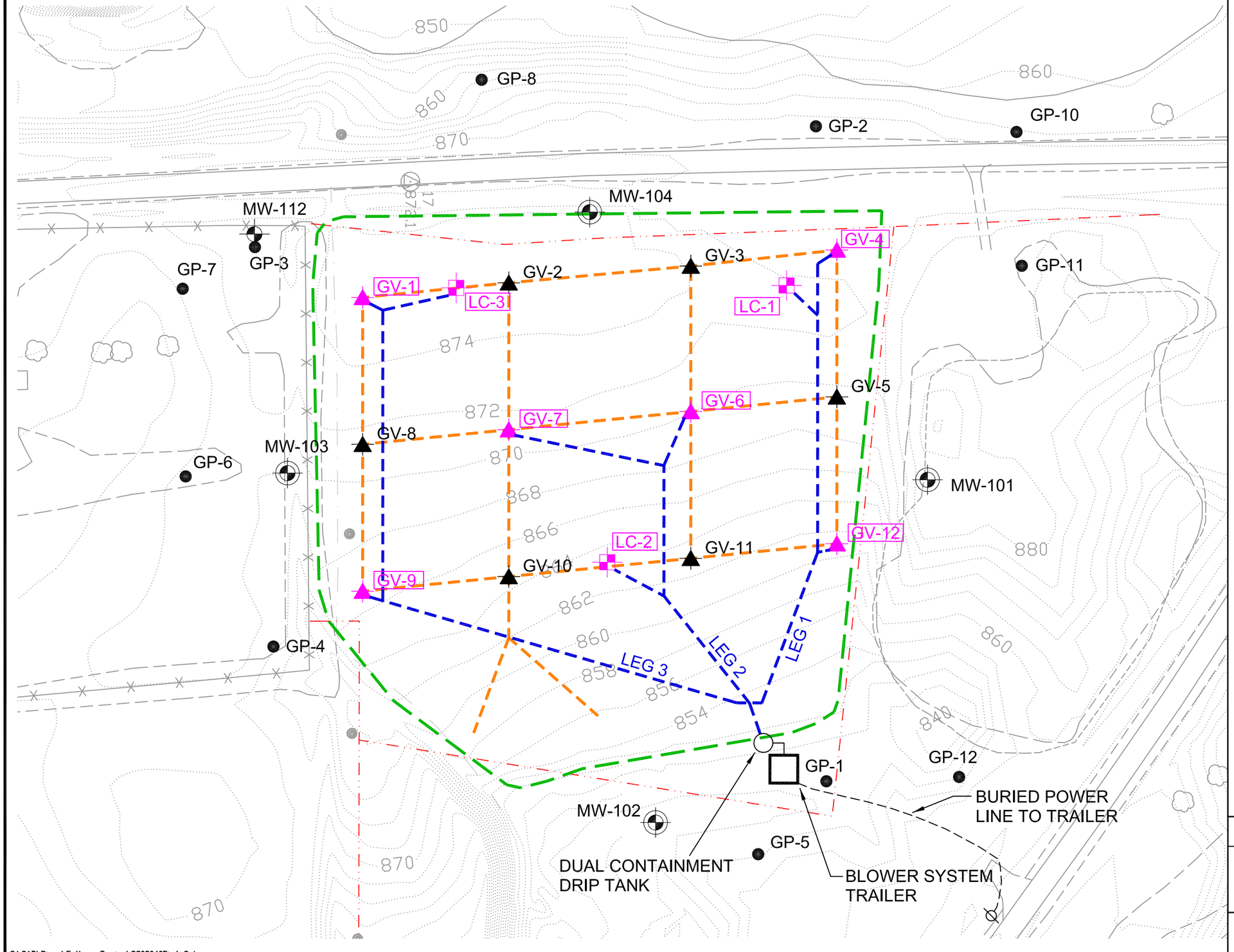

EXPLANATION

- MW-104 — MONITOR WELL LOCATION, DESIGNATION
- LC-2 — LEACHATE HEAD WELL LOCATION, DESIGNATION
- GP-1 — GAS PROBE LOCATION AND DESIGNATION
- GV-9 — GAS VENT LOCATION AND DESIGNATION
- 4" DIAMETER BURIED PASSIVE GAS COLLECTION SYSTEM PIPING
- 3" DIAMETER BURIED GAS CONVEYANCE PIPING
- GV-1 — ACTIVE LANDFILL GAS EXTRACTION POINT
- PROPERTY LINE
- OUTLINE OF CLOSED LANDFILL

N

SCALE

0 200

Feet

FF/NN LANDFILL
RIPON, WISCONSIN

INTERIM ACTIVE GAS EXTRACTION SYSTEM PIPING LAYOUT

DATE:	10/12/10
DESIGNED:	HJW
CHECKED:	MRN
APPROVED:	MRN
DRAWN:	HJW
PROJ.:	117-2202040

GeoTrans, Inc. A TETRA TECH COMPANY

Figure 3-2

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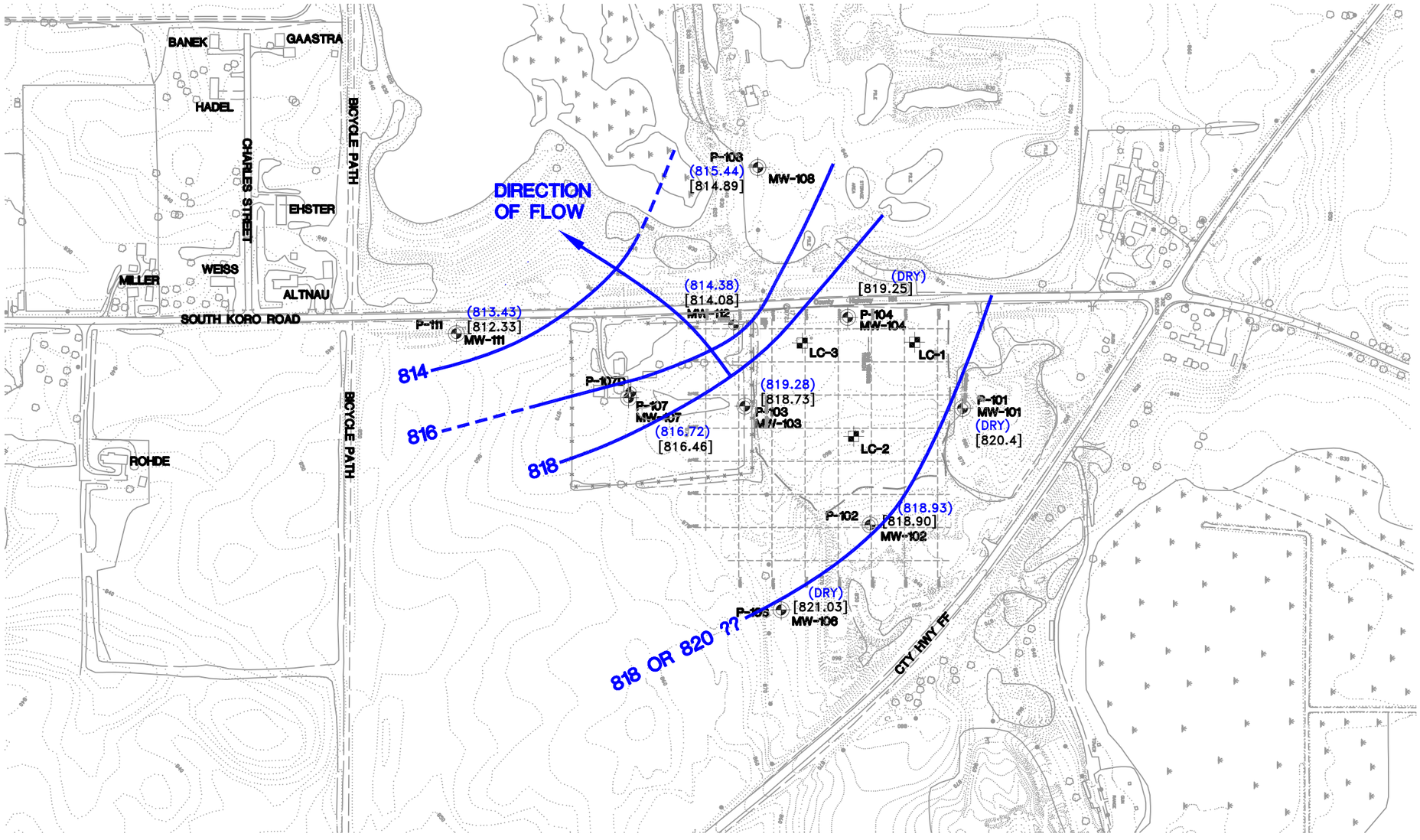

EXPLANATION

- P-104 / MW-104 — MONITOR WELL, PIEZOMETER LOCATION, DESIGNATION
- LC-2 — LEACHATE HEAD WELL LOCATION, DESIGNATION
- — — — OUTLINE OF CLOSED LANDFILL
- (819.25) — POTENTIOMETRIC SURFACE ELEVATION
- [791.73] — WELL BOTTOM ELEVATION

N

SCALE

0 700

Feet

RIPON FF/NN LANDFILL
RIPON, WISCONSIN

WATER TABLE ELEVATIONS MAY 2002

DATE:	5/28/02
DESIGNED:	GLD
CHECKED:	GLD
APPROVED:	GLD
DRAWN:	HJW
PROJ.:	N734-104

GeoTrans, Inc. A TETRA TECH COMPANY

Figure 4-1

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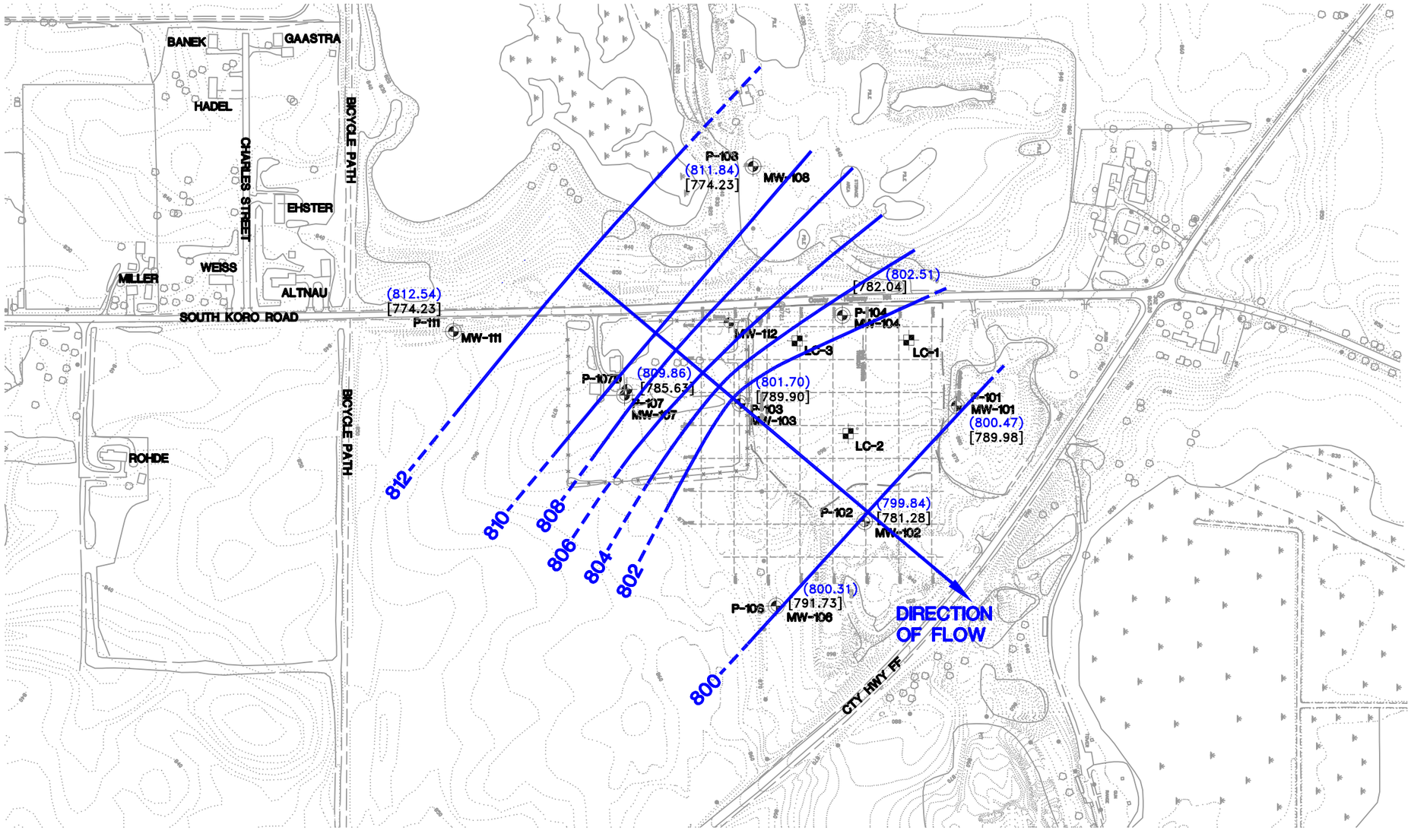


EXPLANATION

P-104 / MW-104	MONITOR WELL, PIEZOMETER LOCATION, DESIGNATION
LC-2	LEACHATE HEAD WELL LOCATION, DESIGNATION
— — —	OUTLINE OF CLOSED LANDFILL
(821.63)	POTENTIOMETRIC SURFACE ELEVATION
[791.73]	WELL BOTTOM ELEVATION

N

SCALE

0 700

Feet

RIPON FF/NN LANDFILL
RIPON, WISCONSIN

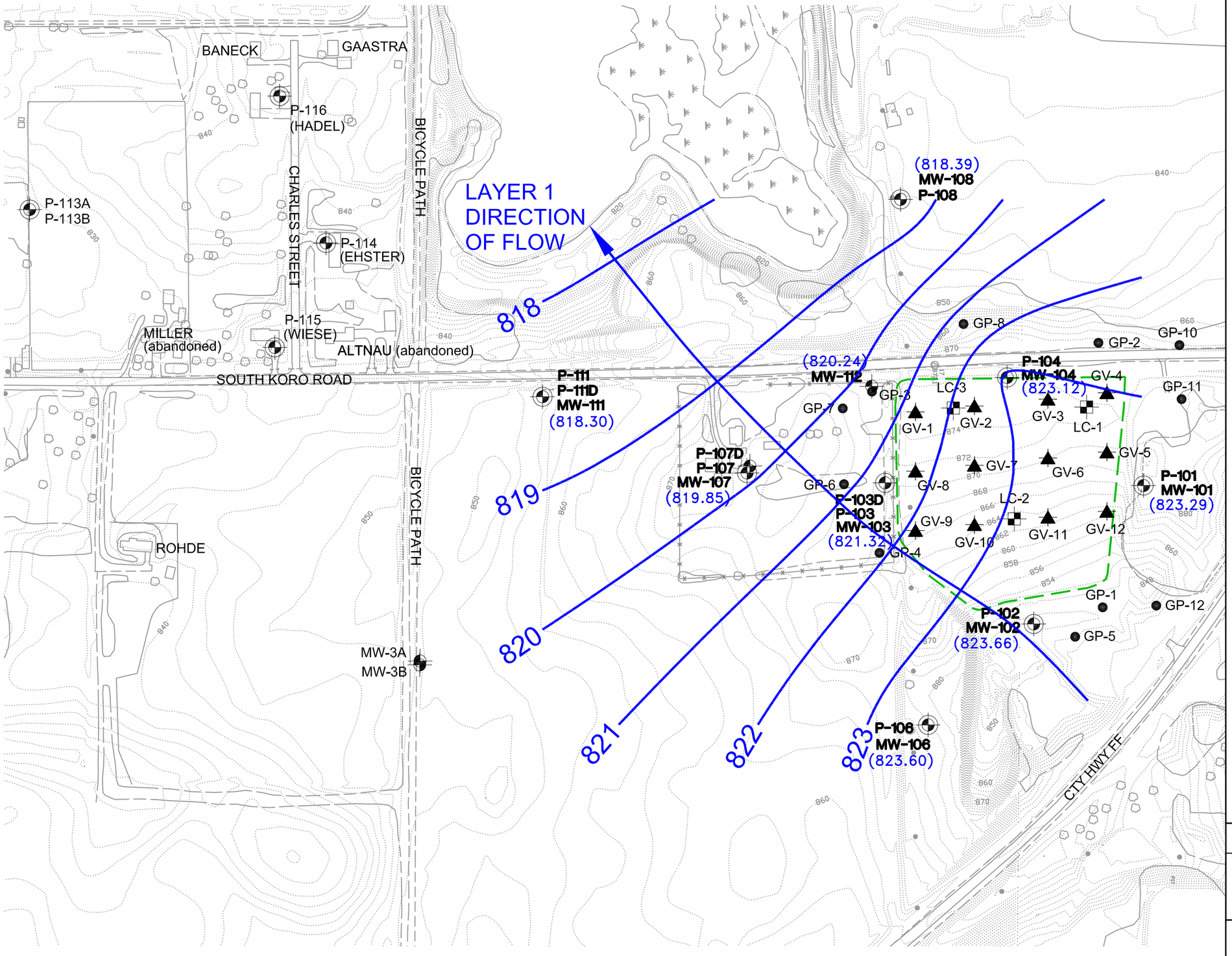
POTENTIOMETRIC SURFACE MAP MAY 2002

DATE:	5/28/02
DESIGNED:	GLD
CHECKED:	GLD
APPROVED:	GLD
DRAWN:	HJW
PROJ.:	N734-104

GeoTrans, Inc. A TETRA TECH COMPANY

Figure 4-2

S:\cad\Ripon\N734\5-28-02\34wt03-b.dwg 05/28/2002 11:05:17



EXPLANATION

P-104 / MW-104	MONITOR WELL, PIEZOMETER LOCATION, DESIGNATION
LC-2	LEACHATE HEAD WELL LOCATION, DESIGNATION
	OUTLINE OF CLOSED LANDFILL
GP-1	GAS PROBE LOCATION AND DESIGNATION
GV-1	GAS VENT LOCATION AND DESIGNATION
(823.29)	GROUNDWATER ELEVATION

N

SCALE

0 500

Feet

BASEMAP FROM FOND DU LAC COUNTY PLANNING DIVISION, SPRING 2000.

FF/NN LANDFILL
RIPON, WISCONSIN

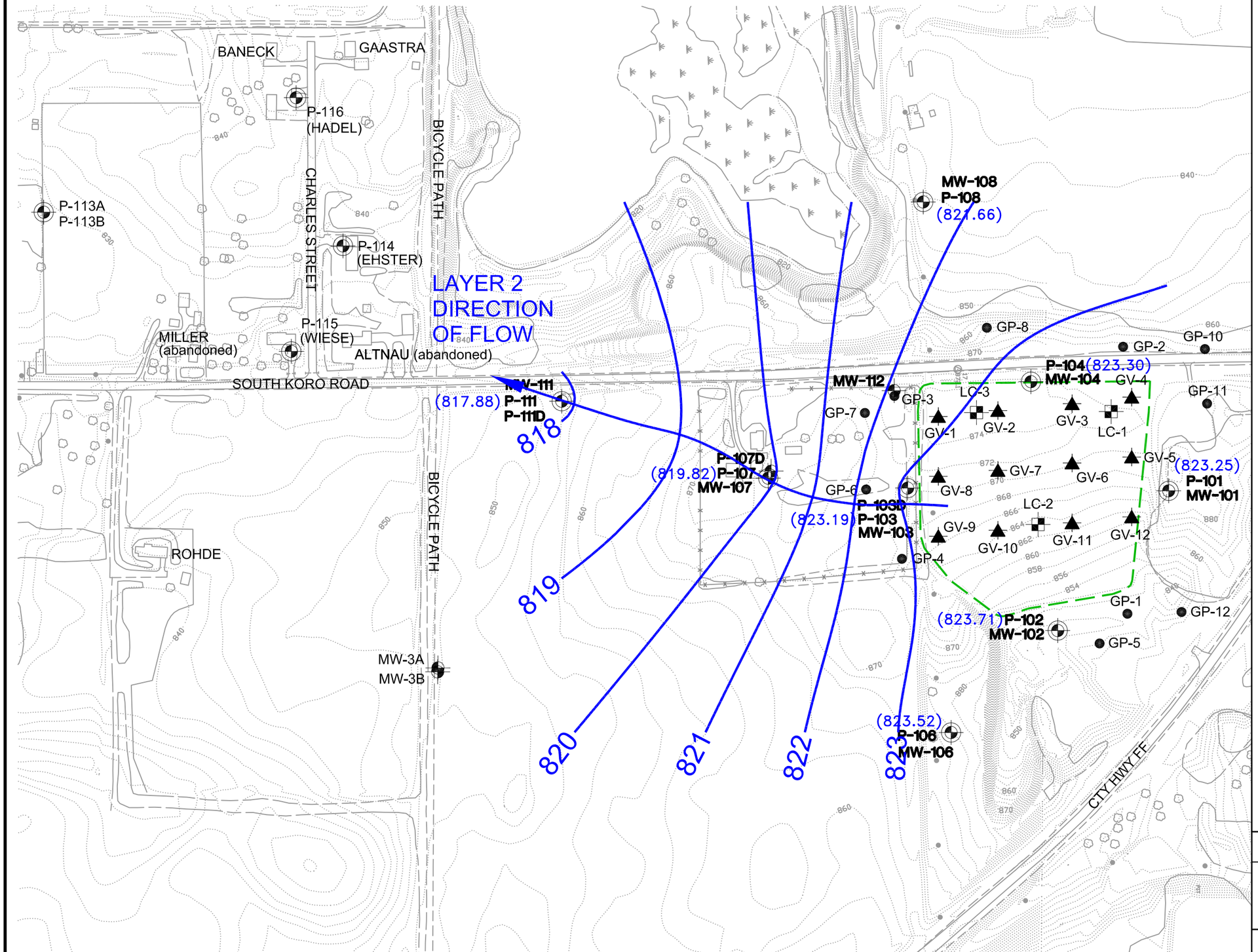
GROUNDWATER ELEVATIONS
LAYER 1 WELLS
SEPTEMBER 2010

DATE:	10/12/10
DESIGNED:	HJW
CHECKED:	MRN
APPROVED:	MRN
DRAWN:	HJW
PROJ.:	117-2202040

GeoTrans, Inc. A TETRA TECH COMPANY

Figure 4-3

S:\CAD\Ripon\2202.040\10-12-10\2202040Fig5.dwg



EXPLANATION

P-104 / MW-104	MONITOR WELL, PIEZOMETER LOCATION, DESIGNATION
LC-2	LEACHATE HEAD WELL LOCATION, DESIGNATION
	OUTLINE OF CLOSED LANDFILL
GP-1	GAS PROBE LOCATION AND DESIGNATION
GV-1	GAS VENT LOCATION AND DESIGNATION
(823.25)	GROUNDWATER ELEVATION

N

SCALE

0 500

Feet

BASEMAP FROM FOND DU LAC COUNTY PLANNING DIVISION, SPRING 2000.

FF/NN LANDFILL RIPON, WISCONSIN	DATE: 10/12/10
	DESIGNED: HJW
GROUNDWATER ELEVATIONS LAYER 2 WELLS SEPTEMBER 2010	CHECKED: MRN
	APPROVED: MRN
	DRAWN: HJW
	PROJ.: 117-2202040

GeoTrans, Inc. A TETRA TECH COMPANY

Figure 4-4

S:\CAD\Ripon\2202.040\10-12-10\2202040Fig6.dwg

LAYER 3
DIRECTION
OF FLOW

BANECK
GAASTRA
BICYCLE PATH
CHARLES STREET
SOUTH KORO ROAD
MILLER (abandoned)
ALTNAU (abandoned)
ROHDE
CTY HWY FF

818
818.5
819
819.5
820
820.5
821
821.5
822

(817.85)
P-116
(HADEL)

P-113A
P-113B
(818.88)

(819.00)
P-114
(EHSTER)

(819.13)
P-115
(WIESE)

MW-111
P-111
P-111D
(820.16)

P-107D
P-107
MW-107

MW-3A
MW-3B
(820.59)

MW-108
P-108

MW-112
GP-3
GP-7
GP-6
GP-8
GP-2
GP-10
GP-11
GP-12
GP-1
GP-5
GP-4

P-104
MW-104
GV-1
GV-2
GV-3
GV-4
GV-5
GV-6
GV-7
GV-8
GV-9
GV-10
GV-11
GV-12
LC-1
LC-2
LC-3

P-103D (822.35)
P-103
MW-103

P-102
MW-102

P-101
MW-101

P-106
MW-106

EXPLANATION

- P-104 / MW-104 — MONITOR WELL, PIEZOMETER LOCATION, DESIGNATION
- LC-2 — LEACHATE HEAD WELL LOCATION, DESIGNATION
- OUTLINE OF CLOSED LANDFILL
- GP-1 — GAS PROBE LOCATION AND DESIGNATION
- GV-1 — GAS VENT LOCATION AND DESIGNATION
- (822.35) — GROUNDWATER ELEVATION

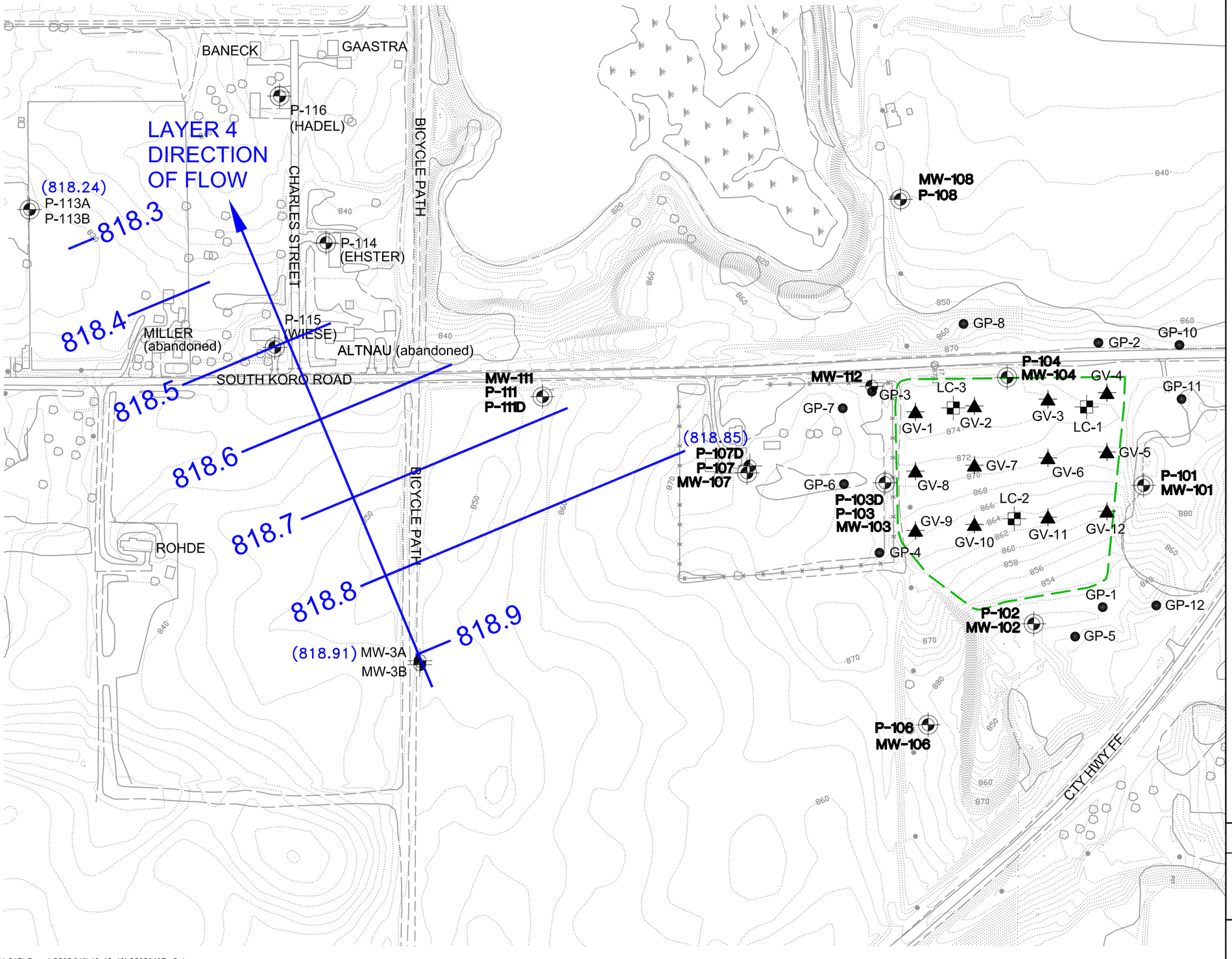
N

SCALE
0 500
Feet

BASEMAP FROM FOND DU LAC COUNTY PLANNING DIVISION, SPRING 2000.

FF/NN LANDFILL RIPON, WISCONSIN	DATE: 10/12/10 DESIGNED: HJW CHECKED: MRN APPROVED: MRN DRAWN: HJW PROJ.: 117-2202040
GROUNDWATER ELEVATIONS LAYER 3 WELLS SEPTEMBER 2010	
GeoTrans, Inc. A TETRA TECH COMPANY	Figure 4-5

S:\CAD\Ripon\2202.040\10-12-10\2202040Fig7.dwg



EXPLANATION

- P-104 / MW-104 — MONITOR WELL, PIEZOMETER LOCATION, DESIGNATION
- LC-2 — LEACHATE HEAD WELL LOCATION, DESIGNATION
- OUTLINE OF CLOSED LANDFILL
- GP-1 — GAS PROBE LOCATION AND DESIGNATION
- GV-1 — GAS VENT LOCATION AND DESIGNATION
- (818.85) — GROUNDWATER ELEVATION

N

SCALE

0 500

Feet

BASEMAP FROM FOND DU LAC COUNTY PLANNING DIVISION, SPRING 2000.

FF/NN LANDFILL
RIPON, WISCONSIN

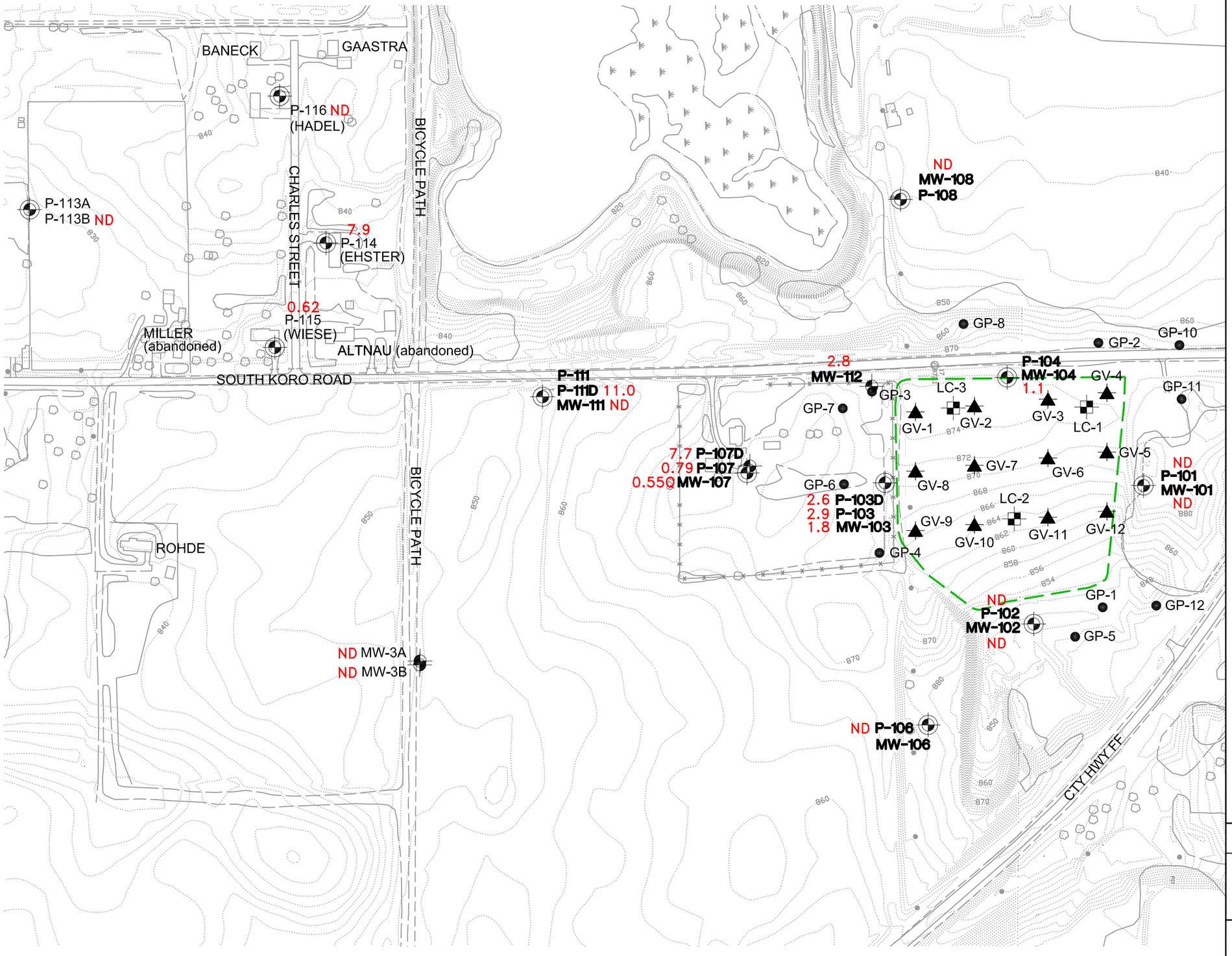
GROUNDWATER ELEVATIONS
LAYER 4 WELLS
SEPTEMBER 2010

DATE:	10/12/10
DESIGNED:	HJW
CHECKED:	MRN
APPROVED:	MRN
DRAWN:	HJW
PROJ.:	117-2202040

GeoTrans, Inc. A TETRA TECH COMPANY

Figure 4-6

S:\CAD\Ripon\2202.040\10-12-10\2202040Fig8.dwg



EXPLANATION

- P-104 / MW-104 — MONITOR WELL, PIEZOMETER LOCATION, DESIGNATION
- LC-2 — LEACHATE HEAD WELL LOCATION, DESIGNATION
- OUTLINE OF CLOSED LANDFILL
- GP-1 — GAS PROBE LOCATION AND DESIGNATION
- GV-1 — GAS VENT LOCATION AND DESIGNATION
- 7.7 — VINYL CHLORIDE CONCENTRATION (ug/L)

N

SCALE

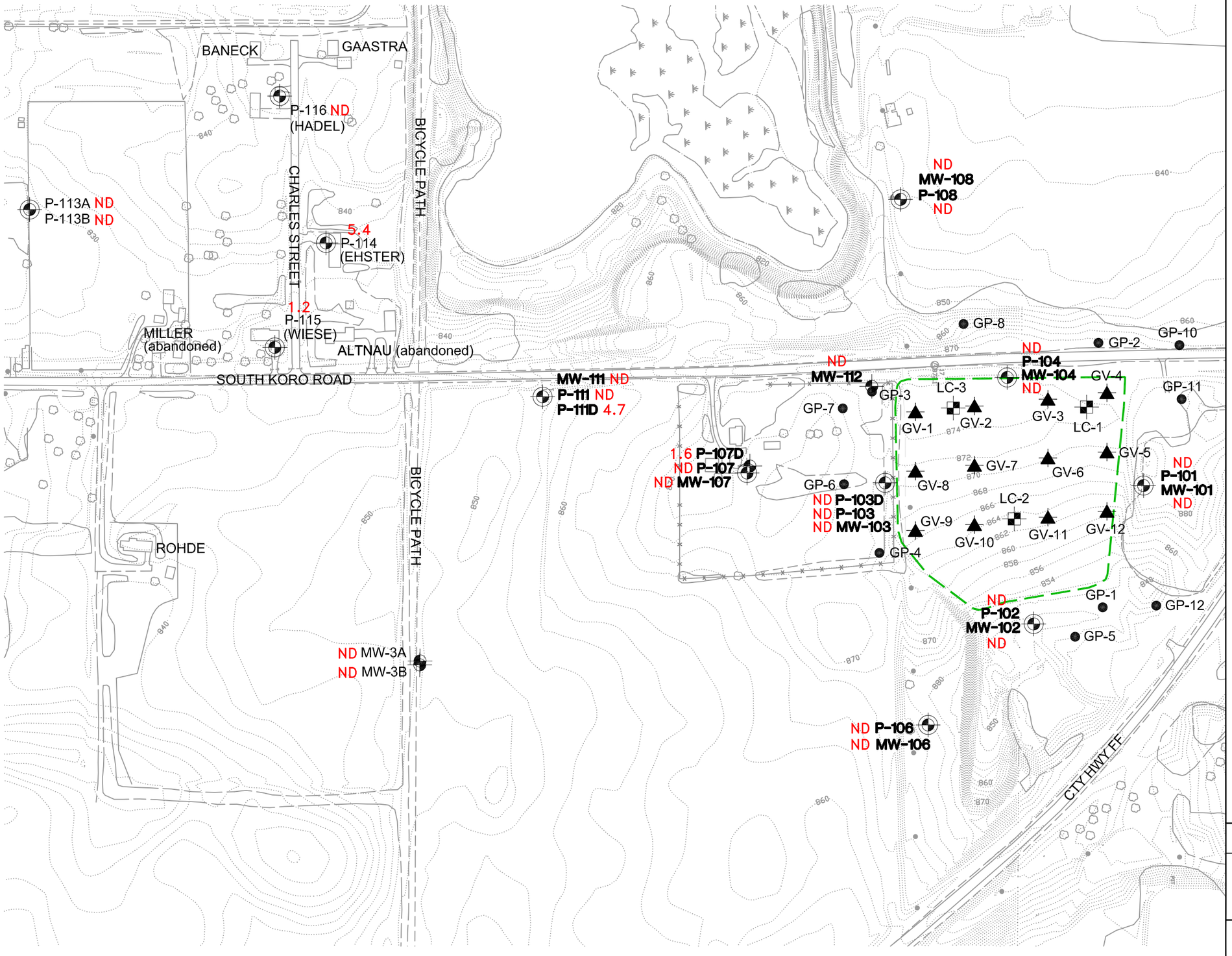
0 500

Feet

BASEMAP FROM FOND DU LAC COUNTY PLANNING DIVISION, SPRING 2000.

FF/NN LANDFILL RIPON, WISCONSIN	DATE: 1/11/11
	DESIGNED: HJW
VINYL CHLORIDE CONCENTRATIONS APRIL 2006	CHECKED: MRN
	APPROVED: MRN
	DRAWN: HJW
	PROJ.: 117-2202040
GeoTrans, Inc. A TETRA TECH COMPANY	Figure 5-1

S:\CAD\Ripon\5 Year Review\2202040Fig4-7.dwg



EXPLANATION

- P-104 / MW-104 — MONITOR WELL, PIEZOMETER LOCATION, DESIGNATION
- LC-2 — LEACHATE HEAD WELL LOCATION, DESIGNATION
- OUTLINE OF CLOSED LANDFILL
- GP-1 — GAS PROBE LOCATION AND DESIGNATION
- GV-1 — GAS VENT LOCATION AND DESIGNATION
- 4.7 — VINYL CHLORIDE CONCENTRATION (ug/L)

N

SCALE

0 500

Feet

BASEMAP FROM FOND DU LAC COUNTY PLANNING DIVISION, SPRING 2000.

FF/NN LANDFILL RIPON, WISCONSIN	DATE: 1/11/11
	DESIGNED: HJW
VINYL CHLORIDE CONCENTRATIONS OCTOBER 2010	CHECKED: MRN
	APPROVED: MRN
	DRAWN: HJW
	PROJ.: 117-2202040

GeoTrans, Inc. A TETRA TECH COMPANY

Figure 5-2

S:\CAD\Ripon\5 Year Review\2202040Fig4-8.dwg

Table 3-1. Groundwater Monitoring Schedule

Stratigraphic Layer	Sampling Point:	Location Relative to Landfill	Water Level	VOCs	Equipment Type
Layer 1 Wells (25-65 ft bgs)	MW-101	Up-gradient	Q	Q	Bailer
	MW-102	Side-gradient	Q	A	Bailer
	MW-103	Down-gradient	Q	Q	Bailer
	MW-104	Within Landfill	Q	A	Bailer
	MW-106	Side-gradient	Q	A	Bailer
	MW-107	Down-gradient	Q	Q	Bailer
	MW-108	Side-gradient	Q	A	Bailer
	MW-111	Down-gradient	Q	Q	Bailer
	MW-112	Down-gradient	Q	A	Bailer
Layer 2 Wells (62-95 ft bgs)	P-101	Up-gradient	Q	Q	Bailer
	P-102	Side-gradient	Q	A	Bailer
	P-103	Down-gradient	Q	Q	QED
	P-104	Beneath Landfill	Q	A	QED
	P-106	Side-gradient	Q	A	QED
	P-107	Down-gradient	Q	Q	QED
	P-108	Side-gradient	Q	A	Bailer
	P-111	Down-gradient	Q	Q	QED
Layer 3 Wells (152-199 ft bgs)	MW-3B	Down-gradient	Q	Q	QED
	P-103D	Down-gradient	Q	Q	QED
	P-111D	Down-gradient	Q	Q	QED
	P-113B	Down-gradient	Q	Q	QED
	P-114	Down-gradient	Q	Q	QED
	P-115	Down-gradient	Q	Q	QED
	P-116	Down-gradient	Q	Q	QED
Layer 4 Wells (281-328 ft bgs)	MW-3A	Down-gradient	Q	Q	QED
	P-107D	Down-gradient	Q	Q	QED
	P-113A	Down-gradient	Q	Q	QED
Private Wells	Baneck	Down-gradient		Q	Spigot
	Gaastra	Down-gradient		Q	Spigot
	Rohde	Down-gradient		Q	Spigot
Landfill	Leachate LH-1	Within Landfill	A	A	Disposable bailers
	Leachate LH-2	Within Landfill	A	A	Disposable bailers
	Leachate LH-3	Within Landfill	A	A	Disposable bailers
	Gas VOCs LH-1	Within Landfill		Q	Summa Canister
	Gas VOCs LH-2	Within Landfill		Q	Summa Canister
	Gas VOCs LH-3	Within Landfill		Q	Summa Canister
	Gas VOCs GV-6	Within Landfill		Q	Summa Canister
	Gas VOCs GP-3	Down-gradient		Q	Summa Canister
	Cap Inspection	On Landfill		SA	

Q = Quarterly (Jan, Jul, Oct); A = Annual (Apr)

Table 4-1. Stratigraphic Groupings of Monitoring Wells

Layer	Well ID	Well Screen Elevation (ft msl)	Lithology at Well Screen
Layer 1 Wells	MW-106	821.0	sand
	MW-101	820.4	sand
	MW-104	819.3	sand & gravel
	MW-102	818.9	sand & gravel
	MW-103	818.7	sand
	MW-107	816.5	sand
	MW-108	814.9	sand
	MW-112	814.1	sand
	MW-111	812.3	sand
Layer 2 Wells	P-106	791.7	sand
	P-101	790.0	sand
	P-103	789.9	silt
	P-107	785.6	sand
	P-108	783.5	sand
	P-104	782.0	sand
	P-102	781.3	sand
	P-111	774.2	sand
Layer 3 Wells	P-111D	704.0	sand and gravel
	P-103D	682.08	sandstone
	MW-3B	665.0	sandstone
	P-113B	634.2	sandstone
	P-114	654.4	sandstone
	P-115	662.7	sandstone
	P-116	681.3	sandstone
Layer 4 wells	MW-3A	570.0	sandstone
	P-107D	544.0	granite
	P-113A	507.8	sandstone

Table 4-2 - Groundwater Elevations
FF/NN Landfill
Ripon, WI

Well Name	TOC Elevation	Jun-93	Oct-93	Apr-94	Oct-96	May-97	Oct-97	Apr-98	Oct-98	Oct-99	May-00
MW-101	884.80	826.56	824.20	824.04	823.41	824.34			822.08	823.17	
P-101	885.26	826.52	824.24	824.02	823.38	824.33	823.00	820.24	822.04	823.16	822.73
MW-102	843.05	826.83	825.35	824.29	823.57	824.67	823.26			823.52	823.17
P-102	842.99	826.89	824.40	824.35	823.64	824.75	823.38	820.77	822.47	823.63	823.25
MW-103	872.42	823.08	821.77	819.49	820.56			819.22			
P-103	872.92	826.29	826.88	823.88	817.43	824.16	822.89	820.25	821.96	823.11	822.70
P-103D	873.08	(Installed December 2003)									
MW-104	875.15	826.32	824.12	824.02	823.14	824.13		820.13	823.87		
P-104	875.48	826.47	824.25	824.12	823.26	824.24	822.92	820.25	822.06	823.18	822.70
MW-106	878.90	826.67	824.21	824.24	820.96	824.61	823.23		822.42	823.45	823.10
P-106	878.91	826.63	824.09	824.07	823.42	824.51	823.16	820.40	822.33	823.38	823.02
MW-107	871.78	821.02	820.52	818.76	819.17	819.22		817.04	818.70	819.68	
P-107	871.38	820.86	820.37	818.78	819.07	819.24	818.38	817.14	818.72	819.71	818.62
P-107D	871.98			819.13	817.47	819.52	818.29	816.77	817.56	817.78	817.34
MW-108	845.25		819.00	817.85	818.17	818.31				818.48	817.49
P-108	845.61		822.03	821.09	821.29	821.52	820.55	818.77	820.25	821.18	820.25
MW-111	856.46			817.58	817.93	818.10	817.29	816.29	817.33	818.30	817.28
P-111	856.13			817.09	817.43	817.60	816.78	815.75	816.85	817.83	816.79
P-111D	855.79	(Installed April 2002)									
MW-112	874.55				819.46	819.92	819.02		819.15	820.02	819.20
P-113A	833.09	(Installed September 2002)									
P-113B	833.10	(Installed September 2002)									
P-114	839.35	(Private well converted to monitoring well in 2003)									
P-115	842.71	(Private well converted to monitoring well in 2004)									
P-116	845.34	(Private well converted to monitoring well in 2004)									
MW-3A	850.77	(Water levels taken beginning February 2002)									
MW-3B	851.04	(Water levels taken beginning February 2002)									
LC1	876.15				849.02	847.87	846.99	846.82	846.56		846.27
LC2	866.05				847.25	842.91	841.20	840.61	838.31	839.29	839.17
LC3	877.34					845.69					845.82

Notes: Blank cells indicate that the water level was below top of pump; unable to measure.
Measurements are in Feet Above Mean Sea Level (msl)
">" indicates depth to top of pump (water level was beneath pump)
NT - Not taken, only measured deep wells
NM - Well not measured

Table 4-2 - Groundwater Elevations
FF/NN Landfill
Ripon, WI

Well Name	TOC Elevation	Oct-00	May-01	Oct-01	Feb-02	May-02	Aug-02	Oct-02	Dec-02	Apr-03	Oct-03
MW-101	884.80		823.13	824.17	823.18	DRY	DRY	NT	DRY	DRY	821.24
P-101	885.26	822.66	823.06	824.16	823.19	800.47	814.42	NT	818.91	820.46	821.16
MW-102	843.05	823.19		824.38	823.53	818.93	DRY	NT	DRY	820.95	821.57
P-102	842.99		823.39	824.49	823.69	799.84	814.94	NT	819.47	821.08	821.66
MW-103	872.42			821.63	>51.32	819.28	819.34	NT	DRY	DRY	819.61
P-103	872.92	822.60	823.02	823.87	823.00	801.70	814.74	NT	819.01	820.52	821.12
P-103D	873.08										
MW-104	875.15			823.88	>51.28	DRY	DRY	NT	DRY	820.37	820.85
P-104	875.48	822.64	823.10	824.03	823.12	802.51	814.82	NT	819.05	820.50	821.43
MW-106	878.90	822.96	823.34	Dry	823.50	DRY	DRY	NT	DRY	DRY	821.58
P-106	878.91	822.89	823.26	824.25	823.39	800.31	814.52	NT	819.18	820.80	821.49
MW-107	871.78		819.36	820.12	>52.5	816.72	DRY	DRY	DRY	817.73	818.35
P-107	871.38	818.62	819.35	820.12	818.86	809.86	813.29	NT	816.65	817.74	818.39
P-107D	871.98	818.10	819.04	816.61	817.70	811.80	815.35	816.43	816.68	817.26	816.72
MW-108	845.25		818.32	818.62	>27.7	815.44	815.45	NT	815.79	816.20	816.68
P-108	845.61	820.45	820.97	822.08	820.66	811.84	815.19	NT	817.83	818.57	819.26
MW-111	856.46	817.32	818.15	818.74	817.51	813.43	813.59	NT	815.42	816.14	816.71
P-111	856.13	816.83	817.68	818.26	817.04	812.54	812.90	NT	814.90	815.68	816.27
P-111D	855.79					807.70	815.16	816.73	816.22	818.17	817.95
MW-112	874.55	819.21	819.87	820.52	822.87	814.38	814.47	NT	816.75	817.87	818.54
P-113A	833.09							816.09	816.39	816.93	816.20
P-113B	833.10							816.68	816.93	817.25	816.58
P-114	839.35									817.17	816.93
P-115	842.71										
P-116	845.34										
MW-3A	850.77				817.24	810.74	815.18	816.11	815.99	816.63	815.67
MW-3B	851.04				819.32	807.37	815.34	817.07	817.54	818.31	817.92
LC1	876.15		846.30	Dry	Dry	DRY	DRY	NT	DRY	DRY	NM
LC2	866.05	839.28	839.03	838.92	838.97	838.83	838.98	NT	838.75	839.17	NM
LC3	877.34		845.80	Dry	Dry	DRY	DRY	NT	DRY	DRY	NM

Table 4-2 - Groundwater Elevations
FF/NN Landfill
Ripon, WI

Well Name	TOC Elevation	Feb-04	Apr-04	Jul-04	Oct-04	Jan-05	Apr-05	Jul-05	Oct-05	Jan-06	Mar-06
MW-101	884.80	NM	822.87	825.76	823.36	822.85	823.27	821.11	DRY	820.81	NM
P-101	885.26	NM	822.86	825.76	823.35	822.84	823.26	821.07	820.23	820.75	NM
MW-102	843.05	NM	823.34	826.08	823.71	823.34	823.66	821.70	820.65	821.33	NM
P-102	842.99	NM	823.42	826.17	823.79	823.38	823.75	821.48	820.72	821.41	NM
MW-103	872.42	NM	821.06	824.54	822.24	820.52	821.60	819.70	819.25	819.24	NM
P-103	872.92	NM	822.77	825.58	823.23	822.78	823.14	821.09	820.26	820.92	NM
P-103D	873.08	820.64	821.89	824.39	822.21	821.89	822.08	820.26	819.23	820.24	NM
MW-104	875.15	NM	822.75	825.49	823.27	822.75	823.16	821.09	820.34	820.65	NM
P-104	875.48	NM	822.82	825.61	823.36	822.82	823.21	821.20	820.40	820.79	NM
MW-106	878.90	NM	823.25	826.07	823.60	823.20	823.61	821.42	DRY	821.24	NM
P-106	878.91	NM	823.17	825.99	823.50	823.10	823.54	821.31	820.50	821.16	NM
MW-107	871.78	NM	819.63	823.41	821.20	819.89	820.18	818.69	817.85	817.81	NM
P-107	871.38	NM	819.71	823.34	821.20	820.91	820.20	818.72	817.84	817.80	NM
P-107D	871.98	NM	818.68	819.78	817.72	817.65	818.77	815.90	814.85	816.33	816.45
MW-108	845.25	NM	817.86	820.27	819.00	818.17	818.41	816.95	816.27	816.31	NM
P-108	845.61	NM	820.52	823.39	821.94	820.84	821.05	819.76	819.13	819.04	NM
MW-111	856.46	NM	818.03	821.40	819.60	817.39	818.69	817.32	816.51	816.31	NM
P-111	856.13	NM	817.59	821.01	819.16	816.92	818.19	816.82	816.03	815.84	NM
P-111D	855.79	NM	819.55	821.82	819.77	819.55	819.55	818.11	817.37	818.40	NM
MW-112	874.55	NM	819.89	823.17	821.14	820.15	820.50	818.82	818.14	818.31	NM
P-113A	833.09	NM	817.91	818.17	817.32	817.28	818.35	815.50	814.36	816.40	816.04
P-113B	833.10	816.61	818.30	820.16	818.25	818.13	818.36	816.74	815.47	816.90	NM
P-114	839.35	NM	818.55	820.44	818.71	818.50	818.76	817.02	816.34	817.28	NM
P-115	842.71	NM	818.61	820.51	818.71	818.55	818.62	817.05	816.05	817.44	NM
P-116	845.34	NM	817.54	819.31	817.80	817.47	817.74	816.45	815.48	816.02	NM
MW-3A	850.77	NM	818.03	819.73	817.00	817.15	816.84	816.05	814.87	817.98	815.81
MW-3B	851.04	NM	819.79	822.01	819.66	819.60	819.45	818.44	817.28	819.15	NM
LC1	876.15	NM	846.45	NM	DRY	DRY	846.39	DRY	NM	NM	NM
LC2	866.05	NM	839.27	NM	838.89	DRY	839.05	838.89	838.91	839.01	NM
LC3	877.34	NM	DRY	NM	DRY	DRY	DRY	DRY	NM	NM	NM

Table 4-2 - Groundwater Elevations
FF/NN Landfill
Ripon, WI

Well Name	TOC Elevation	Apr-06	Jul-06	Oct-06	Jan-07	May-07	Aug-07	Oct-07	Jan-08	May-08
MW-101	884.80	821.41	821.29	820.71	821.43	822.37	822.22	822.74	822.47	824.5
P-101	885.26	821.37	821.22	820.69	821.34	822.32	822.18	822.68	822.43	824.49
MW-102	843.05	821.91	821.75	821.15	821.73	822.85	822.55	822.95	822.95	824.9
P-102	842.99	822.06	821.80	821.25	821.82	822.90	822.63	823.01	823.03	824.95
MW-103	872.42	819.36	819.82	818.82	819.47	820.39	820.45	820.78	820.46	822.13
P-103	872.92	821.42	821.33	820.70	821.39	822.31	822.17	822.63	822.86	824.39
P-103D	873.08	820.54	820.43	819.88	820.52	821.56	821.495	822.015	821.935	823.885
MW-104	875.15	821.35	821.16	820.61	821.11	822.17	822.06	822.56	822.25	824.26
P-104	875.48	821.45	821.33	820.76	821.29	822.29	822.27	822.75	822.44	824.45
MW-106	878.90	821.85	821.77	821.10	821.78	822.78	822.51	822.76	822.84	824.77
P-106	878.91	821.72	821.67	820.99	821.62	822.71	822.44	822.7	822.75	824.7
MW-107	871.78	818.03	DRY	817.90	818.29	818.87	818.97	819.12	818.88	820.34
P-107	871.38	818.19	818.59	817.89	818.23	818.88	819.01	819.08	818.91	820.27
P-107D	871.98	816.89	816.83	816.24	817.05	818.27	818.79	819.93	820.32	822.9
MW-108	845.25	816.70	816.88	816.39	816.64	817.39	817.96	817.99	817.5	819.15
P-108	845.61	819.40	819.65	819.41	819.40	820.14	821.45	821.33	820.44	822.15
MW-111	856.46	816.74	817.14	816.58	816.72	817.40	817.44	817.51	NT	818.85
P-111	856.13	816.24	816.74	816.09	816.23	816.92	816.95	817.01	816.85	818.4
P-111D	855.79	818.62	818.54	818.26	818.48	819.84	819.44	819.92	820.14	822.09
MW-112	874.55	818.66	818.88	818.20	818.52	819.24	819.39	819.73	819.41	820.97
P-113A	833.09	816.39	816.54	815.81	817.29	817.78	818.13	819.42	819.91	822.4
P-113B	833.10	817.01	817.57	816.81	816.70	818.11	818.26	819.09	819.35	821.36
P-114	839.35	817.38	817.36	816.86	817.36	818.48	818.14	818.61	819	820.91
P-115	842.71	817.56	817.50	817.12	817.62	818.72	818.375	818.815	819.185	821.095
P-116	845.34	816.48	816.34	816.00	816.38	817.47	816.905	817.475	817.755	819.425
MW-3A	850.77	816.29	817.51	816.34	817.49	817.68	819.68	820.7	821.15	823.53
MW-3B	851.04	818.86	819.18	818.27	818.88	819.62	820.24	820.88	821.08	823.09
LC1	876.15	843.40	847.60	847.66	NM	846.41	NM	876.15	NM	845.89
LC2	866.05	839.47	839.52	838.45	NM	838.63	NM	866.05	NM	837.81
LC3	877.34	845.89	845.87	844.68	NM	846.12	NM	877.34	NM	845.28

Table 4-2 - Groundwater Elevations
FF/NN Landfill
Ripon, WI

Well Name	TOC Elevation	Jul-08	Sep-08	Oct-08	Jan-09	Apr-09	Jul-09	Oct-09	Feb-10
MW-101	884.80	825.1	822.61	822.63	822.93	824.08	823.61	822.68	822.2
P-101	885.26	825.07	822.56	822.59	822.91	824.05	823.6	822.63	822.17
MW-102	843.05	825.36	822.77	822.83	823.4	824.49	823.85	822.99	822.65
P-102	842.99	825.34	822.74	822.81	823.5	824.57	824.11	823.05	822.76
MW-103	872.42	823.95	822.05	821.92	821.19	821.99	821.72	820.83	820.27
P-103	872.92	825.02	822.57	822.66	822.97	824.06	823.59	822.62	822.24
P-103D	873.08	824.425	822.145	822.265	822.475	823.545	822.905	822.055	821.705
MW-104	875.15	824.9	822.54	822.55	822.82	823.92	823.47	822.53	822.06
P-104	875.48	825.12	822.78	822.74	822.98	824.06	823.64	822.68	822.22
MW-106	878.90	824.98	822.7	822.75	823.31	824.41	823.94	822.96	822.61
P-106	878.91	825.25	822.63	822.64	823.25	824.37	823.9	822.85	822.54
MW-107	871.78	823.81	821.16	821.04	819.71	820.34	820.25	819.37	818.81
P-107	871.38	823.72	821.1	821.09	819.4	820.34	820.26	819.34	818.48
P-107D	871.98	823.25	820.9	820.87	820.81	822.24	820.61	819.98	819.88
MW-108	845.25	820.42	819.28	819.23	818.16	818.87	818.58	817.93	817.28
P-108	845.61	823.57	822.14	822.05	820.87	821.67	821.73	821.06	820.08
MW-111	856.46	821.08	819.77	819.75	818.21	818.88	818.71	817.87	817.29
P-111	856.13	820.72	819.35	819.23	817.77	818.41	818.3	817.43	816.86
P-111D	855.79	822.61	820.74	820.79	820.65	821.71	820.85	820.15	819.91
MW-112	874.55	822.76	821.08	820.99	820.08	820.83	820.62	819.76	819.24
P-113A	833.09	822.8	820.45	820.53	820.34	821.81	820.1	819.4	819.57
P-113B	833.10	821.79	820.09	820.1	819.84	820.96	819.81	819.24	819.15
P-114	839.35	821.45	819.79	819.83	819.5	820.51	819.6	818.99	818.75
P-115	842.71	821.635	819.965	819.975	819.655	820.725	819.805	819.145	818.935
P-116	845.34	820.385	816.805	818.705	818.375	819.155	818.465	817.755	817.565
MW-3A	850.77	823.87	821.57	821.62	821.62	822.96	821.46	820.87	820.85
MW-3B	851.04	823.53	821.48	821.5	821.51	822.66	821.74	821.06	820.84
LC1	876.15	NM	NM	NM	NM	NM	NM	NM	NM
LC2	866.05	NM	NM	NM	NM	NM	NM	NM	NM
LC3	877.34	NM	NM	NM	NM	NM	NM	NM	NM

Table 4-2 - Groundwater Elevations
FF/NN Landfill
Ripon, WI

Well Name	TOC Elevation	May-10	Sep-10
MW-101	884.80	823.43	823.29
P-101	885.26	823.37	823.25
MW-102	843.05	823.77	823.66
P-102	842.99	823.8	823.71
MW-103	872.42	821.25	821.32
P-103	872.92	823.34	823.19
P-103D	873.08	822.575	822.35
MW-104	875.15	823.25	823.12
P-104	875.48	823.41	823.3
MW-106	878.90	823.72	823.6
P-106	878.91	823.64	823.52
MW-107	871.78	819.59	819.85
P-107	871.38	819.62	819.82
P-107D	871.98	819.68	818.85
MW-108	845.25	818.27	818.39
P-108	845.61	821.53	821.66
MW-111	856.46	818.07	818.3
P-111	856.13	817.61	817.88
P-111D	855.79	820.41	820.16
MW-112	874.55	820.13	820.24
P-113A	833.09	819.09	818.24
P-113B	833.10	819.27	818.88
P-114	839.35	819.12	819
P-115	842.71	819.205	819.13
P-116	845.34	818.055	817.85
MW-3A	850.77	819.92	818.91
MW-3B	851.04	821	820.59
LC1	876.15	843.73	NM
LC2	866.05	838.96	NM
LC3	877.34	845.67	NM

Table 4-3. Private Drinking Water Well Groundwater Sampling Results
FF/NN Landfill
Ripon, WI

		Parameters										
		VOC's							Inorganic			
Private Well ID	**Sampling Date**	**Carbon disulfide ***	**Methyl ethyl ketone ***	**Chloromethane**	**cis-1,2-Dichloroethene**	**Napthalene**	**Toluene**	**Vinyl Chloride**	**Alkalinity**	**COD**	**Chloride**	**Hardness**
		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L	mg/L	mg/L
WDNR	PAL	1000	460	3	70	100	1000	0.2	NE	NE	250	NE
NR140	ES	200	90	0.3	7	10	200	0.02	NE	NE	125	NE
Regularly Monitored Wells												
Baneck, Perry/Watkins	5/9/2001	NA	NA	ND	ND	ND	ND	ND	NA	NA	NA	NA
	11/19/2001 [1]	NA	NA	ND	ND	ND	ND	ND	NA	NA	NA	NA
	2/5/2002	NA	NA	ND	ND	ND	ND	ND	280	3.2	ND	280
	5/22/2002	NA	NA	ND	ND	ND	ND	ND	300	ND	ND	290
	5/22/2002 Dup	NA	NA	ND	ND	ND	ND	ND	300	ND	ND	290
	8/19/2002	ND	ND	ND	ND	ND	ND	ND	300	[3.0]	ND	290
	12/3/2002	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA
	4/22/2003	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA
	10/22/2003	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA
	07/22/2004	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA
	10/12/2004	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA
	1/28/2005	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA
	4/27/2005	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA
	8/2/2005	ND	ND	ND	ND	0.071 QB	ND	ND	NA	NA	NA	NA
	10/26/2005	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA
	01/31/06	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA
	4/28/2006	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA
	7/27/2006 [1]	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA
	10/31/2006 [1]	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA
	2/8/2007 [1]	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA
	5/1/2007	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA
	8/9/2007	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA
	10/22/2007	ND	ND	0.75 Q	ND	ND	ND	ND	NA	NA	NA	NA
	1/25/2008	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA
	5/6/2008 [1]	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA
	7/22/2008	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA
	10/3/2008	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA
	1/28/2009	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA
	4/6/2009	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA
	7/14/2009 [2]	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA
	10/29/2009 [3]	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA
	2/26/2010	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA
	5/26/2010	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA
	10/6/2010	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA

Table 4-3. Private Drinking Water Well Groundwater Sampling Results
FF/NN Landfill
Ripon, WI

		Parameters										
		VOC's							Inorganic			
Private Well ID	**Sampling Date**	**Carbon disulfide ***	**Methyl ethyl ketone ***	**Chloromethane**	**cis-1,2-Dichloroethene**	**Napthalene**	**Toluene**	**Vinyl Chloride**	**Alkalinity**	**COD**	**Chloride**	**Hardness**
		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L	mg/L	mg/L
WDNR	PAL	1000	460	3	70	100	1000	0.2	NE	NE	250	NE
NR140	ES	200	90	0.3	7	10	200	0.02	NE	NE	125	NE
Gaastra	5/9/2001	NA	NA	ND	ND	ND	ND	ND	NA	NA	NA	NA
	11/19/2001 [1]	NA	NA	ND	ND	ND	ND	ND	NA	NA	NA	NA
	2/5/2002	NA	NA	ND	ND	ND	ND	ND	290	ND	ND	280
	5/22/2002	NA	NA	ND	ND	ND	ND	ND	290	ND	ND	270
	8/19/2002	ND	ND	0.24Q	ND	ND	ND	ND	300	ND	ND	280
	12/3/2002	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA
	4/22/2003	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA
	10/22/2003	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA
	10/22/2003 dup	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	07/22/2004	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA
	10/12/04	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA
	1/27/2005	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA
	4/27/2005	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA
	8/2/2005	ND	ND	ND	ND	0.071 QB	ND	ND	ND	ND	ND	ND
	10/26/2005	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA
	01/31/06	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA
	4/28/2006	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA
	7/27/2006 [1]	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA
	10/31/2006 [1]	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA
	2/1/2007 [1]	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA
	5/1/2007	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA
	8/9/2007	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA
	10/22/2007	ND	ND	0.99 Q	ND	ND	ND	ND	NA	NA	NA	NA
	1/25/2008	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA
	5/6/2008 [1]	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA
	7/22/2008	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA
	10/3/2008	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA
	1/28/2009	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA
	4/6/2009	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA
	7/14/2009 [2]	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA
	10/29/2009 [2, 3]	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA
	2/26/2010	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA
	5/26/2010	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA
	10/6/2010	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA

Table 4-3. Private Drinking Water Well Groundwater Sampling Results
FF/NN Landfill
Ripon, WI

		Parameters										
		VOC's							Inorganic			
Private Well ID	**Sampling Date**	**Carbon disulfide ***	**Methyl ethyl ketone ***	**Chloromethane**	**cis-1,2-Dichloroethene**	**Napthalene**	**Toluene**	**Vinyl Chloride**	**Alkalinity**	**COD**	**Chloride**	**Hardness**
		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L	mg/L	mg/L
WDNR	PAL	1000	460	3	70	100	1000	0.2	NE	NE	250	NE
NR140	ES	200	90	0.3	7	10	200	0.02	NE	NE	125	NE
Rohde	10/9/2001	NA	NA	ND	ND	ND	ND	ND	NA	NA	NA	NA
	11/19/2001 [1]	NA	NA	ND	ND	ND	ND	ND	NA	NA	NA	NA
	2/4/2002	NA	NA	ND	ND	ND	ND	ND	290	ND	ND	300
	5/22/2002	NA	NA	ND	ND	ND	ND	ND	290	ND	ND	290
	8/20/2002	ND	ND	ND	ND	ND	ND	ND	300	ND	ND	290
	4/22/2003	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA
	10/23/2003	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA
	10/23/2003	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	07/22/2004	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA
	10/12/2004	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA
	1/28/2005	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA
	4/27/2005	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA
	8/2/2005	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA
	10/26/2005	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA
	2/1/2006	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA
	4/28/2006	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA
	7/28/2006 [1]	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA
	10/31/2006	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA
	2/8/2007 [1]	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA
	5/1/2007	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA
	8/9/2007	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA
	10/22/2007	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA
	1/25/2008	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA
	5/6/2008 [1]	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA
	7/22/2008	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA
	10/3/2008	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA
	1/28/2009	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA
	4/6/2009	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA
	7/14/2009 [3]	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA
	11/4/2009 [3]	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA
	2/25/2010	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA
	5/26/2010	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA
	10/6/2010	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA

Table 4-3. Private Drinking Water Well Groundwater Sampling Results
FF/NN Landfill
Ripon, WI

		Parameters										
		VOC's							Inorganic			
Private Well ID	**Sampling Date**	**Carbon disulfide ***	**Methyl ethyl ketone ***	**Chloromethane**	**cis-1,2-Dichloroethene**	**Napthalene**	**Toluene**	**Vinyl Chloride**	**Alkalinity**	**COD**	**Chloride**	**Hardness**
		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L	mg/L	mg/L
WDNR	PAL	1000	460	3	70	100	1000	0.2	NE	NE	250	NE
NR140	ES	200	90	0.3	7	10	200	0.02	NE	NE	125	NE

Underline values indicate PAL exceedance
Bold values indicate ES exceedance
Q = detected at less than quantitation limit
B= detected in trip blank
ND= not detected above the level of detection
NA = not analyzed
NR = not required to analyze

PAL = Preventive Action Limit
ES = Enforcement Standard
NE = None Established

[1] Methylene Chloride was detected and is assumed to be a laboratory artifact

[2] Acetone was detected and is assumed to be a laboratory artifact

[3] Chloromethane was detected and is assumed to be lab introduced

Monitoring began in 1993. See prior report submittals to WDNR for results prior to 2001.
See Table 2 for monitoring wells for Ehster, Hadel and Wiese data

Table 4-4. Monitoring Well Groundwater Sampling Results for VOCs
FF/NN Landfill
Ripon, WI

		Parameters																														
Sampling Point	Collection Date	Acetone [1]	Benzene	Bromomethane	2-Butanone (MEK)	sec-Butylbenzene	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	1,4-dichlorobenzene	Dichlorodifluoromethane	1,1-Dichloroethane	1,2-dichloroethane	1,1-Dichloroethene	cis-1,2-dichloroethene	trans-1,2-Dichloroethene	1,2-dichloropropane	Ethylbenzene	Isopropylbenzene	Methylene chloride	MTBE	Tetrachloroethene	Tetrahydrofuran	Toluene	1,2,4-Trichlorobenzene	Trichloroethene	Trichlorofluoromethane	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl Chloride	Total Xylenes
WDNR	PAL	200	0.5	1	90	NE	NE	80	0.6	0.3	15	200	85	0.5	0.7	7	20	0.5	140	NE	0.5	12	0.5	10	200	14	0.5	NE	96		0.02	1000
NR140	ES	1000	5	10	460	NE	NE	400	6	3	75	1000	850	5	7	70	100	5	700	NE	5	60	5	50	1000	70	5	NE	480		0.2	10000
MW-3A	4/4/02	NR			NA																											
	5/22/02	NR			NA																											
	8/20/02	NR																														
	12/5/02	NR																														
	4/22/03																															
	10/22/03																															
	5/11/04																															
	10/14/04																															
	1/27/05																															
	4/26/05																															
	8/2/05																															
	10/26/05																															
	1/31/06																															
	4/24/06																															
	7/27/06									0.35 J																						
	10/31/06																															
	1/31/07																															
	5/1/07																															
	8/8/07																															
	10/19/07																															
	5/6/08																															
	10/1/08																															
	4/7/09																															
	10/28/09																															
	5/24/10																															
	10/5/10																				0.49 J											

Table 4-4. Monitoring Well Groundwater Sampling Results for VOCs
FF/NN Landfill
Ripon, WI

		Parameters																												
Sampling Point	Collection Date	Acetone [1]	Benzene	Bromomethane	2-Butanone (MEK)	sec-Butylbenzene	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	1,4-dichlorobenzene	Dichlorodifluoromethane	1,1-Dichloroethane	1,2-dichloroethane	1,1-Dichloroethene	cis-1,2-dichloroethene	trans-1,2-Dichloroethene	1,2-dichloropropane	Ethylbenzene	Isopropylbenzene	Methylene chloride	MTBE	Tetrachloroethene	Tetrahydrofuran	Toluene	1,2,4-Trichlorobenzene	Trichloroethene	Trichlorofluoromethane	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl Chloride	Total Xylenes
WDNR	PAL	200	0.5	1	90	NE	NE	80	0.6	0.3	15	200	85	0.5	0.7	7	20	0.5	140	NE	0.5	12	0.5	10	200	14	0.5	NE	96		0.02	1000
NR140	ES	1000	5	10	460	NE	NE	400	6	3	75	1000	850	5	7	70	100	5	700	NE	5	60	5	50	1000	70	5	NE	480		0.2	10000
MW-3B	4/4/02	NR			NA																				0.38						**0.31**	
	5/22/02	NR			NA																			NA								
	8/20/02	NR																						NA								
	12/5/02	NR																														
	4/22/03																															
	10/22/03																															
	5/11/2004																														**0.2 J**	
	7/22/04																															
	10/14/04																															
	1/27/05																															
	4/26/05																															
	8/2/05																														**0.30 J**	
	10/26/05																														**0.39 J**	
	1/31/06																															
	4/24/06																															
	7/27/06									0.45 J																						
	10/31/06																															
	1/31/07																															
	5/1/07																															
	8/8/07																															
	10/19/07																															
	5/6/08															1.3															**5.4**	
	10/1/08																															
	4/7/09																															
	10/28/09																															
	5/24/10																															
	10/5/10																															

Table 4-4. Monitoring Well Groundwater Sampling Results for VOCs
FF/NN Landfill
Ripon, WI

		Parameters																														
Sampling Point	Collection Date	Acetone [1]	Benzene	Bromomethane	2-Butanone (MEK)	sec-Butylbenzene	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	1,4-dichlorobenzene	Dichlorodifluoromethane	1,1-Dichloroethane	1,2-dichloroethane	1,1-Dichloroethene	cis-1,2-dichloroethene	trans-1,2-Dichloroethene	1,2-dichloropropane	Ethylbenzene	Isopropylbenzene	Methylene chloride	MTBE	Tetrachloroethene	Tetrahydrofuran	Toluene	1,2,4-Trichlorobenzene	Trichloroethene	Trichlorofluoromethane	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl Chloride	Total Xylenes
WDNR	PAL	200	0.5	1	90	NE	NE	80	0.6	0.3	15	200	85	0.5	0.7	7	20	0.5	140	NE	0.5	12	0.5	10	200	14	0.5	NE	96		0.02	1000
NR140	ES	1000	5	10	460	NE	NE	400	6	3	75	1000	850	5	7	70	100	5	700	NE	5	60	5	50	1000	70	5	NE	480		0.2	10000
MW-101	10/1/93	NR																					0.7 J									
	4/1/94	NR																					0.6 J									
	5/1/96	NR																					0.6 J									
	10/1/96	NR								0.89 J													0.72 J									
	5/1/97	NR																														
	10/1/97	NR																					0.7									
	04/98*	NR																														
	10/1/98	NR																														
	4/1/99	NR																														
	10/1/99	NR																					0.7									
	5/1/00	NR																					0.32									
	10/1/00	NR																					0.38									
	5/1/02	NR																					0.28									
	10/11/01	NR																														
	2/5/02	NR			NA							0.19											0.32	NA			0.16					
	05/21/02 *		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	8/19/02 *		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/5/02 *		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	4/21/03 *		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	10/23/03																															
	4/28/04																															
	10/13/04	11																														
	4/27/05																															
	4/28/06	18																														
	11/1/06*		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	2/1/07																															
	5/1/07	2.4																														
	5/6/08																															
	4/8/09																															
	10/29/09																															
	5/25/10																															
	10/4/10																															

Table 4-4. Monitoring Well Groundwater Sampling Results for VOCs
FF/NN Landfill
Ripon, WI

		Parameters																													
Sampling Point	Collection Date	Acetone [1]	Benzene	Bromomethane	2-Butanone (MEK)	sec-Butylbenzene	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	1,4-dichlorobenzene	Dichlorodifluoromethane	1,1-Dichloroethane	1,2-dichloroethane	1,1-Dichloroethene	cis-1,2-dichloroethene	trans-1,2-Dichloroethene	1,2-dichloropropane	Ethylbenzene	Isopropylbenzene	Methylene chloride	MTBE	Tetrachloroethene	Tetrahydrofuran	Toluene	1,2,4-Trichlorobenzene	Trichloroethene	Trichlorofluoromethane	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl Chloride	Total Xylenes
WDNR	PAL	200	0.5	1	90	NE	NE	80	0.6	0.3	15	200	85	0.5	0.7	7	20	0.5	140	NE	0.5	12	0.5	10	200	14	0.5	NE	96		0.02	1000
NR140	ES	1000	5	10	460	NE	NE	400	6	3	75	1000	850	5	7	70	100	5	700	NE	5	60	5	50	1000	70	5	NE	480		0.2	10000
P-101	10/1/93	NR																													
	4/1/94	NR																							0.5 J						
	020/5/02	NR			NA																			NA							
	5/22/02	NR			NA																			NA							
	10/13/04																														
	4/27/05																														
	10/25/05																														
	4/28/06																														
	11/1/06																														
	5/1/07																														
	5/6/08																														
	4/8/09																														
	11/4/09																														
	5/25/10																														
	10/4/10																				0.41 J										
MW-102	10/26/93	NR																													
	4/11/94	NR																							3						
	5/8/96	NR																							0.4 J						
	10/30/96	NR								0.99 J													0.30 J								
	5/12/97	NR																													
	10/26/97	NR																													
	4/13/98	NR														0.46															
	10/11/01	NR																													
	05/21/02 *	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	08/19/02 *	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/05/02 *	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	7/23/04																														
	10/14/04																														
	4/27/05																														
	10/25/05																														
	4/25/06																														
	11/1/06																														
	5/2/07																														
	4/30/08																														
	10/2/08																														
	4/8/09																														
	5/20/10																														

Table 4-4. Monitoring Well Groundwater Sampling Results for VOCs
FF/NN Landfill
Ripon, WI

		Parameters																														
Sampling Point	Collection Date	Acetone [1]	Benzene	Bromomethane	2-Butanone (MEK)	sec-Butylbenzene	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	1,4-dichlorobenzene	Dichlorodifluoromethane	1,1-Dichloroethane	1,2-dichloroethane	1,1-Dichloroethene	cis-1,2-dichloroethene	trans-1,2-Dichloroethene	1,2-dichloropropane	Ethylbenzene	Isopropylbenzene	Methylene chloride	MTBE	Tetrachloroethene	Tetrahydrofuran	Toluene	1,2,4-Trichlorobenzene	Trichloroethene	Trichlorofluoromethane	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl Chloride	Total Xylenes
WDNR	PAL	200	0.5	1	90	NE	NE	80	0.6	0.3	15	200	85	0.5	0.7	7	20	0.5	140	NE	0.5	12	0.5	10	200	14	0.5	NE	96		0.02	1000
NR140	ES	1000	5	10	460	NE	NE	400	6	3	75	1000	850	5	7	70	100	5	700	NE	5	60	5	50	1000	70	5	NE	480		0.2	10000
P-102	10/26/93	NR																														
	4/11/94	NR																														
	10/11/01	NR																														
	5/21/02	NR			NA																			NA							**0.33 J**	
	8/20/02	NR																						NA							**0.62**	
	12/4/02	NR																													**0.68**	
	4/21/03																				0.48 J&										**0.83**	
	10/22/03																														**0.96**	
	4/27/04																														**2.1**	
	10/14/04									0.5 J																					**0.32**	
	1/27/05																															
	4/27/05																															
	8/3/05																															
	8/3/05 dup																															
	10/25/05																															
	2/1/06																															
	4/27/06																															
	4/27/06 dup																															
	7/27/06									0.66 J																						
	11/1/06																															
	2/15/07																															
	5/2/07																															
	8/14/07																															
	10/16/07	2.9 J																														
	5/6/08																															
	10/2/08																															
	4/8/09																															
	11/4/09																															
	11/4/09 Dup																															
	5/20/10																															

Table 4-4. Monitoring Well Groundwater Sampling Results for VOCs
FF/NN Landfill
Ripon, WI

		Parameters																													
Sampling Point	Collection Date	Acetone[1]	Benzene	Bromomethane	2-Butanone (MEK)	sec-Butylbenzene	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	1,4-dichlorobenzene	Dichlorodifluoromethane	1,1-Dichloroethane	1,2-dichloroethane	1,1-Dichloroethene	cis-1,2-dichloroethene	trans-1,2-Dichloroethene	1,2-dichloropropane	Ethylbenzene	Isopropylbenzene	Methylene chloride	MTBE	Tetrachloroethene	Tetrahydrofuran	Toluene	1,2,4-Trichlorobenzene	Trichloroethene	Trichlorofluoromethane	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl Chloride	Total Xylenes
WDNR	PAL	200	0.5	1	90	NE	NE	80	0.6	0.3	15	200	85	0.5	0.7	7	20	0.5	140	NE	0.5	12	0.5	10	200	14	0.5	NE	96		0.02	1000
NR140	ES	1000	5	10	460	NE	NE	400	6	3	75	1000	850	5	7	70	100	5	700	NE	5	60	5	50	1000	70	5	NE	480		0.2	10000
MW-103[2]	10/27/93	NR														**410**															**75**	
	4/11/94	NR														**1100**															**440**	
	04/01/94	NR														**970**															**410**	
	5/1/96	NR					7 J									**740**	9 J										**10J**				**170**	
	05/01/96	NR					8 J			**9 J**						**840**	10 J										**11J**				**180**	
	10/1/96	NR	3.3				8.1 J	1.9		1.1	0.76 J		0.99 J		0.30 J	**520 E**	5	1.9									4.7				**98 E**	
	5/1/97	NR	4.3				8.5	2.7			0.98		1.2	0.52	0.75	**790**	4.7	1.6				0.27					**5.6**				**230**	
	10/1/97	NR	4.2				7.9	2.4			1.4		0.89	0.38		**550 J**	5.2	1.5				0.38		3.1			**6.6**				**220 J**	
	04/98*	NR																														
	10/1/98	NR	2				5.7									**260**	3.3										**5.8**				**45**	
	4/1/99	NR	1.4				4.7									**150**	2.4										3.9				**47**	
	10/1/99	NR					5.2									**170**	2.6										2.4				**48**	
	5/1/00	NR	1.8				6.5									**170**	3.4										4.1				**60**	
	10/1/00	NR	1.6				6.9	3.1			0.84		0.33			**130**	4.5	0.75									**6.6**				**78**	
	5/1/01	NR	1.2				5.7	1.5			0.92					**94**	3.4	0.54			2.6L			1.1			4.5				**46**	
	10/11/01	NR	1.1		80		2.6	0.62			0.54					25	2.7				6.4L				0.8						**15**	
	2/4/02	NR	1.8		NA		6.4	1.1			0.81		0.36			**71**	5.5	0.53			0.28		0.13	NA	0.72		3.1				**40**	
	5/21/02*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	8/19/02 *	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/05/02 *	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	04/21/03 *	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	10/21/03		0.8				1.3									58	1.9										1.7				**21**	
	4/28/04		0.61 J		26		0.53 J									16											1.9				**6.7**	
	10/13/04	56	1.4				1.7			0.52						12	2.5								0.89		0.78				**7.9**	
	4/26/05		1.2				2.8									1.9	3.0								0.71						**1.8**	
	4/25/06	31			8.0 J		0.62 J									5.2											0.48 J				**1.8**	
	10/31/06*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	2/1/07				6.1 J											10											0.82 J				**0.34**	
	5/2/07						1.7									14											1.7				**0.75**	
	10/18/07															26											2.8				**2.2**	
	5/5/08															15.7											3.4					
	10/2/08															12.3											3.8					
	4/7/09															7.7											3.1					
	10/28/09															4.6											2.4					
	2/25/10															2.9											2.1					
	5/24/10															4											2.1					
	10/4/10															3.5					0.73 J						2.4					

Table 4-4. Monitoring Well Groundwater Sampling Results for VOCs
FF/NN Landfill
Ripon, WI

		Parameters																													
Sampling Point	Collection Date	Acetone [1]	Benzene	Bromomethane	2-Butanone (MEK)	sec-Butylbenzene	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	1,4-dichlorobenzene	Dichlorodifluoromethane	1,1-Dichloroethane	1,2-dichloroethane	1,1-Dichloroethene	cis-1,2-dichloroethene	trans-1,2-Dichloroethene	1,2-dichloropropane	Ethylbenzene	Isopropylbenzene	Methylene chloride	MTBE	Tetrachloroethene	Tetrahydrofuran	Toluene	1,2,4-Trichlorobenzene	Trichloroethene	Trichlorofluoromethane	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl Chloride	Total Xylenes
WDNR	PAL	200	0.5	1	90	NE	NE	80	0.6	0.3	15	200	85	0.5	0.7	7	20	0.5	140	NE	0.5	12	0.5	10	200	14	0.5	NE	96		0.02	1000
NR140	ES	1000	5	10	460	NE	NE	400	6	3	75	1000	850	5	7	70	100	5	700	NE	5	60	5	50	1000	70	5	NE	480		0.2	10000
P-103	10/27/93	NR																													
	4/12/94	NR																													
	5/9/96	NR														0.1 J									0.1 J						0.1 J	
	10/31/96	NR								0.84 J																					
	5/13/97	NR																													
	10/27/97	NR																													
	4/13/98	NR																													
	2/4/02	NR			NA																			NA							
	5/21/02	NR			NA											[0.54]								NA							
	10/13/04									0.52 J																				**1.7**	
	1/26/05																														
	1/26/05 dup																														
	4/26/05																													**2.4**	
	8/3/05																													**3.2**	
	10/26/05																													**3.2**	
	2/1/06																													**3.6**	
	4/25/06																													**2.9**	
	7/28/06									0.49 J																				**1.6**	
	11/1/06																													**1.4**	
	2/1/07																													**1.5**	
	5/2/07																													**1.6**	
	8/14/07																													**1.4**	
	10/18/07																													**1.2**	
	5/5/08																													**0.74**	
	5/5/08 Dup																													**0.81**	
	10/2/08																														
	10/2/08 Dup																														
	4/7/09																														
	10/28/09																														
	2/25/10									0.52 J																				**0.49 J**	
	5/24/10																														
	10/5/10																													**0.41 J**	

Table 4-4. Monitoring Well Groundwater Sampling Results for VOCs
FF/NN Landfill
Ripon, WI

		Parameters																													
Sampling Point	Collection Date	Acetone [1]	Benzene	Bromomethane	2-Butanone (MEK)	sec-Butylbenzene	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	1,4-dichlorobenzene	Dichlorodifluoromethane	1,1-Dichloroethane	1,2-dichloroethane	1,1-Dichloroethene	cis-1,2-dichloroethene	trans-1,2-Dichloroethene	1,2-dichloropropane	Ethylbenzene	Isopropylbenzene	Methylene chloride	MTBE	Tetrachloroethene	Tetrahydrofuran	Toluene	1,2,4-Trichlorobenzene	Trichloroethene	Trichlorofluoromethane	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl Chloride	Total Xylenes
WDNR	PAL	200	0.5	1	90	NE	NE	80	0.6	0.3	15	200	85	0.5	0.7	7	20	0.5	140	NE	0.5	12	0.5	10	200	14	0.5	NE	96		0.02	1000
NR140	ES	1000	5	10	460	NE	NE	400	6	3	75	1000	850	5	7	70	100	5	700	NE	5	60	5	50	1000	70	5	NE	480		0.2	10000
P-103D	2/4/04				NA																0.55 J			NA						**1.1**	
	5/11/04																														**1.5**	
	05/11/04 dup																														**1.5**	
	7/23/04																														**1.3**	
	07/23/04 dup																														**1.5**	
	10/13/04									0.43 J						0.86 J																
	4/26/05															0.84 J															**3.0**	
	10/26/05															0.98 J															**2.7**	
	10/26/05 dup															0.95 J															**2.8**	
	4/25/06																														**2.6**	
	11/1/06																														**1.9**	
	5/2/07																														**1.4**	
	10/18/07																														**1.2**	
	5/5/08																														**0.69**	
	5/5/08 Dup																														**0.66**	
	10/2/08																														**1.1**	
	10/2/08 Dup																														**1.5**	
	4/7/09																															
	4/7/09 Dup																															
	10/28/09									1.1																						
	2/25/10																														**0.64 J**	
	5/24/10																															
	10/5/10																				0.86 J										**0.71 J**	

Table 4-4. Monitoring Well Groundwater Sampling Results for VOCs
FF/NN Landfill
Ripon, WI

		Parameters																														
Sampling Point	Collection Date	Acetone [1]	Benzene	Bromomethane	2-Butanone (MEK)	sec-Butylbenzene	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	1,4-dichlorobenzene	Dichlorodifluoromethane	1,1-Dichloroethane	1,2-dichloroethane	1,1-Dichloroethene	cis-1,2-dichloroethene	trans-1,2-Dichloroethene	1,2-dichloropropane	Ethylbenzene	Isopropylbenzene	Methylene chloride	MTBE	Tetrachloroethene	Tetrahydrofuran	Toluene	1,2,4-Trichlorobenzene	Trichloroethene	Trichlorofluoromethane	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl Chloride	Total Xylenes
WDNR	PAL	200	0.5	1	90	NE	NE	80	0.6	0.3	15	200	85	0.5	0.7	7	20	0.5	140	NE	0.5	12	0.5	10	200	14	0.5	NE	96		0.02	1000
NR140	ES	1000	5	10	460	NE	NE	400	6	3	75	1000	850	5	7	70	100	5	700	NE	5	60	5	50	1000	70	5	NE	480		0.2	10000
	10/27/93	NR	2				2				2					1 JB									31							
	4/19/94	NR	1				1				1					10											0.8 J				**6.0**	
	5/9/96	NR	**6**				5	1		0.3 J			0.2 J			6	0.3 J		0.1 J						0.2 J		0.5 J				**10**	
	10/30/96	NR	0.64 J				1.1	0.34 J		0.46 J						3.6	0.22 J		0.80 J								0.31 J				**4.3**	0.77 J
	5/12/97	NR	4.8				4.5	1.5			0.91					1.1						0.32									**4.5**	
	10/27/97	NR	0.63				1.3				0.85					7.3															**18**	
	4/13/98	NR	1.2													**74**	0.67								0.46		3.5				**17**	
	10/13/98	NR	1.7								0.76					3.3															**15**	4.1
	4/7/99	NR	3.2				1.4									6.6											0.71				**6.1**	
	10/27/99	NR	3.5				5.4				0.92					4.5															**2.8**	
	5/2/00	NR	3				5.7				1.5					0.7									0.13						**1.1**	
	10/30/00	NR	2				6.2				1.6					2.6									0.12		0.33				**29**	
	5/1/01	NR	2.5				5.6				2	0.47				7				0.26	0.51 L			0.81	0.13		0.66				**8.6**	
	10/11/01	NR	3.1				9.5				2.3				0.85	2					0.39 L				0.1				0.1		**2.2**	
	2/5/02	NR	2.7		NA	0.16	8				2	0.19				5.1				0.23				NA	0.17		0.73				**13**	
	05/21/02*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	08/19/02 *	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-104	12/05/02 *	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	4/21/2003 *	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	4/22/03		1.8		6.9 J		3.1									4.6															**6.5**	
	10/23/03	3.2	4				7.8				1.8					3.3															**8.6**	
	4/28/04		2.4				6				2.2 J					6.4															**8.7**	
	10/13/04		2.5				6.5				2.2 J					10															**20**	
	4/27/05		1.7				5.4				2.1 J																				**0.64**	
	10/25/05		1.4				6.9				2.5 J					3.9															**13**	
	4/25/06		1.4		4.6 J		4.9				2.2 J					1.0 J															**1.1**	
	11/2/06		1.2 J				4.8				1.7 J																					
	11/2/06 dup		1.3 J				5																									
	5/2/07		0.8 J				4				2.0 J																					
	10/18/07		0.75 J				6				2.0 J																					
	5/6/08						3.3				1.8																					
	10/1/08						3.7				1.9																					
	4/7/09						3.5				2.3																					
	11/4/09						3.9				1.9																					
	5/20/10		0.47 J				3.5				2.4																					

Table 4-4. Monitoring Well Groundwater Sampling Results for VOCs
FF/NN Landfill
Ripon, WI

		Parameters																														
Sampling Point	Collection Date	Acetone [1]	Benzene	Bromomethane	2-Butanone (MEK)	sec-Butylbenzene	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	1,4-dichlorobenzene	Dichlorodifluoromethane	1,1-Dichloroethane	1,2-dichloroethane	1,1-Dichloroethene	cis-1,2-dichloroethene	trans-1,2-Dichloroethene	1,2-dichloropropane	Ethylbenzene	Isopropylbenzene	Methylene chloride	MTBE	Tetrachloroethene	Tetrahydrofuran	Toluene	1,2,4-Trichlorobenzene	Trichloroethene	Trichlorofluoromethane	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl Chloride	Total Xylenes
WDNR	PAL	200	0.5	1	90	NE	NE	80	0.6	0.3	15	200	85	0.5	0.7	7	20	0.5	140	NE	0.5	12	0.5	10	200	14	0.5	NE	96		0.02	1000
NR140	ES	1000	5	10	460	NE	NE	400	6	3	75	1000	850	5	7	70	100	5	700	NE	5	60	5	50	1000	70	5	NE	480		0.2	10000
P-104	10/27/94	NR																														
	4/19/94	NR																														
	5/9/96	NR																														
	10/30/96	NR								0.20 J																						
	5/12/97	NR																														
	10/27/97	NR																														
	4/13/98	NR																														
	10/11/01	NR																			0.52L											
	2/5/02	NR	0.18		NA					0.85														NA								
	5/21/02	NR			NA																			NA								
	8/20/02	NR																						NA								
	10/13/04									0.45 J																						
	10/13/04																															
	8/3/05																															
	8/3/05 Dup																															
	7/28/06																															
	8/14/07																															
	5/5/08																															
	4/7/09																															
	5/26/10																															
MW-106	10/1/93	NR																														
	4/1/94	NR																							11							
	2/4/02	NR			NA																			NA	0.25							
	05/21/02 *	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	08/19/02 *	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	120/5/02 *	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	04/21/03 *	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	7/23/04																															
	4/27/05																															
	4/27/05 Dup																															
	7/28/06*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	10/31/06*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	2/15/07																															
	8/14/07																															
	4/30/08																															
	4/8/09																															
	5/20/10																															

Table 4-4. Monitoring Well Groundwater Sampling Results for VOCs
FF/NN Landfill
Ripon, WI

		Parameters																														
Sampling Point	Collection Date	Acetone [1]	Benzene	Bromomethane	2-Butanone (MEK)	sec-Butylbenzene	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	1,4-dichlorobenzene	Dichlorodifluoromethane	1,1-Dichloroethane	1,2-dichloroethane	1,1-Dichloroethene	cis-1,2-dichloroethene	trans-1,2-Dichloroethene	1,2-dichloropropane	Ethylbenzene	Isopropylbenzene	Methylene chloride	MTBE	Tetrachloroethene	Tetrahydrofuran	Toluene	1,2,4-Trichlorobenzene	Trichloroethene	Trichlorofluoromethane	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl Chloride	Total Xylenes
WDNR	PAL	200	0.5	1	90	NE	NE	80	0.6	0.3	15	200	85	0.5	0.7	7	20	0.5	140	NE	0.5	12	0.5	10	200	14	0.5	NE	96		0.02	1000
NR140	ES	1000	5	10	460	NE	NE	400	6	3	75	1000	850	5	7	70	100	5	700	NE	5	60	5	50	1000	70	5	NE	480		0.2	10000
P-106	10/1/93	NR																									0.6 J					
	4/1/94	NR																									0.8 J					
	5/1/96	NR														0.2 J											0.8 J					
	10/1/96	NR								0.62 J																	0.22 J					
	5/1/97	NR																									0.65					
	10/1/97	NR																									0.67					
	4/1/98	NR																									0.61					
	10/1/98	NR																									0.71					
	4/1/99	NR																									0.58					
	10/1/99	NR																									0.61					
	5/1/00	NR																									0.56					
	10/1/00	NR																									0.6					
	5/1/01	NR																									0.56					
	10/11/01	NR																									0.39					
	2/5/02	NR			NA																			NA			0.6					
	02/05/02	NR			NA																			NA			0.6					
	5/22/02	NR			NA																			NA			0.49					
	05/22/02Dup	NR			NA																			NA			0.47 J					
	8/20/02	NR																						NA			0.43 J					
	12/4/02	NR																									0.53					
	4/22/03																										0.55 J					
	10/21/03																										0.56					
	10/21/03																															
	4/27/04																															
	10/13/04									0.9																	0.84 J					
	4/27/05																															
	10/25/05																															
	4/28/06																															
	11/1/06																															
	5/1/07																															
	10/22/07																															
	4/30/08																															
	10/1/08																															
	4/8/09																															
	4/8/09 Dup																															
	11/4/09																															
	5/26/10																															

Table 4-4. Monitoring Well Groundwater Sampling Results for VOCs
FF/NN Landfill
Ripon, WI

		Parameters																														
Sampling Point	Collection Date	Acetone [1]	Benzene	Bromomethane	2-Butanone (MEK)	sec-Butylbenzene	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	1,4-dichlorobenzene	Dichlorodifluoromethane	1,1-Dichloroethane	1,2-dichloroethane	1,1-Dichloroethene	cis-1,2-dichloroethene	trans-1,2-Dichloroethene	1,2-dichloropropane	Ethylbenzene	Isopropylbenzene	Methylene chloride	MTBE	Tetrachloroethene	Tetrahydrofuran	Toluene	1,2,4-Trichlorobenzene	Trichloroethene	Trichlorofluoromethane	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl Chloride	Total Xylenes
WDNR	PAL	200	0.5	1	90	NE	NE	80	0.6	0.3	15	200	85	0.5	0.7	7	20	0.5	140	NE	0.5	12	0.5	10	200	14	0.5	NE	96		0.02	1000
NR140	ES	1000	5	10	460	NE	NE	400	6	3	75	1000	850	5	7	70	100	5	700	NE	5	60	5	50	1000	70	5	NE	480		0.2	10000
MW-107	10/27/93	NR																									2					
	4/12/94	NR																									2					
	5/9/96	NR																									2					
	10/21/96	NR								0.80 J																	2.2					
	5/13/97	NR										0.9															2.6					
	10/27/97	NR										0.7															2					
	4/14/98	NR																									2.1					
	10/13/98*	NR																									NA					
	4/6/99	NR																									1.8					
	10/27/99	NR																									1.1					
	5/2/00	NR																									1.6					
	10/31/00	NR																									1.2					
	5/31/01	NR										0.47									0.57 L						1.8					
	10/11/01	NR																									0.87					
	2/4/02	NR			NA							0.35												NA			1.4					
	05/21/02*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	8/19/02 *	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/5/02 *	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	4/21/03																				0.52 J						1.2					
	10/21/03																										2.2					
	4/27/04																										1.9					
	10/13/04									0.63 J																	0.65 J					
	4/27/05																										1.1					
	10/27/05																										0.79 J					
	4/25/06																				0.49 J						0.55 J					
	10/31/06																															
	5/1/07																										0.86					
	10/17/07																										0.53 J					
	5/5/08																															
	10/1/08																															
	4/7/09																															
	10/28/09									1.6																						
	5/24/10																															
	10/4/10																				0.70 J											

Table 4-4. Monitoring Well Groundwater Sampling Results for VOCs
FF/NN Landfill
Ripon, WI

		Parameters																												
Sampling Point	Collection Date	Acetone [1]	Benzene	Bromomethane	2-Butanone (MEK)	sec-Butylbenzene	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	1,4-dichlorobenzene	Dichlorodifluoromethane	1,1-Dichloroethane	1,2-dichloroethane	1,1-Dichloroethene	cis-1,2-dichloroethene	trans-1,2-Dichloroethene	1,2-dichloropropane	Ethylbenzene	Isopropylbenzene	Methylene chloride	MTBE	Tetrachloroethene	Tetrahydrofuran	Toluene	1,2,4-Trichlorobenzene	Trichloroethene	Trichlorofluoromethane	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl Chloride	Total Xylenes
WDNR	PAL	200	0.5	1	90	NE	NE	80	0.6	0.3	15	200	85	0.5	0.7	7	20	0.5	140	NE	0.5	12	0.5	10	200	14	0.5	NE	96		0.02	1000
NR140	ES	1000	5	10	460	NE	NE	400	6	3	75	1000	850	5	7	70	100	5	700	NE	5	60	5	50	1000	70	5	NE	480		0.2	10000
P-107	10/27/93	NR														4															**6**	
	4/12/94	NR														2									0.7 J						**3**	
	4/12/94 Dup	NR														2									0.7 J						**3**	
	5/9/96	NR	0.1 J					0.2 J								2									0.1 J		0.1 J				**2**	
	10/23/96	NR						0.19		0.79 J						1.9															**2.3**	
	10/23/96	NR						0.21		0.49 J						2.1															**2.7**	
	5/14/97	NR														1.3															**2**	
	5/14/97 Dup	NR														1.1															**1.7**	
	10/27/97	NR														2.2															**2.6**	
	10/27/97	NR														1.8															**2.3**	
	4/14/98	NR														2.3															**2.2**	
	4/14/98 Dup	NR														2.3															**2.4**	
	10/14/98	NR														2.1										0.2					**1.5**	
	10/14/98	NR														2.4															**1.7**	
	4/6/99	NR														1.5															**0.58**	
	10/27/99	NR														1.8																
	10/27/99	NR														1.8																
	5/2/00	NR														1.5															**1.2**	
	5/02/00 Dup	NR														1.6															**1.2**	
	10/31/00	NR														1.4																
	10/31/00	NR														1.4																
	5/9/01	NR														0.96					0.52 L			0.72			1.8				**0.85**	
	5/9/2001	NR														0.97					0.49 L			0.79							**0.86**	
	10/11/01	NR														1.6															**1.7**	
	10/11/01	NR														1.5															**1.7**	
	2/4/02	NR			NA											1.6								NA							**1.2**	
	5/21/02	NR			NA											1.8								NA							**1.5**	
	5/21/02 Dup	NR			NA											1.7								NA							**1.4**	
	8/20/02	NR														0.84								NA							**0.54 J**	
	12/4/02	NR														1.3															**1**	
	4/21/03															1.5 J															**1**	
	04/21/2003															1.3 J																
	10/21/03															1.3															**0.93**	
	4/27/04															0.96 J															**0.61**	
	10/13/04															0.89 J															**0.64**	
	10/13/04															1.1 J																
	4/27/05																															
	10/27/05																															
	4/25/06																														**0.79**	
	10/31/06																														**0.33 J**	
	5/1/07																														**0.76**	
	10/19/07															0.92 J															**1**	
	5/5/08																															
	10/1/08																															
	4/7/09																															
	10/28/09									1.6																						
	5/24/10																														**1.1**	
	10/5/10																														**0.94 J**	

Table 4-4. Monitoring Well Groundwater Sampling Results for VOCs
FF/NN Landfill
Ripon, WI

		Parameters																												
Sampling Point	Collection Date	Acetone [1]	Benzene	Bromomethane	2-Butanone (MEK)	sec-Butylbenzene	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	1,4-dichlorobenzene	Dichlorodifluoromethane	1,1-Dichloroethane	1,2-dichloroethane	1,1-Dichloroethene	cis-1,2-dichloroethene	trans-1,2-Dichloroethene	1,2-dichloropropane	Ethylbenzene	Isopropylbenzene	Methylene chloride	MTBE	Tetrachloroethene	Tetrahydrofuran	Toluene	1,2,4-Trichlorobenzene	Trichloroethene	Trichlorofluoromethane	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl Chloride	Total Xylenes
WDNR	PAL	200	0.5	1	90	NE	NE	80	0.6	0.3	15	200	85	0.5	0.7	7	20	0.5	140	NE	0.5	12	0.5	10	200	14	0.5	NE	96		0.02	1000
NR140	ES	1000	5	10	460	NE	NE	400	6	3	75	1000	850	5	7	70	100	5	700	NE	5	60	5	50	1000	70	5	NE	480		0.2	10000
P-107D	10/27/93	NR														2B															**6**	
	4/13/94	NR																													
	5/9/96	NR	0.1 J							0.3 J						0.2 J									0.3J						**0.6 J**	
	10/23/96	NR								0.44 J																					**3.9**	
	5/14/97	NR														0.49															**2.4**	
	10/27/97	NR														1.7															**5.1**	
	4/14/98	NR														1															**4.1**	
	10/14/98	NR																													**2.2**	
	4/6/99	NR														0.34															**0.87**	
	10/27/99	NR																													**1.7**	
	5/2/00	NR																													**1.3**	
	10/31/00	NR														0.64																
	1/5/01	NR		0.33												1.5					0.44L			0.72B							**5.6**	
	10/11/01	NR														2.2															**10**	
	2/4/02	NR			NA											1.2								NA			0.17				**3.9**	
	2/04/02 Dup	NR														1.2															**3.9**	
	5/21/02	NR			NA											1.1								NA							**3.3**	
	8/20/02	NR														1.1								NA							**3.1**	
	12/4/02	NR														0.75															**0.81**	
	4/21/03															1.3 J															**3.3**	
	10/21/03															0.97															**3.5**	
	4/27/04															1.5 J															**4.2**	
	10/13/04							1.2 J		0.93						2.0 J															**5.9**	
	4/27/05															1.3 J															**3.1**	
	4/27/05 Dup							1.9 J								2.5															**6.2**	
	10/27/05							1.2 J								2.0 J															**4.3**	
	4/25/06							2.3 J								3.1					0.68 L										**7.7**	
	10/31/06							2.0 J								2.1 J															**4.3**	
	5/1/07							1.6 J								2.5 J															**6.2**	
	5/1/07 Dup							1.6 J								2.9															**6.7**	
	10/19/07																														**3**	
	5/5/08																														**1.3**	
	10/1/08																														**1.6**	
	4/7/09																														**2.5**	
	10/28/09																														**2**	
	2/25/10							0.25 J													0.64 J										**1.8**	
	5/24/10																														**4**	
	10/5/10																														**1.6**	

Table 4-4. Monitoring Well Groundwater Sampling Results for VOCs
FF/NN Landfill
Ripon, WI

		Parameters																														
Sampling Point	Collection Date	Acetone [1]	Benzene	Bromomethane	2-Butanone (MEK)	sec-Butylbenzene	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	1,4-dichlorobenzene	Dichlorodifluoromethane	1,1-Dichloroethane	1,2-dichloroethane	1,1-Dichloroethene	cis-1,2-dichloroethene	trans-1,2-Dichloroethene	1,2-dichloropropane	Ethylbenzene	Isopropylbenzene	Methylene chloride	MTBE	Tetrachloroethene	Tetrahydrofuran	Toluene	1,2,4-Trichlorobenzene	Trichloroethene	Trichlorofluoromethane	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl Chloride	Total Xylenes
WDNR	PAL	200	0.5	1	90	NE	NE	80	0.6	0.3	15	200	85	0.5	0.7	7	20	0.5	140	NE	0.5	12	0.5	10	200	14	0.5	NE	96		0.02	1000
NR140	ES	1000	5	10	460	NE	NE	400	6	3	75	1000	850	5	7	70	100	5	700	NE	5	60	5	50	1000	70	5	NE	480		0.2	10000
MW-108	10/18/93	NR																							11							
	4/13/94	NR																							2							
	5/8/96	NR														0.2 J									0.2 J							
	10/23/96	NR								0.85 J																						
	5/12/97	NR																														
	10/27/97	NR																														
	4/14/98	NR																														
	10/11/01	NR																			0.34L											
	5/21/02*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	8/19/02 *	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/5/02	NR																														
	10/14/04															1.2 J											1.3 J				**0.67**	
	4/27/05															1.0											0.7				**0.3**	
	8/3/05																										0.70 J					
	10/25/05																															
	2/1/06																															
	4/28/06																															
	7/27/06									0.36 J																						
	11/2/06																															
	2/1/07																															
	5/2/07																															
	8/14/07																															
	10/16/07																															
	5/6/08																															
	10/2/08																															
	4/8/09																															
	11/4/09																															
	11/4/09 Dup																															
	5/20/10																															
	5/20/10 Dup																															

Table 4-4. Monitoring Well Groundwater Sampling Results for VOCs
FF/NN Landfill
Ripon, WI

		Parameters																														
Sampling Point	Collection Date	Acetone [1]	Benzene	Bromomethane	2-Butanone (MEK)	sec-Butylbenzene	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	1,4-dichlorobenzene	Dichlorodifluoromethane	1,1-Dichloroethane	1,2-dichloroethane	1,1-Dichloroethene	cis-1,2-dichloroethene	trans-1,2-Dichloroethene	1,2-dichloropropane	Ethylbenzene	Isopropylbenzene	Methylene chloride	MTBE	Tetrachloroethene	Tetrahydrofuran	Toluene	1,2,4-Trichlorobenzene	Trichloroethene	Trichlorofluoromethane	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl Chloride	Total Xylenes
WDNR	PAL	200	0.5	1	90	NE	NE	80	0.6	0.3	15	200	85	0.5	0.7	7	20	0.5	140	NE	0.5	12	0.5	10	200	14	0.5	NE	96		0.02	1000
NR140	ES	1000	5	10	460	NE	NE	400	6	3	75	1000	850	5	7	70	100	5	700	NE	5	60	5	50	1000	70	5	NE	480		0.2	10000
P-108	10/25/93	NR																														
	10/25/93	NR																														
	4/13/94	NR																														
	4/13/94 Dup	NR																														
	10/11/01	NR																			0.32 L											
	2/5/02	NR			NA																			NA								
	5/21/02	NR			NA																			NA								
	10/14/04									0.45 J																						
	1/28/05																															
	10/25/05																															
	7/27/06									0.75 J																						
	8/14/07											2.7 J																				
	5/6/08																															
	4/8/09																															
	5/20/10																															
MW-111	4/19/94	NR																														
	10/11/01	NR																			0.30 L											
	5/21/02*	NR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	8/19/02	NR																						NA								
	12/5/02	NR																														
	10/13/04																															
	10/26/05																															
	4/24/06																															
	8/8/07																															
	5/5/08																															
	4/7/09																															
	10/28/09																															
	5/24/10																															
	10/4/10																				0.80 J											

Table 4-4. Monitoring Well Groundwater Sampling Results for VOCs
FF/NN Landfill
Ripon, WI

		Parameters																												
Sampling Point	Collection Date	Acetone[1]	Benzene	Bromomethane	2-Butanone (MEK)	sec-Butylbenzene	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	1,4-dichlorobenzene	Dichlorodifluoromethane	1,1-Dichloroethane	1,2-dichloroethane	1,1-Dichloroethene	cis-1,2-dichloroethene	trans-1,2-Dichloroethene	1,2-dichloropropane	Ethylbenzene	Isopropylbenzene	Methylene chloride	MTBE	Tetrachloroethene	Tetrahydrofuran	Toluene	1,2,4-Trichlorobenzene	Trichloroethene	Trichlorofluoromethane	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl Chloride	Total Xylenes
WDNR	PAL	200	0.5	1	90	NE	NE	80	0.6	0.3	15	200	85	0.5	0.7	7	20	0.5	140	NE	0.5	12	0.5	10	200	14	0.5	NE	96		0.02	1000
NR140	ES	1000	5	10	460	NE	NE	400	6	3	75	1000	850	5	7	70	100	5	700	NE	5	60	5	50	1000	70	5	NE	480		0.2	10000
P-111	4/19/94	NR																							2							
	10/11/01	NR																														
	2/5/02	NR			NA																			NA								
	5/22/02	NR			NA																			NA								
	8/19/02	NR																						NA								
	08/19/02	NR																						NA								
	12/5/02	NR																														
	12/05/02	NR																														
	4/22/03																															
	10/22/03																															
	4/28/04																															
	8/3/05																															
	7/27/06																															
	8/8/07																															
	5/5/08																															
	4/7/09																															
	10/28/09																															
	5/24/10																															
	10/5/10																															

Table 4-4. Monitoring Well Groundwater Sampling Results for VOCs
FF/NN Landfill
Ripon, WI

		Parameters																												
Sampling Point	Collection Date	Acetone [1]	Benzene	Bromomethane	2-Butanone (MEK)	sec-Butylbenzene	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	1,4-dichlorobenzene	Dichlorodifluoromethane	1,1-Dichloroethane	1,2-dichloroethane	1,1-Dichloroethene	cis-1,2-dichloroethene	trans-1,2-Dichloroethene	1,2-dichloropropane	Ethylbenzene	Isopropylbenzene	Methylene chloride	MTBE	Tetrachloroethene	Tetrahydrofuran	Toluene	1,2,4-Trichlorobenzene	Trichloroethene	Trichlorofluoromethane	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl Chloride	Total Xylenes
WDNR	PAL	200	0.5	1	90	NE	NE	80	0.6	0.3	15	200	85	0.5	0.7	7	20	0.5	140	NE	0.5	12	0.5	10	200	14	0.5	NE	96		0.02	1000
NR140	ES	1000	5	10	460	NE	NE	400	6	3	75	1000	850	5	7	70	100	5	700	NE	5	60	5	50	1000	70	5	NE	480		0.2	10000
P-111D	4/4/02	NR														0.6									0.3						**13**	
	5/22/02	NR			NA											0.59 J								NA							**15**	
	8/19/02	NR														0.37 J								NA							**12**	
	12/5/02	NR														0.42 J															**11**	
	4/23/03																														**12**	
	10/23/03																														**9.1**	
	5/11/04							1.4																							**15**	
	7/23/04																														**14**	
	10/13/04							1.9 J																	1.6 J						**11**	
	1/27/05																														**8.8**	
	4/26/05							3.7								0.87 J															**13**	
	4/26/05 Dup							3.5																							**13**	
	8/3/05									2.9 J						0.96 J															**10**	
	10/26/05							3.1 J								1.1 J															**10**	
	10/26/05 dup							2.7 J								0.93 J															**10**	
	2/1/06							4.2								0.89 J															**11**	
	4/24/06							2.8 J								1.3 J															**11**	
	7/27/06									0.30 J						1.2 J															**10**	
	10/31/06							1.4 J								1.3 J															**8.5**	
	1/31/07							3.0 J								1.4 J															**8.2**	
	5/1/07							3.1 J								1.3 J															**8.2**	
	8/8/07							2.9 J								1.5 J															**8.5**	
	10/17/07							2.7 J								1.5 J															**8**	
	5/5/08															1.5															**4.7**	
	10/2/08							1.8								1.5															**5.7**	
	4/7/09							1.4								1.7															**5.5**	
	10/28/09							1.8								1.5															**5**	
	2/25/10							1.8								1.5															**4.4**	
	2/25/10 Dup							1.5								1.5															**3.9**	
	5/24/10							1.9								1.5															**5.9**	
	5/24/10 Dup							1.8								1.4															**4.4**	
	10/5/10							1.5								1.3					0.53 J										**4.7**	
	10/5/10 Dup							1.6								1.3					1.2										**4.7**	

Table 4-4. Monitoring Well Groundwater Sampling Results for VOCs
FF/NN Landfill
Ripon, WI

		Parameters																														
Sampling Point	Collection Date	Acetone [1]	Benzene	Bromomethane	2-Butanone (MEK)	sec-Butylbenzene	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	1,4-dichlorobenzene	Dichlorodifluoromethane	1,1-Dichloroethane	1,2-dichloroethane	1,1-Dichloroethene	cis-1,2-dichloroethene	trans-1,2-Dichloroethene	1,2-dichloropropane	Ethylbenzene	Isopropylbenzene	Methylene chloride	MTBE	Tetrachloroethene	Tetrahydrofuran	Toluene	1,2,4-Trichlorobenzene	Trichloroethene	Trichlorofluoromethane	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl Chloride	Total Xylenes
WDNR	PAL	200	0.5	1	90	NE	NE	80	0.6	0.3	15	200	85	0.5	0.7	7	20	0.5	140	NE	0.5	12	0.5	10	200	14	0.5	NE	96		0.02	1000
NR140	ES	1000	5	10	460	NE	NE	400	6	3	75	1000	850	5	7	70	100	5	700	NE	5	60	5	50	1000	70	5	NE	480		0.2	10000
MW-112	11/27/96	NR	0.6 J					2 J								59	1 J										3 J				**15**	
	11/27/96	NR	0.7 J					2 J								58	1 J										4 J				**16**	
	5/12/97	NR	0.59				0.27									5.4															**2.2**	
	10/26/97	NR	0.5				0.29									1.3																
	4/13/98	NR	0.69					1.4								57	1.3										1.9				**12**	
	10/13/98	NR	0.76													**80**											1.2				**25**	
	4/6/99	NR	0.72					1.4								40	0.56										1.7				**7.9**	
	10/27/99	NR														7.6											1					
	5/2/00	NR	0.46													3.4											0.39					
	10/30/00	NR					0.37									5.6											0.37					
	5/9/01	NR	0.42				0.42									3.5															**0.98**	
	10/11/01	NR	0.36				0.39	0.53								27											0.83				**3.7**	
	2/4/02	NR	0.23		NA		0.48									0.49								NA								
	5/21/02*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	8/19/02 *	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/4/02															**150**											2.7 J				**56**	
	4/22/03		1.2 J					7.4 &								**220**	4.5 J										**5.9**				**45**	
	10/22/03	2.5	0.88					5.9								60	1.4										1.6				**51**	
	4/28/04		0.53 J				0.45 J	4								18											1.1 J				**9.9**	
	4/28/04 dup	6.5	0.61 J				0.48 J	4.7								22											1.1 J				**9.3**	
	7/23/04	110	1.1					23								**140**	2.6	0.58					1				**7.4**				**31**	
	10/13/04		1.0 J				0.42	14								**110**	2.4 J										2.9				**25**	
	10/13/04		0.87 J					15		0.56 J						**94**	2.1 J						0.60 J				2.9				**29**	
	1/26/05		0.76 J					20								**85**	2.3 J														**27**	
	4/26/05		0.6 J					13								64	1.2 J										1.8				**17**	
	8/3/05						0.48 J									4.6															**1.5**	
	10/25/05															2.5 J															**1.4**	
	2/1/06		0.41 J				0.45 J	3.2 J								11											0.76 J				**4.9**	
	4/25/06						0.48 J	0.97 J								5.4															**2.8**	
	7/27/06						0.43 J			0.24 J						2.9															**1.7**	
	7/27/06 dup									0.52 J																					**1.5**	
	11/2/06															2.3 J															**1.7**	
	2/1/07						0.46 J	1.4 J								3.8															**2.5**	
	5/2/07						0.53 J	1.3 J								6.1															**2.6**	
	8/14/07						0.51 J									4.4															**1.8**	
	8/14/07 dup						0.51 J									4.9															**1.6**	
	10/18/07						0.49 J									4															**1.2**	
	5/5/08															33.3											1.8				**1.3**	
	10/2/08															13.3																
	4/7/09															5.1																
	11/4/09																															
	5/20/10						0.44 J									2.7															**0.33 J**	

Table 4-4. Monitoring Well Groundwater Sampling Results for VOCs
FF/NN Landfill
Ripon, WI

		Parameters																														
Sampling Point	Collection Date	Acetone [1]	Benzene	Bromomethane	2-Butanone (MEK)	sec-Butylbenzene	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	1,4-dichlorobenzene	Dichlorodifluoromethane	1,1-Dichloroethane	1,2-dichloroethane	1,1-Dichloroethene	cis-1,2-dichloroethene	trans-1,2-Dichloroethene	1,2-dichloropropane	Ethylbenzene	Isopropylbenzene	Methylene chloride	MTBE	Tetrachloroethene	Tetrahydrofuran	Toluene	1,2,4-Trichlorobenzene	Trichloroethene	Trichlorofluoromethane	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl Chloride	Total Xylenes
WDNR	PAL	200	0.5	1	90	NE	NE	80	0.6	0.3	15	200	85	0.5	0.7	7	20	0.5	140	NE	0.5	12	0.5	10	200	14	0.5	NE	96		0.02	1000
NR140	ES	1000	5	10	460	NE	NE	400	6	3	75	1000	850	5	7	70	100	5	700	NE	5	60	5	50	1000	70	5	NE	480		0.2	10000
P-113A	9/12/02	NR							0.37 J																1.0 J							
	12/3/02	NR																														
	4/23/03																								2.2							
	10/22/03																															
	5/11/04																															
	8/2/05																															
	7/27/06									0.84																						
	8/8/07																															
	5/6/08																															
	4/6/09																															
	10/29/09																															
	5/25/10																															
	10/6/10																															
P-113B	9/11/02 [3]	NR							1										0.41 J						6.6							2.6
	12/3/02	NR																														
	4/23/03																															
	7/30/03																															
	10/22/03																															
	2/4/04																															
	5/11/04																															
	7/22/04																															
	10/14/04									0.49 J																						
	1/27/05																															
	4/27/05																															
	8/2/05																															
	10/26/05									0.42 J																						
	2/1/06																															
	4/24/06																															
	7/27/06									0.49 J																						
	10/31/06																															
	1/31/07																															
	5/1/07																															
	8/8/07																															
	10/19/07																															
	5/6/08																															
	10/1/08																															
	4/6/09																															
	4/6/09 Dup																															
	10/29/09																															
	5/25/10																															
	10/6/10																				0.51 J											

Table 4-4. Monitoring Well Groundwater Sampling Results for VOCs
FF/NN Landfill
Ripon, WI

		Parameters																													
Sampling Point	Collection Date	Acetone [1]	Benzene	Bromomethane	2-Butanone (MEK)	sec-Butylbenzene	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	1,4-dichlorobenzene	Dichlorodifluoromethane	1,1-Dichloroethane	1,2-dichloroethane	1,1-Dichloroethene	cis-1,2-dichloroethene	trans-1,2-Dichloroethene	1,2-dichloropropane	Ethylbenzene	Isopropylbenzene	Methylene chloride	MTBE	Tetrachloroethene	Tetrahydrofuran	Toluene	1,2,4-Trichlorobenzene	Trichloroethene	Trichlorofluoromethane	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl Chloride	Total Xylenes
WDNR	PAL	200	0.5	1	90	NE	NE	80	0.6	0.3	15	200	85	0.5	0.7	7	20	0.5	140	NE	0.5	12	0.5	10	200	14	0.5	NE	96		0.02	1000
NR140	ES	1000	5	10	460	NE	NE	400	6	3	75	1000	850	5	7	70	100	5	700	NE	5	60	5	50	1000	70	5	NE	480		0.2	10000
P-114 (former Ehster well)	11/19/01	NR														0.93															**7**	
	2/5/02	NR														0.85															**5.5**	
	5/22/02	NR														1.2															**6.2**	
	8/21/02	NR														0.93															**5.4**	
	12/3/02	NR														1.3									0.40 J						**6.3**	
	4/23/03																														**3.3**	
	10/23/03															1.2															**8.6**	
	10/23/03															1.4															**9.2**	
	5/11/04															1.5 J															**10**	
	7/22/04															1.4 J															**7.9**	
	10/13/04									0.39 J						1.7 J															**10**	
	1/27/05																														**3.5**	
	4/26/05																														**3.0**	
	8/2/05															1.1 J															**6.1**	
	10/26/05									0.84						1.3 J															**6.6**	
	10/26/05 dup									0.49						1.4 J															**6.9**	
	1/31/06															1.3 J															**8.4**	
	4/24/06															1.3 J															**7.6**	
	4/24/06 dup															1.3 J															**7.9**	
	7/27/06									0.48 J						1.6 J															**8.9**	
	7/27/06 dup									0.38 J						1.6 J															**8.7**	
	11/2/06															2.7 J															**13**	
	11/02/06 dup															2.7 J															**13**	
	2/1/07															1.2 J					0.46 J										**7.5**	
	2/1/07 dup															1.4 J															**8.5**	
	5/1/07															1.1 J															**7.4**	
	5/1/07 dup															1.2 J															**7.8**	
	8/8/07															1.1 J															**6.7**	
	8/8/07 dup															1.2 J															**7.5**	
	10/22/07															0.95 J															**7.8**	
	10/22/07 Dup															1.2 J															**8.1**	
	5/6/08															1.5															**6.6**	
	10/2/08															1.2															**6.1**	
	4/6/09															1.6															**6.5**	
	10/29/09									1.5						1.5															**4.7**	
	2/26/10															1.6															**5.1**	
	5/26/10															1.3															**4.5**	
	5/26/10 Dup															1.3															**4.3**	
	10/6/10															1.4															**5.4**	
	10/6/10 Dup															1.3															**5.4**	

Table 4-4. Monitoring Well Groundwater Sampling Results for VOCs
FF/NN Landfill
Ripon, WI

		Parameters																													
Sampling Point	Collection Date	Acetone [1]	Benzene	Bromomethane	2-Butanone (MEK)	sec-Butylbenzene	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	1,4-dichlorobenzene	Dichlorodifluoromethane	1,1-Dichloroethane	1,2-dichloroethane	1,1-Dichloroethene	cis-1,2-dichloroethene	trans-1,2-Dichloroethene	1,2-dichloropropane	Ethylbenzene	Isopropylbenzene	Methylene chloride	MTBE	Tetrachloroethene	Tetrahydrofuran	Toluene	1,2,4-Trichlorobenzene	Trichloroethene	Trichlorofluoromethane	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl Chloride	Total Xylenes
WDNR	PAL	200	0.5	1	90	NE	NE	80	0.6	0.3	15	200	85	0.5	0.7	7	20	0.5	140	NE	0.5	12	0.5	10	200	14	0.5	NE	96		0.02	1000
NR140	ES	1000	5	10	460	NE	NE	400	6	3	75	1000	850	5	7	70	100	5	700	NE	5	60	5	50	1000	70	5	NE	480		0.2	10000
P-115 (former Wiese well)	10/9/01	NR																													
	10/09/01 Dup	NR																													
	11/19/01	NR																													
	2/5/02	NR																													
	5/22/02	NR																													
	8/19/02	NR								0.20 J																					
	12/3/02	NR																													
	4/22/03																														
	7/30/03																														
	10/22/03																														
	2/4/04																														
	4/27/04																														
	10/14/04																													**0.33 J**	
	1/27/05																														
	4/26/05																														
	8/2/05																													**0.34 J**	
	10/26/05									0.24 J																				**0.33 J**	
	1/31/06																														
	4/24/06																													**0.62**	
	7/27/06																													**0.44 J**	
	10/31/06																													**0.39 J**	
	2/1/07																													**0.50 J**	
	5/1/07																													**0.54 J**	
	8/14/07																													**0.62**	
	10/22/07																													**0.49 J**	
	10/22/07																													**0.55 J**	
	5/6/08																													**1.1**	
	10/2/08																													**1.9**	
	4/6/09																													**1.3**	
	10/29/09									1.6																				**1.3**	
	2/26/10									0.30 J																				**0.95 J**	
	5/26/10																														
	10/6/10																													**1.2**	

Table 4-4. Monitoring Well Groundwater Sampling Results for VOCs
FF/NN Landfill
Ripon, WI

		Parameters																														
Sampling Point	Collection Date	Acetone[1]	Benzene	Bromomethane	2-Butanone (MEK)	sec-Butylbenzene	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	1,4-dichlorobenzene	Dichlorodifluoromethane	1,1-Dichloroethane	1,2-dichloroethane	1,1-Dichloroethene	cis-1,2-dichloroethene	trans-1,2-Dichloroethene	1,2-dichloropropane	Ethylbenzene	Isopropylbenzene	Methylene chloride	MTBE	Tetrachloroethene	Tetrahydrofuran	Toluene	1,2,4-Trichlorobenzene	Trichloroethene	Trichlorofluoromethane	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl Chloride	Total Xylenes
WDNR	PAL	200	0.5	1	90	NE	NE	80	0.6	0.3	15	200	85	0.5	0.7	7	20	0.5	140	NE	0.5	12	0.5	10	200	14	0.5	NE	96		0.02	1000
NR140	ES	1000	5	10	460	NE	NE	400	6	3	75	1000	850	5	7	70	100	5	700	NE	5	60	5	50	1000	70	5	NE	480		0.2	10000
P-116 (former Hadel well)	10/9/01	NR																														
	11/19/01	NR																														
	2/5/02	NR																														
	5/22/02	NR																														
	8/19/02	NR																														
	08/19/02 Dup	NR																														
	12/3/02	NR																														
	12/03/02 Dup	NR																														
	4/22/03																															
	7/30/03																															
	10/22/03																															
	2/4/04																															
	5/11/04																															
	7/22/04																															
	10/14/04																															
	1/27/05																															
	4/26/05																															
	8/2/05																															
	10/26/05																															
	1/31/06																															
	01/31/06 Dup																															
	4/24/06																															
	7/27/06									0.35 J																						
	10/31/06																															
	2/1/07																															
	5/1/07																															
	8/8/07																															
	10/22/07																															
	5/6/08																															
	10/2/08																															
	4/6/09																															
	10/29/09																															
	2/26/10																				1.1											
	5/25/10																															
	10/6/10																				0.44 J											

Results in µg/L

B = analyte found in method blank as well as sample
E = exceeds calibration range
J = estimated value (detected between LOD and LOQ)
L = Lab Artifact
& = Laboratory control spike recovery not within control limits
NE = None Established
NA= Not Analyzed; no sample collected for analysis

PAL = Preventive Action Limit
ES = Enforcement Standard
Underline indicates exceeds NR 140 PAL
Bolding indicates exceeds NR 140 ES
Blank = Sample Collected but No VOCs detected
Historical data for abandoned wells MW-105, P-105, P-109 and MW-110 can be found in reports prior to October 204
NR = Value not reported by lab or not recorded during initial evaluation by GeoTrans

* Not sampled due to insufficient water for sample collection

[1] The reporting of acetone on an 8260B VOC scan varies with labs. Enchem, which began analyzing samples in April 2003, does report acetone. Acetone has appeared in several wells beginning in October 2003.

[2] MW-103 had low concentrations of isopropyl ether detected in October 1997 and February 2002. Acetone at 27 ppb was detected in April 2004. Carbon disulfide at 2.2 J ppb was detected in January 2007

[3] this sample had detections of bromodichloromethane at 0.59 ppb and dibromochloromethane at 0.35 ppb,

[4] this sample in P-116 had 0.18 ppb of 1,1,1-trichloroethane

Table 4-5. Groundwater Sampling Results for Natural Attenuation Parameters
FF/NN Landfill
Ripon, WI

Well ID	Compound	Nitrate	Nitrite	Iron 2	Sulfate	Sulfide	Methane	ORP**	Dissolved Oxygen	Specific Conductivity	pH	Temperature
		NO_3^-	NO_2^-	Fe^{2+}	SO_4^{2-}	S^{2-}	CH_4					
	Detection Range	0.2 to 1.5*	0.08 to 0.8*	0.1 to 2.5*	8 to 100*	0.2 to 3*						
	Target	>1	<1	< backgrnd	= backgrnd	<1	<0.5	>50	>0.5			
	Units	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mV	mg/l	uS/cm	Units	C
MW-101	2/1/2007									558	6.59	7.4
	5/1/2007									1021	6.92	13.1
	5/6/2008									782	7.18	12.4
	4/8/2009									940	6.75	12.5
	10/29/2009	<0.20	0.39	>2.5	>100	<0.2	0.015	-98	3.17	914	6.85	11.8
	5/25/2010	<0.20	0.08	>2.5	>100	<0.2	0.0192	-73	1.65	961	6.55	25.3
	10/4/2010	0.08			>100		0.0136	-63	2.13	1265	6.95	15.8
MW-103	2/1/2007									2670	6.95	5.7
	5/2/2007									1180	6.64	10.8
	10/18/2007									1609	6.74	13.0
	5/5/2008									1420	7.06	12.2
	10/2/2008									1411	6.69	11.3
	4/7/2009									1433	7.17	10.3
	10/28/2009	<0.20	>0.80	0.42	>100	<0.2	0.00042	24	4.21	1780	6.79	10.7
	2/25/2010	>1.5	<0.08	<0.1	>100	<0.2	<0.0028	55	4.1	2	6.96	8.6
	5/24/2010	>1.5	<0.08	0.11	>100	<0.2	<0.0028	86	2.84	2110	6.49	17.7
	10/4/2010	>1.5			>100		0.0235	46	3.33	1920	7.22	12.9
MW-107	4/21/2003						0.13	185.70	21.27	1021	7.00	9.84
	4/22/2003				30			74.10	5.70	1024	7.06	10.32
	10/21/2003	3.3			32			79.30	5.80	1211	6.92	9.64
	5/1/2007									570	6.93	10.5
	10/17/2007									1297	7.09	13.1
	5/5/2008									796	7.54	11.5
	10/1/2008									1240	6.86	10.1
	4/7/2009									1226	7.50	10.2
	10/28/2009	>1.5	0.18	0.61	>100	<0.2	<0.000180	-1	5.78	956	7.13	11.6
	5/24/2010	>1.5	0.32	1.86	>100	0.71	<0.0028	61	3.08	1087	6.89	20.7
	10/4/2010	>1.5		0.7	49.95		ND	76	6.38	1650	7.62	10.6
MW-111	12/5/2002									866	7.15	7.84
	8/8/2007									920	7.45	11.4
	5/5/2008									732	7.45	11.9
	4/7/2009									867	7.22	10.8
	10/28/2009	>1.5	<0.08	0.26	>100	<0.2	0.00031	3	6.66	836	6.66	11.4
	5/24/2010	1.09	0.22	1.39	>100	0.44	<0.0028	71	2.73	958	6.80	22.7
	10/4/2010	0.99		0.02	>100		ND	85	4.87	995	7.72	9.6
P-101	12/4/2002				50			-53.5	0.08	843	7.12	9.26
	4/22/2003				51			-36.9	0.81	646	7.46	10.12
	10/23/2003	<0.058			49			-65.5	0.66	754	7.04	10.20
	5/1/2007									828	7.57	11.7
	5/6/2008									735	7.69	11.3
	4/8/2009									749	7.24	11.4
	10/29/2009	0.39	0.12	1.84	71.36	<0.2	0.00059	-108	2.2	880	7.32	11.2
	5/25/2010	<0.20	<0.08	1.38	70.81	<0.2	<0.0028	-48	1.04	925	6.62	25.5
	10/4/2010	0.08			69.72		ND	-92	1.9	948	7.51	15.0
P-103	12/4/2002				54		0.037	-60.50	1.17	956	7.00	9.49
	4/21/2003				58			-29.90	0.71	388	7.28	10.50
	10/22/2003	0.41			54			-147.10	0.82	874	7.17	10.06
	2/1/2007							172	0.53	903	6.86	9.0
	5/2/2007							206	0.92	896	6.78	9.9
	8/14/2007							226	0.70	863	7.09	11.4
	10/18/2007							300	0.51	863	6.35	11.0
	5/5/2008							30	0.93	956	6.98	10.5
	10/2/2008							323	1.37	888	6.70	10.8
	4/7/2009							-95	1.09	813	7.40	9.8
	10/28/2009	0.45	<0.08	<0.1	78.95	<0.2	0.052	-125	0.85	739	7.19	10.2
	2/25/2010	>1.5	NM	NM	83.29	<0.2	0.0416	-120	1.62	845	7.25	9.0
	5/24/2010	<0.20	<0.08	>2.5	89.8	<0.2	0.0489	-104	0.38	815	7.00	11.2
	10/5/2010	0.08			85.02		0.0562	-128	1.15	874	7.86	10.9
P-107	12/4/2002	NM	NM	NM	66		0.11	-28.00	0.86	791	7.22	9.40
	4/21/2003				74			37.30	0.76	646	7.43	9.62
	10/21/2003	<0.058						-70.40	0.92	716	7.18	9.73
	5/1/2007							240	1.64	840	6.66	9.6
	10/19/2007							330	1.80	863	6.42	10.7
	5/5/2008							8	1.50	925	7.50	11.0
	10/1/2008							350	2.63	923	6.66	10.2
	4/7/2009							-95	1.75	852	7.34	9.0
	10/28/2009	<0.20	<0.08	1.68	89.8	<0.2	0.31	-78	1.19	778	7.08	10.9
	5/24/2010	<0.20	<0.08	1.76	99.39	<0.2	0.383	-70	1.12	869	6.92	13.2
	10/5/2010	0.06			88.68		0.345	-117	1.84	930	7.86	10.8

Table 4-5. Groundwater Sampling Results for Natural Attenuation Parameters
FF/NN Landfill
Ripon, WI

Well ID	Compound	Nitrate	Nitrite	Iron 2	Sulfate	Sulfide	Methane	ORP**	Dissolved Oxygen	Specific Conductivity	pH	Temperature
		NO_3^-	NO_2^-	Fe^{2+}	SO_4^{2-}	S^{2-}	CH_4					
	Detection Range	0.2 to 1.5*	0.08 to 0.8*	0.1 to 2.5*	8 to 100*	0.2 to 3*						
	Target	>1	<1	< backgrnd	= backgrnd	<1	<0.5	>50	>0.5			
	Units	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mV	mg/l	uS/cm	Units	C
P-111	12/5/2002				44			-88.30	-0.03	639	7.43	9.76
	4/22/2003				39			-74.20	0.67	486	7.71	12.06
	10/22/2003	<0.058			31			-94.00	0.75	566	7.53	9.87
	8/14/2007							118	0.35	580	7.46	11.1
	5/5/2008							65	0.35	614	7.72	10.5
	4/7/2009							-89	0.26	624	7.62	9.1
	10/28/2009	<0.20	<0.08	0.53	64.03	<0.2	0.0085	-140	0.48	616	7.57	10.1
	5/24/2010	<0.20	<0.08	0.61	70.99	<0.2	0.0051	-101	0.24	673	7.25	10.5
	10/5/2010	0.06			69.06		0.0065	-131	0.28	715	8.26	10.3
MW-3B	12/5/2002				36			-87	-0.11	1248	6.57	9.84
	12/5/2002				36							
	4/22/2003				46			-92	0.37	815	7.18	9.86
	10/22/2003	<0.058			43			-161	0.55	662	7.45	9.79
	1/31/2007							140	0.51	710	7.27	8.2
	5/1/2007							125	1.32	703	6.99	9.5
	8/8/2007							-233	0.43	605	7.49	10.3
	10/19/2007							170	0.29	598	6.63	9.8
	5/6/2008							21	0.40	672	7.89	9.7
	10/1/2008							334	1.35	646	6.90	9.7
	4/7/2009							-116	0.20	604	7.48	8.8
	10/28/2009	<0.20	<0.08	0.72	37.68	<0.2	0.098	-230	0.35	567	7.65	9.4
	5/24/2010	<0.20	<0.08	0.78	50.67	<0.2	0.0275	-176	0.17	650	7.27	10.2
	10/5/2010	0.05		0.61	43.23		0.0159	-161	8.80	697	8.24	9.9
P-103D	5/2/2007							260	0.57	879	6.89	9.9
	10/18/2007							321	0.54	854	6.43	11.2
	5/5/2008							20	0.63	935	7.02	10.8
	10/2/2008							327	3.40	877	6.85	10.7
	4/7/2010							-110	0.45	808	7.61	10.0
	10/28/2009	<0.20	0.17	>2.5	76.38	<0.2	0.098	-146	0.52	746	7.30	10.2
	2/25/2010		<0.08	>2.5	78.05	<0.2	0.0747	-146	0.76	842	7.39	9.2
	5/24/2010	<0.20	<0.08	>2.5	88.88	<0.2	0.0303	-111	0.37	853	7.08	11.1
	10/5/2010	0.11			93.48		**0.0659**	-147	1.10	898	7.97	10.9
P-111D	12/5/2002				62			-75.60	-0.02	910	7.32	9.75
	4/23/2003				64			-20.50	0.94	706	7.63	9.98
	10/23/2003	<0.058			65			-68.30	0.70	838	7.17	9.78
	1/31/2007							74	0.72	885	7.30	8.9
	5/1/2007							78	3.37	900	7.05	10.0
	8/8/2007							55	0.55	900	7.25	10.9
	10/19/2007							296	0.53	897	6.90	10.7
	5/6/2008							15	0.56	980	7.56	10.6
	10/1/2008							330	2.31	907	7.07	10.0
	4/7/2009							-97	1.98	821	7.52	9.3
	10/28/2009	<0.20	<0.08	1.79	60.63	<0.2	0.33	-171	0.46	764	7.51	10.0
	2/25/2010	0.43	<0.08	1.62	65.7	<0.2	0.123	-125	0.86	871	7.45	6.0
	5/24/2010	<0.20	<0.08	1.83	70.59	0.25	0.31/0.239 Dup	-136	0.24	840	7.21	10.7
	10/5/2010	0.08		1.75	61.2		0.269/0.222 Dup	-148	0.75	886	8.13	10.3
P-113B	12/3/2002				47			27.20	0.39	960	6.80	10.18
	4/23/2003				56			-54.30	1.05	715	7.22	10.13
	10/22/2003	<0.058			49			-125.40	0.46	616	7.42	10.13
	1/31/2007							109	0.40	620	7.33	8.8
	5/1/2007							113	1.03	625	7.03	10.2
	8/14/2007							110	0.28	618	7.28	11.1
	10/22/2007							252	0.53	629	6.70	10.3
	5/6/2008							-16	0.33	716	7.31	10.3
	10/2/2008							328	2.47	674	7.12	10.6
	4/6/2009							-122	0.40	627	7.54	9.2
	10/29/2009	<0.20	<0.08	0.83	70.14	<0.2	0.057	-187	0.42	579	7.33	10.3
	5/25/2010	<0.20	<0.08	1.19	80.11	<0.2	<0.0028	-145	0.17	646	7.26	10.9
	10/6/2010	0.1		0.98	75.55		ND	-183	0.35	685	8.09	11.0
P-114 (Ehster)	12/3/2002				44					695	7.71	11.10
	4/23/2003				63			-117.00	0.85	669	7.71	10.00
	10/23/2003	<0.058			49			-125.10	0.54	1379	7.31	9.87
	2/1/2007							151	0.21	674	7.27	9.9
	5/1/2007							149	0.96	686	7.08	10.2
	8/8/2007							202	0.34	667	7.45	11.0
	10/22/2007							313	0.90	670	6.71	10.2
	5/6/2008							14	0.74	775	7.23	10.2
	10/2/2008							307	2.34	737	7.01	10.4
	4/6/2009							-76	0.45	687	7.58	9.5
	10/29/2009	0.22	<0.08	0.56	50.61	<0.2	0.28	-120	0.44	636	7.41	10.0
	2/26/2010	0.61	0.11	0.54	49.43	<0.2	0.285	-148	0.35	707	7.62	9.2
	5/26/2010	<0.20	0.15	0.6	57.47	<0.2	0.138/0.194 Dup	-129	0.66	703	7.27	10.4
	10/6/2010	0.11		0.72	57.18		0.186/0.224 Dup	-182	0.86	766	8.28	10.6

Table 4-5. Groundwater Sampling Results for Natural Attenuation Parameters
FF/NN Landfill
Ripon, WI

Well ID	Compound	Nitrate	Nitrite	Iron 2	Sulfate	Sulfide	Methane	ORP**	Dissolved Oxygen	Specific Conductivity	pH	Temperature
		NO_3^-	NO_2^-	Fe^{2+}	SO_4^{2-}	S^{2-}	CH_4					
	Detection Range	0.2 to 1.5*	0.08 to 0.8*	0.1 to 2.5*	8 to 100*	0.2 to 3*						
	Target	>1	<1	< backgrnd	= backgrnd	<1	<0.5	>50	>0.5			
	Units	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mV	mg/l	uS/cm	Units	C
P-115 (former Wiese well)	2/1/2007							128	0.29	590	7.35	9.6
	5/1/2007							112	0.85	589	7.12	10.5
	8/14/2007							216	0.43	582	7.44	10.7
	10/22/2007							313	0.54	579	6.74	10.6
	5/6/2008							-16	0.48	690	7.27	10.7
	10/2/2008							315	2.44	654	6.89	10.7
	4/6/2009							-72	0.30	605	7.58	9.9
	10/29/2009	<0.20	<0.08	0.92	40.7	<0.2	0.044	-166	0.47	551	7.52	10.2
	2/26/2010	0.36	<0.08	1.48	43.65	<0.2	0.0579	-155	0.35	620	7.64	9.8
	5/26/2010	<0.20	<0.08	1.01	46.07	<0.2	0.049	-135	0.40	608	7.30	10.5
	10/6/2010	0.1		0.95	41.23		0.0562	-175	1.42	646	8.15	10.7
P-116 (former Hadel well)	2/1/2007							171	0.38	528	7.34	8.8
	5/1/2007							142	0.59	528	7.09	10.5
	8/8/2007							202	0.42	523	7.53	12.1
	10/22/2007							301	0.59	522	6.75	10.8
	5/6/2008							38	0.71	603	7.18	12.3
	10/2/2008							295	2.70	559	7.04	11.2
	4/6/2009							-49	0.89	518	7.57	9.5
	10/29/2009	0.33	0.21	0.51	41.29	0.32	0.0031	-96	0.44	476	7.53	10.3
	2/26/2010	0.48	0.23	0.51	41.82	0.4	0.0042	-97	0.44	535	7.64	9.1
	5/25/2010	0.33	0.24	0.73	49.87	0.49	0.004	-75	0.33	530	7.30	12.2
	10/6/2010	0.45		0.92	58.53		0.0051	-106	0.55	567	8.20	12.1
MW-3A	12/5/2002				20			-312	0.03	589	7.30	9.79
	4/22/2003				26			3	0.66	464	7.52	10.22
	10/22/2003	<0.058			14			-98	0.87	552	7.29	10.06
	1/31/2007							163	0.79	556	7.13	6.1
	5/1/2007							34	1.96	558	6.95	10.2
	8/8/2007							-144	0.74	549	7.32	12.4
	10/19/2007							201	1.07	551	6.51	10.5
	5/6/2008							13	0.33	630	7.55	9.8
	10/1/2008							297	7.35	591	6.89	9.8
	10/28/2009	<0.20	<0.08	0.51	14.67	<0.2	0.0073	-236	0.55	505	7.45	9.5
	5/24/2010	<0.20	0.04	0.49	22.35	0.21	0.0074	-227	0.55	561	7.13	12.5
	10/5/2010	0.05			15.33		0.0397	-204	1.51	600	8.20	11.3
P-107D	12/4/2002				19					594	7.64	7.90
	4/21/2003				27					388	7.28	10.50
	10/21/2003	<0.058			19			51.40	1.25	528	7.34	10.05
	5/1/2007							113	3.20	583	6.96	12.4
	10/19/2007							261	1.10	581	6.56	10.0
	5/5/2008							61	1.07	653	7.55	10.6
	10/1/2008							354	4.48	607	6.89	10.4
	4/7/2009							-101	2.01	569	7.53	9.1
	10/28/2009	<0.20	<0.08	<0.1	23.84	<0.2	0.073	-188	0.45	528	7.48	10.1
	2/25/2010	0.51	<0.08	<0.1	23.57	<0.2	0.0613	-191	0.74	605	7.50	8.5
	5/24/2010	<0.20	<0.08	0.19	31.82	<0.2	0.163	-147	3.12	618	7.15	11.2
	10/5/2010	0.06		0.03	21.24		0.0737	-132	0.93	619	8.09	10.6
P-113A	12/3/2002				12			111.80	20.00	579	7.26	10.39
	4/23/2003				15			42.00	2.98	465	7.50	10.37
	10/22/2003	0.3			10			-62.60	2.23	576	7.30	10.17
	8/8/2007							-140	0.57	544	7.37	13.3
	5/6/2008							-88	0.55	620	7.22	10.4
	4/6/2009							-137	0.74	542	7.42	8.4
	10/29/2009	0.35	0.16	>2.5	31.67	0.37	0.27	-240	0.87	498	7.41	10.7
	5/25/2010	0.26	0.21	>2.5	44.79	0.39	0.169	-183	0.96	554	7.16	15.6
	10/6/2010	0.43			44.48		0.239	-196	0.89	591	7.98	12.8
Perry/Watkins	10/29/2009	<0.20	<0.08	>2.5	15.18	<0.2	0.0098	-167	3.00	489	7.55	10.8
	2/26/2010	<0.20			16.34	0.42	0.0067	-159	1.57	549	7.70	8.6
	5/26/2010	<0.20	<0.08	1.7	24.6	<0.2	0.0082	-135	0.91	552	7.35	16.7
	10/6/2010	0.1			20.12		0.0081	-183	1.38	582	8.18	14.4
Gaastra	10/29/2009	<0.20	<0.08	0.98	16.04	<0.2	0.01	-163	0.27	490	7.56	10.3
	2/26/2010	<0.20			19.35	<0.2	0.0086	-146	1.22	584	7.45	10.7
	5/26/2010	<0.20	<0.08	2.44	27.28	0.22	0.0121	-156	0.52	553	7.28	17.3
	10/6/2010	0.11			22.65		0.0103	-201	1.14	597	8.22	15.0
Rohde	11/4/2009	<0.20	<0.08	0.36	19.88	<0.2	0.0011	-76	0.99	500	7.25	10.0
	2/25/2010	<0.20			21.03	<0.2	<0.0028	0	2.61	606	7.61	9.4
	5/26/2010	<0.20	<0.08	0.25	25.64	<0.2	<0.0028	7	1.19	635	6.42	18.53
	10/6/2010	0.08			26.48		ND	-117	1.91	612	8.08	13.7

indicates that sample was not analyzed for that parameter
* detection range only applies to samples collected on or after 10/2009
** ORP is believed to be incorrect from 2/2007 to 10/2008 due to equipment malfunction

Table 4-6. Leachate Well Sampling Results for VOCs
FF/NN Landfill
Ripon, WI

			Parameter																											
Leachate Well ID	Year	Date	Benzene	2-Butanone (MEK)	Carbon Disulfide	Chlorobenzene	Chloroethane	Chloromethane	Dichlorodiflurormethane	1,2-Dichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	1,1-Dichloroethane	cis-1,2-Dichloroethene	Ethylbenzene	Isopropylbenzene	P-isopropyl toluene	4-Methyl-2 Pentanone	Naphthalene	n-Propylbenzene	Tetrachloroethene	Tetrahydrofuran	Toluene	1,2,4-Trichlorobenzene	Trichloroethene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl Chloride	Xylenes (Total)	Methyl-t-butyl ether	Di-isopropyl ether
LC-1	1993	5/12	<25	<120	<25	<25	<25	<25	NA	25	25	<25	<25	410	92	NA	NA	<120	NA	NA	<25	NA	170	NA	18J	NA	NA	76	320	NA	NA
		5/12 Dup	<36	<180	<36	<36	<36	<36	NA	36	36	43	<36	550	110	NA	NA	<180	NA	NA	<36	NA	290	NA	<36	NA	NA	71	410	NA	NA
		6/24	1J	<7	<1	<1	5	<1	NA	1	1	0.8J	<1	13	12	NA	NA	<7	NA	NA	<1	NA	20	NA	<1	NA	NA	6	85	NA	NA
		6/24 Dup	<25	<8	<2	<2	6D	<2	NA	2	2	1DJ	<2	13D	11D	NA	NA	<8	NA	NA	<2	NA	23D	NA	<2	NA	NA	7D	82D	NA	NA
	1996	5/10	2.2	<120	<25	<25	<25	4J	ND	ND	ND	<25	<25	0.46J	4J	ND	NA	<120	NA	ND	<25	NA	<25	ND	<25	NA	NA	<25	86	NA	NA
		10/31	<16	<5	<1	0.58J	1.5	<1	ND	ND	ND	<1	<1	<12	8.3	ND	NA	23	NA	ND	<1	NA	4.7	ND	<1	NA	NA	<1	280	NA	NA
	1997	5/13	1.7	<100	90	<11	<60	<19	ND	ND	ND	<18	<12	<0.23	<19	ND	<18	<18	<18	ND	<32	<95	<20	ND	<24	<16	<16	<23	<55	<7.0	<6.5
		10/28	3.6	5.9	<1.0	0.23	9.4	<0.38	ND	ND	ND	0.87	<0.25	<2.3	3.6	ND	1.7	0.80	6.8	ND	<0.63	97	1.2	ND	<0.49	9.6	8.7	<0.46	29	1.1	0.49
	1998	4/14	3.8	<20	<10	<2.2	35	<3.8	ND	ND	ND	<3.5	<2.5	<2.3	<3.8	ND	<3.5	<3.7	13	ND	<6.3	110	<3.9	ND	<4.9	14	12	<4.6	50	<1.4	<1.3
		10/14	NA	NA	NA	<2.2	<12	<3.8	ND	ND	ND	<3.5	<2.5	NA	19	ND	6.3	NA	18	ND	<6.3	NA	<3.9	ND	<4.9	37	22	<4.6	100	<1.4	<1.3
	1999	4/28*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
		10/28*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	2000	5/02*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
		10/30*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	2001	5/9*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
		10/9	Leachate wells not sampled																												
	2002	2/5*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
		5/22*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
		8/19 *	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	2003	4/22*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	2004	4/28*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	2005	*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	2006	*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	2007	*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	2008	5/6*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	2009	4/9*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	2010	5/26*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table 4-6. Leachate Well Sampling Results for VOCs
FF/NN Landfill
Ripon, WI

			Parameter																											
Leachate Well ID	Year	Date	Benzene	2-Butanone (MEK)	Carbon Disulfide	Chlorobenzene	Chloroethane	Chloromethane	Dichlorodifluoromethane	1,2-Dichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	1,1-Dichloroethane	cis-1,2-Dichloroethene	Ethylbenzene	Isopropylbenzene	P-isopropyl toluene	4-Methyl-2 Pentanone	Naphthalene	n-Propylbenzene	Tetrachloroethene	Tetrahydrofuran	Toluene	1,2,4-Trichlorobenzene	Trichloroethene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl Chloride	Xylenes (Total)	Methyl-t-butyl ether	Di-isopropyl ether
LC-2	1993	5/12	5	<18	<4	18	<4	<4	<1.0	<4	<4	380D	<4	<4	49	NA	NA	<18	NA	NA	<4	NA	71	NA	<4	NA	NA	<4	160D	NA	NA
		6/24	10	<16	<3	20	<3	<3	<1.0	<3	<3	170D	<3	<3	54	NA	NA	<16	NA	NA	<3	NA	27	NA	<3	NA	NA	<3	180	NA	NA
	1996	5/10	4.0	<12	<2	10	5	<2	<1.0	NA	NA	<2	0.2J	<2	<2	NA	NA	<12	NA	NA	<2	NA	0.6J	NA	<2	NA	NA	<2	20	NA	NA
		10/31	6.6	<5	<1	24	8.1	<1.0	<1.0	<5	<5	11	0.22J	3.1	42	NA	NA	<5.0	NA	NA	2.7	NA	6.8	NA	0.56J	NA	NA	<1.0	140	NA	NA
	1997	5/13	5.8	<20	<10	17	<12	<3.8	<1.0	<2	<2.2	8.3	<2.5	<2.3	<3.8	<3.6	<3.5	<3.7	4.4	<4.6	<6.3	<19	<3.9	<1.8	<4.9	6.9	5.5	<4.6	34	<1.4	<1.3
		10/28	7.0	2.3	<1.0	25	6.4	<0.38	<1.0	0.59	0.23	8.2	<0.20	<0.23	18	0.64	1.1	<0.37	8.9	<0.46	<0.63	240J	1.4	0.18	<0.49	17	6.5	<0.46	40	1.6	1.2
	1998	4/14	<16	<100	<50	25	<60	<19	<1.0	<10	<11	<18	<12	<12	<19	<18	<18	<18	<18	<23	<32	200	<20	<9.0	<24	<16	<16	<23	<55	<7	<6.5
		10/14	4.0	NA	NA	91	<2.4	<0.76	<1.0	<0.44	<0.44	18	<0.50	<0.46	45	1.4	<0.70	NA	7.1	<0.92	<1.3	NA	<0.78	<0.36	<0.98	17	3.5	<0.92	39	1.3	0.94
	1999	4/7	6.2	NA	NA	44	<1.0	<1.0	<1.0	<1.0	<1.0	28	<1.0	<1.0	150	3.9	<1.0	NA	7.1	2.8	<1.0	NA	<0.40	<1.0	<1.0	26	9.0	<1.0	380	<1.0	<1.0
		10/28	8.0	<2.5	NA	45	<2.5	<2.5	<1.0	<2.5	<2.5	30	<2.5	<2.5	280	6.7	<2.5	<2.5	12	<2.5	<2.5	240	<1.0	<2.5	<2.5	42	11	<2.5	750	<2.5	<2.5
	2000	5/02	8.1	<2.5	<2.5	45	<2.5	<2.5	<1.0	<2.5	<2.5	30	<2.5	<2.5	190	<2.5	<2.5	<2.5	3.6	<2.5	<2.5	190	<1.0	<2.5	<2.5	42	15	<2.5	670	<2.5	<2.5
		10/30	10	<1.0	NA	47	<1.0	<1.0	<1.0	<1.0	<1.0	33	<1.0	<1.0	130	2.0	<1.0	<1.0	<1.0	<1.0	<1.0	200	0.68	<1.0	<1.0	18	13	<1.0	430	2.0	<1.0
	2001	5/09	<0.40	<1.0	NA	<1.0	<1.0	<1.0	1.0	<1.0	<1.0	19	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	200	<0.40	<1.0	<1.0	<0.40	<0.40	<1.0	<1.0	<1.0	<1.0
		10/9	Leachate wells not sampled																											
	2002	2/5	13	NA	NA	67	<13	<4.8	<3.2	<3.3	<3.1	39	<4.6	<4.9	180	9	<4.1	NA	13	7	<2.5	NA	<2.6	<3.1	<2.7	45	12	<3.5	720	<5.7	<5.9
		5/22	14	NA	NA	51	ND	ND	ND	ND	ND	33	ND		96	3.3 Q	ND	NA	ND	ND	ND	ND	ND	ND	ND	23	9.5	ND	570	NA	NA
	2003	4/22	12	ND	ND	43	ND	ND	ND	ND	ND	30	ND	ND	210	NA	NA	NA	10	NA	ND	170	ND	NA	ND	NA	NA	ND	980	ND	NA
	2004	4/28	9	ND	ND	30	1.8 Q	ND	ND	ND	ND	23	ND	ND	88	NA	NA	NA	4.4	NA	ND	130	1.5 Q	NA	ND	NA	NA	ND	470 D	0.87 Q	NA
	2005	8/3	11	ND	ND	43	ND	ND	ND	ND	ND	25	ND	ND	92	NA	NA	NA	3.7	NA	ND	180	ND	NA	ND	NA	NA	ND	770	ND	NA
	2006	4/28[1]	13	ND	ND	45	ND	ND	ND	ND	ND	33	ND	ND	85	NA	NA	NA	17	NA	ND	220	ND	NA	ND	NA	NA	ND	1100	ND	NA
	2007	5/02	12	<22	<3.3	50	<4.8	<1.2	<5.0	<4.1	<4.4	22	<3.8	<4.1	52	NA	NA	NA	6.3	NA	<2.2	170	<3.4	NA	<2.4	NA	NA	<0.9	780	<3	NA
	2008	5/6	7.6	<4.3	<0.66	58.2	<0.97	<0.24	<0.99	<0.83	<0.87	13.1	<0.75	<0.83	43.3	NA	NA	NA	11.3	NA	<0.45	128	2.1	NA	<0.48	NA	NA	<0.18	337	<0.61	NA
	2009	4/9	10.9	<22	<3	45.9	<5	<1	<5	<4	<4	16.3	<4	<4	91.3	NA	NA	NA	<4	NA	<2	138	<3	NA	<2	NA	NA	<1	618	<3	NA
	2010	5/26	13.7	ND	ND	45.2	ND	ND	ND	ND	ND	18.6	ND	ND	ND	ND	ND	ND	12.7J	ND	ND	187	ND	ND	ND	ND	ND	ND	953	ND	ND

Table 4-6. Leachate Well Sampling Results for VOCs
FF/NN Landfill
Ripon, WI

			Parameter																											
Leachate Well ID	Year	Date	Benzene	2-Butanone (MEK)	Carbon Disulfide	Chlorobenzene	Chloroethane	Chloromethane	Dichlorodiflurormethane	1,2-Dichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	1,1-Dichloroethane	cis-1,2-Dichloroethene	Ethylbenzene	Isopropylbenzene	P-isopropyl toluene	4-Methyl-2 Pentanone	Naphthalene	n-Propylbenzene	Tetrachloroethene	Tetrahydrofuran	Toluene	1,2,4-Trichlorobenzene	Trichloroethene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl Chloride	Xylenes (Total)	Methyl-t-butyl ether	Di-isopropyl ether
LC-3	1993	5/12*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
		6/24*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	1996	5/10*	NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
		10/31*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	1997	5/13*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
		10/28*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	1998	4/14*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
		10/14*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	1999	4/28*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
		10/28*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	2000	5/02	<10	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	5800	<25	<25	<25	<25	25	<25	<25	<25	65	<25	<25	<10	<10	330	<25	<25	<25
		10/30	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	2001	5/9*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
		10/9	Leachate wells not sampled																												
	2002	2/5*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
		5/22*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
		8/19 *	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	2003	4/22*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	2004	4/28*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	2005	*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	2006	*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	2007	5/02	<4.1	<43	<6.6	<4.1	<9.7	<2.4	<9.9	<8.3	<8.7	<9.5	<7.5	170	13	NA	NA	NA	<7.4	NA	<4.5	290	35	NA	<4.8	NA	NA	13	65	<6.1	NA
	2008	5/6*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	2009	4/9[1]	<1	<9	<1	<1	<2	<1	<2	<2	<2	<2	<2	296	2.2	NA	NA	NA	<2	NA	<1	22	13.6	NA	22	NA	NA	11.3	17.3	<6.1	NA
	2010	5/26	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1180	ND	ND	ND	ND	ND	ND	ND	20.6J	29.8	ND	23.8	ND	ND	14.5	47.5	ND	ND

Table 4-6. Leachate Well Sampling Results for VOCs
FF/NN Landfill
Ripon, WI

			Parameter																											
Leachate Well ID	Year	Date	Benzene	2-Butanone (MEK)	Carbon Disulfide	Chlorobenzene	Chloroethane	Chloromethane	Dichlorodifluoromethane	1,2-Dichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	1,1-Dichloroethane	cis-1,2-Dichloroethene	Ethylbenzene	Isopropylbenzene	P-isopropyl toluene	4-Methyl-2 Pentanone	Naphthalene	n-Propylbenzene	Tetrachloroethene	Tetrahydrofuran	Toluene	1,2,4-Trichlorobenzene	Trichloroethene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl Chloride	Xylenes (Total)	Methyl-t-butyl ether	Di-isopropyl ether

Notes:
* = Insufficient water for sample collection
D = Analyte was identified in an analysis at a secondary dilution factor
J = Estimated Values; Below the Quantitation Limit
NA = Not analyzed
ND = Not detected
Q = Between LOD and LOQ
4/28[1] Acetone detected at 29 ug/l
4/9[1] Acetone detected at 56.9 ug/l
Many samples results indicated the presence of methylene chloride and/or acetone.
Validation of the data indicated that these compounds were not actually present in the water from the leachate wells.
These, and other compounds not detected in the samples are not included on the summary table.

All concentrations are in parts per billion (ppb)

Contaminants are not compared to NR140 Prevention Action Limits and Enforcement Standards because those standards do not apply to leachate.

Table 4-7. Landfill Gas Field Parameter Monitoring Results
FF/NN Landfill
Ripon, WI

Monitoring Points	Time	Date	CH_4 (%)	CO_2 (%)	O_2 (%)	N (%)	Comments
			variable	variable	<5	<40	target percentages
GP-1	11:03	3/20/2006	**18.8**	8.1	0.4	72.7	pre-startup
	15:25	3/22/2006	**17.9**	8.0	0.4	73.7	
	14:10	3/23/2006	**21.4**	11.5	0.2	66.9	
	14:00	3/30/2006	0.8	2.4	15.0	81.8	
	13:45	4/6/2006	0.6	1.5	16.8	81.1	
	13:40	4/11/2006	1.2	0.8	19.3	78.7	
	11:33	4/14/2006	0.0	1.9	14.7	83.4	
	10:28	4/17/2006	3.8	4.8	16.8	74.6	
	7:15	4/28/2006	2.5	3.2	18.1	76.2	
	13:30	5/4/2006	0.0	3.4	13.9	82.7	
	10:45	5/22/2006	0.1	1.2	19.3	79.4	
	12:23	6/2/2006	0.1	3.5	12.1	84.3	
	8:02	6/9/2006	2.6	2.0	19.8	75.6	
	12:49	6/14/2006	1.1	3.9	15.4	79.6	
	11:10	6/22/2006	0.7	1.0	18.1	80.2	
	11:47	7/5/2006	0.6	2.4	14.9	82.1	
	11:15	7/10/2006	0.7	4.5	14.1	80.7	
	10:35	7/17/2006	0.8	2.9	15.8	80.5	
	13:42	7/28/2006	2.0	1.7	12.2	84.1	
	10:19	8/8/2006	4.4	8.5	12.9	74.2	
	8:20	8/16/2006	1.4	3.6	15.5	79.5	
	8:05	8/21/2006	0.5	0.6	13.0	85.9	
	13:52	8/28/2006	3.4	7.6	11.2	77.8	
	11:09	9/13/2006	4.6	0.1	12.5	82.8	
	10:28	9/25/2006	0.0	0.0	10.7	89.3	
	8:05	10/10/2006	0.7	2.3	17.6	79.4	
	8:07	10/23/2006	0.7	2.7	19.0	77.6	
	14:35	11/2/2006	0.3	2.6	17.6	79.5	
	13:35	11/14/2006	0.2	2.6	15.9	81.3	
	11:08	11/27/2006	0.2	0.4	19.3	80.2	
	12:20	12/26/2006	0.1	3.6	12.3	84.1	
	13:13	1/27/2007	0.5	2.8	14.6	82.2	
	10:50	2/24/2007	0.4	0.0	20.4	79.3	
	17:29	3/28/2007	0.3	2.4	14.6	82.8	
	10:25	5/1/2007	0.2	2.2	12.6	85.1	
	10:27	5/1/2007	0.1	1.2	16.1	82.6	
	12:00	5/30/2007	2.0	7.2	7.1	83.7	
	16:35	6/6/2007	**11.0**	10.6	0.8	77.6	
	14:48	6/7/2007	**6.0**	7.6	5.7	80.7	
	16:59	6/12/2007	1.1	6.0	9.4	83.5	
	14:25	6/14/2007	**7.0**	10.4	2.1	80.5	
	14:15	6/19/2007	3.5	6.6	9.7	80.3	
	14:10	6/21/2007	0.4	6.0	10.1	83.5	
	14:00	7/11/2007	4.0	8.4	8.3	79.3	
	14:35	7/23/2007	**8.5**	13.8	2.0	75.7	
	14:25	8/8/2007	**9.5**	14.8	2.4	73.3	
	11:45	8/13/2007	**6.5**	12.4	5.6	75.5	
	13:30	8/20/2007	**5.5**	10.8	9.2	74.5	
	13:55	8/28/2007	**12.0**	15.8	2.2	70.0	
	15:40	8/31/2007	**9.5**	14.0	4.2	72.3	
	14:35	9/4/2007	**8.0**	13.6	4.4	74.0	
	13:05	9/17/2007	0.2	6.0	12.0	81.8	

Monitoring Points	Time	Date	CH_4 (%)	CO_2 (%)	O_2 (%)	N (%)	Comments
GP-1	9:25	9/29/2007	0.2	4.6	13.9	81.4	
	8:25	10/4/2007	0.4	2.8	17.1	79.7	
	9:25	10/7/2007	0.6	3.4	15.3	80.7	
	10:15	10/18/2007	**6.5**	12.2	4.2	77.1	
	8:45	10/25/2007	0.1	3.6	15.5	80.8	
	9:00	11/1/2007	0.1	5.4	13.8	80.7	
	9:40	11/13/2007	0.2	3.8	13.7	82.4	
	11:10	11/26/2007	0.3	1.2	19.3	79.3	
	10:40	12/10/2007	0.4	1.2	19.4	79.0	
	11:25	12/26/2007	0.3	1.4	18.6	79.8	
	13:00	1/23/2008	0.3	2.8	13.9	83.0	
	9:55	1/9/2008	0.4	1.0	17.7	81.0	
	13:00	1/23/2008	0.3	2.8	13.9	83.0	
	9:00	2/4/2008	0.1	2.2	14.6	83.1	
	7:30	2/18/2008	0.2	2.0	14.8	83.0	
	7:10	3/4/2008	0.1	1.2	19.1	79.6	
	8:05	3/18/2008	0.1	0.4	19.5	80.0	
	14:00	5/12/2008	0.0	4.8	3.5	91.7	
	8:55	5/19/2008	0.1	5.8	4.5	89.7	
	13:30	5/30/2008	**7.0**	7.8	0.8	84.4	
	8:55	6/12/2008	0.0	2.2	17.0	80.8	
	8:55	6/25/2008	**10.5**	10.0	0.0	79.5	
	10:55	7/7/2008	**8.5**	11.0	0.0	80.5	opened GV-6 to 200 ft/min
	11:50	7/21/2008	**13.5**	11.8	0.0	74.7	
	9:37	8/5/2008	**26.5**	13.4	0.0	60.1	
	10:40	8/5/2008	**18.0**	11.6	2.1	68.3	vent for 1 hour with cap off
	8:55	8/13/2008	**22.5**	14.4	0.0	63.1	increase to 12 on 12 off
	9:55	8/13/2008	**17.5**	11.4	3.1	68.0	vent for 1 hour with cap off
	8:35	8/19/2008	**7.0**	12.6	3.4	77.0	
	10:00	8/19/2008	**6.0**	14.0	1.3	78.7	vent for 1 hour with cap off
	11:58	10/3/2008	4.2	7.0	11.6	77.3	
	11:12	10/13/2008	1.8	4.4	14.2	79.6	
	9:00	10/28/2008	0.0	4.6	13.6	81.8	
	7:20	11/6/2008	0.4	3.4	15.1	81.1	
	10:15	12/8/2008	0.1	2.6	16.0	81.3	
	10:00	12/24/2008	0.0	2.2	15.7	82.1	
	11:30	1/8/2009	0.1	3.4	16.8	79.8	
	11:05	1/18/2009	0.1	3.6	16.1	80.2	
	7:20	1/27/2009	0.2	1.2	20.9	77.7	
	8:20	2/6/2009	0.1	0.6	19.8	79.5	
	10:30	2/23/2009	0.0	2.2	18.5	79.3	
	10:00	3/9/2009	0.0	1.8	17.9	80.3	
	10:00	3/20/2009	0.1	1.0	19.6	79.4	
	9:35	4/9/2009	0.0	2.8	8.7	88.5	
	10:20	4/19/2009	0.0	3.6	5.2	91.2	
	8:20	5/4/2009	0.0	3.8	1.8	94.4	
	8:25	5/18/2009	0.0	5.0	5.8	89.2	
	10:00	6/1/2009	0.0	6.6	6.1	87.3	
	8:40	6/14/2009	0.4	5.2	8.3	86.1	
	8:30	7/2/2009	0.0	3.2	15.1	81.7	
	7:20	7/13/2009	1.0	7.4	8.9	82.8	
	8:40	7/13/2009	0.0	0.8	18.9	80.3	vent for 1 hour with cap off
	7:20	7/22/2009	0.1	5.8	11.3	82.9	

Table 4-7. Landfill Gas Field Parameter Monitoring Results
FF/NN Landfill
Ripon, WI

Monitoring Points	Time	Date	CH_4 (%)	CO_2 (%)	O_2 (%)	N (%)	Comments
GP-1	8:35	8/11/2009	0.0	3.4	14.7	81.9	
	8:30	8/24/2009	0.0	3.6	14.7	81.7	
	9:05	9/8/2009	2.0	7.8	9.4	80.8	
	9:05	9/21/2009	1.8	6.0	12.1	80.1	
	10:05	10/5/2009	0.0	5.8	12.9	81.3	
	10:30	10/28/2009	0.0	3.8	14.2	82.0	
	10:35	11/16/2009	0.0	2.4	16.5	81.1	
	9:05	12/18/2009	0.0	3.2	14.4	82.4	
	8:40	12/28/2009	0.0	1.0	18.4	80.6	
	8:45	1/11/2010	0.0	3.2	14.1	82.7	
	8:50	1/26/2010	0.3	4.0	9.1	86.7	
	10:32	2/25/2010	0.2	4.2	7.3	88.4	
	9:35	3/8/2010	0.0	5.4	1.0	93.6	
	9:05	3/22/2010	0.0	2.6	7.2	90.2	
	9:08	4/5/2010	0.0	3.8	14.6	81.6	
	9:05	4/19/2010	0.0	4.2	7.0	88.8	
	9:05	5/3/2010	0.0	1.2	17.6	81.2	
	9:35	5/17/2010	0.2	3.4	11.8	84.6	
	13:00	5/25/2010	0.0	4.8	10.7	84.5	
	9:05	6/24/2010	0.1	7.8	8.0	84.2	
	10:05	7/6/2010	0.0	8.8	3.0	88.2	
	8:38	7/19/2010	0.6	6.4	7.8	85.3	
	8:45	8/2/2010	2.6	9.4	3.9	84.1	
	9:35	8/16/2010	3.1	12.6	1.0	83.4	
	8:40	8/30/2010	2.2	9.0	6.6	82.3	
	8:50	9/13/2010	**5.5**	12.4	1.5	80.6	
	10:40	9/28/2010	3.7	11.2	1.9	83.2	
	6:50	10/12/2010	**14.0**	15.0	0.0	71.0	
	9:05	10/25/2010	**16.5**	16.0	0.0	67.5	
	9:20	11/2/2010	0.0	5.4	9.3	85.3	
	8:35	11/15/2010	4.4	9.0	3.8	82.8	
	9:30	12/10/2010	0.0	11.2	0.1	88.7	
	8:35	12/23/2010	0.0	1.2	17.9	80.9	

Table 4-7. Landfill Gas Field Parameter Monitoring Results
FF/NN Landfill
Ripon, WI

Monitoring Points	Time	Date	CH_4 (%)	CO_2 (%)	O_2 (%)	N (%)	Comments
GP-2	9:00	3/22/2006	**29.5**	27.8	0.5	42.2	pre-startup
	14:40	3/23/2006	**29.1**	24.5	0.8	45.6	
	14:20	3/30/2006	**11.5**	13.1	10.7	64.7	
	14:05	4/6/2006	**10.3**	12.6	10.2	66.9	
	14:15	4/11/2006	**5.4**	5.7	15.3	73.6	
	11:56	4/14/2006	**6.8**	12.1	8.7	72.4	
	11:00	4/17/2006	0.0	0.0	20.7	79.3	
	9:55	4/28/2006	0.0	0.1	20.7	79.2	
	14:15	5/4/2006	1.5	18.9	3.0	76.6	
	11:15	5/22/2006	0.0	0.0	20.5	79.5	
	12:49	6/2/2006	1.0	0.1	19.7	79.2	
	9:00	6/9/2006	1.9	0.5	20.4	77.2	
	13:20	6/14/2006	4.8	1.0	20.1	74.1	
	10:00	6/22/2006	0.6	0.2	20.4	78.8	
	12:34	7/5/2006	0.7	1.5	19.9	77.9	
	11:48	7/10/2006	0.7	0.8	19.6	78.9	
	11:15	7/17/2006	0.7	1.2	18.8	79.3	
	13:05	7/28/2006	0.5	0.7	19.1	79.7	
	10:50	8/8/2006	0.6	0.2	19.6	79.6	
	7:53	8/16/2006	0.1	0.0	19.9	80.0	
	7:40	8/21/2006	0.5	0.1	20.4	79.0	
	13:40	8/28/2006	0.0	0.0	20.2	79.8	
	10:50	9/13/2006	0.1	0.1	20.2	79.6	
	10:10	9/25/2006	0.6	9.5	13.7	76.2	
	7:45	10/10/2006	0.7	1.8	19.8	77.7	
	7:46	10/23/2006	0.7	3.9	18.0	77.4	
	13:24	11/2/2006	0.5	0.3	17.6	81.6	
	12:38	11/14/2006	0.1	5.2	15.7	79.1	
	10:51	11/27/2006	0.1	0.6	20.0	79.3	
	13:55	12/26/2006	0.3	6.2	14.5	79.1	
	12:25	1/27/2007	0.3	1.6	19.1	79.1	
	12:15	2/24/2007	0.3	3.6	16.5	79.7	
	16:05	3/28/2007	0.2	2.4	18.0	79.5	
	11:07	5/1/2007	0.0	3.8	15.2	81.0	
	12:17	5/30/2007	0.0	1.2	18.5	80.3	
	13:20	6/19/2007	0.1	7.6	11.5	80.9	
	11:20	8/13/2007	0.0	0.4	20.5	79.1	
	10:54	10/18/2007	0.1	1.0	18.8	80.1	
	13:10	1/23/2008	0.4	1.2	20.2	78.2	
	7:45	6/12/2008	0.0	2.2	18.6	79.2	
	11:05	7/21/2008	0.0	0.6	20.4	79.0	
	12:34	10/3/2008	0.0	0.6	20.9	78.5	
	11:40	10/13/2008	0.0	0.4	20.9	78.7	
	11:15	1/27/2009	0.3	1.8	20.3	77.6	
	10:46	4/9/2009	0.0	0.0	20.1	79.9	
	10:40	7/22/2009	0.0	0.8	18.9	80.3	
	10:05	10/28/2009	0.0	2.2	18.1	79.7	
	10:15	1/26/2010	0.3	3.0	17.1	79.7	
	11:39	5/25/2010	0.0	0.0	19.1	80.9	
	10:10	9/28/2010	0.0	2.4	17.1	80.5	

Table 4-7. Landfill Gas Field Parameter Monitoring Results
FF/NN Landfill
Ripon, WI

Monitoring Points	Time	Date	CH_4 (%)	CO_2 (%)	O_2 (%)	N (%)	Comments
GP-3	7:49	3/22/2006	1.4	1.9	19.9	76.8	pre-startup
	12:57	3/23/2006	0.6	1.2	19.3	78.9	
	15:20	3/23/2006	2.2	4.5	16.4	76.9	
	14:35	3/30/2006	2.1	7.6	11.5	78.8	
	14:30	4/6/2006	1.6	11.8	7.2	79.4	
	14:40	4/11/2006	0.4	4.0	15.6	80.0	
	12:11	4/14/2006	0.0	1.5	18.1	80.4	
	11:20	4/17/2006	1.4	0.2	20.7	77.7	
	10:50	4/28/2006	0.4	0.1	20.7	78.8	
	15:00	5/4/2006	0.0	0.0	20.4	79.6	
	11:38	5/22/2006	0.2	0.0	2.5	97.3	
	13:18	6/2/2006	0.2	0.0	20.2	79.6	
	9:09	6/9/2006	0.8	0.1	20.5	78.6	
	13:45	6/14/2006	1.1	0.1	20.4	78.4	
	11:25	6/22/2006	0.7	0.0	20.1	79.2	
	11:19	7/5/2006	0.6	0.0	20.0	79.4	
	10:37	7/10/2006	0.6	0.0	19.6	79.8	
	0:57	7/17/2006	0.1	0.0	19.0	80.9	
	12:25	7/28/2006	0.6	0.0	19.7	79.7	
	11:32	8/8/2006	0.6	0.0	19.6	79.8	
	7:35	8/16/2006	0.5	0.0	20.0	79.5	
	7:24	8/21/2006	0.0	0.0	20.3	79.7	
	13:26	8/28/2006	0.1	0.0	19.9	80.0	
	10:31	9/13/2006	0.0	0.3	20.3	79.4	
	9:56	9/25/2006	0.6	3.0	17.6	78.8	
	7:20	10/10/2006	0.5	0.9	19.8	78.8	
	7:36	10/23/2006	0.1	0.0	20.6	79.3	
	13:10	11/2/2006	0.5	0.4	20.8	78.3	
	13:00	11/14/2006	0.1	4.2	16.1	79.6	
	10:39	11/27/2006	0.1	0.4	19.4	80.2	
	13:58	12/26/2006	0.3	0.2	20.0	79.6	
	12:00	1/27/2007	0.1	0.0	19.6	80.4	
	12:30	2/24/2007	0.3	4.6	14.7	80.4	
	15:32	3/28/2007	0.1	0.0	19.9	80.0	
	10:57	5/1/2007	0.1	2.6	16.5	80.8	
	12:33	5/30/2007	0.0	0.4	18.9	80.7	
	13:30	6/19/2007	0.0	0.0	20.9	79.1	
	11:00	8/13/2007	0.0	0.0	20.9	79.1	
	10:00	10/18/2007	0.1	4.0	15.7	80.2	
	13:55	1/23/2008	0.4	0.8	20.6	78.3	
	7:05	6/12/2008	0.0	0.0	20.9	79.1	
	10:30	7/21/2008	0.0	0.0	20.9	79.1	
	12:16	10/3/2008	0.0	0.0	20.9	79.1	
	10:00	10/13/2008	0.0	0.0	20.9	79.1	
	7:50	1/27/2009	0.2	3.6	17.4	78.8	
	11:10	4/9/2009	0.0	0.0	20.2	79.8	
	8:40	7/22/2009	0.0	0.4	19.1	80.5	
	9:24	10/28/2009	0.0	0.2	19.5	80.3	
	8:09	1/26/2010	0.2	0.0	20.4	79.4	
	9:15	5/25/2010	0.0	0.0	19.1	80.9	
	8:50	9/28/2010	0.0	1.8	17.2	81.0	

Table 4-7. Landfill Gas Field Parameter Monitoring Results
FF/NN Landfill
Ripon, WI

Monitoring Points	Time	Date	CH_4 (%)	CO_2 (%)	O_2 (%)	N (%)	Comments
GP-4	9:11	3/22/2006	0.0	1.4	20.4	78.2	pre-startup
	15:35	3/23/2006	0.0	0.8	19.8	79.4	
	15:40	3/30/2006	0.5	0.8	21.8	76.9	
	14:40	4/6/2006	0.8	1.3	18.9	79.0	
	14:35	4/11/2006	0.2	0.9	19.2	79.7	
	12:18	4/14/2006	0.0	1.3	18.1	80.6	
	11:35	4/17/2006	1.3	0.8	20.4	77.5	
	10:40	4/28/2006	0.0	0.5	20.2	79.3	
	15:10	5/4/2006	1.3	0.6	13.2	84.9	
	11:50	5/22/2006	0.1	0.2	20.4	79.3	
	13:10	6/2/2006	0.2	0.8	19.1	79.9	
	9:12	6/9/2006	3.4	1.2	20.2	75.2	
	14:00	6/14/2006	0.0	0.0	19.9	80.1	
	10:39	6/22/2006	**6.0**	18.8	6.4	68.8	
	11:26	7/5/2006	0.6	0.6	20.0	78.8	
	10:43	7/10/2006	0.4	3.8	19.9	75.9	
	10:08	7/17/2006	0.9	0.6	19.6	78.9	
	12:34	7/28/2006	0.6	0.4	19.6	79.4	
	9:21	8/8/2006	0.6	0.3	19.7	79.4	
	7:42	8/16/2006	0.5	0.7	19.9	78.9	
	7:28	8/21/2006	0.4	0.5	20.0	79.1	
	13:31	8/28/2006	0.5	0.5	20.1	78.9	
	10:35	9/13/2006	0.7	0.6	20.2	78.5	
	9:59	9/25/2006	0.1	0.2	19.1	80.6	
	7:24	10/10/2006	0.6	0.5	20.3	78.6	
	7:40	10/23/2006	0.4	0.0	20.4	79.2	
	13:17	11/2/2006	0.5	0.2	21.0	78.3	
	13:11	11/14/2006	0.2	1.4	19.0	79.5	
	10:42	11/27/2006	0.1	0.6	19.7	79.7	
	14:04	12/26/2006	0.3	0.8	19.6	79.4	
	12:09	1/27/2007	0.1	0.4	19.6	79.9	
	12:38	2/24/2007	0.4	1.0	19.4	79.3	
	15:40	3/28/2007	0.1	0.2	19.8	79.9	
	10:50	5/1/2007	0.0	1.2	18.2	80.6	
	12:37	5/30/2007	0.0	1.8	17.5	80.7	
	13:40	6/19/2007	0.0	0.8	20.0	79.2	
	11:05	8/13/2007	0.0	0.6	20.6	78.8	
	10:10	10/18/2007	0.1	1.2	17.9	80.8	
	13:25	1/23/2008	0.3	0.4	20.9	78.4	
	7:25	6/12/2008	0.0	0.2	20.9	78.9	
	10:45	7/21/2008	0.0	1.2	19.2	79.6	
	11:18	10/3/2008	0.0	0.0	20.9	79.1	
	10:05	10/13/2008	0.0	1.2	19.7	79.1	
	7:05	1/27/2009	0.1	1.4	20.1	78.5	
	11:15	4/9/2009	0.0	0.6	19.4	80.0	
	10:37	7/22/2009	0.0	0.6	18.9	80.5	
	9:33	10/28/2009	0.0	0.6	19.3	80.1	
	8:14	1/26/2010	0.3	0.2	20.5	79.1	
	8:11	5/25/2010	0.1	0.8	18.5	80.7	
	9:05	9/28/2010	0.0	2.2	16.6	81.2	

Monitoring Points	Time	Date	CH_4 (%)	CO_2 (%)	O_2 (%)	N (%)	Comments
GP-5	9:13	3/22/2006	0.0	4.4	17.6	78.0	pre-startup
	14:15	3/23/2006	0.0	4.2	17.6	78.2	
	14:05	3/30/2006	1.2	2.5	18.8	77.5	
	13:40	4/6/2006	1.1	3.0	17.9	78.0	
	13:45	4/11/2006	0.7	2.7	17.5	79.1	
	12:50	4/14/2006	0.1	3.5	15.4	81.0	
	10:30	4/17/2006	0.0	3.6	16.2	80.2	
	10:35	4/28/2006	2.2	7.0	13.0	77.8	
	10:40	5/22/2006	1.5	8.5	11.2	78.8	
	12:25	6/2/2006	0.1	7.2	9.4	83.3	
	8:45	6/9/2006	0.1	0.3	10.5	89.1	
	12:18	6/14/2006	0.1	0.0	9.1	90.8	
	11:18	6/22/2006	0.7	10.7	10.5	78.1	
	11:51	7/5/2006	0.6	11.9	11.1	76.4	
	11:17	7/10/2006	0.7	12.0	10.1	77.2	
	10:22	7/17/2006	0.8	11.9	11.1	76.2	
	8:24	7/28/2006	0.6	10.1	11.5	77.8	
	10:16	8/8/2006	0.6	11.8	10.1	77.5	
	8:35	8/16/2006	0.8	10.0	10.5	78.7	
	8:02	8/21/2006	0.5	0.8	10.9	87.8	
	13:54	8/28/2006	0.6	11.3	13.3	74.8	
	11:07	9/13/2006	0.1	0.0	13.4	86.5	
	10:26	9/25/2006	0.0	0.0	13.4	86.6	
	8:52	10/10/2006	0.7	8.9	14.4	76.0	
	8:00	10/23/2006	0.3	1.4	15.5	82.8	
	14:37	11/2/2006	0.3	7.2	14.0	78.5	
	13:25	11/14/2006	0.2	6.0	14.9	78.9	
	11:10	11/27/2006	0.2	5.2	15.7	79.0	
	12:35	12/26/2006	0.1	4.8	15.7	79.5	
	13:09	1/27/2007	0.4	5.4	15.8	78.4	
	10:55	2/24/2007	0.4	4.2	17.3	78.2	
	17:30	3/28/2007	0.3	3.4	16.6	79.8	
	10:22	5/1/2007	0.1	3.4	14.0	82.5	
	12:40	5/30/2007	0.0	6.4	9.9	83.7	
	16:25	6/19/2007	0.0	7.4	12.1	80.5	
	11:39	8/13/2007	0.0	8.4	11.8	79.8	
	10:20	10/18/2007	0.1	9.6	9.4	80.9	
	13:12	1/23/2008	0.3	5.6	15.7	78.4	
	9:00	6/12/2008	0.0	6.0	9.7	84.3	
	12:05	7/21/2008	0.0	10.6	7.7	81.7	
	11:55	10/3/2008	0.0	8.2	12.7	79.1	
	11:08	10/13/2008	0.0	6.6	14.1	79.3	
	7:10	1/27/2009	0.2	3.2	14.0	82.7	
	11:02	4/9/2009	0.0	2.8	16.8	80.4	
	7:30	7/22/2009	0.0	7.8	13.0	79.2	
	10:20	10/28/2009	0.0	5.6	14.4	80.0	
	9:05	1/26/2010	0.3	4.8	16.2	78.8	
	8:40	5/25/2010	0.0	6.4	9.5	84.1	
	11:00	9/28/2010	0.0	8.8	11.6	79.6	

Monitoring Points	Time	Date	CH_4 (%)	CO_2 (%)	O_2 (%)	N (%)	Comments
GP-6	7:45	3/22/2006	0.0	6.1	13.9	80.0	pre-startup
	15:55	3/23/2006	0.0	4.9	16.3	78.8	
	15:15	3/30/2006	0.0	1.7	18.3	80.0	
	14:25	4/6/2006	0.0	2.8	16.9	80.3	
	14:30	4/11/2006	0.7	2.8	17.3	79.2	
	12:04	4/14/2006	0.0	3.8	14.6	81.6	
	11:15	4/17/2006	**10.4**	2.3	17.6	69.7	
	10:30	4/28/2006	0.0	2.5	18.3	79.2	
	14:30	5/4/2006	0.0	2.7	17.9	79.4	
	11:30	5/22/2006	3.8	3.9	18.1	74.2	
	13:04	6/2/2006	0.2	2.4	17.2	80.2	
	9:25	6/9/2006	0.1	0.8	17.7	81.4	
	14:10	6/14/2006	1.3	3.3	16.8	78.6	
	9:50	6/22/2006	0.5	3.1	17.3	79.1	
	11:13	7/5/2006	0.5	3.6	17.1	78.8	
	10:34	7/10/2006	0.6	3.9	16.7	78.8	
	9:58	7/17/2006	0.1	0.6	16.8	82.5	
	12:10	7/28/2006	0.6	3.6	16.5	79.3	
	9:05	8/8/2006	0.6	3.5	17.0	78.9	
	7:29	8/16/2006	0.1	0.0	17.2	82.7	
	7:18	8/21/2006	0.5	3.6	18.1	77.8	
	13:21	8/28/2006	0.0	0.0	18.1	81.9	
	10:20	9/13/2006	0.6	1.0	19.1	79.3	
	11:05	9/25/2006	0.7	2.6	18.5	78.2	
	7:30	10/10/2006	0.8	2.3	19.7	77.2	
	7:34	10/23/2006	0.9	2.4	14.4	82.3	
	13:05	11/2/2006	2.4	0.8	19.7	77.1	
	13:14	11/14/2006	0.2	3.0	17.9	78.9	
	10:35	11/27/2006	0.1	0.6	19.6	79.8	
	14:20	12/26/2006	0.3	3.0	18.0	78.7	
	13:45	1/27/2007	0.2	3.4	17.0	79.5	
	12:45	2/24/2007	0.4	3.0	18.1	78.5	
	16:00	3/28/2007	0.2	2.4	18.0	79.5	
	10:45	5/1/2007	0.1	3.0	16.4	80.5	
	12:23	5/30/2007	0.0	3.2	15.8	81.0	
	16:15	6/19/2007	0.0	2.4	17.8	79.8	
	10:54	8/13/2007	0.1	2.6	18.5	78.9	
	11:14	10/18/2007	0.1	3.4	16.4	80.1	
	11:28	1/23/2008	0.0	3.0	18.0	79.0	
	6:55	6/12/2008	0.0	2.6	17.8	79.6	
	11:00	7/21/2008	0.0	3.0	15.5	81.5	
	12:53	10/3/2008	0.0	3.8	17.7	78.5	
	9:55	10/13/2008	0.0	3.4	18.2	78.4	
	10:05	1/27/2009	0.2	3.0	18.4	78.4	
	10:58	4/9/2009	0.0	3.2	16.6	80.2	
	10:20	7/22/2009	0.0	3.6	17.1	79.3	
	9:10	10/28/2009	0.0	2.6	17.2	80.2	
	8:00	1/26/2010	0.1	3.0	17.4	79.6	
	8:18	5/25/2010	0.0	2.4	16.5	81.1	
	8:42	9/28/2010	0.0	4.2	14.6	81.2	

Monitoring Points	Time	Date	CH_4 (%)	CO_2 (%)	O_2 (%)	N (%)	Comments
GP-7	7:40	3/22/2006	1.0	7.0	13.0	79.0	pre-startup
	15:50	3/23/2006	0.1	5.0	14.7	80.2	
	15:00	3/30/2006	**7.1**	4.6	18.2	70.1	
	14:20	4/6/2006	0.1	2.3	17.0	80.6	
	14:25	4/11/2006	0.2	3.2	16.3	80.3	
	12:07	4/14/2006	0.1	5.2	11.8	82.9	
	10:15	4/17/2006	**10.5**	1.3	18.5	69.7	
	10:25	4/28/2006	0.0	1.7	19.2	79.1	
	14:25	5/4/2006	1.2	2.2	18.8	77.8	
	11:22	5/22/2006	0.0	1.0	19.5	79.5	
	13:00	6/2/2006	0.2	1.6	18.5	79.7	
	9:20	6/9/2006	3.7	2.4	20.0	73.9	
	14:05	6/14/2006	3.1	2.5	19.2	75.2	
	9:45	6/22/2006	0.5	1.7	19.1	78.7	
	11:10	7/5/2006	0.5	1.5	19.3	78.7	
	10:30	7/10/2006	0.0	0.0	18.6	81.4	
	9:55	7/17/2006	0.1	0.0	18.5	81.4	
	12:05	7/28/2006	0.0	3.7	18.5	77.8	
	9:00	8/8/2006	0.6	1.3	19.0	79.1	
	7:25	8/16/2006	0.5	1.5	19.2	78.8	
	7:16	8/21/2006	0.5	1.4	19.8	78.3	
	13:19	8/28/2006	0.4	1.2	19.5	78.9	
	10:19	9/13/2006	0.6	1.3	19.9	78.2	
	11:03	9/25/2006	1.8	2.2	17.7	78.3	
	7:28	10/10/2006	0.7	1.4	19.5	78.4	
	7:32	10/23/2006	3.0	2.8	19.0	75.2	
	13:00	11/2/2006	0.5	1.6	19.8	78.1	
	13:18	11/14/2006	0.2	3.2	17.2	79.4	
	10:30	11/27/2006	0.0	1.2	19.0	79.8	
	14:15	12/26/2006	0.3	2.6	18.0	79.1	
	13:40	1/27/2007	0.1	3.4	16.7	79.9	
	12:40	2/24/2007	0.4	3.2	17.2	79.2	
	15:55	3/28/2007	0.1	1.2	18.9	79.8	
	10:43	5/1/2007	0.1	3.6	15.1	81.2	
	12:26	5/30/2007	0.0	3.6	15.6	80.8	
	16:20	6/19/2007	0.0	2.6	17.5	79.9	
	10:50	8/13/2007	0.1	1.4	19.3	79.3	
	11:10	10/18/2007	0.1	3.6	15.5	80.8	
	11:24	1/23/2008	0.0	3.2	17.6	79.2	
	10:48	6/12/2008	0.0	1.4	18.4	80.2	
	10:55	7/21/2008	0.0	2.6	17.3	80.1	
	12:50	10/3/2008	0.0	1.8	19.6	78.6	
	9:50	10/13/2008	0.1	1.6	19.4	79.0	
	10:00	1/27/2009	0.2	3.0	18.2	78.6	
	10:58	4/9/2009	0.0	3.2	16.6	80.2	
	10:15	7/22/2009	0.0	0.4	19.1	80.5	
	9:05	10/28/2009	0.0	1.4	18.2	80.4	
	7:50	1/26/2010	0.0	0.4	20.0	79.6	
	8:14	5/25/2010	0.0	1.8	17.7	80.5	
	8:35	9/28/2010	0.0	4.0	14.3	81.7	

Table 4-7. Landfill Gas Field Parameter Monitoring Results
FF/NN Landfill
Ripon, WI

Monitoring Points	Time	Date	CH_4 (%)	CO_2 (%)	O_2 (%)	N (%)	Comments
GP-8	9:03	3/22/2006	0.0	2.4	18.6	79.0	pre-startup
	14:50	3/23/2006	0.0	1.9	18.6	79.5	
	14:55	3/30/2006	3.0	7.2	14.8	75.0	
	14:10	4/6/2006	0.0	7.0	10.9	82.1	
	14:20	4/11/2006	0.0	4.8	13.6	81.6	
	12:25	4/14/2006	0.0	5.4	12.2	82.4	
	11:10	4/17/2006	0.0	0.1	20.7	79.2	
	10:00	4/28/2006	0.0	0.2	20.4	79.4	
	14:20	5/4/2006	0.0	0.2	19.3	80.5	
	11:18	5/22/2006	0.6	0.1	20.4	78.9	
	12:55	6/2/2006	0.2	0.7	19.3	79.8	
	9:03	6/9/2006	2.4	0.6	20.3	76.7	
	13:37	6/14/2006	4.0	1.6	19.6	74.8	
	9:55	6/22/2006	0.5	0.5	19.8	79.2	
	12:27	7/5/2006	1.6	0.9	19.6	77.9	
	11:45	7/10/2006	0.7	1.2	19.2	78.9	
	11:10	7/17/2006	0.6	2.3	17.7	79.4	
	12:45	7/28/2006	0.6	0.8	19.0	79.6	
	10:58	8/8/2006	**17.8**	1.3	19.1	61.8	
	7:47	8/16/2006	0.1	0.2	19.5	80.2	
	7:33	8/21/2006	0.8	1.3	19.6	78.3	
	13:35	8/28/2006	0.0	0.0	19.1	80.9	
	10:47	9/13/2006	0.0	0.0	20.1	79.9	
	10:06	9/25/2006	0.0	0.0	17.5	82.5	
	7:26	10/10/2006	0.1	0.0	19.3	80.6	
	7:44	10/23/2006	0.7	1.4	19.6	78.3	
	13:20	11/2/2006	3.7	0.3	20.5	75.5	
	13:04	11/14/2006	0.1	4.2	15.1	80.6	
	10:45	11/27/2006	0.1	0.6	19.4	79.9	
	14:09	12/26/2006	0.3	0.8	19.2	79.7	
	12:15	1/27/2007	0.2	0.0	19.7	80.1	
	12:20	2/24/2007	0.3	5.2	12.8	81.8	
	15:47	3/28/2007	0.1	0.6	19.6	79.7	
	11:00	5/1/2007	0.0	8.5	7.6	83.9	
	12:20	5/30/2007	0.0	3.4	15.2	81.4	
	13:25	6/19/2007	0.0	0.6	20.2	79.2	
	11:10	8/13/2007	0.0	1.0	19.8	79.2	
	11:05	10/18/2007	0.1	6.0	11.5	82.4	
	11:38	1/23/2008	0.1	1.0	19.2	79.8	
	7:35	6/12/2008	0.0	0.6	20.7	78.7	
	10:50	7/21/2008	0.0	1.0	19.3	79.7	
	12:45	10/3/2008	0.0	0.4	20.9	78.7	
	10:10	10/13/2008	0.0	1.4	19.4	79.2	
	10:10	1/27/2009	0.3	1.8	19.0	78.9	
	10:51	4/9/2009	0.0	0.4	19.4	80.2	
	10:27	7/22/2009	0.0	0.8	18.8	80.4	
	10:00	10/28/2009	0.0	1.8	17.8	80.4	
	9:30	1/26/2010	0.3	0.4	20.0	79.4	
	8:25	5/25/2010	0.0	1.0	18.4	80.6	
	9:11	9/28/2010	0.0	5.4	12.7	81.9	

Table 4-7. Landfill Gas Field Parameter Monitoring Results
FF/NN Landfill
Ripon, WI

Monitoring Points	Time	Date	CH_4 (%)	CO_2 (%)	O_2 (%)	N (%)	Comments
GP-10	8:58	3/22/2006	0.0	4.5	15.4	80.1	pre-startup
	14:42	3/23/2006	0.0	4.3	15.5	80.2	
	14:50	3/30/2006	0.0	1.6	18.7	79.7	
	14:15	4/6/2006	0.0	2.3	17.1	80.6	
	13:55	4/11/2006	0.0	1.5	18.3	80.2	
	11:54	4/14/2006	0.0	1.9	17.4	80.7	
	10:50	4/17/2006	0.0	3.0	16.5	80.5	
	9:50	4/28/2006	0.0	3.6	15.0	81.4	
	14:00	5/4/2006	0.0	3.4	15.4	81.2	
	11:04	5/22/2006	0.0	1.3	19.0	79.7	
	12:45	6/2/2006	0.1	1.8	17.6	80.5	
	8:55	6/9/2006	0.7	0.9	19.6	78.8	
	13:15	6/14/2006	0.0	0.0	17.7	82.3	
	10:05	6/22/2006	0.6	0.8	19.9	78.7	
	12:38	7/5/2006	0.6	5.3	14.9	79.2	
	11:50	7/10/2006	0.6	5.5	14.6	79.3	
	11:19	7/17/2006	0.6	1.4	19.4	78.6	
	13:09	7/28/2006	0.6	1.0	19.2	79.2	
	11:11	8/8/2006	0.6	4.7	14.7	80.0	
	7:58	8/16/2006	0.1	0.2	16.4	83.3	
	7:44	8/21/2006	0.4	3.5	17.3	78.8	
	13:42	8/28/2006	0.0	0.0	17.7	82.3	
	10:53	9/13/2006	0.6	2.4	18.6	78.4	
	10:12	9/25/2006	0.7	5.5	16.0	77.8	
	7:48	10/10/2006	0.7	5.3	19.2	74.8	
	7:48	10/23/2006	0.6	5.0	17.5	76.9	
	13:31	11/2/2006	0.6	4.3	17.3	77.8	
	12:35	11/14/2006	0.1	4.2	16.3	79.5	
	10:55	11/27/2006	0.1	4.0	16.8	79.1	
	13:50	12/26/2006	0.3	4.2	16.7	78.9	
	12:35	1/27/2007	0.3	4.0	17.2	78.5	
	12:10	2/24/2007	sampling port clogged with ice				
	16:10	3/28/2007	0.2	3.2	17.5	79.2	
	11:10	5/1/2007	0.0	3.8	15.7	80.5	
	12:15	5/30/2007	0.0	3.4	16.0	80.6	
	13:15	6/19/2007	0.1	1.8	18.7	79.5	
	11:24	8/13/2007	0.0	1.0	19.4	79.6	
	10:50	10/18/2007	0.1	2.4	16.9	80.6	
	14:20	1/23/2008	0.4	2.8	18.8	78.0	
	7:55	6/12/2008	0.0	4.0	16.0	80.0	
	11:15	7/21/2008	0.0	4.6	12.6	82.8	
	12:30	10/3/2008	0.0	5.0	16.4	78.6	
	11:50	10/13/2008	0.0	4.6	16.4	79.0	
	11:30	1/27/2009	0.3	3.4	18.2	78.1	
	10:41	4/9/2009	0.0	3.2	16.6	80.2	
	10:47	7/22/2009	0.0	2.8	17.2	80.0	
	10:05	10/28/2009	0.0	2.8	17.5	79.7	
	10:30	1/26/2010	0.3	0.8	19.6	79.3	
	11:50	5/25/2010	0.0	0.4	19.0	80.6	
	10:16	9/28/2010	0.0	1.8	17.7	80.5	

Table 4-7. Landfill Gas Field Parameter Monitoring Results
FF/NN Landfill
Ripon, WI

Monitoring Points	Time	Date	CH_4 (%)	CO_2 (%)	O_2 (%)	N (%)	Comments
GP-11	9:09	3/22/2006	0.0	3.5	17.6	78.9	pre-startup
	14:27	3/23/2006	0.0	3.4	17.6	79.0	
	14:40	3/30/2006	0.0	0.8	19.7	79.5	
	13:55	4/6/2006	0.0	1.7	18.0	80.3	
	14:00	4/11/2006	0.0	0.7	19.8	79.5	
	11:43	4/14/2006	0.0	0.5	18.9	80.6	
	10:55	4/17/2006	0.3	0.1	20.4	79.2	
	7:30	4/28/2006	0.0	0.7	20.2	79.1	
	14:05	5/4/2006	0.0	0.0	19.9	80.1	
	11:07	5/22/2006	2.6	0.3	20.4	76.7	
	12:34	6/2/2006	1.0	0.1	20.4	78.5	
	9:45	6/9/2006	4.9	0.6	20.2	74.3	
	13:23	6/14/2006	0.8	0.3	20.0	78.9	
	10:10	6/22/2006	0.6	0.0	20.4	79.0	
	12:41	7/5/2006	0.5	1.4	18.5	79.6	
	11:55	7/10/2006	0.6	2.5	18.6	78.3	
	11:21	7/17/2006	0.5	1.5	18.1	79.9	
	13:15	7/28/2006	0.1	0.2	18.2	81.5	
	10:36	8/8/2006	0.6	2.2	17.8	79.4	
	8:01	8/16/2006	0.1	0.0	17.9	82.0	
	7:46	8/21/2006	0.5	2.4	19.0	78.1	
	13:45	8/28/2006	0.6	2.6	18.6	78.2	
	10:55	9/13/2006	0.1	2.7	19.2	78.0	
	10:14	9/25/2006	0.7	2.1	19.0	78.2	
	8:00	10/10/2006	0.7	2.0	18.5	78.8	
	7:52	10/23/2006	0.7	1.0	20.6	77.7	
	13:34	11/2/2006	0.6	1.5	19.8	78.1	
	12:44	11/14/2006	0.1	2.0	18.4	79.6	
	10:58	11/27/2006	0.1	1.0	19.6	79.3	
	13:40	12/26/2006	0.3	2.0	18.4	79.4	
	12:41	1/27/2007	0.4	2.6	18.2	78.9	
	11:10	2/24/2007	0.4	2.6	18.1	78.9	
	16:14	3/28/2007	0.2	2.6	17.8	79.5	
	11:15	5/1/2007	0.0	3.4	15.9	80.7	
	12:06	5/30/2007	0.0	3.0	16.8	80.2	
	13:05	6/19/2007	0.1	2.8	18.3	78.8	
	11:27	8/13/2007	0.0	2.2	18.8	79.0	
	10:34	10/18/2007	0.1	2.8	17.0	80.1	
	12:10	1/23/2008	0.2	2.4	19.2	78.2	
	8:05	6/12/2008	0.0	2.6	18.0	79.4	
	11:20	7/21/2008	0.0	3.4	16.6	80.0	
	12:23	10/3/2008	0.0	2.0	19.4	78.6	
	12:00	10/13/2008	0.0	2.2	19.1	78.7	
	10:45	1/27/2009	0.3	3.0	18.5	78.2	
	9:50	4/9/2009	0.0	3.4	16.8	79.8	
	10:53	7/22/2009	0.0	2.0	18.1	79.9	
	10:11	10/28/2009	0.0	2.4	17.9	79.7	
	9:15	1/26/2010	0.3	2.6	18.5	78.6	
	8:30	5/25/2010	0.0	3.2	16.5	80.3	
	10:25	9/28/2010	0.0	3.0	16.8	80.2	

Table 4-7. Landfill Gas Field Parameter Monitoring Results
FF/NN Landfill
Ripon, WI

Monitoring Points	Time	Date	CH_4 (%)	CO_2 (%)	O_2 (%)	N (%)	Comments
GP-12	9:06	3/22/2006	0.0	5.7	13.0	81.3	pre-startup
	14:22	3/23/2006	0.0	5.5	13.2	81.3	
	14:20	3/30/2006	0.0	2.6	17.7	79.7	
	13:50	4/6/2006	0.2	2.1	17.3	80.4	
	13:50	4/11/2006	0.0	2.5	17.1	80.4	
	11:40	4/14/2006	0.0	2.5	15.5	82.0	
	10:45	4/17/2006	1.4	3.7	18.4	76.5	
	12:20	4/28/2006	0.0	2.4	18.0	79.6	
	13:54	5/4/2006	0.0	0.0	17.3	82.7	
	11:00	5/22/2006	1.4	2.7	17.5	78.4	
	12:28	6/2/2006	0.1	1.8	17.4	80.7	
	8:50	6/9/2006	0.9	2.1	19.2	77.8	
	10:20	6/22/2006	0.5	2.2	18.2	79.1	
	11:57	7/5/2006	0.6	2.2	18.2	79.0	
	11:22	7/10/2006	0.6	2.7	18.2	78.5	
	10:39	7/17/2006	0.7	2.6	17.5	79.2	
	13:28	7/28/2006	0.6	1.5	18.2	79.7	
	11:22	8/8/2006	0.6	2.6	17.5	79.3	
	8:58	8/16/2006	4.1	18.6	10.0	67.3	
	8:44	8/21/2006	0.6	3.2	18.5	77.7	
	14:26	8/28/2006	0.0	0.0	19.4	80.6	
	11:42	9/13/2006	0.1	0.9	17.9	81.1	
	11:40	9/25/2006	0.8	3.4	16.8	79.0	
	8:47	10/10/2006	0.7	3.8	17.6	77.9	
	8:50	10/23/2006	0.7	4.1	16.4	78.8	
	14:55	11/2/2006	3.9	14.0	7.7	74.5	
	15:30	11/14/2006	0.3	3.6	16.7	79.5	
	11:05	11/27/2006	0.2	2.4	18.0	79.5	
	13:35	12/26/2006	0.3	3.8	15.7	80.3	
	13:18	1/27/2007	0.4	3.8	15.7	80.1	
	12:00	2/24/2007	0.2	3.2	16.6	80.0	
	17:40	3/28/2007	0.2	3.4	16.4	80.0	
	10:30	5/1/2007	0.1	2.6	16.1	81.3	
	12:02	5/30/2007	0.0	2.8	16.0	81.2	
	16:30	6/19/2007	0.0	2.8	18.1	79.1	
	11:35	8/13/2007	0.0	2.6	18.3	79.1	
	10:26	10/18/2007	0.1	4.0	15.2	80.7	
	13:08	1/23/2008	0.3	7.2	12.2	80.3	
	9:10	6/12/2008	0.0	2.4	17.1	80.5	
	11:45	7/21/2008	0.0	2.6	17.0	80.4	
	12:00	10/3/2008	0.0	4.0	17.6	78.4	
	11:30	10/13/2008	0.0	3.0	18.0	79.0	
	7:15	1/27/2009	0.2	5.6	15.3	78.9	
	9:44	4/9/2009	0.0	3.4	15.8	80.8	
	7:35	7/22/2009	0.0	2.4	17.9	79.7	
	11:15	10/28/2009	0.0	3.2	16.4	80.4	
	9:10	1/26/2010	0.3	5.2	14.9	79.7	
	11:55	5/25/2010	0.0	2.4	16.1	81.5	
	11:10	9/28/2010	0.0	4.0	15.3	80.7	

Table 4-7. Landfill Gas Field Parameter Monitoring Results
FF/NN Landfill
Ripon, WI

Monitoring Points	Time	Date	CH_4 (%)	CO_2 (%)	O_2 (%)	N (%)	Comments
MW-101	9:24	3/23/2006	2.9	18.1	0.8	78.2	pre-startup
	14:25	3/30/2006	1.0	8.0	10.9	80.1	
	14:00	4/6/2006	0.8	0.2	20.0	79.0	
	14:05	4/11/2006	0.0	0.0	20.3	79.7	
	11:50	4/14/2006	0.0	1.8	17.9	80.3	
	10:58	4/17/2006	2.0	0.3	20.5	77.2	
	7:35	4/28/2006	0.0	0.0	20.7	79.3	
	14:10	5/4/2006	0.0	0.0	20.2	79.8	
	11:10	5/22/2006	0.0	0.0	20.5	79.5	
	12:38	6/2/2006	0.2	0.0	20.4	79.4	
	9:50	6/9/2006	1.1	0.2	20.5	78.2	
	13:48	6/14/2006	4.1	0.3	20.4	75.2	
	10:15	6/22/2006	0.0	0.0	20.4	79.6	
	12:46	7/5/2006	0.6	20.0	20.0	59.4	
	12:00	7/10/2006	0.6	0.0	20.0	79.4	
	11:30	7/17/2006	0.0	0.0	19.8	80.2	
	13:20	7/28/2006	0.6	0.0	19.3	80.1	
	10:41	8/8/2006	0.8	0.0	19.8	79.4	
	8:05	8/16/2006	0.1	0.0	19.6	80.3	
	7:52	8/21/2006	0.9	0.1	20.4	78.6	
	13:47	8/28/2006	0.6	0.1	20.2	79.1	
	10:57	9/13/2006	0.6	0.2	19.8	79.4	
	10:16	9/25/2006	0.6	0.2	20.2	79.0	
	8:03	10/10/2006	0.7	0.2	20.5	78.6	
	7:55	10/23/2006	0.9	0.7	19.8	78.6	
	15:00	11/2/2006	0.3	0.0	20.8	78.9	
	12:48	11/14/2006	0.1	0.4	19.4	80.1	
	11:00	11/27/2006	0.1	0.2	20.0	79.7	
	13:45	12/26/2006	0.3	0.0	19.3	80.5	
	12:45	1/27/2007	0.4	0.6	20.0	79.1	
	11:14	2/24/2007	0.5	0.6	20.1	78.9	
	16:18	3/28/2007	0.2	0.2	20.1	79.5	
	11:19	5/1/2007	0.0	0.2	18.8	81.0	
	12:08	5/30/2007	0.0	0.2	18.9	80.9	
	13:10	6/19/2007	0.1	0.0	20.9	79.1	
	11:30	8/13/2007	0.0	0.0	20.9	79.1	
	10:37	10/18/2007	0.1	0.0	19.6	80.4	
	12:18	1/23/2008	0.2	5.8	14.4	79.6	
	14:45	5/12/2008	0.0	0.0	19.8	80.2	
	8:15	6/12/2008	0.0	0.0	20.9	79.1	
	12:20	10/3/2008	0.0	0.4	20.9	78.7	
	12:05	10/13/2008	0.0	0.0	20.9	79.1	
	10:40	1/27/2009	0.3	4.8	15.7	79.3	
	11:57	4/9/2009	0.0	0.0	19.9	80.1	
	10:57	7/22/2009	0.0	0.0	19.4	80.6	
	10:16	10/28/2009	0.0	0.6	19.6	79.8	
	9:20	1/26/2010	0.3	0.8	19.4	79.5	
	8:34	5/25/2010	0.0	0.0	19.3	80.7	
	10:32	9/28/2010	0.0	1.0	17.7	81.3	

Monitoring Points	Time	Date	CH_4 (%)	CO_2 (%)	O_2 (%)	N (%)	Comments
MW-102	14:20	3/23/2006	0.0	0.7	20.5	78.8	pre-startup
	14:15	3/30/2006	1.0	0.5	20.6	77.9	
	13:35	4/6/2006	1.0	0.6	20.3	78.1	
	13:43	4/11/2006	0.5	0.3	19.7	79.5	
	11:50	4/14/2006	0.0	0.3	18.6	81.1	
	10:34	4/17/2006	0.8	0.7	20.1	78.4	
	14:00	4/28/2006	0.0	0.0	20.7	79.3	
	13:35	5/4/2006	0.0	0.2	20.5	79.3	
	10:42	5/22/2006	0.2	0.1	2.4	97.3	
	8:48	6/9/2006	0.0	0.0	19.8	80.2	
	12:20	6/14/2006	0.1	0.0	19.5	80.4	
	11:20	6/22/2006	0.7	0.1	19.9	79.3	
	11:53	7/5/2006	0.6	0.0	20.0	79.4	
	11:19	7/10/2006	0.6	4.7	15.1	79.6	
	10:20	7/17/2006	0.9	0.8	19.0	79.3	
	12:40	7/28/2006	0.6	0.6	18.6	80.2	
	10:13	8/8/2006	0.6	1.2	18.5	79.7	
	8:42	8/16/2006	0.1	0.0	17.7	82.2	
	8:00	8/21/2006	0.1	0.0	18.5	81.4	
	13:55	8/28/2006	0.6	1.8	18.8	78.8	
	11:05	9/13/2006	0.1	0.0	19.5	80.4	
	10:25	9/25/2006	0.1	0.0	19.2	80.7	
	8:44	10/10/2006	0.7	1.0	19.6	78.7	
	8:05	10/23/2006	0.8	0.4	19.6	79.2	
	14:42	11/2/2006	0.3	0.0	20.8	78.9	
	13:30	11/14/2006	0.2	0.2	20.0	79.6	
	11:12	11/27/2006	0.2	0.0	20.2	79.7	
	12:39	12/26/2006	0.1	0.0	20.0	79.9	
	13:10	1/27/2007	0.4	0.2	20.2	79.2	
	11:00	2/24/2007	0.4	0.2	20.6	78.9	
	17:35	3/28/2007	0.2	0.2	20.0	79.6	
	10:24	5/1/2007	0.0	1.4	17.0	81.6	
	11:57	5/30/2007	0.0	1.4	16.7	81.9	
	16:00	6/19/2007	0.0	0.0	20.6	79.4	
	11:42	8/13/2007	0.0	2.8	16.6	80.6	
	10:24	10/18/2007	0.1	4.2	15.0	80.7	
	14:05	1/23/2008	0.4	1.2	20.9	77.5	
	9:05	6/12/2008	0.0	0.6	18.9	80.5	
	12:10	7/21/2008	0.0	1.6	16.4	82.0	
	11:52	10/3/2008	0.0	3.6	16.8	79.6	
	11:03	10/13/2008	0.0	18.7	1.8	79.5	
	11:00	1/27/2009	0.3	1.0	20.8	78.0	
	9:29	4/9/2009	0.0	0.4	19.1	80.5	
	11:35	7/22/2009	0.0	1.8	16.1	82.1	
	10:25	10/28/2009	0.0	2.6	17.4	80.0	
	10:40	1/26/2010	0.3	2.2	18.4	79.1	
	8:44	5/25/2010	0.0	1.4	16.8	81.8	
	11:05	9/28/2010	0.0	4.6	14.1	81.3	

Table 4-7. Landfill Gas Field Parameter Monitoring Results
FF/NN Landfill
Ripon, WI

Monitoring Points	Time	Date	CH_4 (%)	CO_2 (%)	O_2 (%)	N (%)	Comments
MW-103	7:49	3/23/2006	0.0	0.2	21.8	78.0	pre-startup
	15:30	3/30/2006	0.0	1.9	18.2	79.9	
	14:35	4/6/2006	0.4	8.0	9.4	82.2	
	14:40	4/11/2006	0.0	6.4	10.8	82.8	
	12:15	4/14/2006	0.0	3.2	15.6	81.2	
	11:30	4/17/2006	0.0	0.0	20.7	79.3	
	10:45	4/28/2006	0.0	0.0	20.5	79.5	
	15:05	5/4/2006	0.4	0.0	13.5	86.1	
	11:42	5/22/2006	0.2	0.0	20.6	79.2	
	13:14	6/2/2006	0.2	0.0	20.1	79.7	
	9:10	6/9/2006	1.1	0.1	20.5	78.3	
	13:30	6/14/2006	0.6	0.3	20.4	78.7	
	11:28	6/22/2006	0.7	0.0	20.2	79.1	
	11:27	7/5/2006	0.6	0.0	20.4	79.0	
	10:40	7/10/2006	0.0	0.0	19.9	80.1	
	10:06	7/17/2006	0.8	0.4	19.4	79.4	
	12:30	7/28/2006	0.6	0.0	19.9	79.5	
	9:17	8/8/2006	0.6	0.0	19.9	79.5	
	7:34	8/16/2006	0.1	0.0	19.9	80.0	
	7:25	8/21/2006	0.5	0.0	20.1	79.4	
	13:29	8/28/2006	0.1	0.0	20.3	79.6	
	10:34	9/13/2006	0.0	0.0	20.4	79.6	
	9:57	9/25/2006	0.0	0.1	19.3	80.6	
	7:22	10/10/2006	0.5	0.2	20.4	78.9	
	7:38	10/23/2006	0.6	0.0	20.8	78.6	
	13:14	11/2/2006	0.0	0.3	21.0	78.7	
	13:08	11/14/2006	0.2	9.2	11.2	79.5	
	10:40	11/27/2006	0.1	0.0	20.1	79.9	
	14:00	12/26/2006	0.3	0.2	20.1	79.5	
	12:05	1/27/2007	0.1	0.0	19.8	80.2	
	12:34	2/24/2007	0.4	4.2	16.3	79.2	
	15:35	3/28/2007	0.1	0.0	20.0	79.9	
	10:52	5/1/2007	0.1	0.8	18.7	80.4	
	12:40	5/30/2007	0.0	0.4	18.9	80.7	
	13:35	6/19/2007	0.0	0.0	20.9	79.1	
	11:05	8/13/2007	0.0	0.0	20.9	79.1	
	10:05	10/18/2007	0.1	1.2	18.5	80.2	
	13:45	1/23/2008	0.4	0.2	20.9	78.5	
	7:15	6/12/2008	0.0	0.4	20.9	78.7	
	10:40	7/21/2008	0.0	0.0	20.9	79.1	
	11:20	10/3/2008	0.0	0.0	20.9	79.1	
	10:05	10/13/2008	0.0	0.4	20.7	78.9	
	7:00	1/27/2009	0.0	0.0	20.9	79.1	
	11:17	4/9/2009	0.0	0.0	20.0	80.0	
	10:32	7/22/2009	0.0	0.4	19.6	80.0	
	9:27	10/28/2009	0.0	0.0	19.8	80.2	
	8:14	1/26/2010	0.3	2.2	18.0	79.5	
	8:08	5/25/2010	0.0	0.0	19.3	80.7	
	8:57	9/28/2010	0.0	0.0	18.9	81.1	

Table 4-7. Landfill Gas Field Parameter Monitoring Results
FF/NN Landfill
Ripon, WI

Monitoring Points	Time	Date	CH_4 (%)	CO_2 (%)	O_2 (%)	N (%)	Comments
MW-104	9:29	3/23/2006	**12.8**	18.5	0.8	67.9	pre-startup
	15:45	3/30/2006	0.0	0.0	20.7	79.3	
	13:10	4/6/2006	**6.8**	8.9	10.5	73.8	
	14:50	4/11/2006	4.1	7.1	9.2	79.6	
	11:40	4/17/2006	2.0	0.3	21.0	76.7	
	14:10	4/28/2006	0.0	0.0	20.7	79.3	
	15:40	5/4/2006	0.0	0.0	8.1	91.9	
	10:27	5/22/2006	0.0	0.1	19.9	80.0	
	8:32	6/9/2006	0.0	0.0	19.6	80.4	
	12:45	6/14/2006	3.2	0.8	18.8	77.2	
	10:54	6/22/2006	0.8	0.1	19.7	79.4	
	12:19	7/5/2006	0.6	0.0	20.0	79.4	
	11:40	7/10/2006	0.7	0.6	19.8	78.9	
	11:05	7/17/2006	0.1	0.0	19.6	80.3	
	12:38	7/28/2006	0.6	0.0	19.8	79.6	
	9:49	8/8/2006	0.6	0.0	20.0	79.4	
	9:14	8/16/2006	0.7	0.2	19.4	79.7	
	8:30	8/21/2006	0.1	0.3	18.1	81.5	
	14:16	8/28/2006	0.0	0.0	17.6	82.4	
	11:29	9/13/2006	0.7	0.2	16.8	82.3	
	11:27	9/25/2006	0.0	0.2	19.5	80.3	
	8:27	10/10/2006	0.7	13.1	4.3	81.9	
	8:30	10/23/2006	0.7	0.3	16.7	82.3	
	14:14	11/2/2006	0.3	0.0	20.6	79.1	
	15:06	11/14/2006	0.2	0.6	19.4	79.8	
	12:04	11/27/2006	0.2	3.0	17.6	79.2	
	13:15	12/26/2006	0.2	0.0	20.0	79.9	
	14:16	1/27/2007	0.1	0.0	19.4	80.5	
	11:35	2/24/2007	0.5	12.8	5.6	81.1	
	16:55	3/28/2007	0.2	0.2	20.0	79.6	
	11:45	5/1/2007	0.0	0.0	18.9	81.1	
	11:48	5/30/2007	0.0	0.0	19.0	81.0	
	15:30	6/19/2007	0.0	0.0	20.9	79.1	
	12:05	8/13/2007	0.0	0.0	20.9	79.1	
	9:50	10/18/2007	0.1	0.0	19.6	80.3	
	13:20	1/23/2008	0.3	0.6	20.6	78.5	
	9:25	6/12/2008	0.0	0.0	20.9	79.1	
	12:30	7/21/2008	0.0	0.0	20.9	79.1	
	11:37	10/3/2008	0.0	0.0	20.9	79.1	
	10:45	10/13/2008	0.0	0.2	20.9	78.9	
	10:50	1/27/2009	0.2	14.6	3.9	81.3	
	11:40	4/9/2009	0.0	1.2	19.2	79.6	
	7:50	7/22/2009	0.0	0.0	19.6	80.4	
	9:48	10/28/2009	0.0	0.0	20.0	80.0	
	8:25	1/26/2010	0.4	0.2	20.4	79.1	
	11:30	5/25/2010	0.0	0.0	19.3	80.7	
	9:25	9/28/2010	0.0	0.2	18.6	81.2	

Table 4-7. Landfill Gas Field Parameter Monitoring Results
FF/NN Landfill
Ripon, WI

Monitoring Points	Time	Date	CH_4 (%)	CO_2 (%)	O_2 (%)	N (%)	Comments
System Exhaust	2:00	3/28/2006	**4.4**	4.0	17.8	73.8	
	12:52	5/4/2006	8.6	14.7	7.4	69.3	
	11:15	6/28/2006	5.9	14.5	9.5	70.1	
	11:45	7/5/2006	6.1	18.7	7.2	68.0	
	11:12	7/10/2006	6.7	21.7	5.1	66.5	
	10:31	7/17/2006	6.2	18.6	6.5	68.7	
	14:24	7/28/2006	2.1	19.2	6.1	72.6	
	10:23	8/8/2006	5.9	18.0	6.8	69.3	
	8:30	8/16/2006	6.8	17.3	7.3	68.6	
	8:07	8/21/2006	6.9	18.0	7.6	67.5	
	14:00	8/28/2006	7.1	18.6	7.3	67.0	
	11:13	9/13/2006	15.2	20.0	8.1	56.7	
	11:37	9/25/2006	14.2	24.3	4.8	56.7	
	8:09	10/10/2006	7.4	19.2	8.2	65.2	
	8:13	10/23/2006	12.8	16.3	9.1	61.8	
	9:00	11/2/2006	5.0	14.0	8.2	72.8	
	13:43	11/14/2006	4.4	10.4	10.6	74.6	
	11:19	11/27/2006	3.8	10.2	10.8	75.2	
	12:31	12/26/2006	6.5	14.8	6.9	71.8	
	13:30	1/27/2007	8.0	15.8	6.4	69.8	
	10:45	2/24/2007	6.0	11.6	10.0	72.4	
	7:35	3/5/2007	0.1	0.2	19.8	79.9	
	8:20	3/24/2007	9.0	12.6	9.7	68.7	
	17:10	3/24/2007	8.5	12.6	9.4	69.5	
	17:25	3/26/2007	6.5	11.4	9.8	72.3	
	7:39	3/27/2007	6.5	11.2	10.2	72.1	
	17:25	3/28/2007	6.5	10	11.6	71.9	
	8:16	3/29/2007	5.5	8.8	12.3	73.4	
	17:15	3/29/2007	5	8.6	12.3	74.1	
	16:09	6/19/2007	12.5	18.2	4.6	64.7	
	11:55	8/13/2007	13.5	20.2	4.1	62.2	
	9:12	10/19/2007	7.5	16.2	5	71.3	
	12:50	1/23/2008	8.5	15.6	7.1	68.8	
	8:55	6/12/2008	8.0	15.2	7.3	69.5	
	12:03	7/21/2008	9.5	17.0	5.6	67.9	
	11:15	10/13/2008	6.5	9.8	12.0	71.7	
	7:20	1/27/2009	3.8	6.4	15.7	74.2	
	9:37	4/9/2009	6.5	7.6	13.3	72.6	
	7:40	7/22/2009	5	7.8	12.8	74.4	
	10:35	10/28/2009	6.5	7.4	13.9	72.2	
	7:20	1/27/2009	3.75	6.4	15.7	74.15	
	13:15	5/25/2010	5	5.2	15.2	74.6	
	10:45	9/28/2010	6.5	5.4	15.3	72.8	

Table 4-8. Landfill Gas VOC Results
FF/NN Landfill
Ripon, WI

Sampling Point ID	Date	Benzene	Chlorobenzene	Chloroethane	Chloromethane	1,2-Dichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	Dichlorodifluoromethane	1,1-Dichloroethane	1,2-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Dichlorotetrafluorethane	Ethylbenzene	Methylene Chloride	1,1,2,2-Tetrachloroethane	Styrene	Tetrachloroethene	Toluene	1,1,1-Trichloroethane	Trichloroethene	Trichlorofluoromethane	1,1,2-Trichlorofluoromethane	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl Chloride	Total Xylenes
GP-3	9/29/04	102		689					909			110	6660	229	131								205					25400	
	1/28/05			450					590				4500															12600	
	6/2/06												464			105					708							72.9	85.8
	11/2/06			5.9									28.7			19					122								50.1
	5/30/07	1.3	3					2.4	2				7.1			9				0.86	7.4		1			1.9	3.1		25
	8/9/07																												
	10/22/2007												135								33							24.4	
	1/23/2008								3.4				7.3										2.2						
	7/22/2008						1.6														0.74								
	10/7/2008								7.2				1.9		1.4		1.1		0.87		2.7								1.9
	1/27/2009								3.6								1.9												
	4/16/2009																				0.95								
	7/27/2009				0.83												109				19.4						1.2		0.76
	10/27/2009								1.7				5.7	0.82							0.95		6.5						
	2/25/2010				0.86												28				1.7								
	5/25/2010					8.2											15.8						6.2						
	10/12/2010								0.96								299				4.2								
GV-6	7/28/2006	172	117	373					1070	42.6			19		281	323					107	27.9		38				3590	649.5
	11/2/2006	50.2	50.4	73.5					166	35.8					70.4	246					155					45	33.7	84.9	666
	2/23/2007								111	24.4					44.3			7.4			7	33.5		17.6					
	5/30/2007	32		190					160	21			19		120	73					56							150	151
	8/9/2007	75.8	127	255				27.6	119	35			22.4		72.5	543					84.6					98.9	88	54.5	1123
	10/22/2007			32					82	68.9			33.9		23	16.3					41.1	29.9		42.3					29
	1/23/2008			87.6					375	64.8			16		69.5							40		41.4					
	7/22/2008	15.3	16.8	84.7					95.5	83.1					58.4	66.2		22.8				63.4							112
	10/7/2008			43					93.6						21.4														
	1/27/2009																8						1.8						
	4/16/2009								3.1								238				1.7					0.85			
	7/27/2009								61.9	28					16.7		502		38.5										
	10/27/2009	17.7		78.7					40.6						77.7	34	32.7				48					39			107.60
	2/25/2010								133						132														
	5/25/2010			1.5					3	1.1							3				1.3								
	10/12/2010	1.9		11.8					5.3	1.6							23												

Values in ppbv (parts per billion by volume)
Analyzed using EPA Method TO-14A
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Table 4-8. Landfill Gas VOC Results
FF/NN Landfill
Ripon, WI

Sampling Point ID	Date	Benzene	Chlorobenzene	Chloroethane	Chloromethane	1,2-Dichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	Dichlorodifluoromethane	1,1-Dichloroethane	1,2-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Dichlorotetrafluorethane	Ethylbenzene	Methylene Chloride	1,1,2,2-Tetrachloroethane	Styrene	Tetrachloroethene	Toluene	1,1,1-Trichloroethane	Trichloroethene	Trichlorofluoromethane	1,1,2-Trichlorofluoromethane	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl Chloride	Total Xylenes
LC-1	9/29/04			9.1					70.8						9.5														
	1/28/05								553				1080		178													130	
	7/28/2006	117							71.6						168	149					118								563
	11/2/2006	92.6	16.4	54.3					62.4	27.7			1010		30.5	636				22.1	3010		46.9			38.1	29.8		1954
	2/23/2007	48							129						14.6	64.2		21			40.8								175.2
	5/30/2007	160		270					180	24						380	500				270					57	43		1140
	8/9/2007	76.4	21.8	108					118	17.4					34.8	216	106				46.1					32.3	21		489.8
	10/22/2007	51.1	150	86.9					170	49.3					38	328	15.9				38.7					47.5	39.4		546.7
	1/23/2008																												
	7/22/2008	31.6	84.8	48.7					13.5	48.5			1.4		13.1	235		23		3.5		6.4	2.2	2.4	0.95	18	12.1		409.8
	10/7/2008	11.2		27.2					2.8	26.4			1.3				1.8				1.9	1.9	1.4	1.1					
	1/27/2009			7.6													3.3						4						
	4/16/2009								1.1				1.3				1.8				0.94								
	7/27/2009	1.5															7.1			1.2	1.5					3.6	1.7		6.4
	10/27/2009			267					388							384													626
	2/25/2010			123					176	19.2					88.9														
	5/25/2010	3.4		62.4					24.1																	1.3			
	10/12/2010	3.1		14.2					43.4	1.1					16.3	4.9	34.6				6.2					3.8	1.4		4.7
LC-2	7/28/2006	447	404	265					1060				3850	48.7	408	2790	88.6			81	8920		238			191	143	166	13006
	11/2/2006	221	96.9	216					1130						263	378					43.2					79.4	56		8532
	2/23/2007	186	182	148				36.2	309						176	449		194			83.7					173	157		7088.5
	5/30/2007	1.2		4.4					7.7				1.8		7.4	1.2					3.3							2.4	2.7
	8/9/2007	24.9		75.9					75.6						40.6	17.3					25.9								38
	10/22/2007	236	112	344						14.3			16.4		90.5	335								14.8		38.2	27.3		1744.1
	1/23/2008	282	54.7	426					956	19.1					274	200					80			82		77.7	24.1	18.4	1549.9
	7/22/2008	354	114	535					840						286	400					119								1820
	10/7/2008	37.2		284					538						211		18.3												
	1/27/2009					1.2							1.8				9.7			1.3			8.8		3.2				
	4/16/2009			1.5					5.3								200				2								
	7/27/2009								1490							243													1270
	10/27/2009	578		637					595						422	375						777	995						1920
	2/25/2010			224					161						197														
	5/25/2010	16.1		64.1					10.7	1.2					39.2		11.8				2.3								
	10/12/2010			43.7					113						56.9		38.7												

Values in ppbv (parts per billion by volume)
Analyzed using EPA Method TO-14A
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Table 4-8. Landfill Gas VOC Results
FF/NN Landfill
Ripon, WI

Sampling Point ID	Date	Benzene	Chlorobenzene	Chloroethane	Chloromethane	1,2-Dichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	Dichlorodifluoromethane	1,1-Dichloroethane	1,2-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Dichlorotetrafluorethane	Ethylbenzene	Methylene Chloride	1,1,2,2-Tetrachloroethane	Styrene	Tetrachloroethene	Toluene	1,1,1-Trichloroethane	Trichloroethene	Trichlorofluoromethane	1,1,2-Trichlorofluoromethane	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl Chloride	Total Xylenes
LC-3	7/28/2006												516								1070								1340
	11/2/2006	1110	95.4					33.4	740	98.5		254	5840	228	115	526	1430		22.6	209	5030		912	184		158	85.1	1600	3310
	2/23/2007	434							2810	81.6		166	43400		231	185	1440	21.1		63.2	10000		573 J	1210				11900	632
	5/30/2007	610	110					71	5200	64		460	137000		260	18400	2700			260	146000		3200	270		260	150	172000	47400
	8/9/2007	28.8							258	58.6			4960		25.9		197				328		64.1	19.3				4680	
	10/22/2007	162							447	21.6			38300	91.3	66.4	179	1370			20.7	16800		1770	45.4				10700	362.7
	1/23/2008	4.5							44.2	1		10.4	1820		14.2		69.1				37.9		14.5	2.1				1220	
	7/22/2008	30.2	10.3	4.9				1.8	62.4	3.5	0.95	25	6050	13.1	14.3	320	196		15.2	12.6	5140		301	2.6		12.8	7.4	1920	931
	10/7/2008												1.3				2.1						2.1						
	1/27/2009			1.6	2												3.2												
	4/16/2009																674				5.6								
	7/27/2009	26.7	13.2						9.1			24.5	4560		27	311	131			10	2730		289	6.2		0.86	5.5	1760	876
	10/27/2009	256											66400		250	1900	450				33600		1500					9760	7150
	2/25/2010												33.8				54.6										82.5		
	5/25/2010	24.1							94.1			24.5	2470		39	19.3	68.1				692		55.5					1670	41.8
	10/12/2010								24.5			2.2	31.6		5.6		3.8						0.92	0.84					394

Values in ppbv (parts per billion by volume)
Analyzed using EPA Method TO-14A

Chart 4-1: Layer 1 Historic Water Level Data

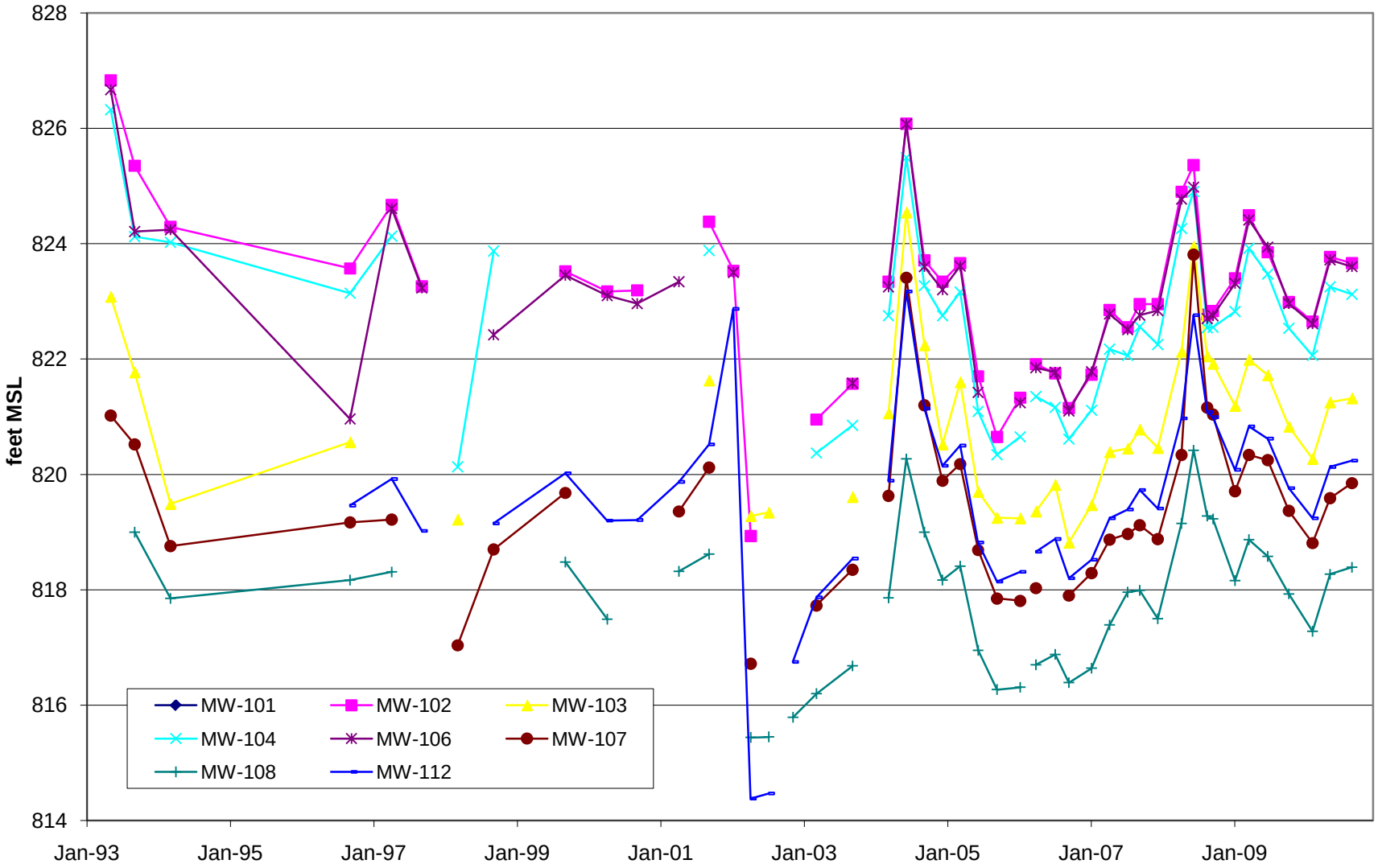

Chart 4-2: Layer 2 Historic Water Level Data

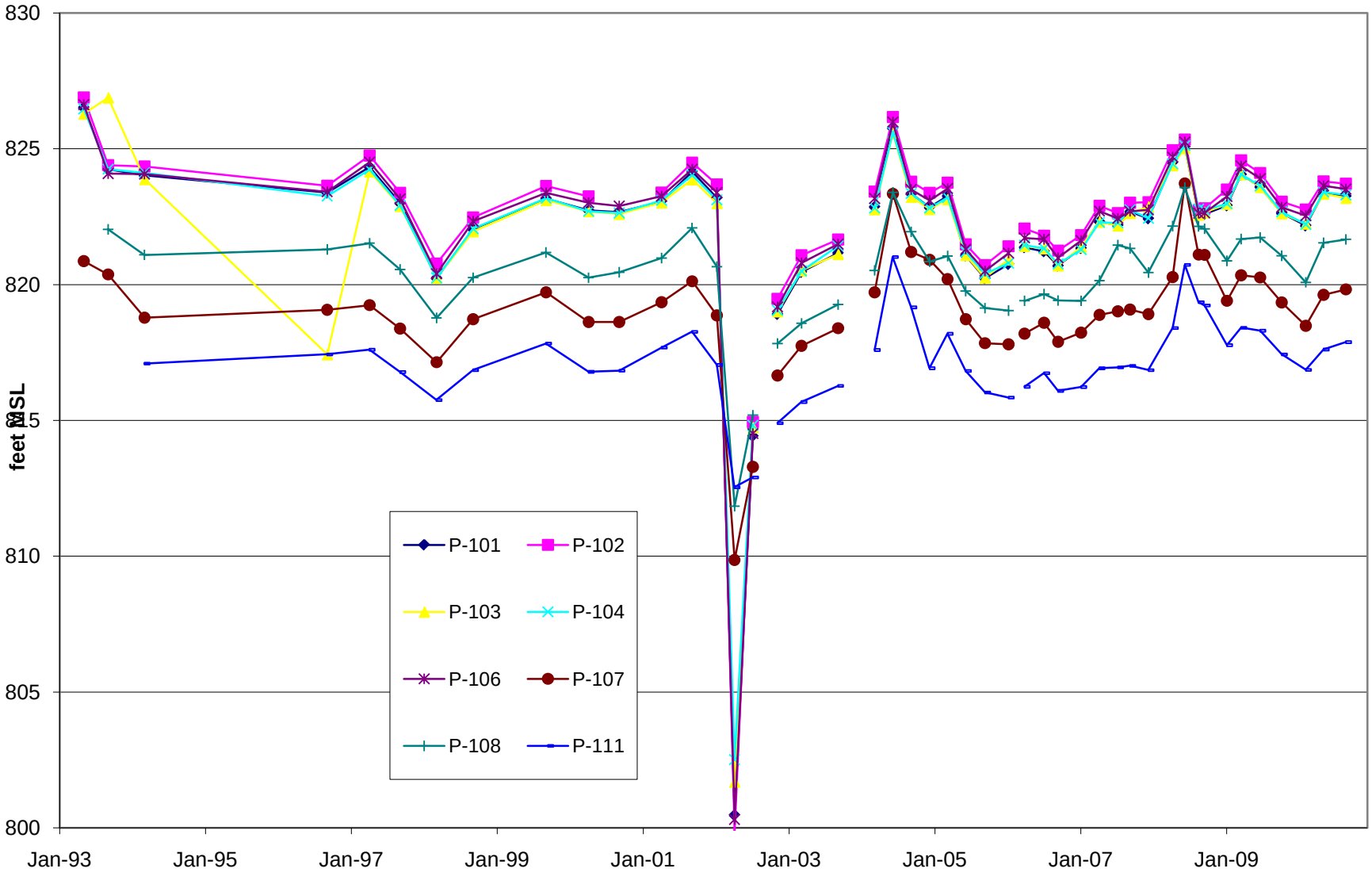

Chart 4-3: Layer 3 Historic Water Level Data

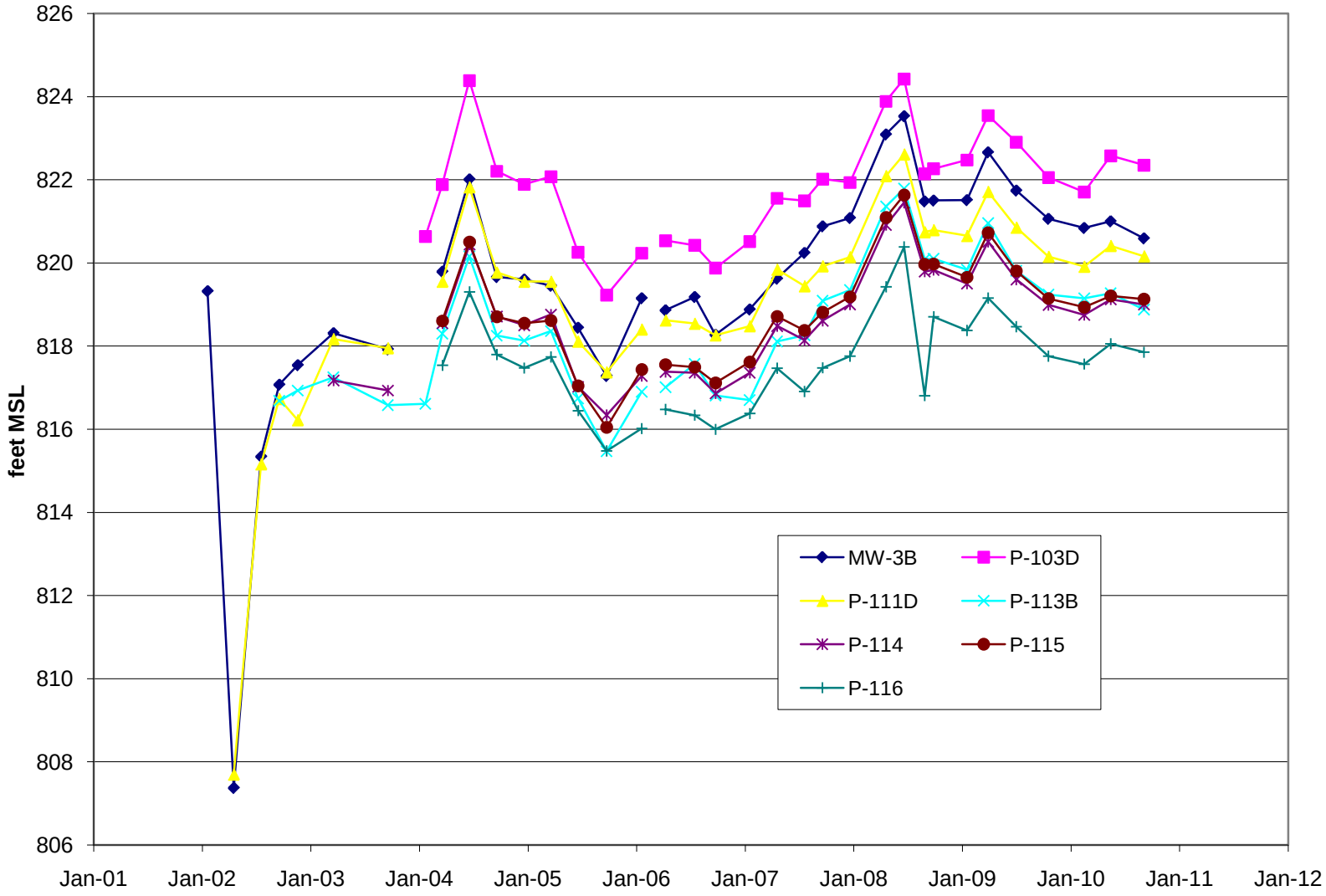

Chart 4-4: Layer 4 Historic Water Level Data

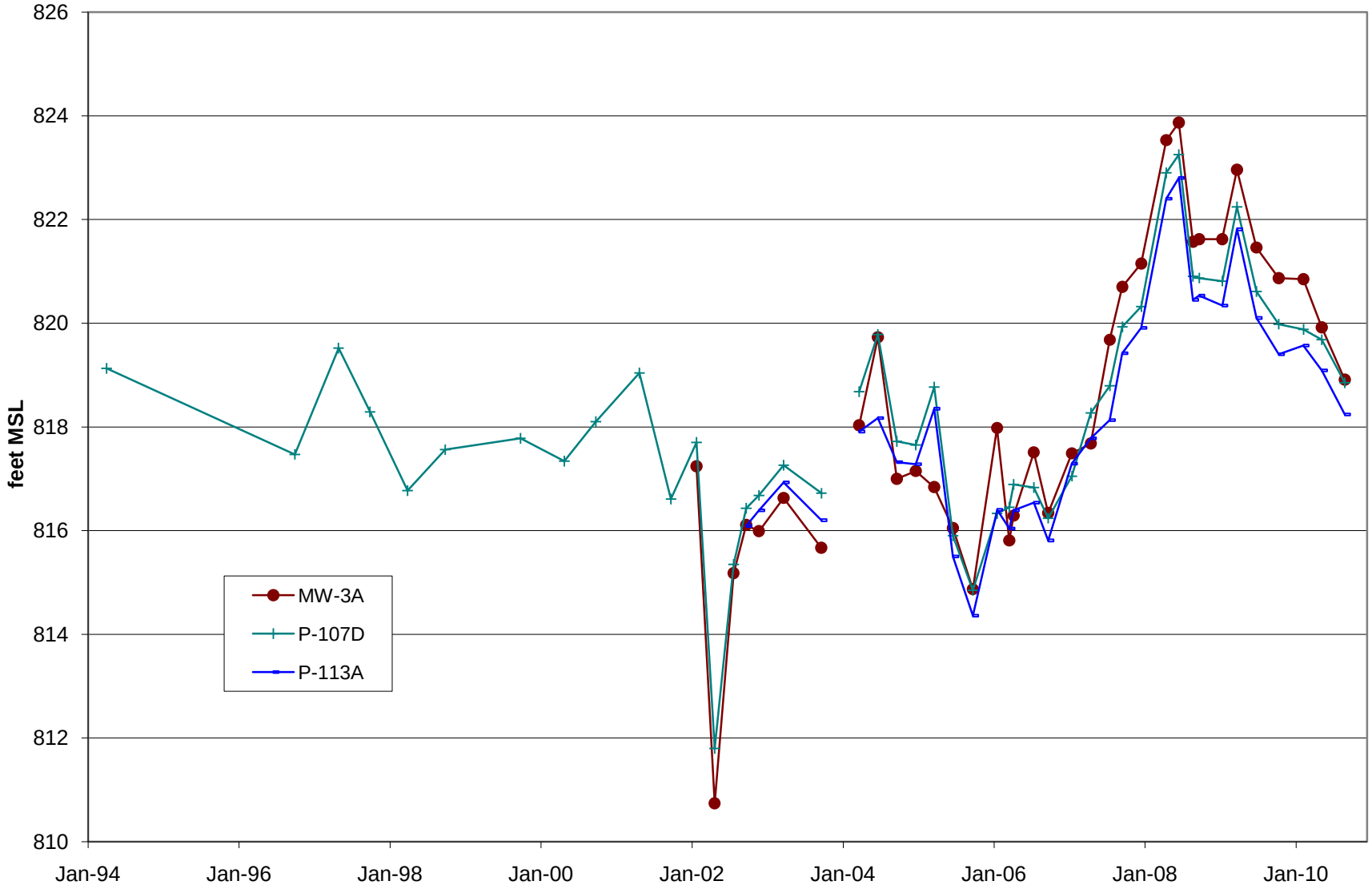

Chart 4-5: GV-1 Gas Concentrations

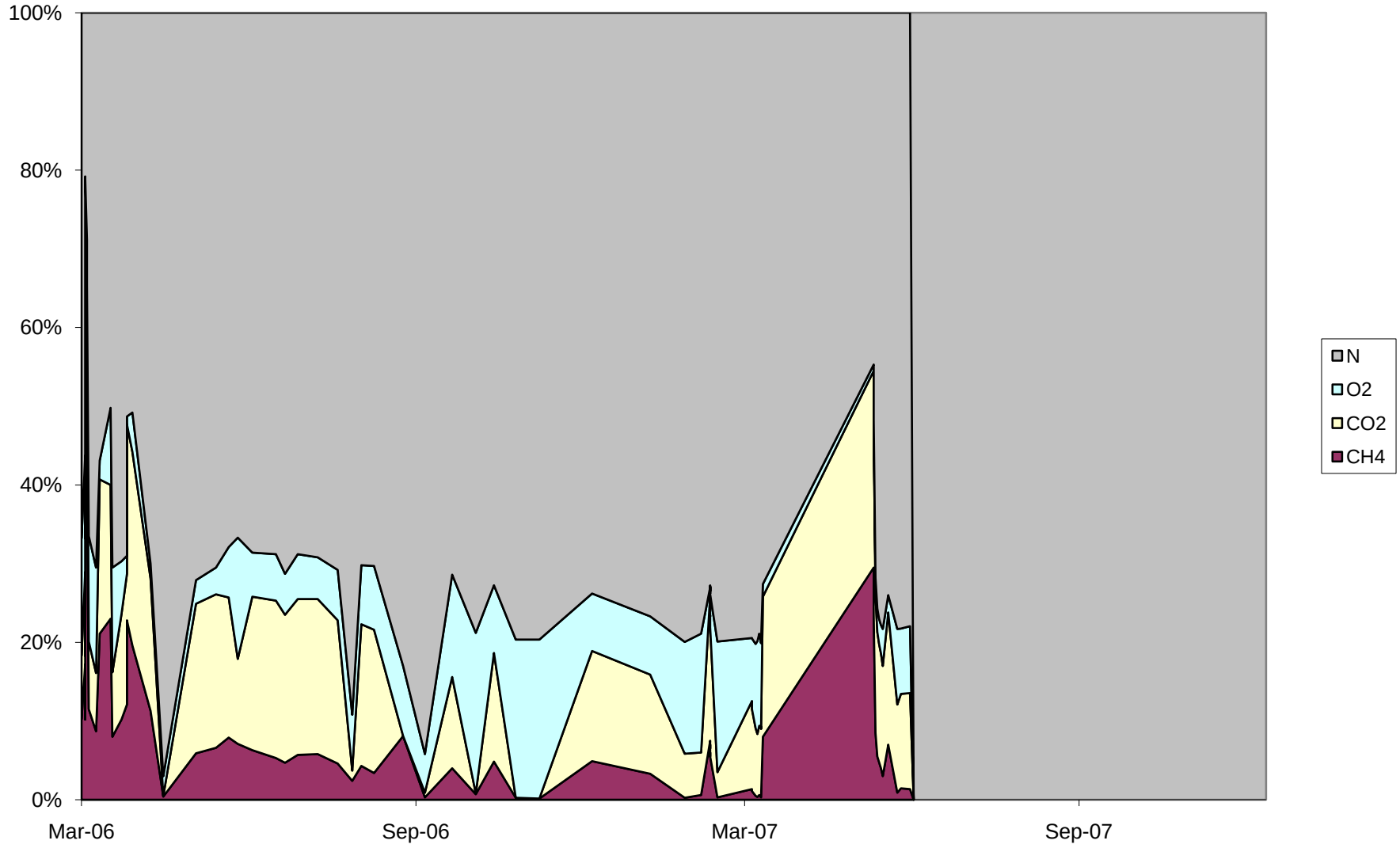

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Chart 4-6: GV-4 Gas Concentrations

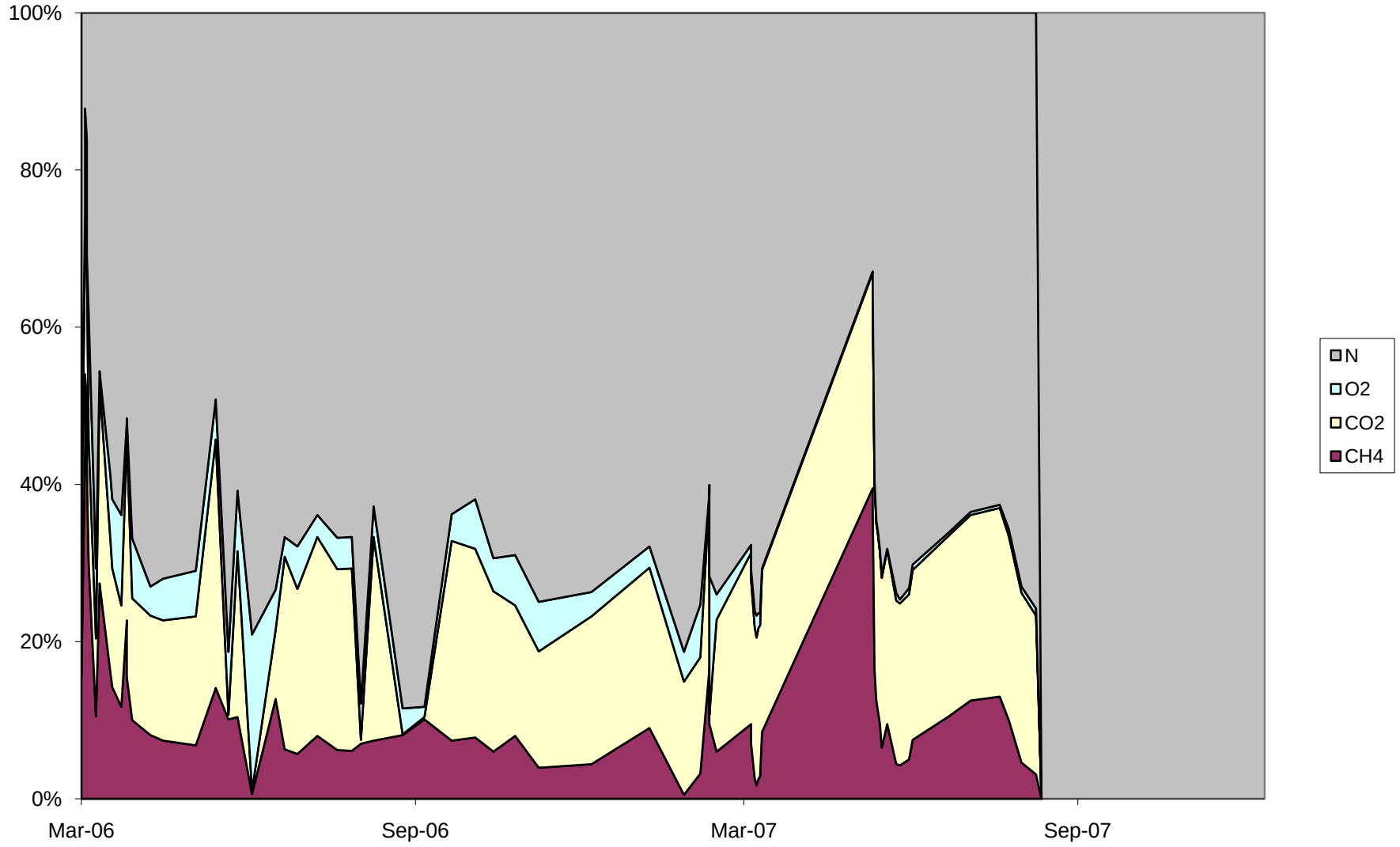

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Chart 4-7: GV-6 Gas Concentrations

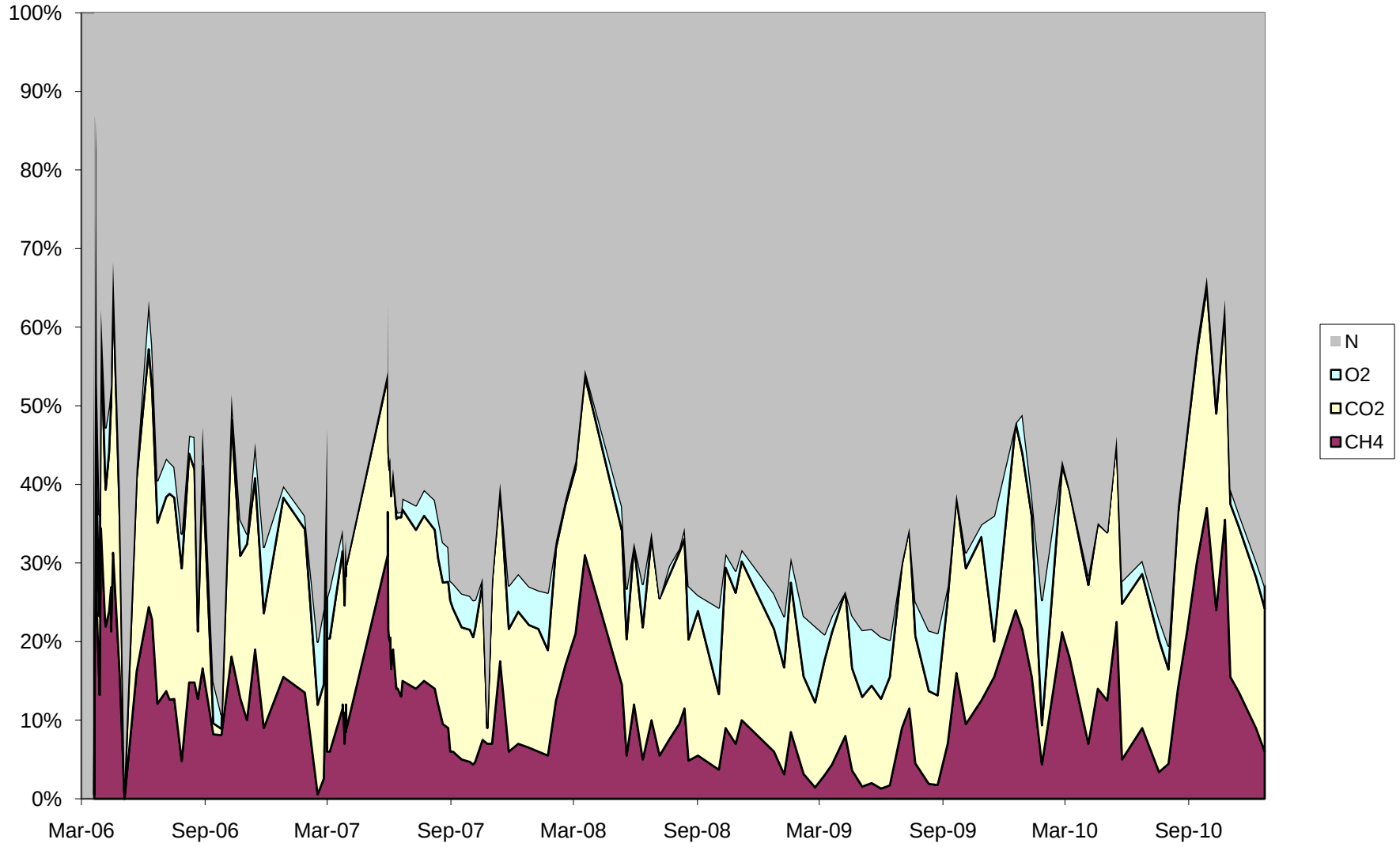

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Chart 4-8: GV-7 Gas Concentrations

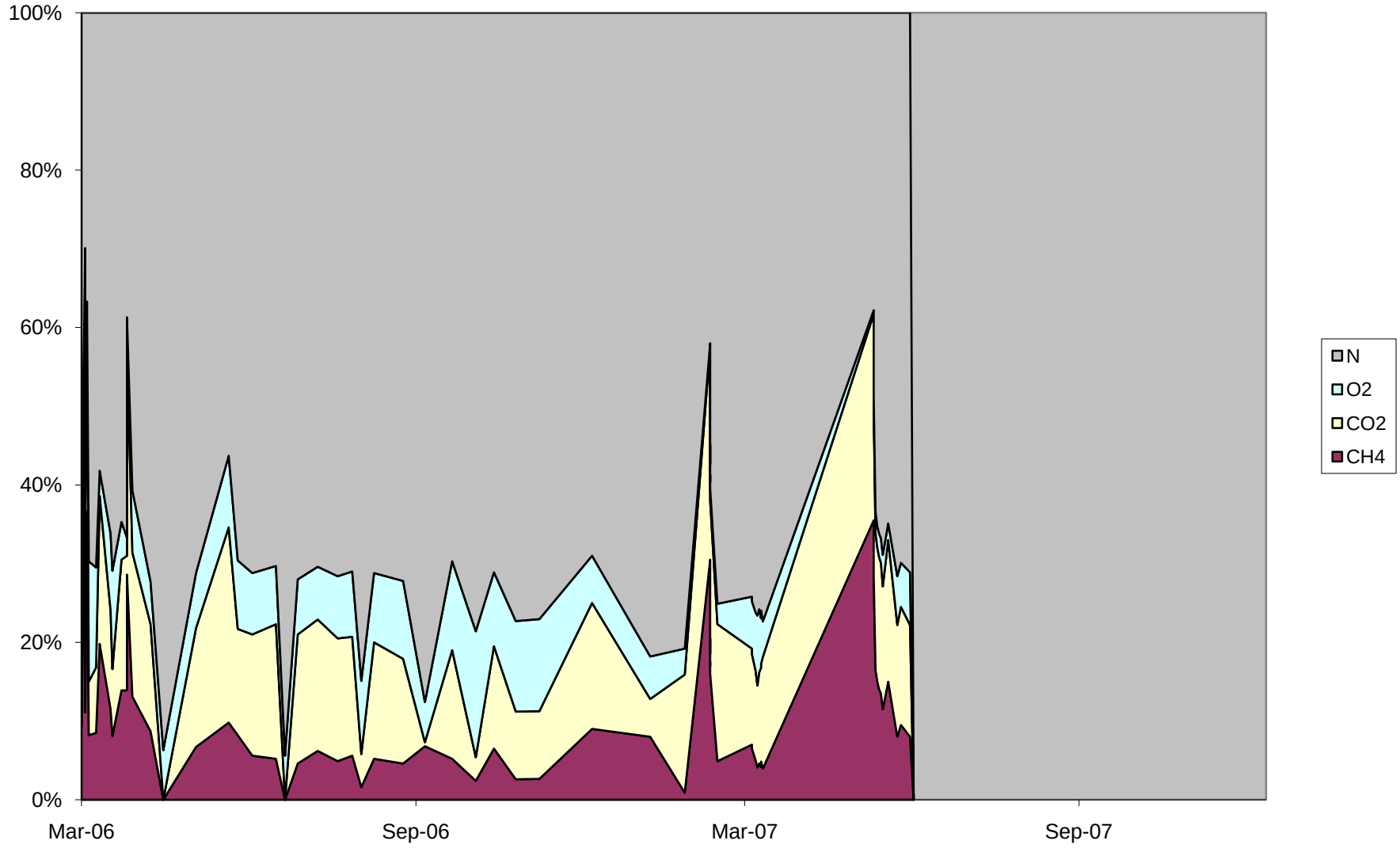

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Chart 4-9: GV-9 Gas Concentrations

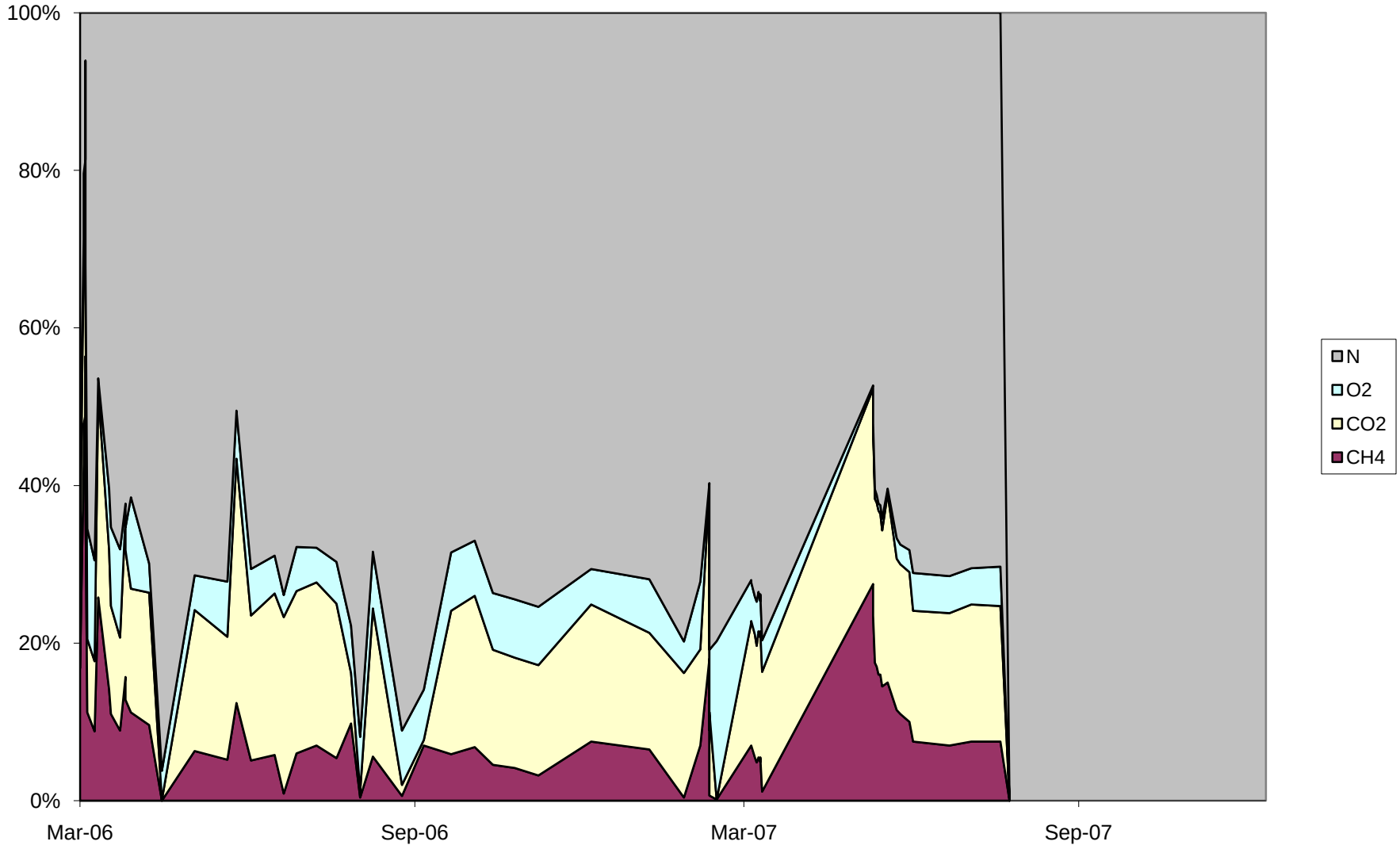

Chart 4-10: GV-12 Gas Concentrations

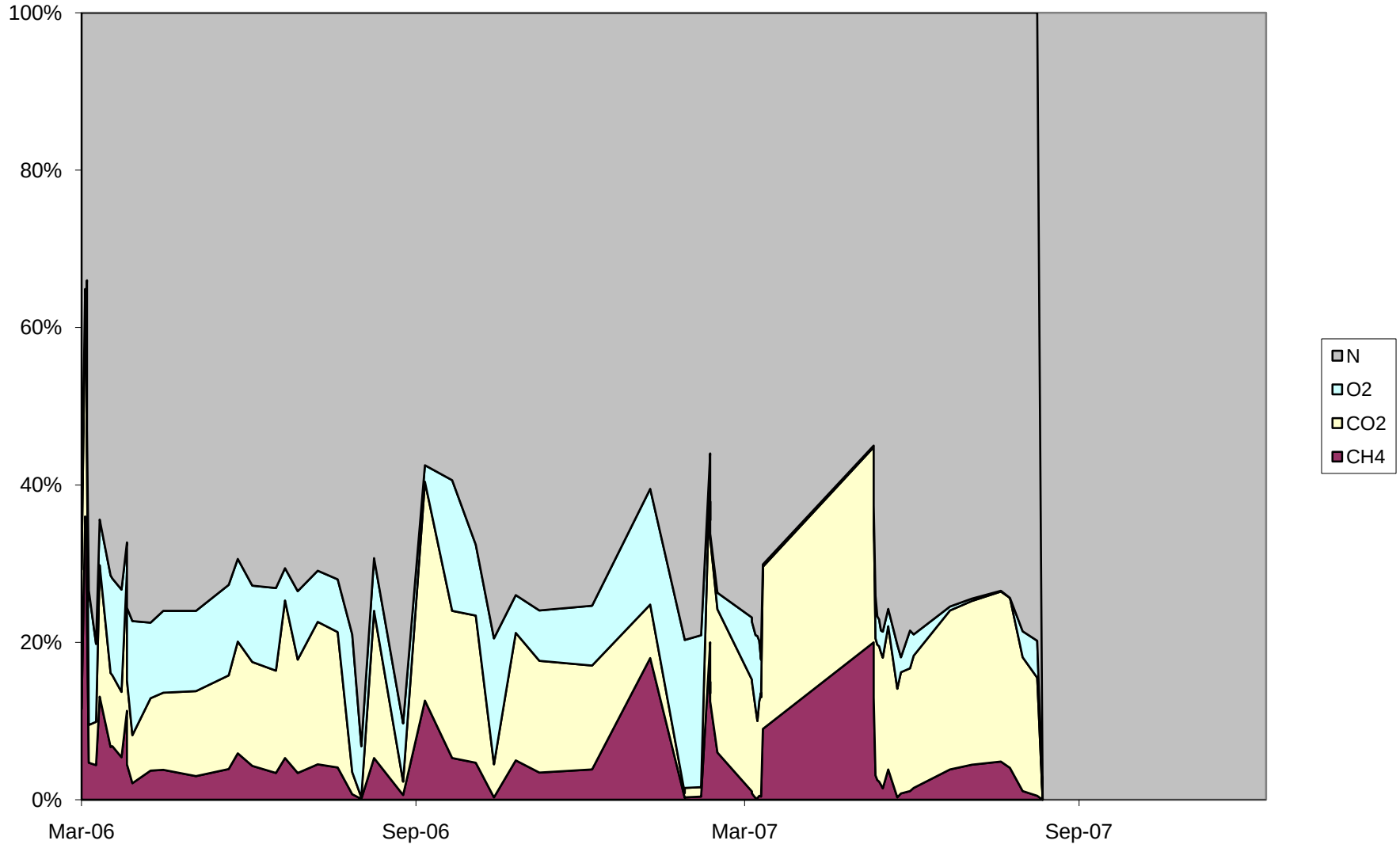

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Chart 4-11: LC-1 Gas Concentrations

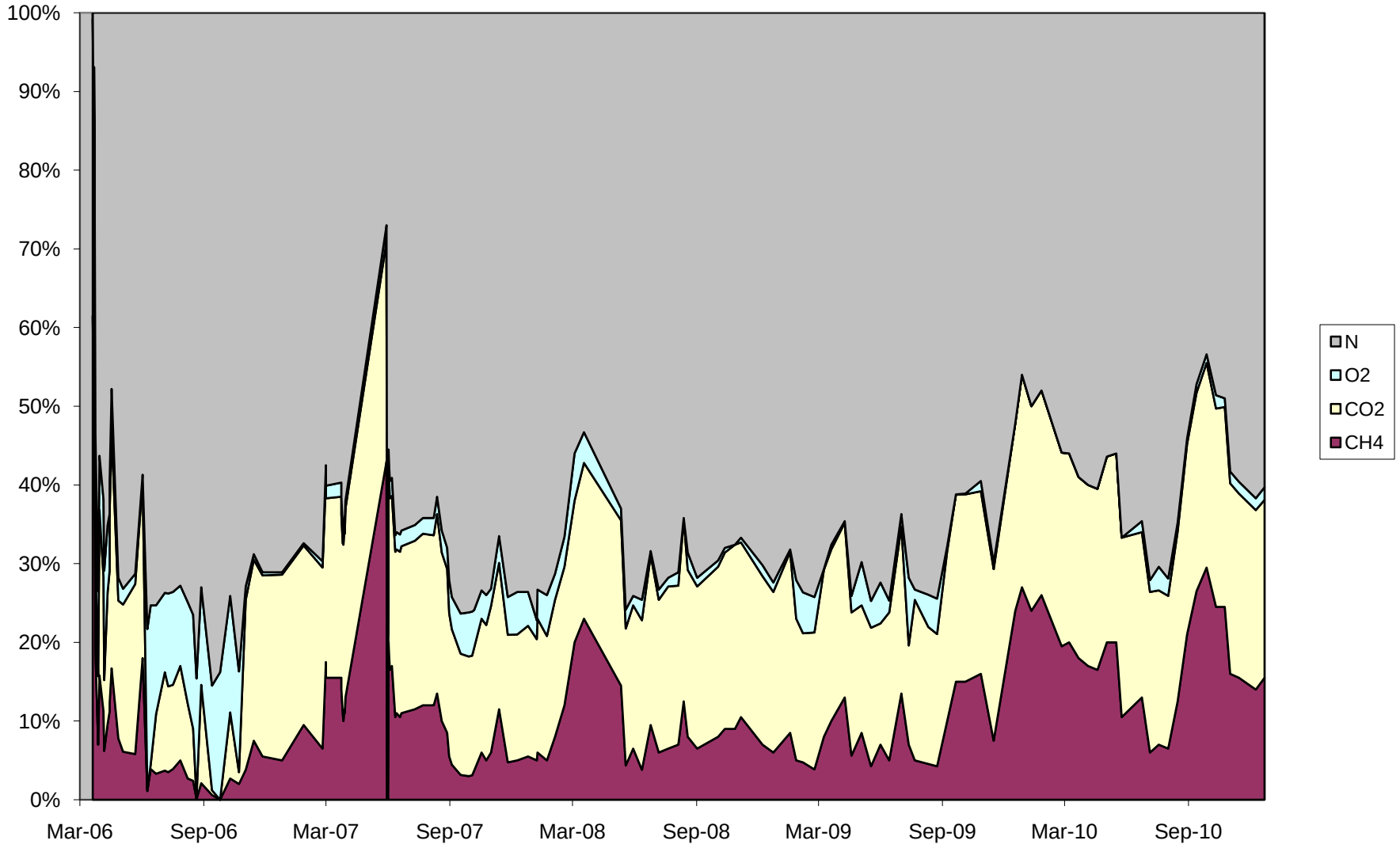

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Chart 4-12: LC-2 Gas Concentrations

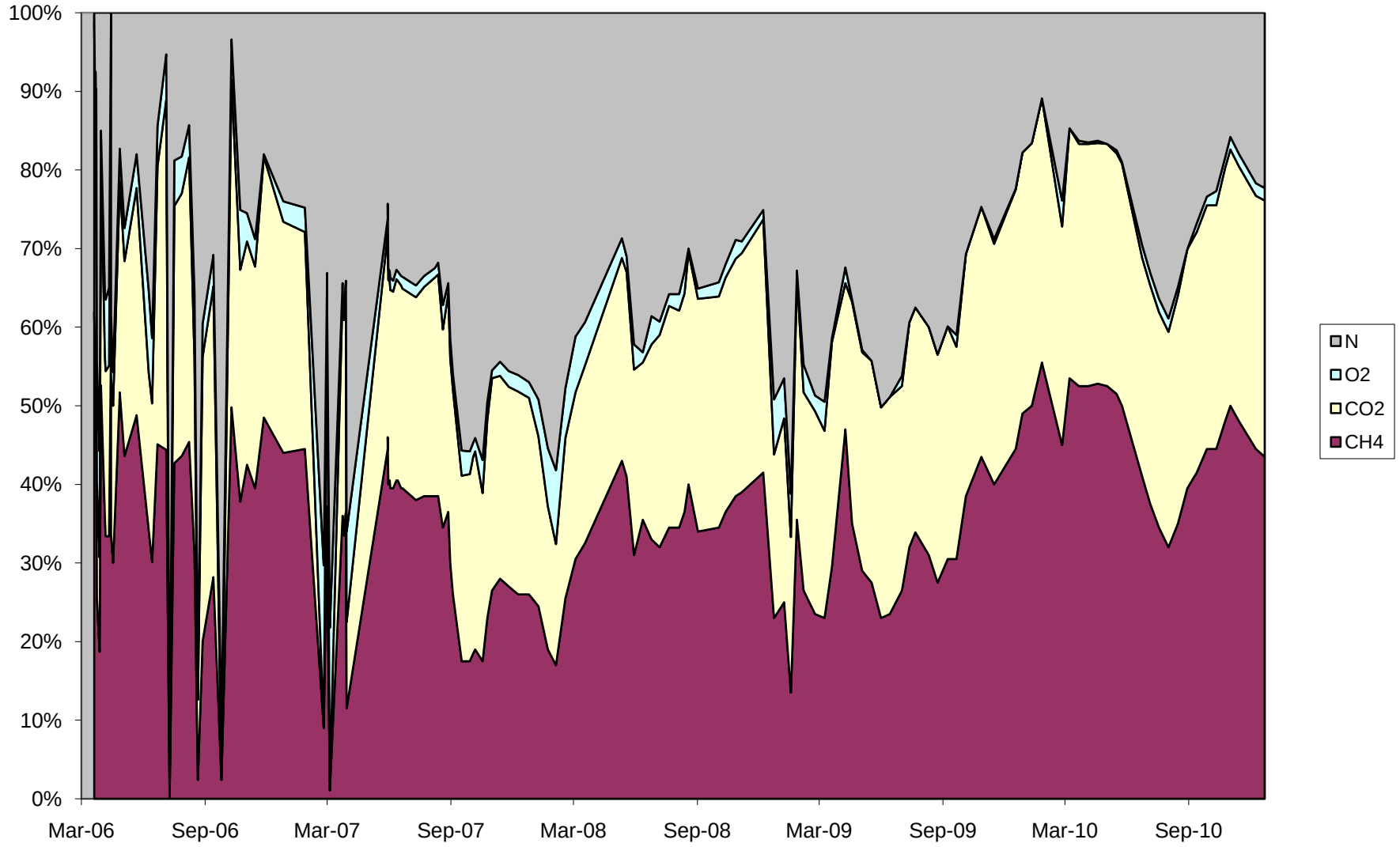

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Chart 4-13: LC-3 Gas Concentrations

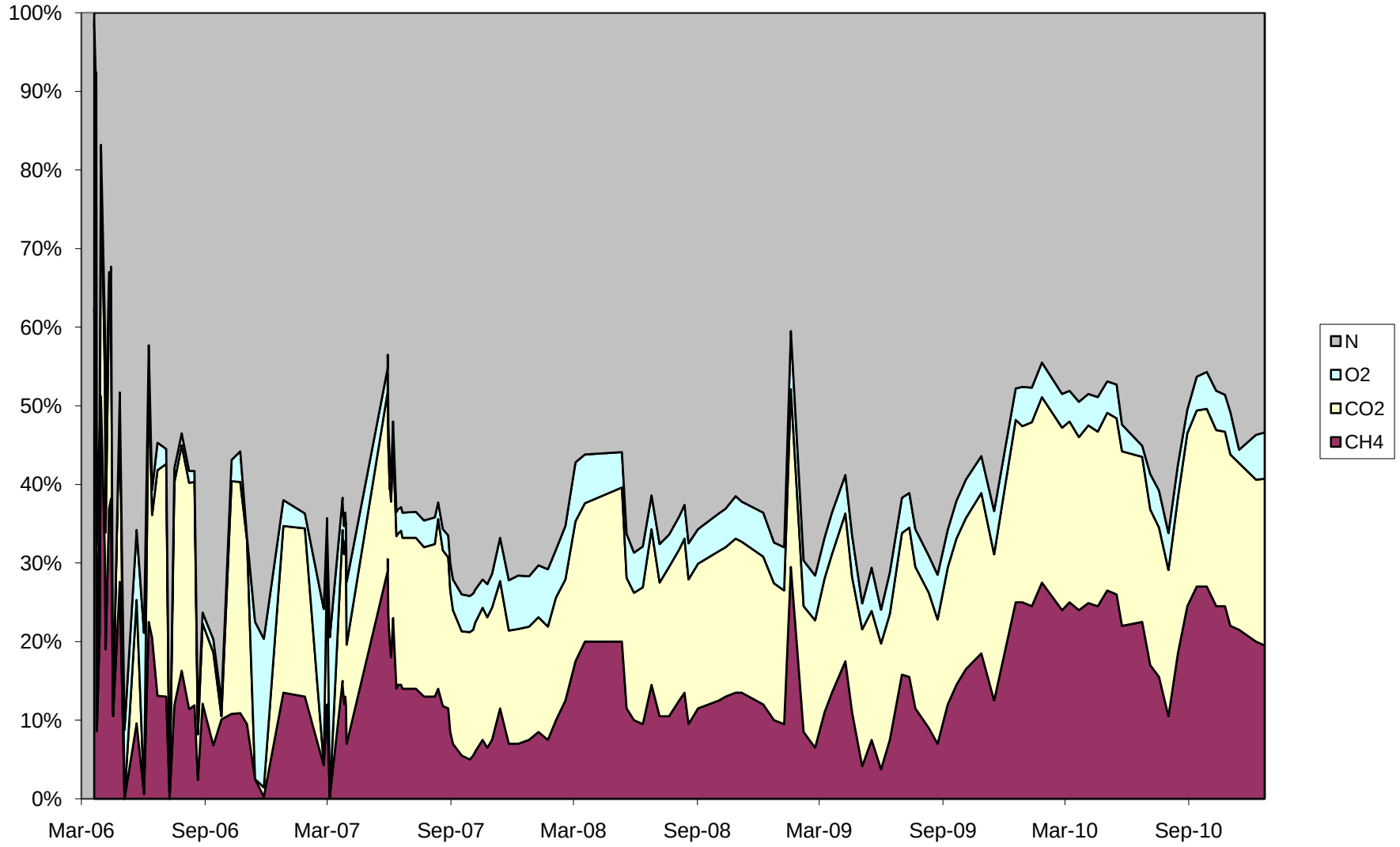

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Chart 4-14: System Exhaust

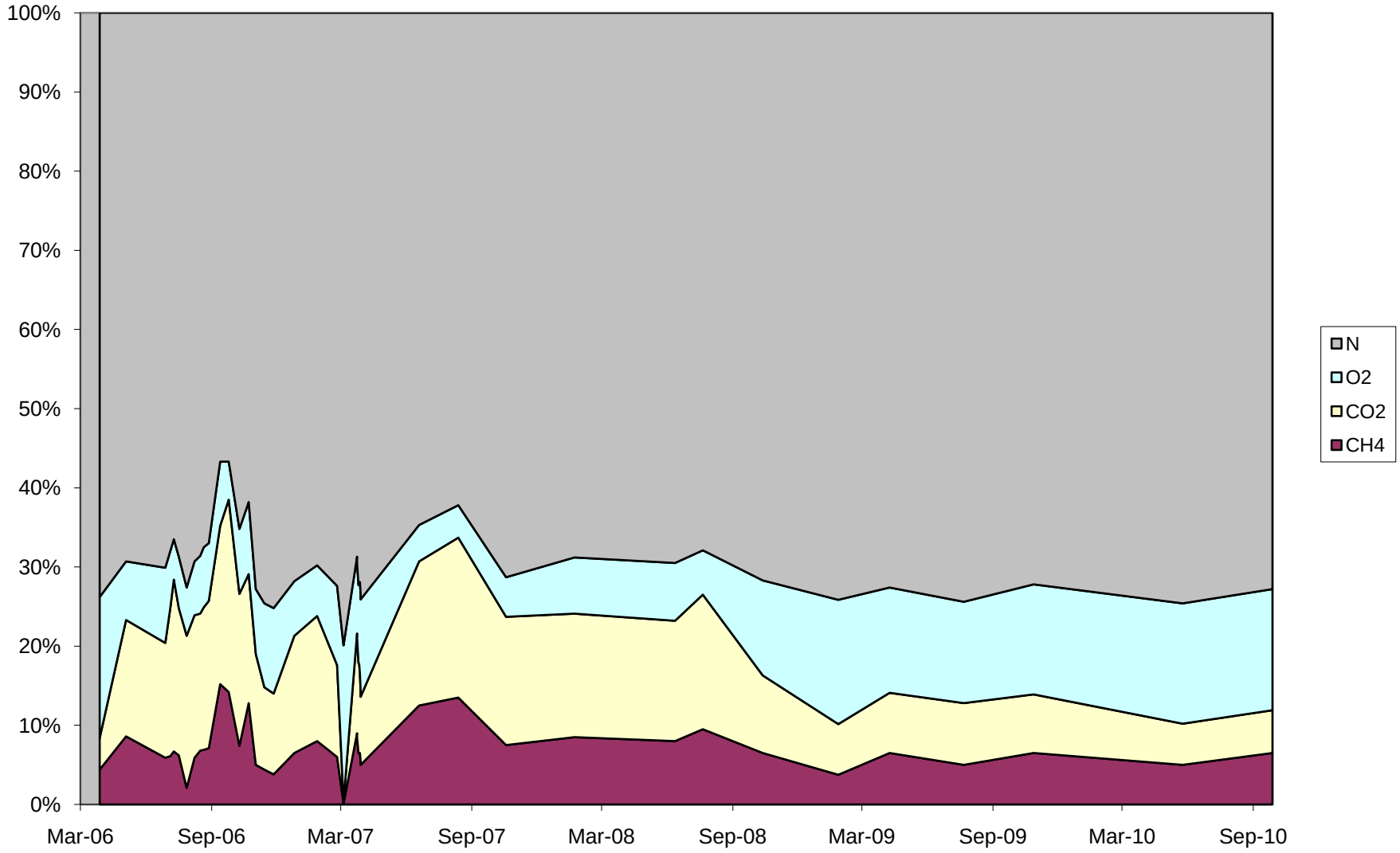

Chart 4-15: GP-1 Gas Concentrations

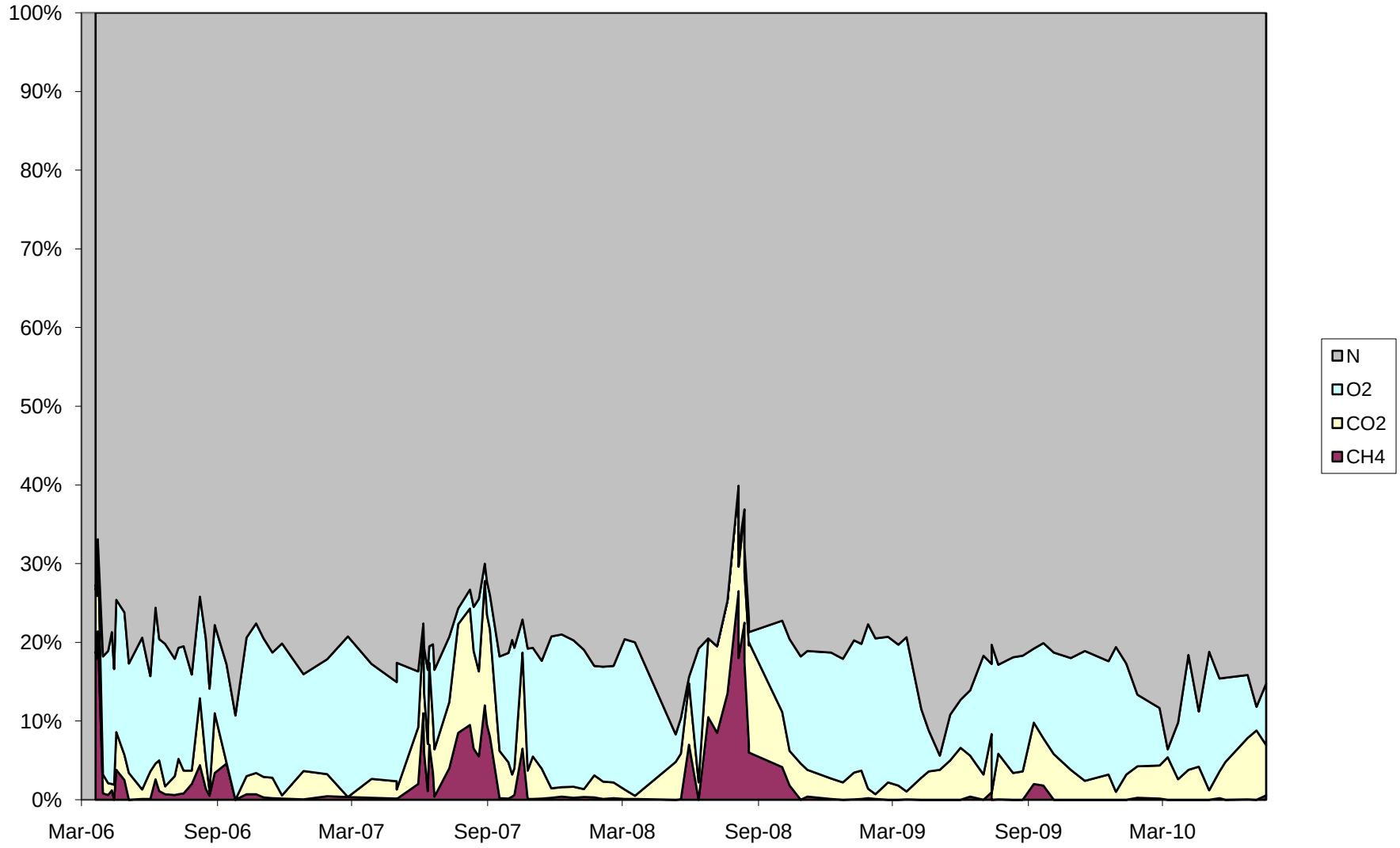

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Chart 4-16: GP-2 Gas Concentrations

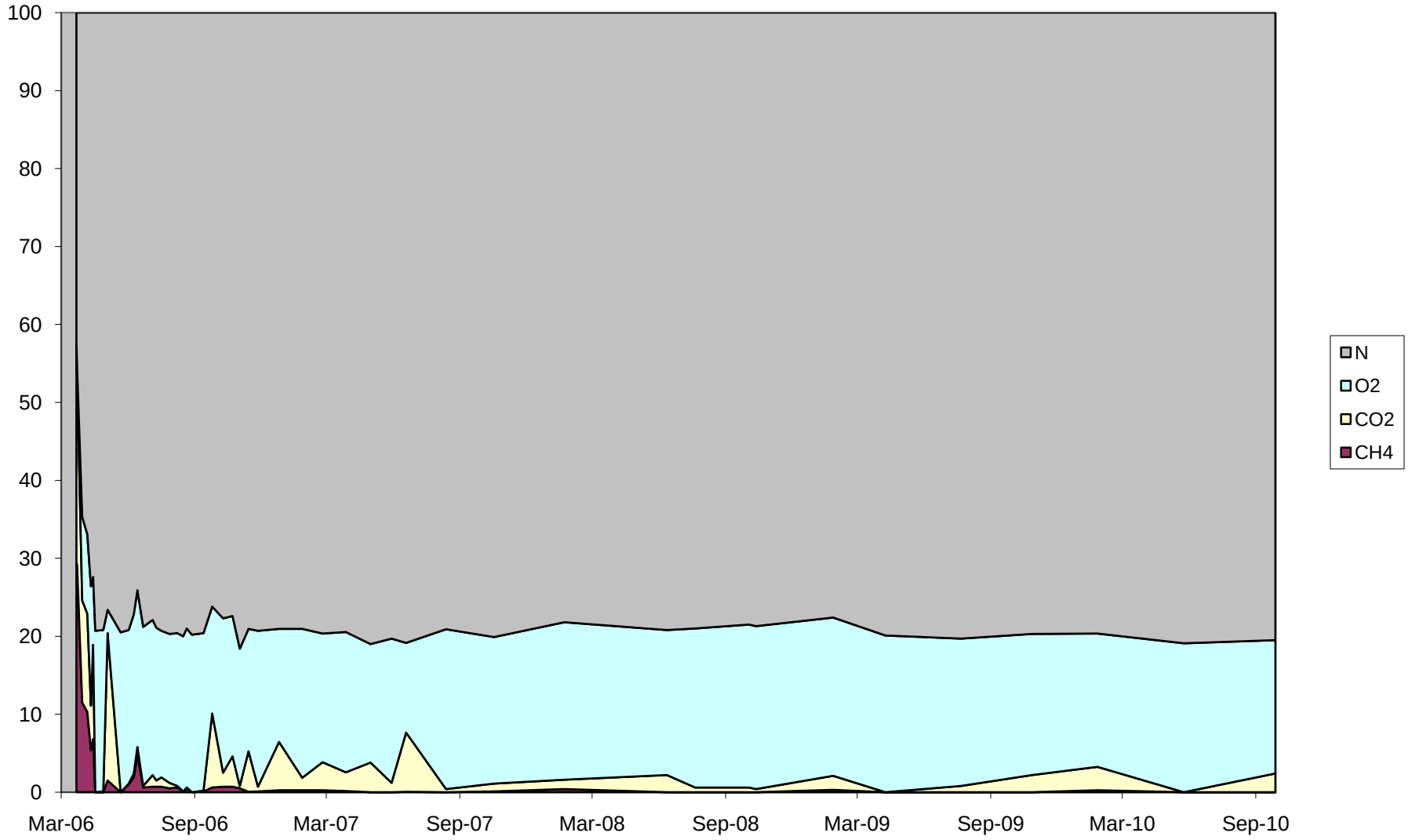

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Chart 4-17: GP-3 Gas Concentrations

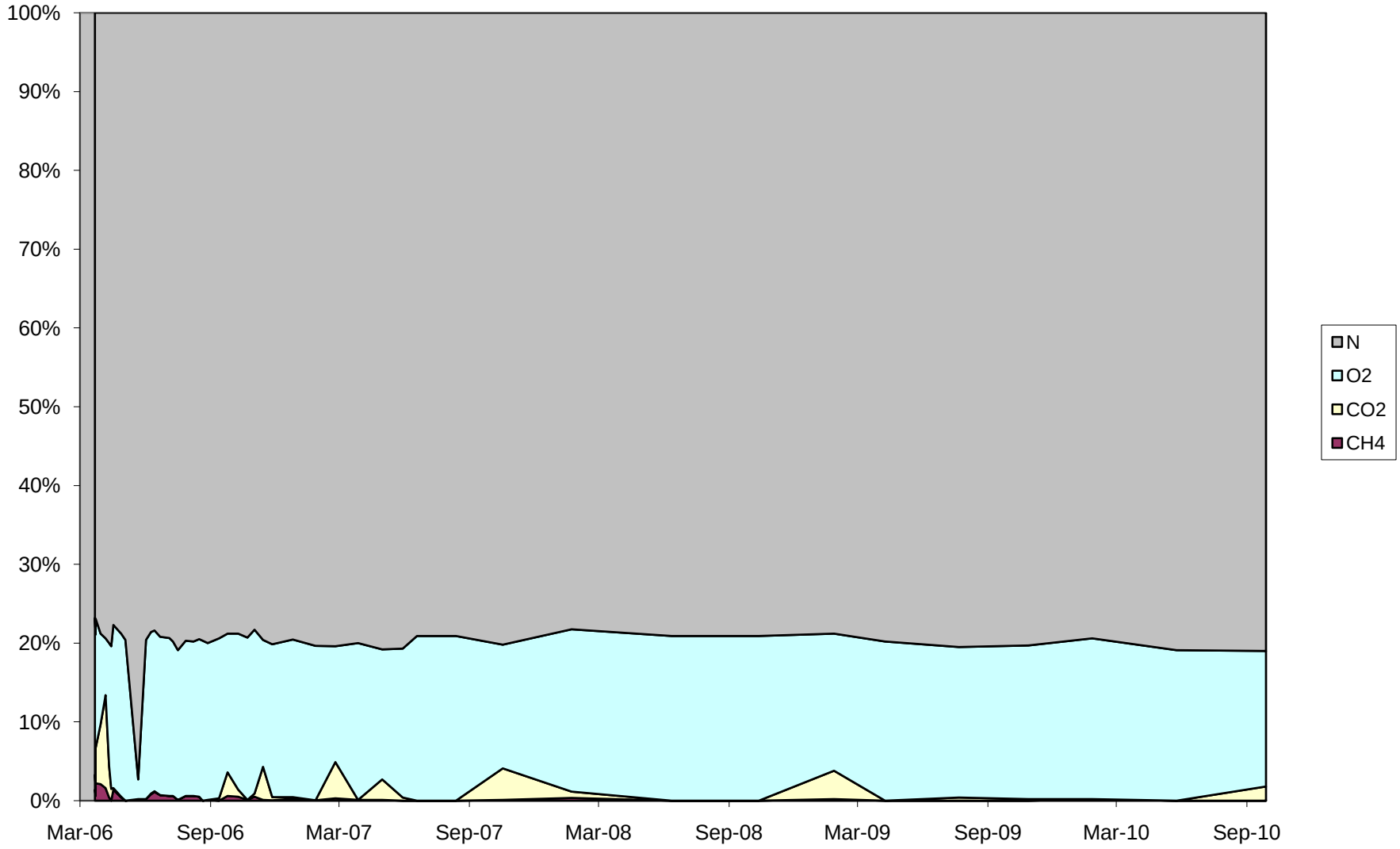

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Chart 4-18: GP-4 Gas Concentrations

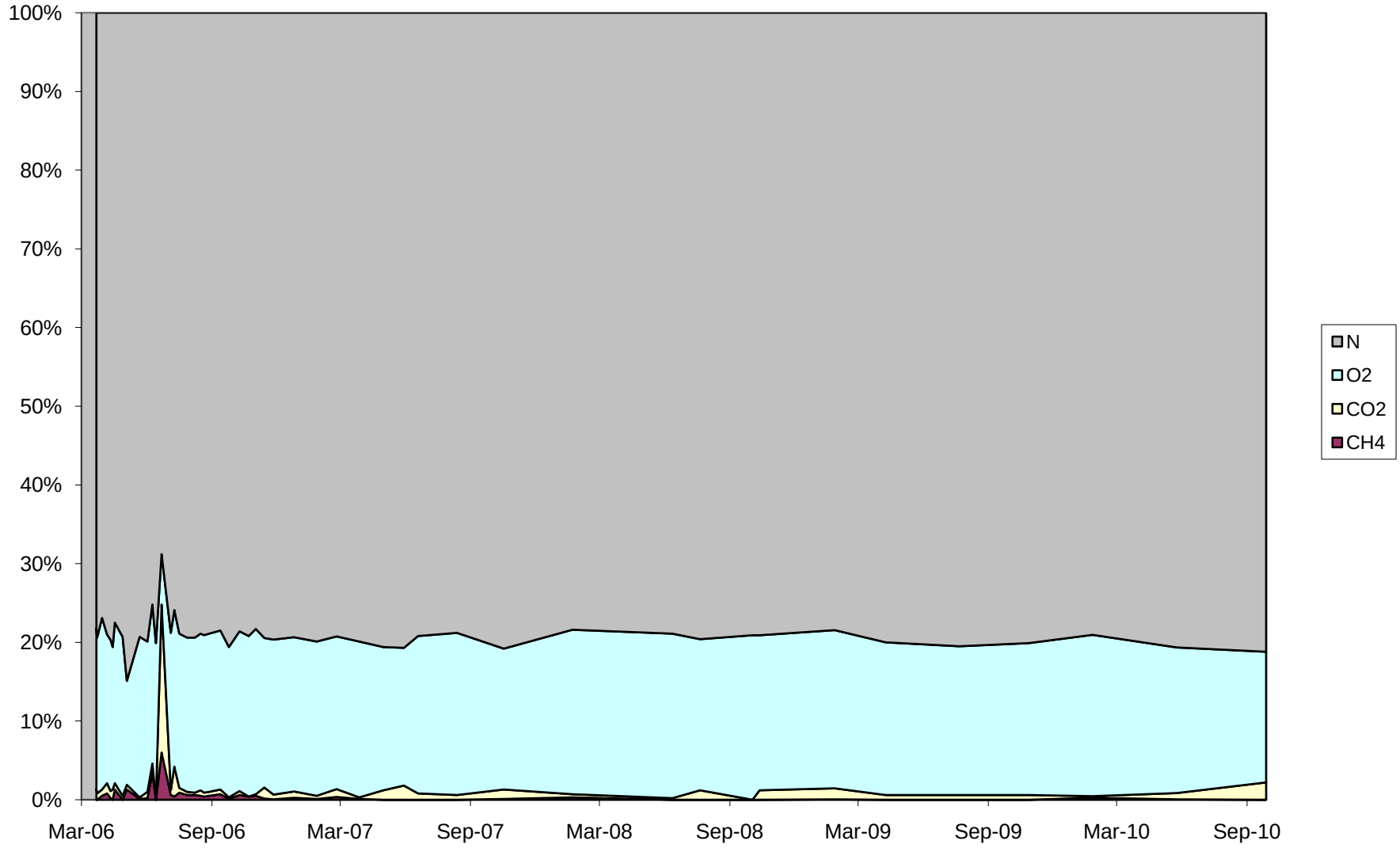

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Chart 4-19: GP-5 Gas Concentrations

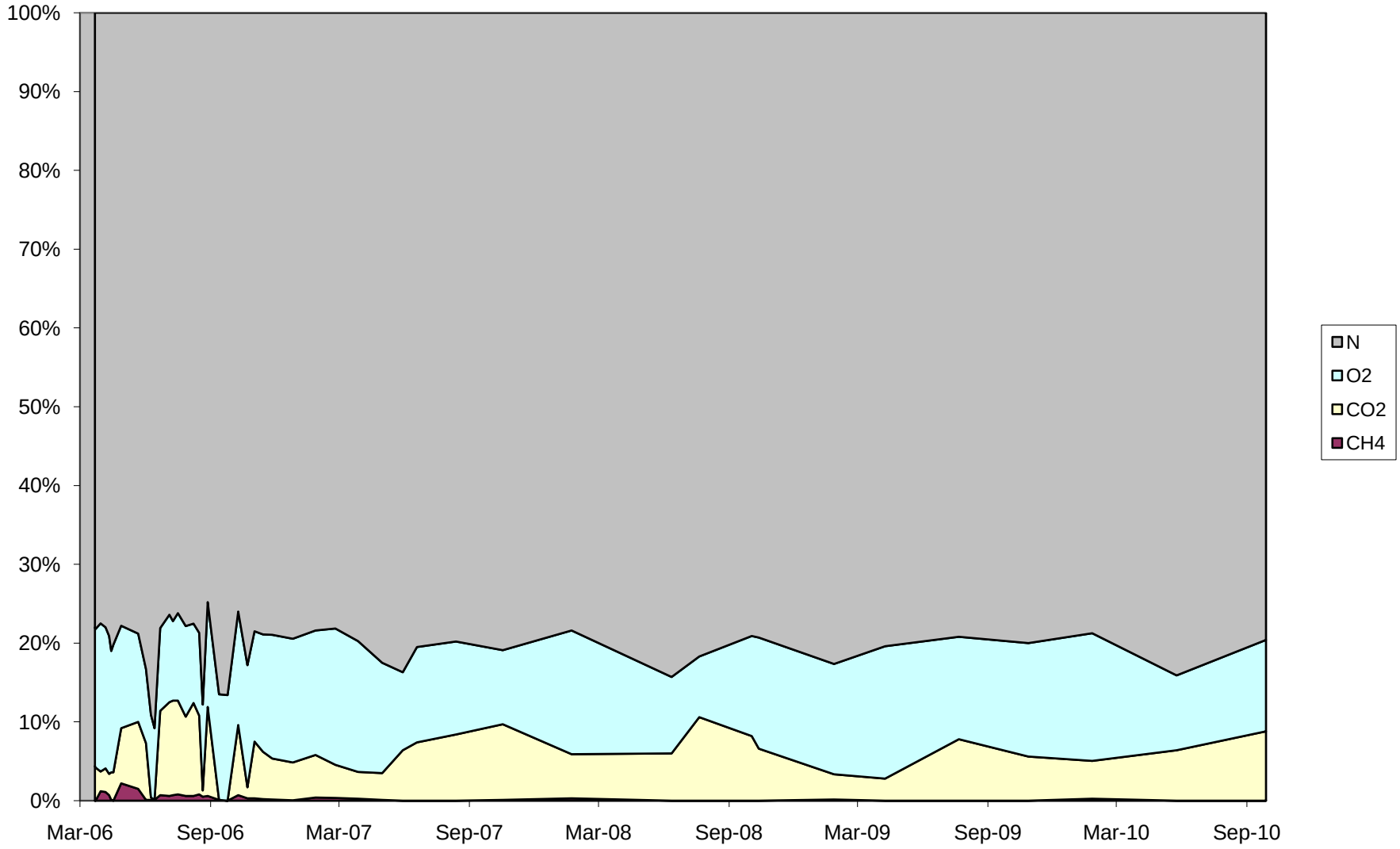

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Chart 4-20: GP-6 Gas Concentrations

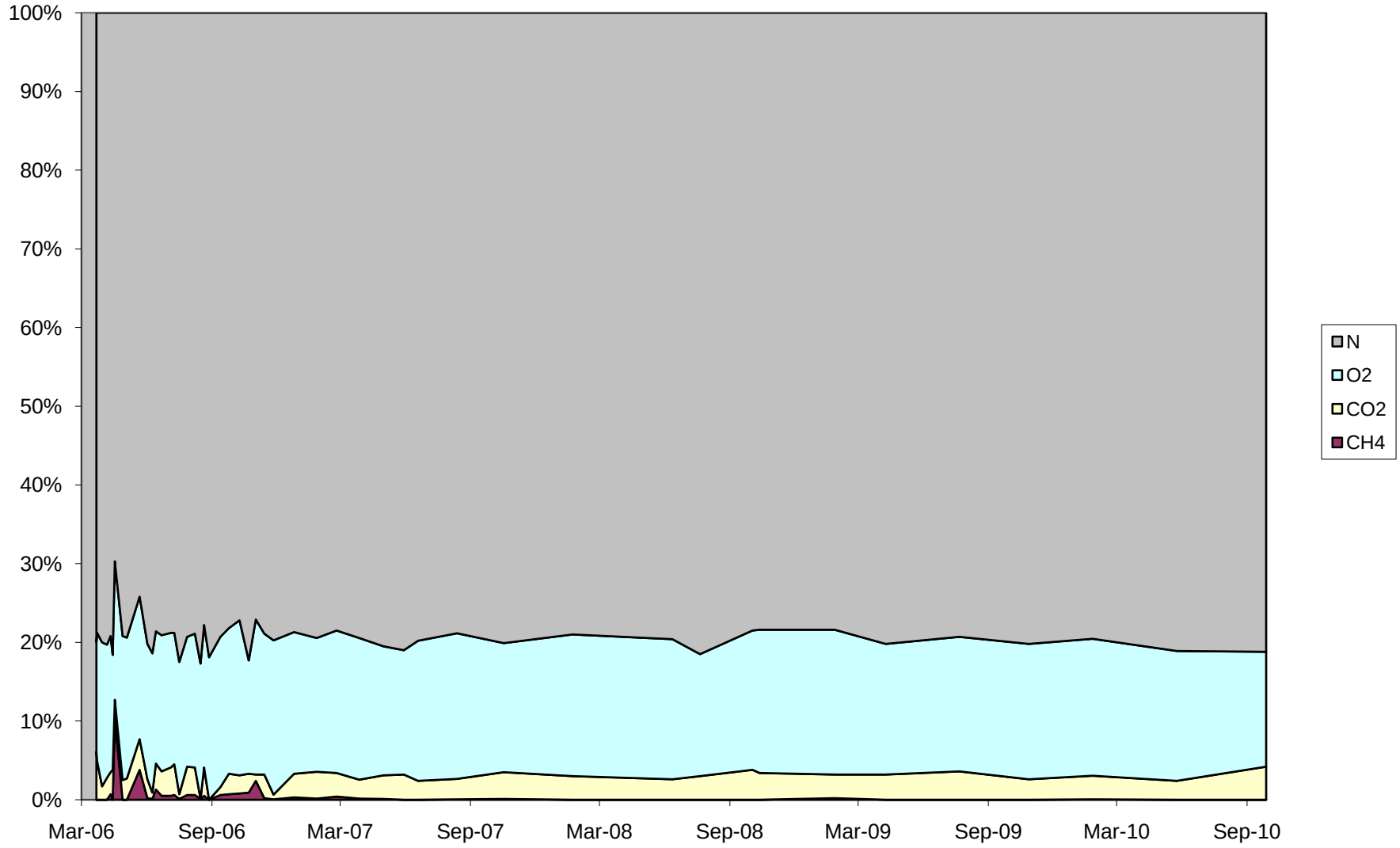

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Chart 4-21: GP-7 Gas Concentrations

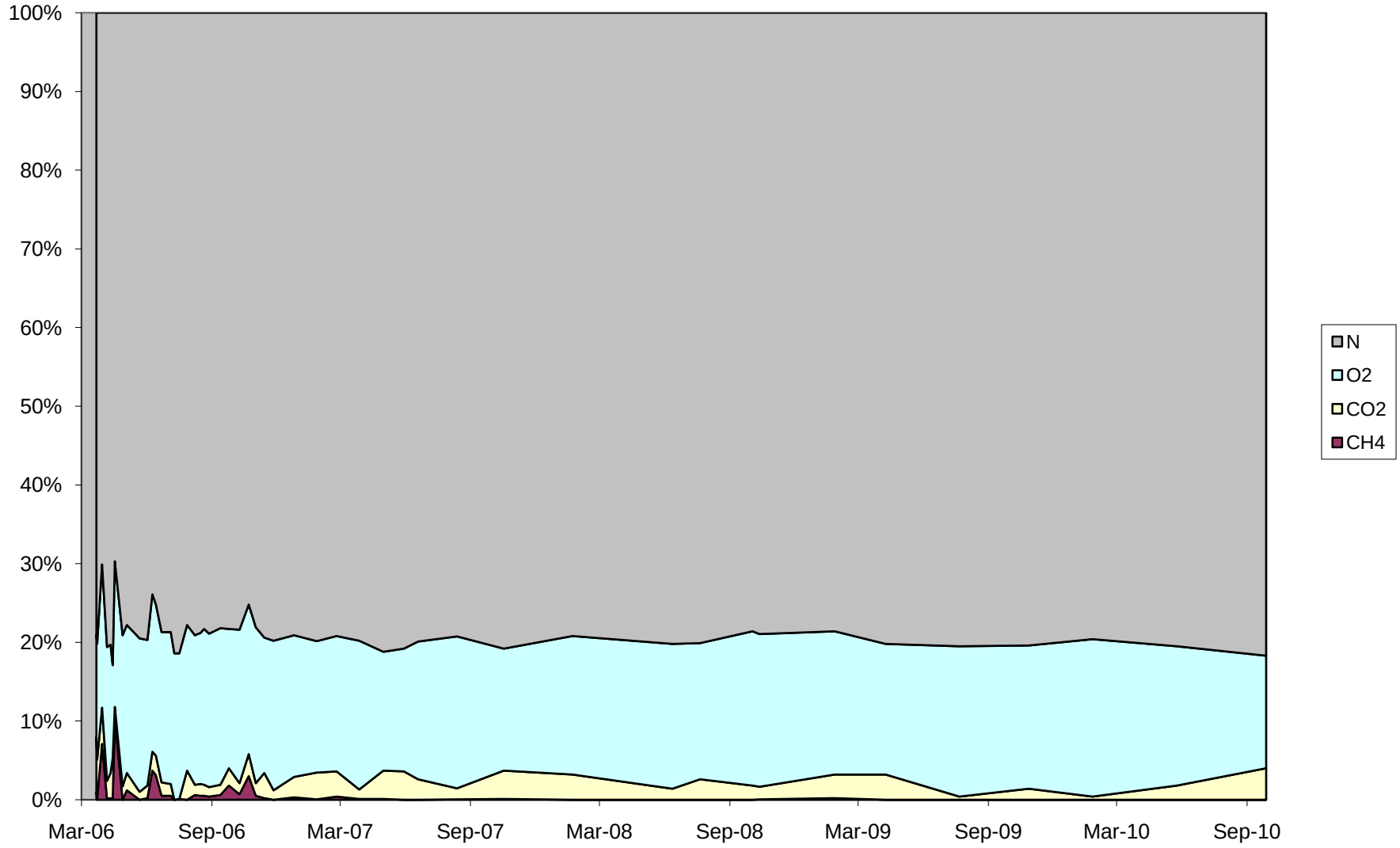

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Chart 4-22: GP-8 Gas Concentrations

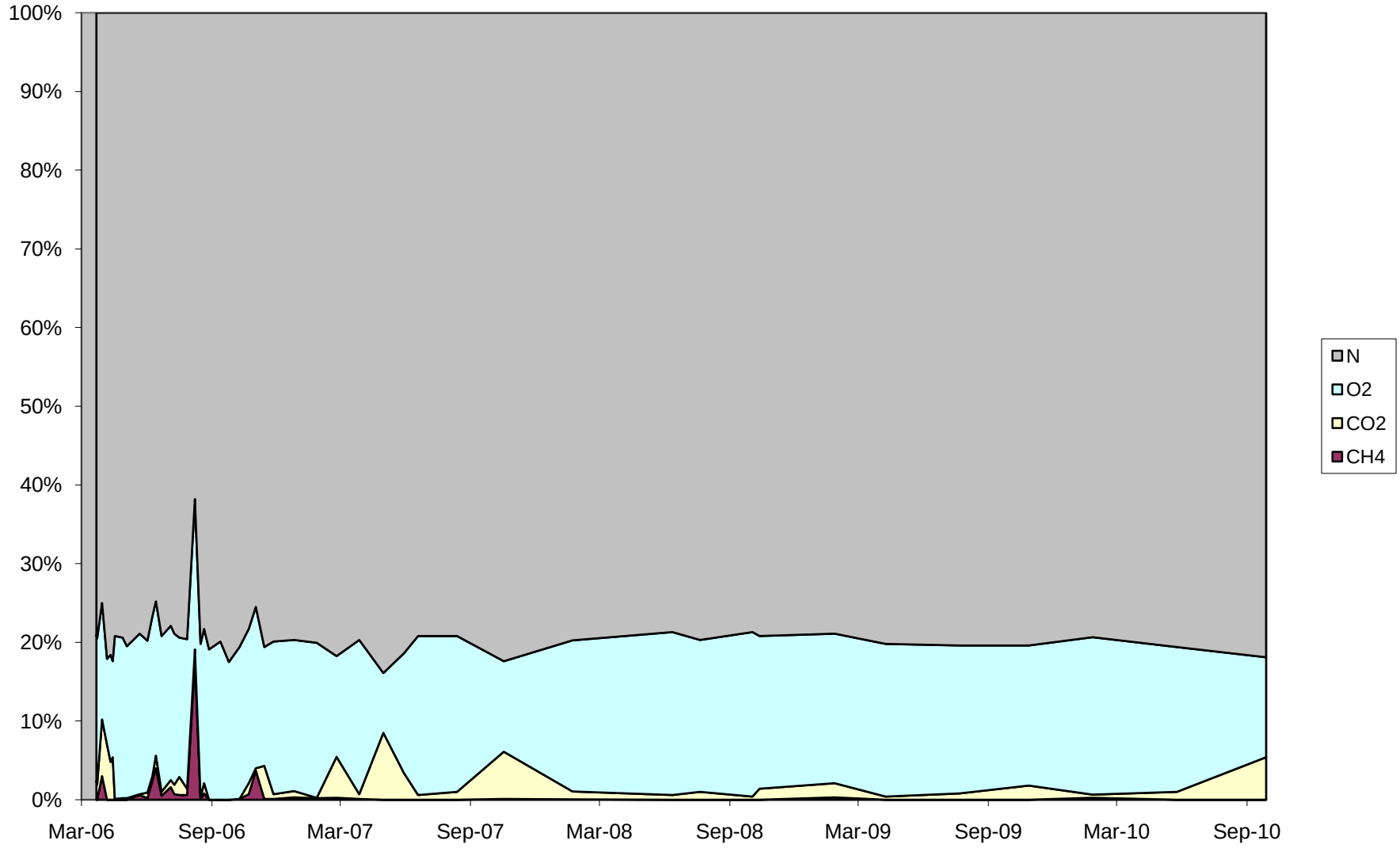

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Chart 4-23: GP-10 Gas Concentrations

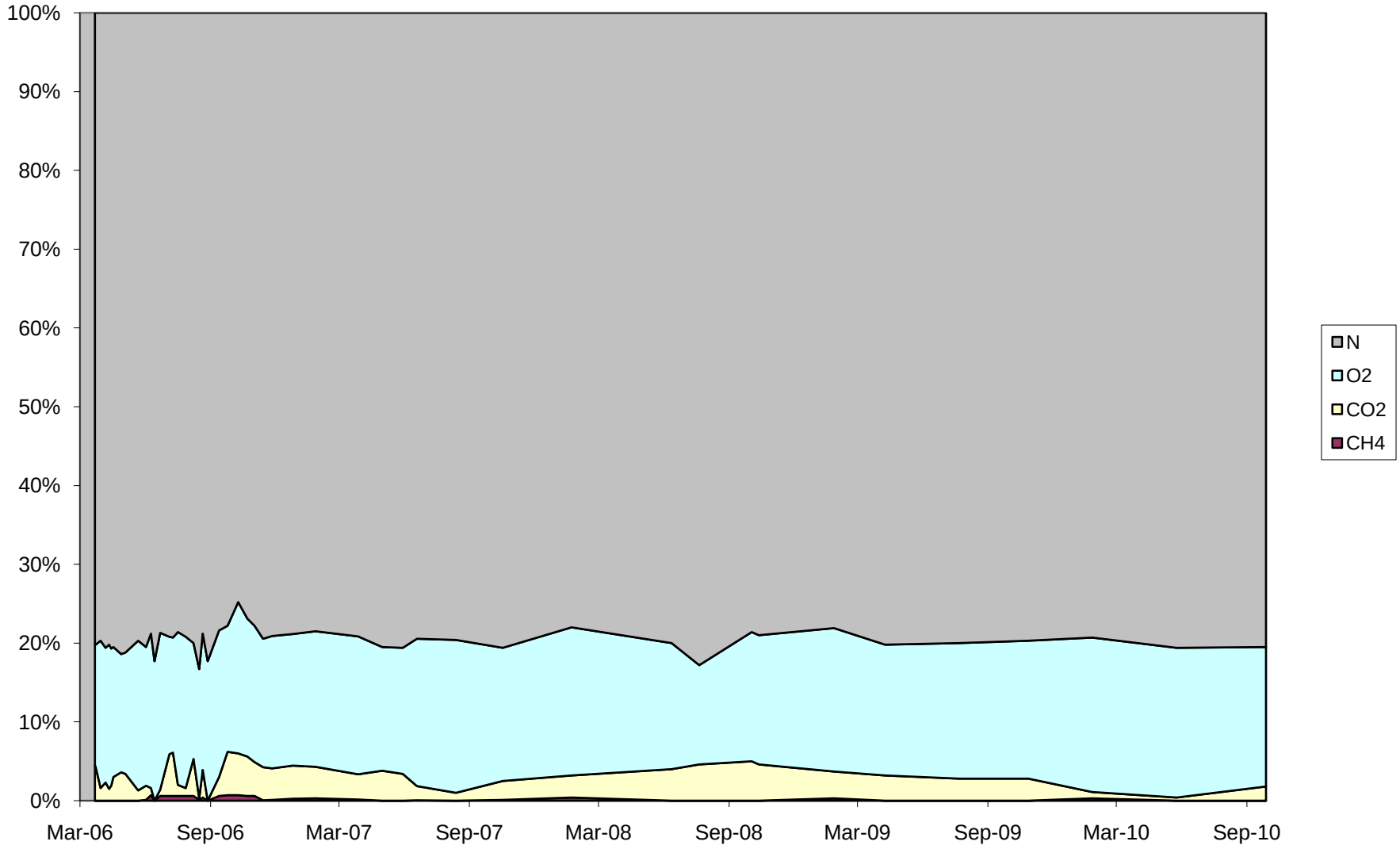

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Chart 4-24: GP-11 Gas Concentrations

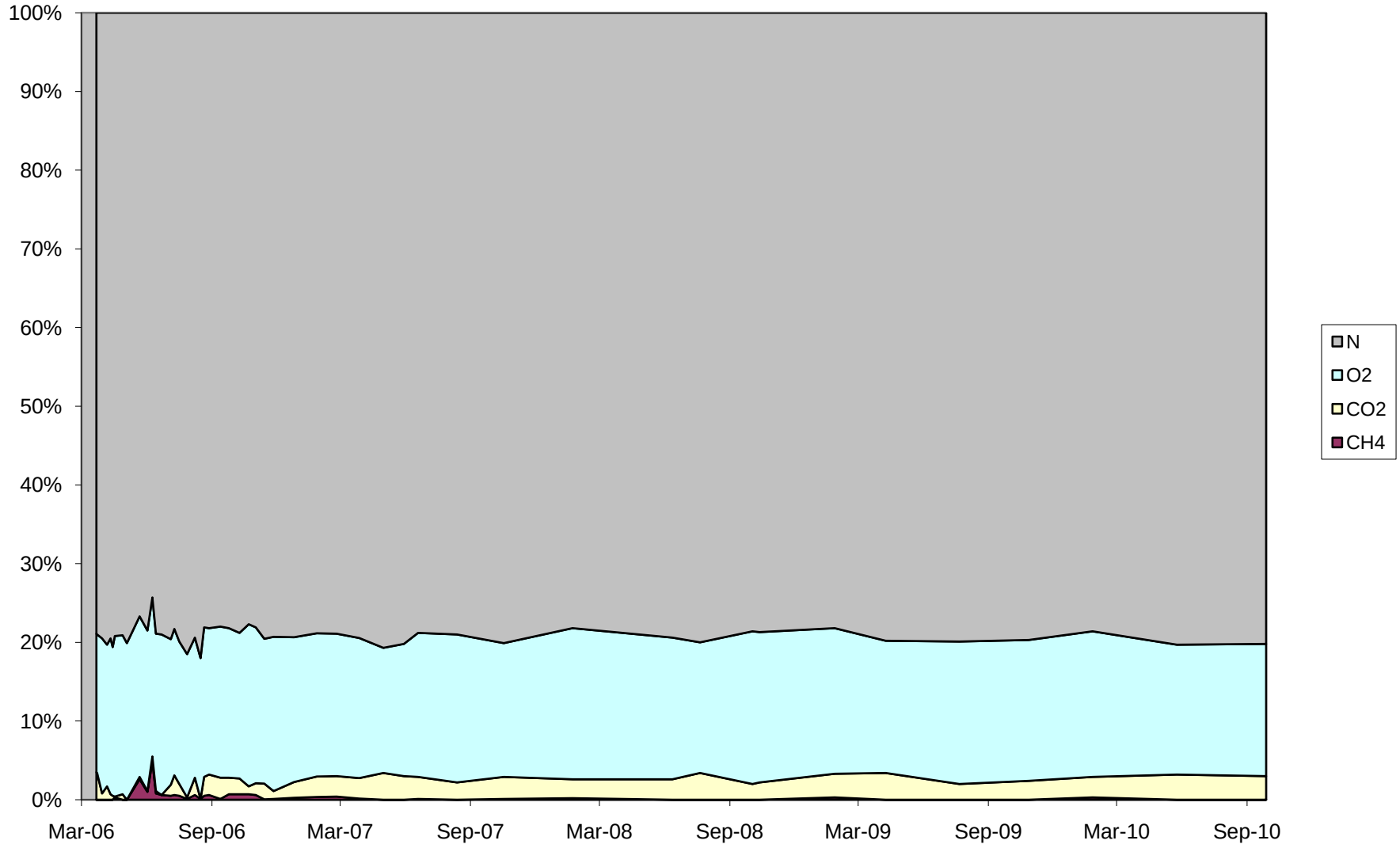

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Chart 4-25: GP-12 Gas Concentrations

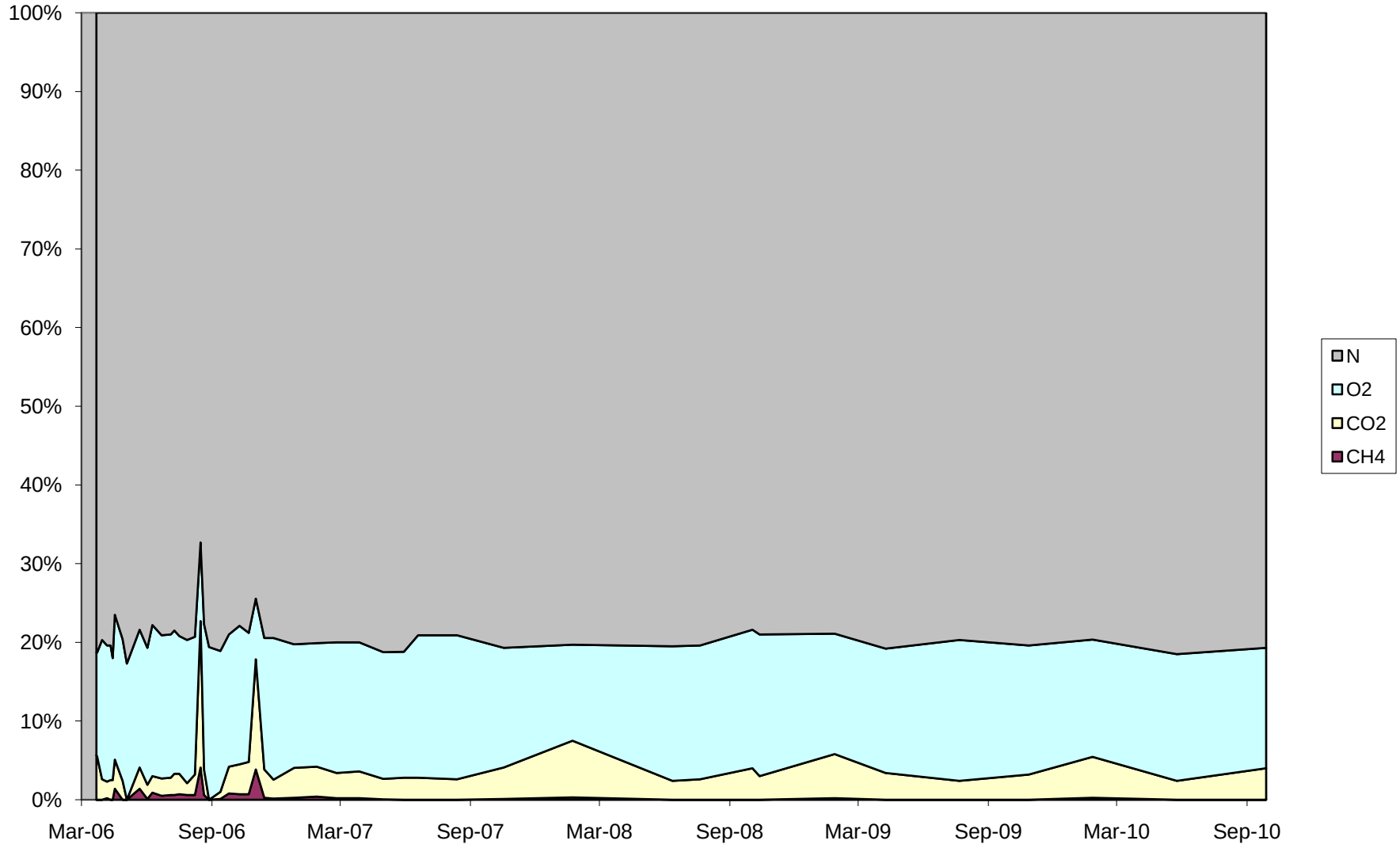

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Chart 4-26: MW-101 Gas Concentrations

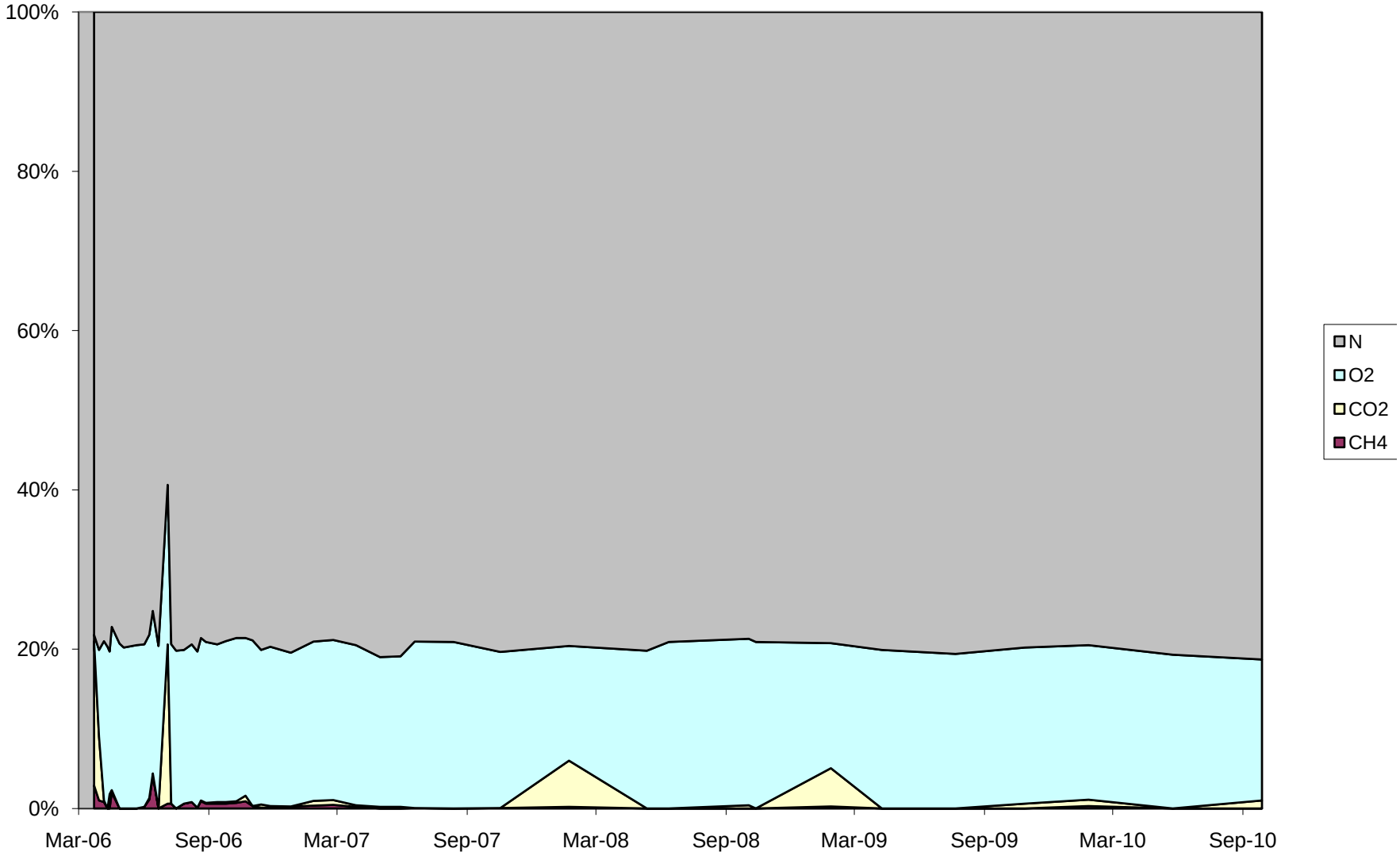

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Chart 4-27: MW-102 Gas Concentrations

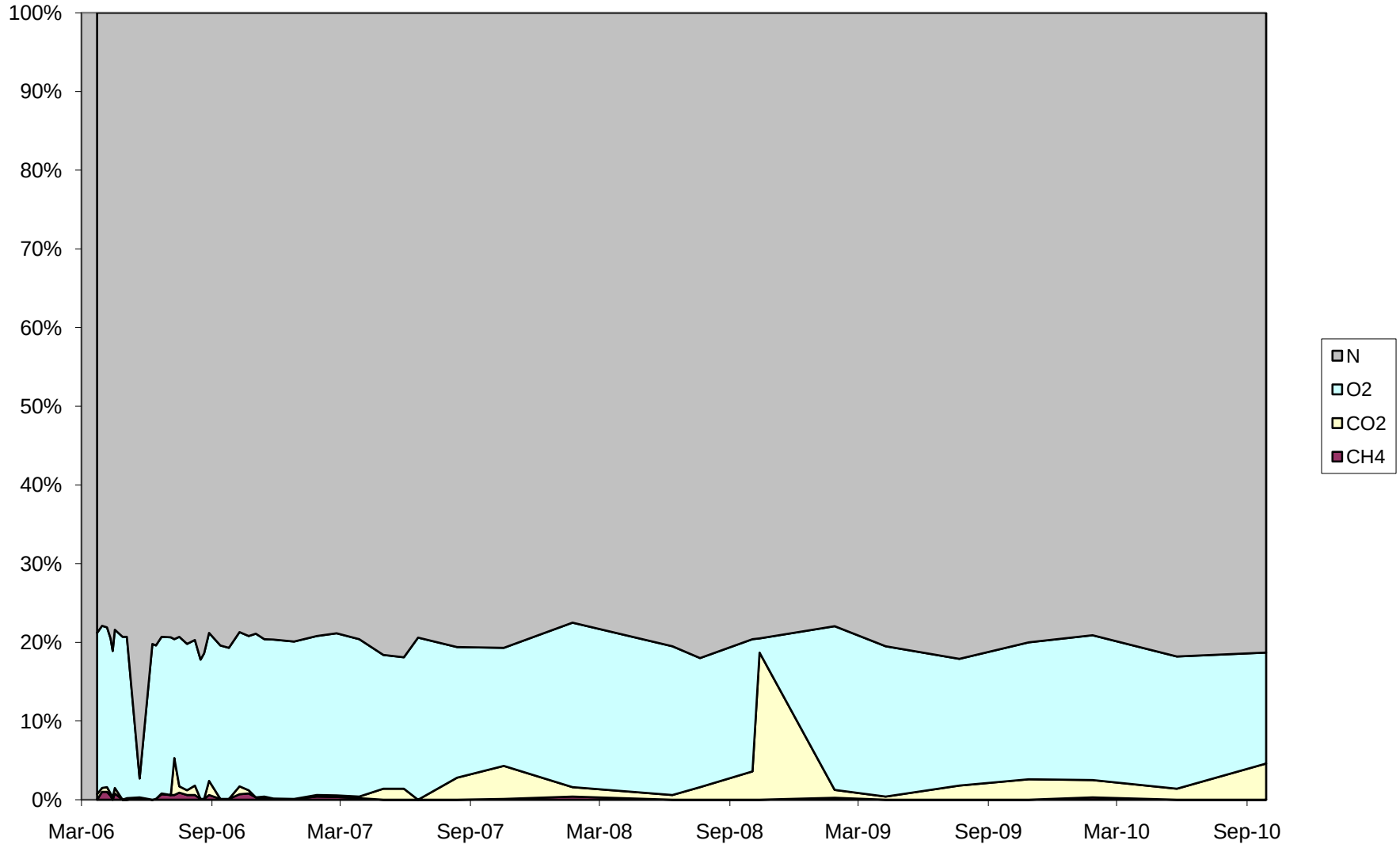

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Chart 4-28: MW-103 Gas Concentrations

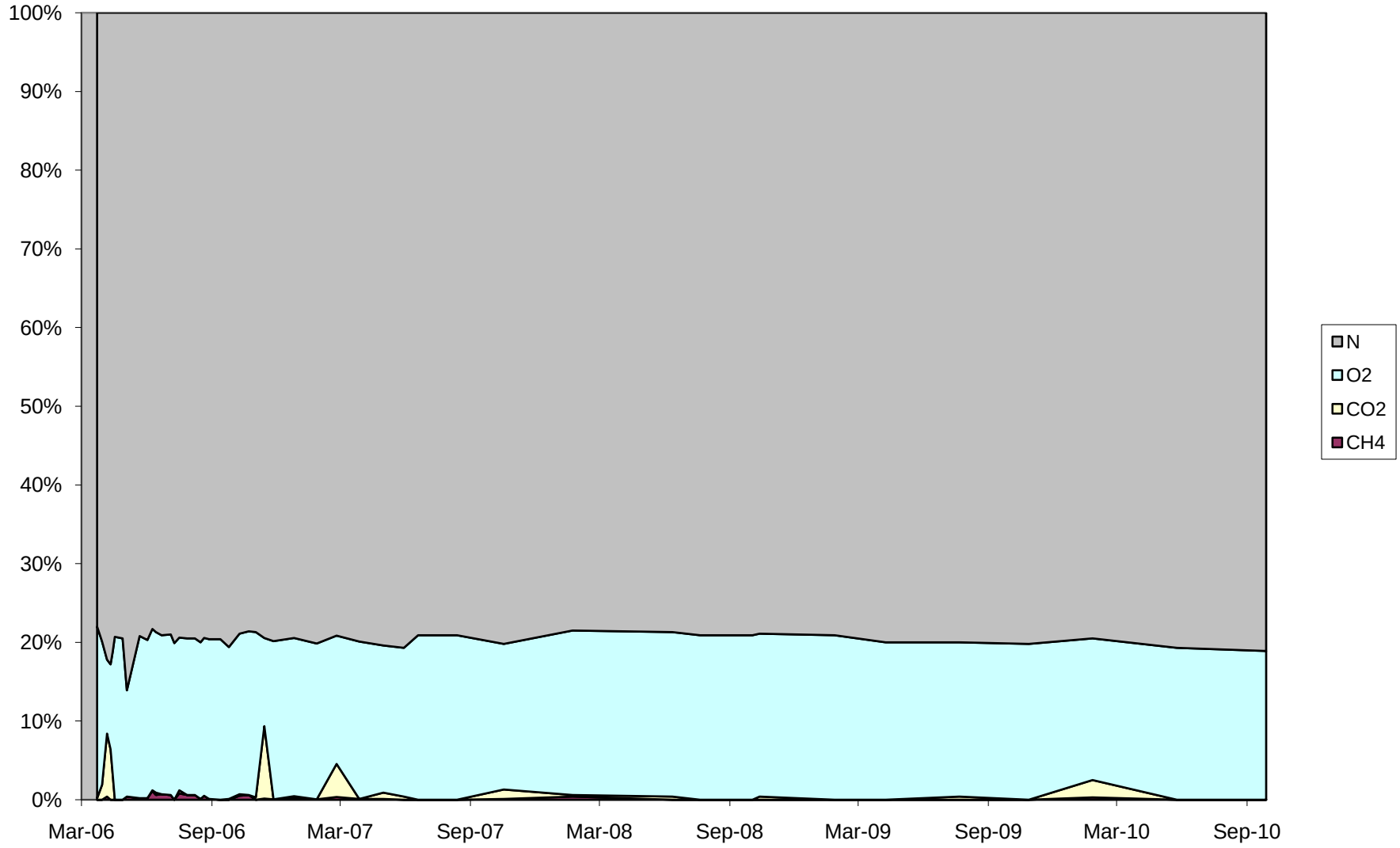

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Chart 4-29: MW-104 Gas Concentrations

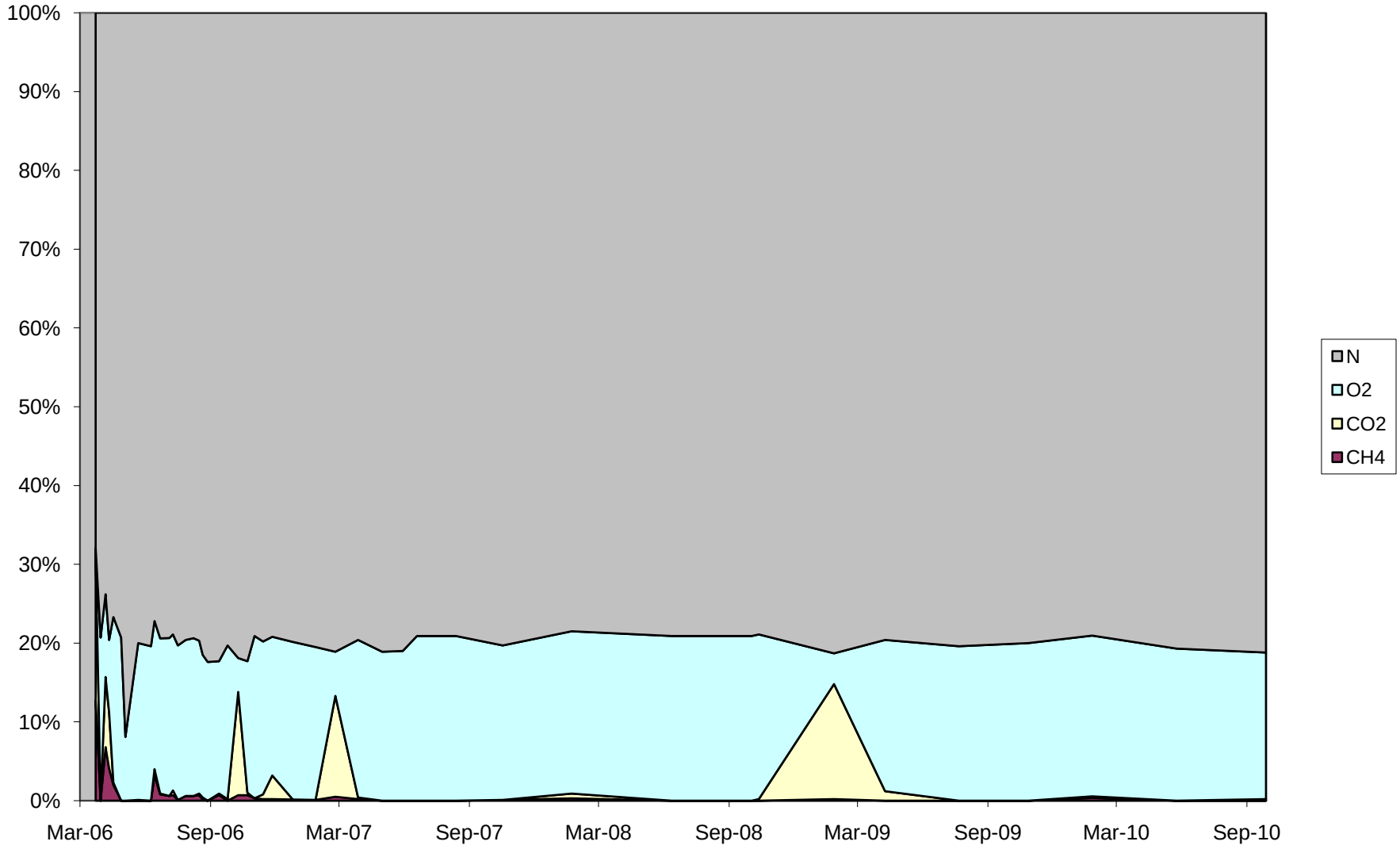

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Chart 4-30: Barometric Pressure
(Weather Station: Ripon, WI)

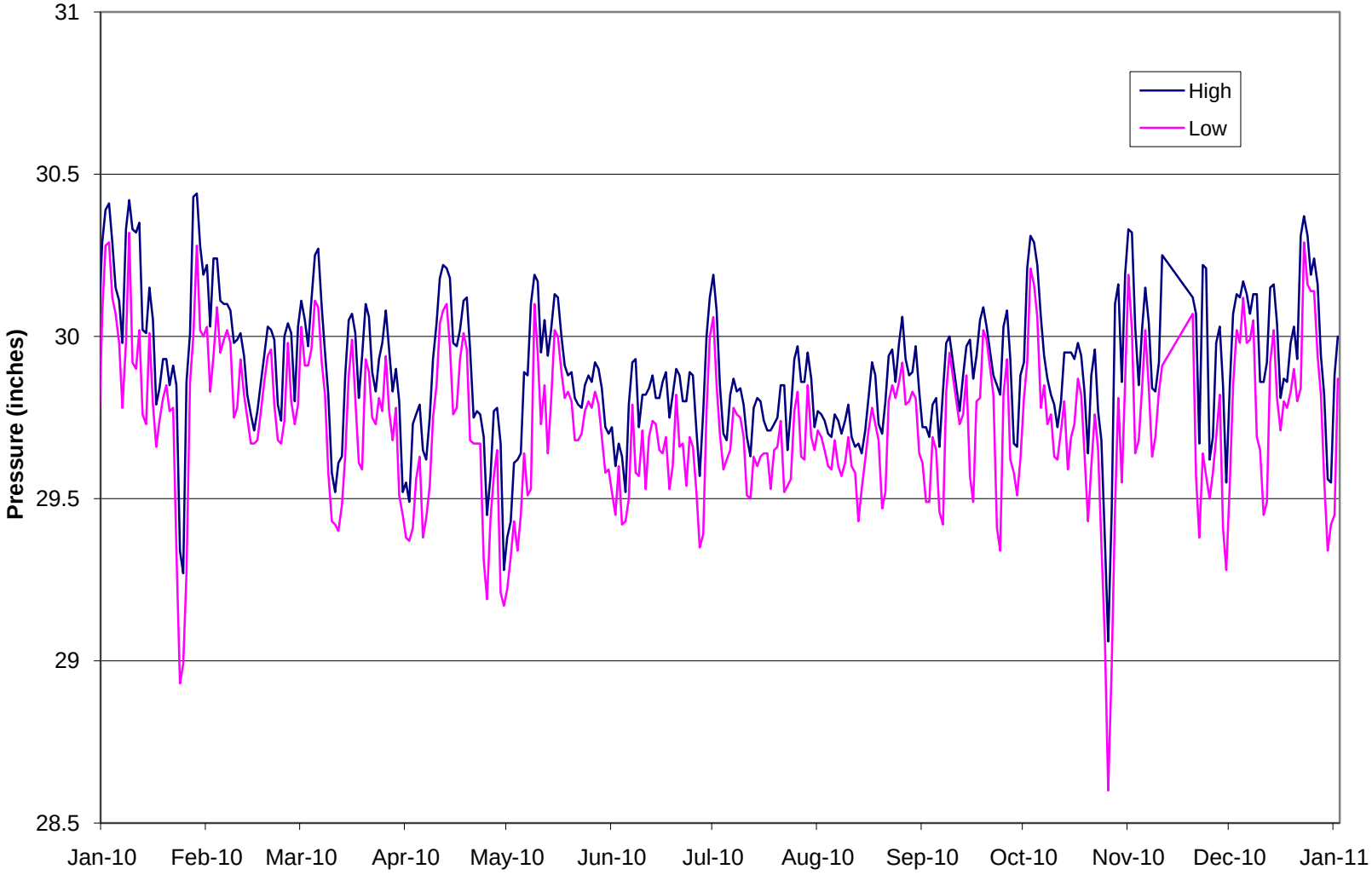

Chart 4-31: LC-1
Total Gas VOCs

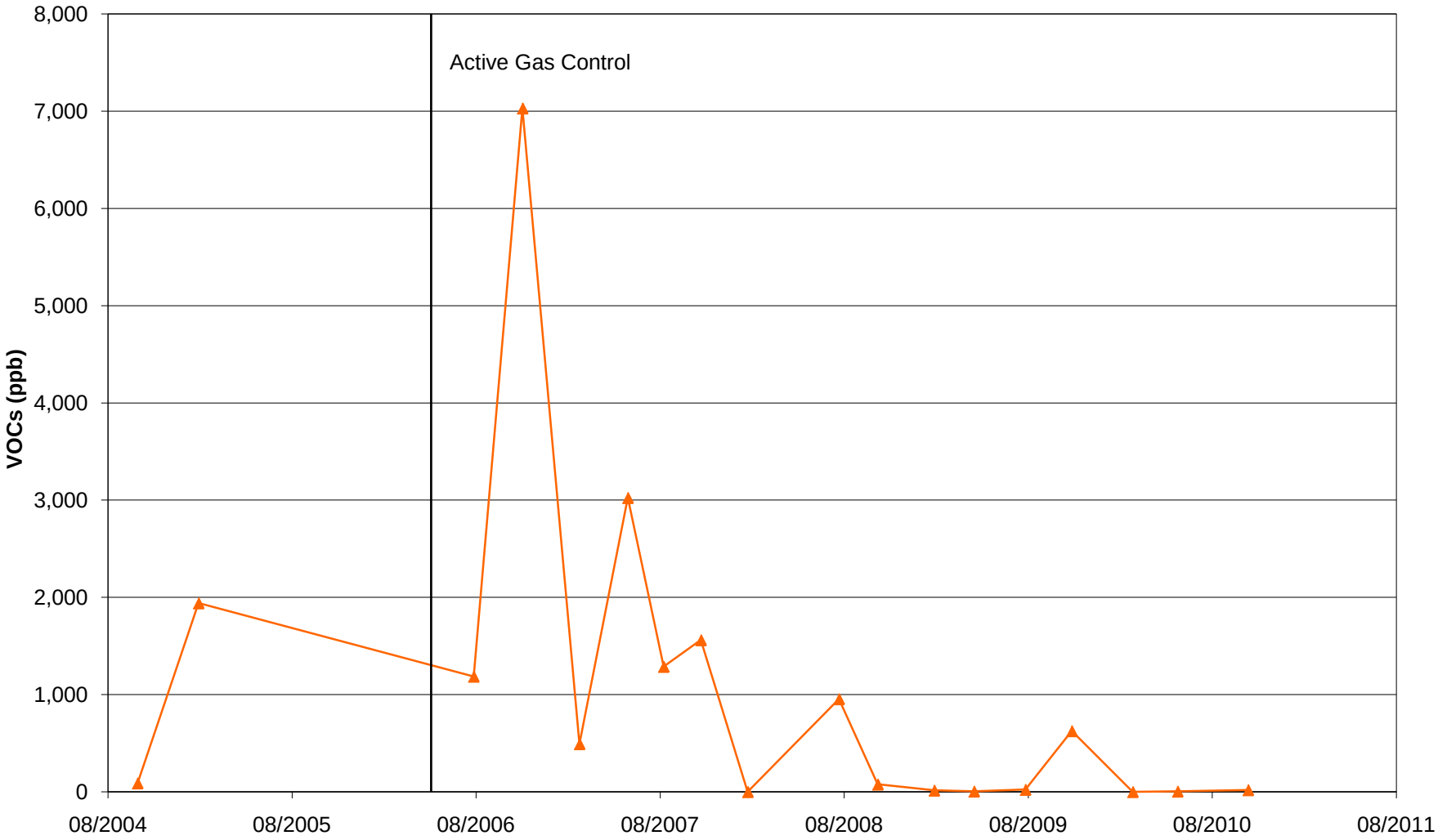

Chart 4-32: LC-2
Total Gas VOCs

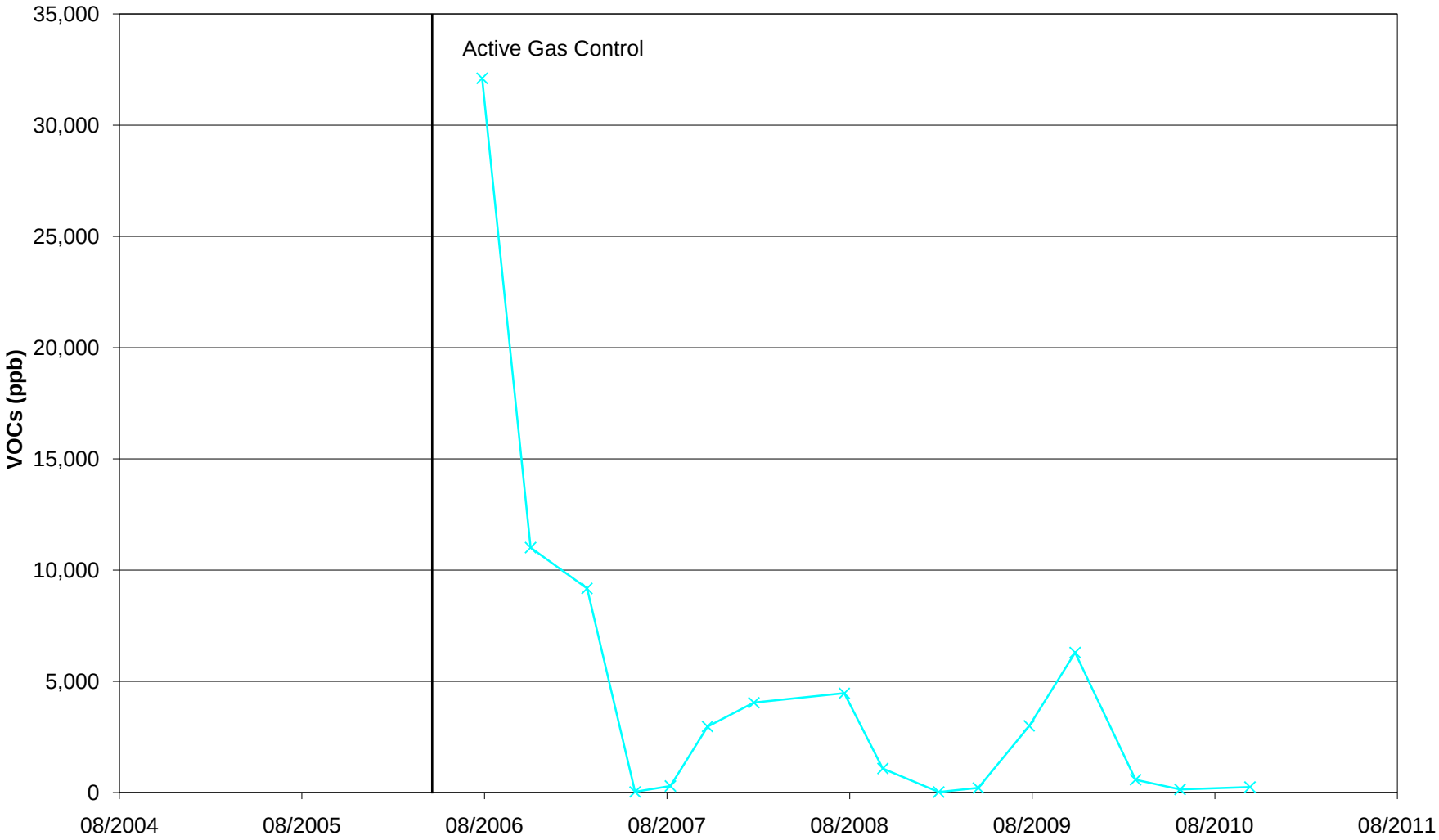

Chart 4-33: LC-3
Total Gas VOCs

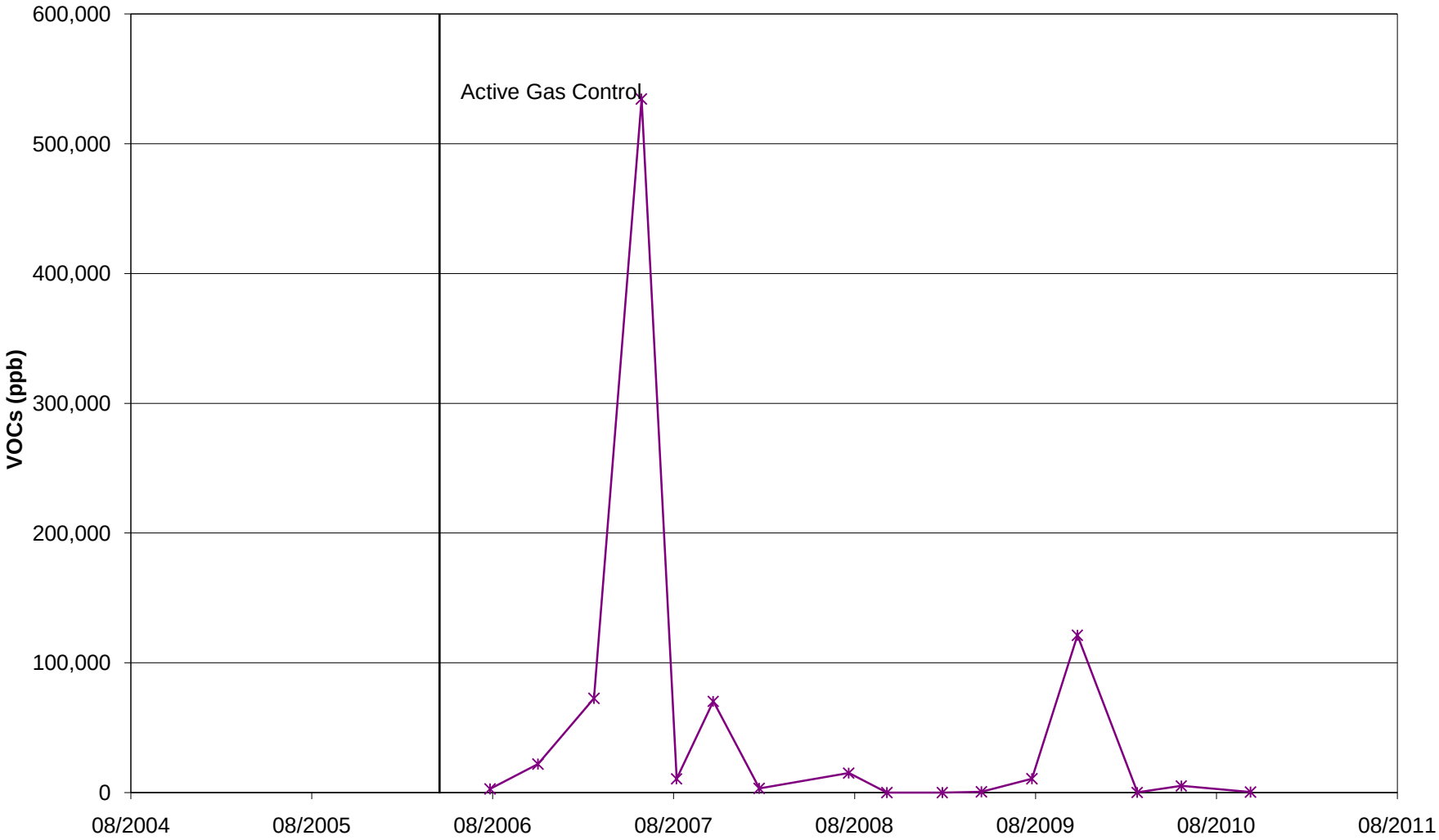

Chart 4-34: GV-6
Total Gas VOCs

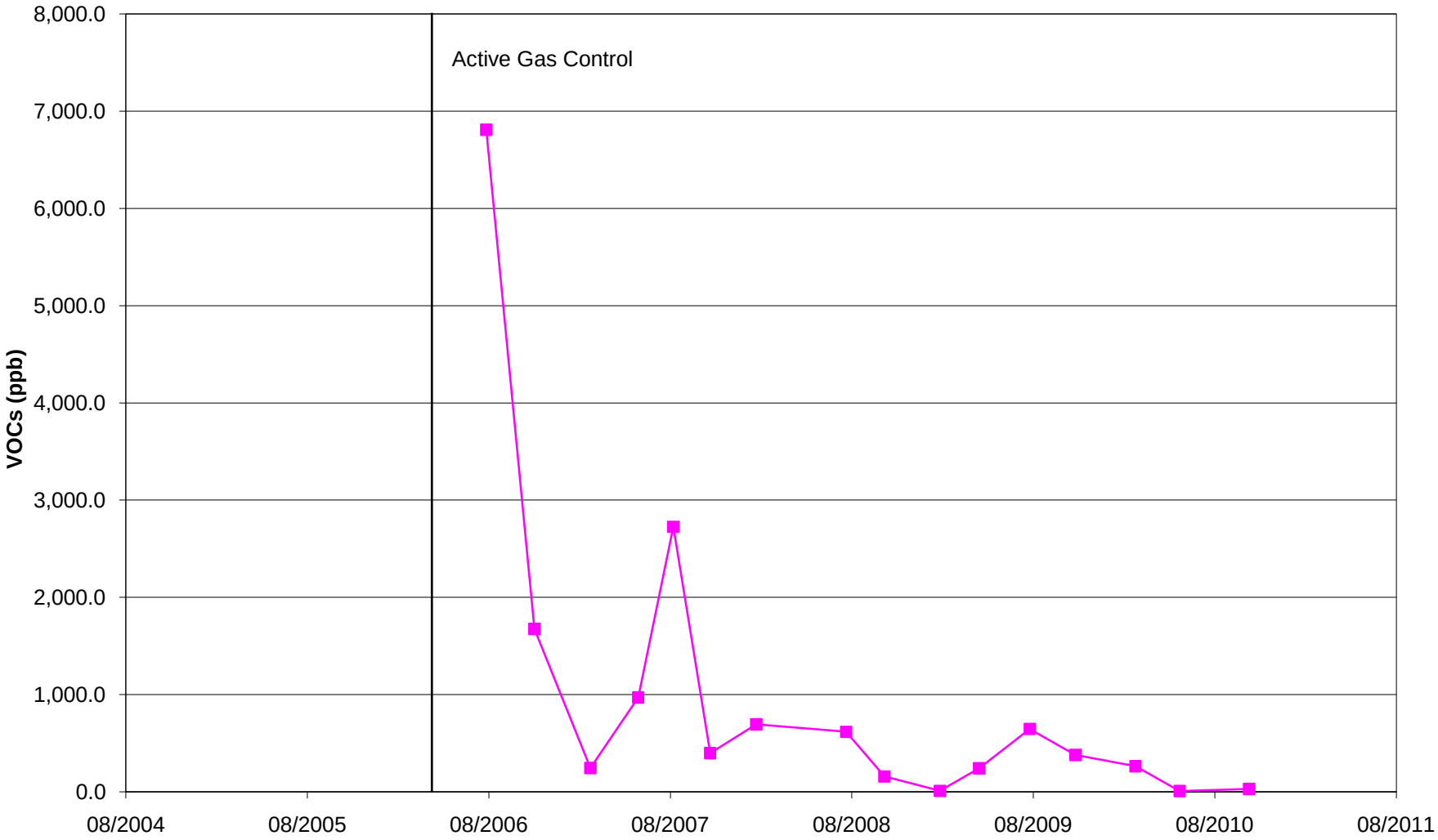

Chart 4-35: GP-3
Total Gas VOCs

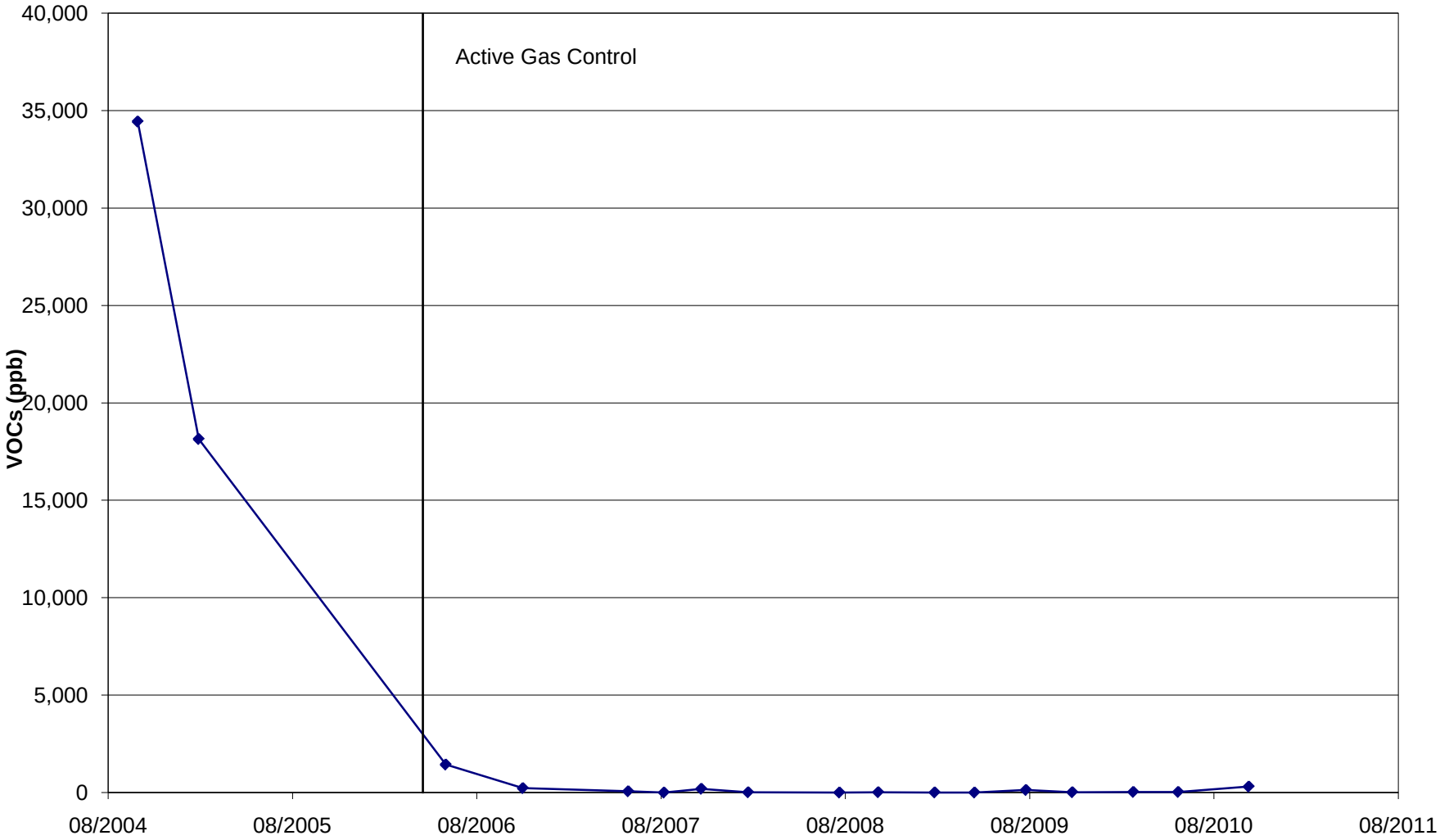

Chart 4-36: MW-101
Layer 1 Well

Upgradient

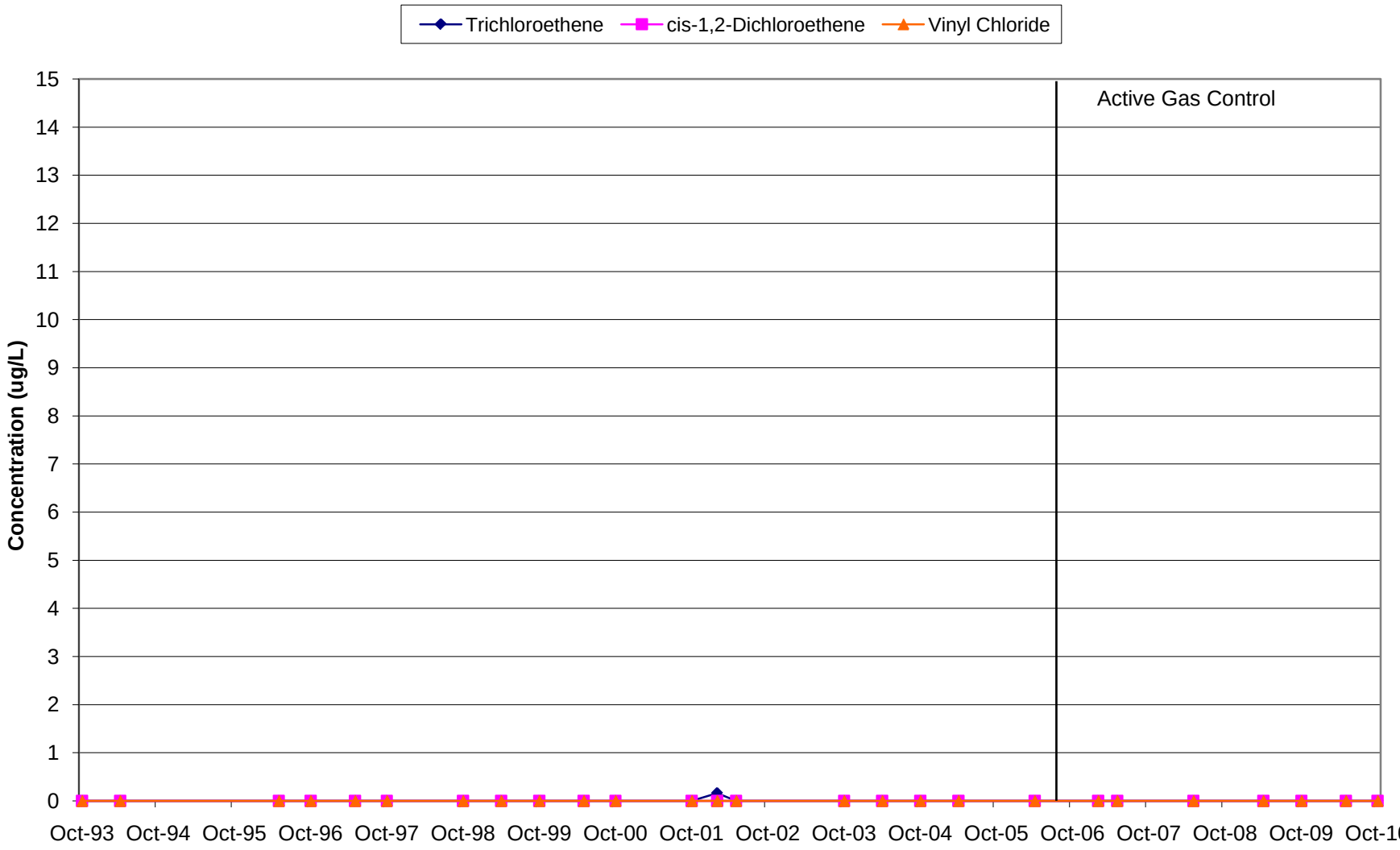

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Chart 4-37: MW-102
Layer 1 Well

Side gradient

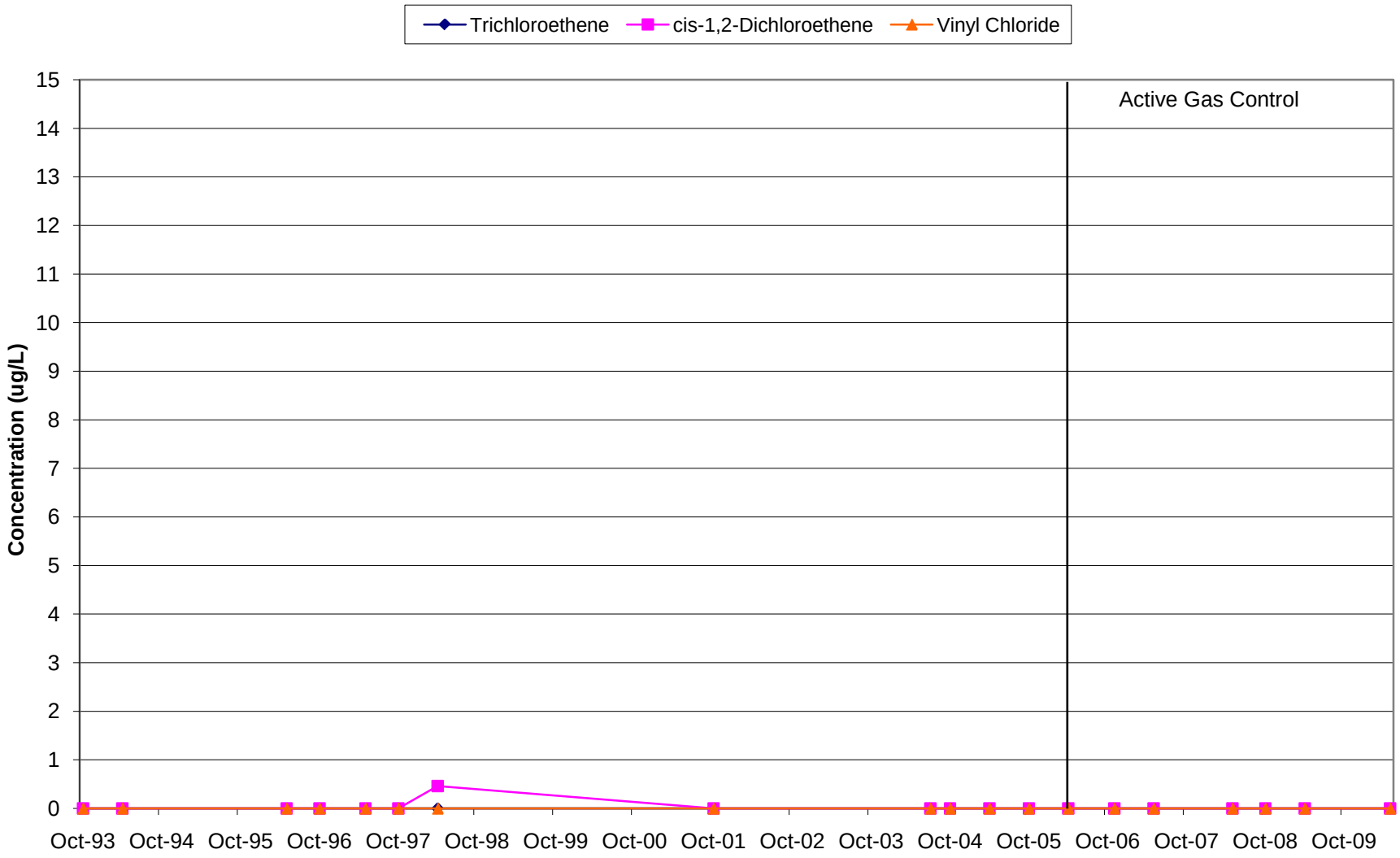

Chart 4-38: MW-103
Layer 1 Well

10' Down gradient

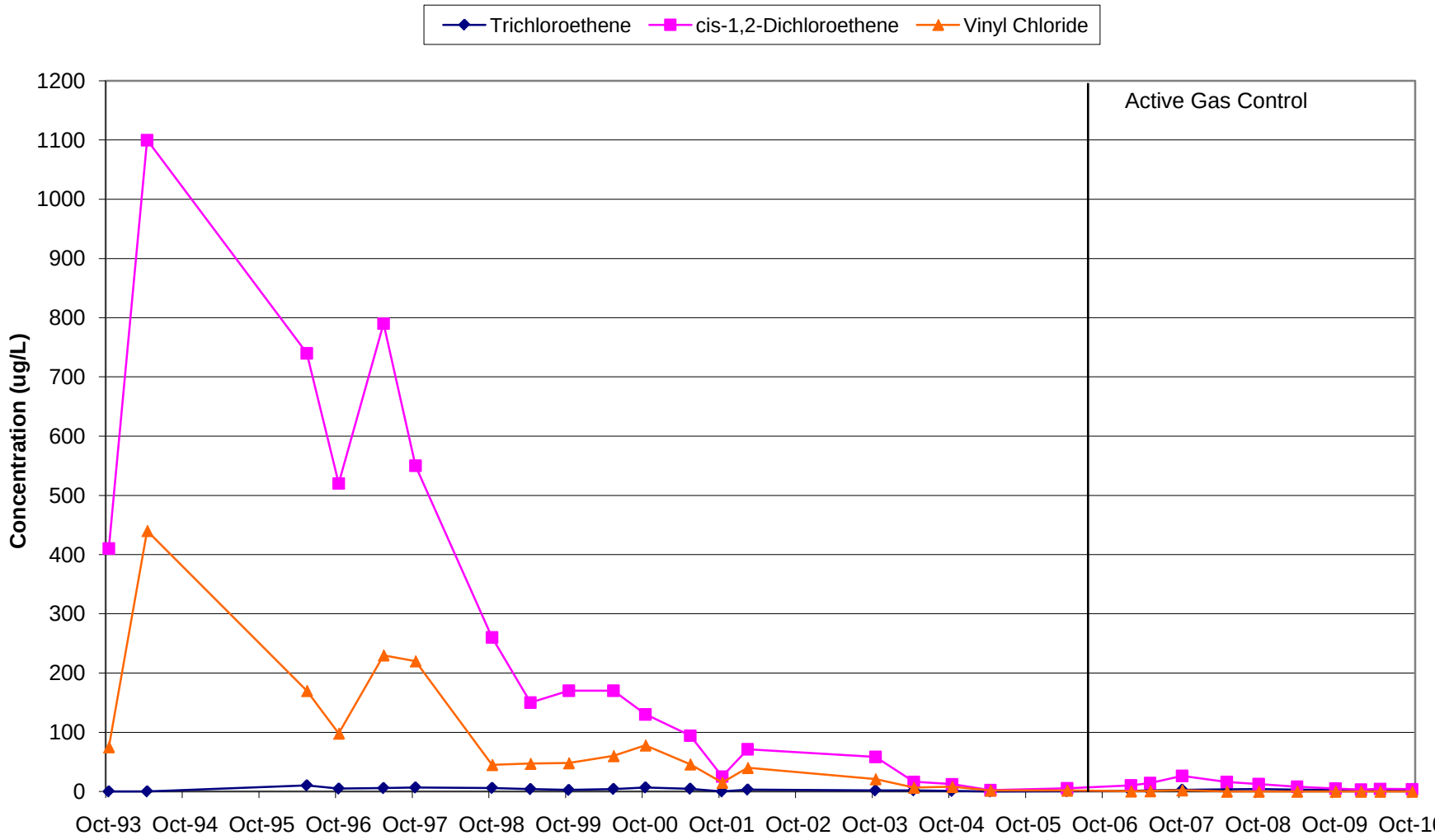

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Chart 4-39: MW-104
Layer 1 Well

Side gradient

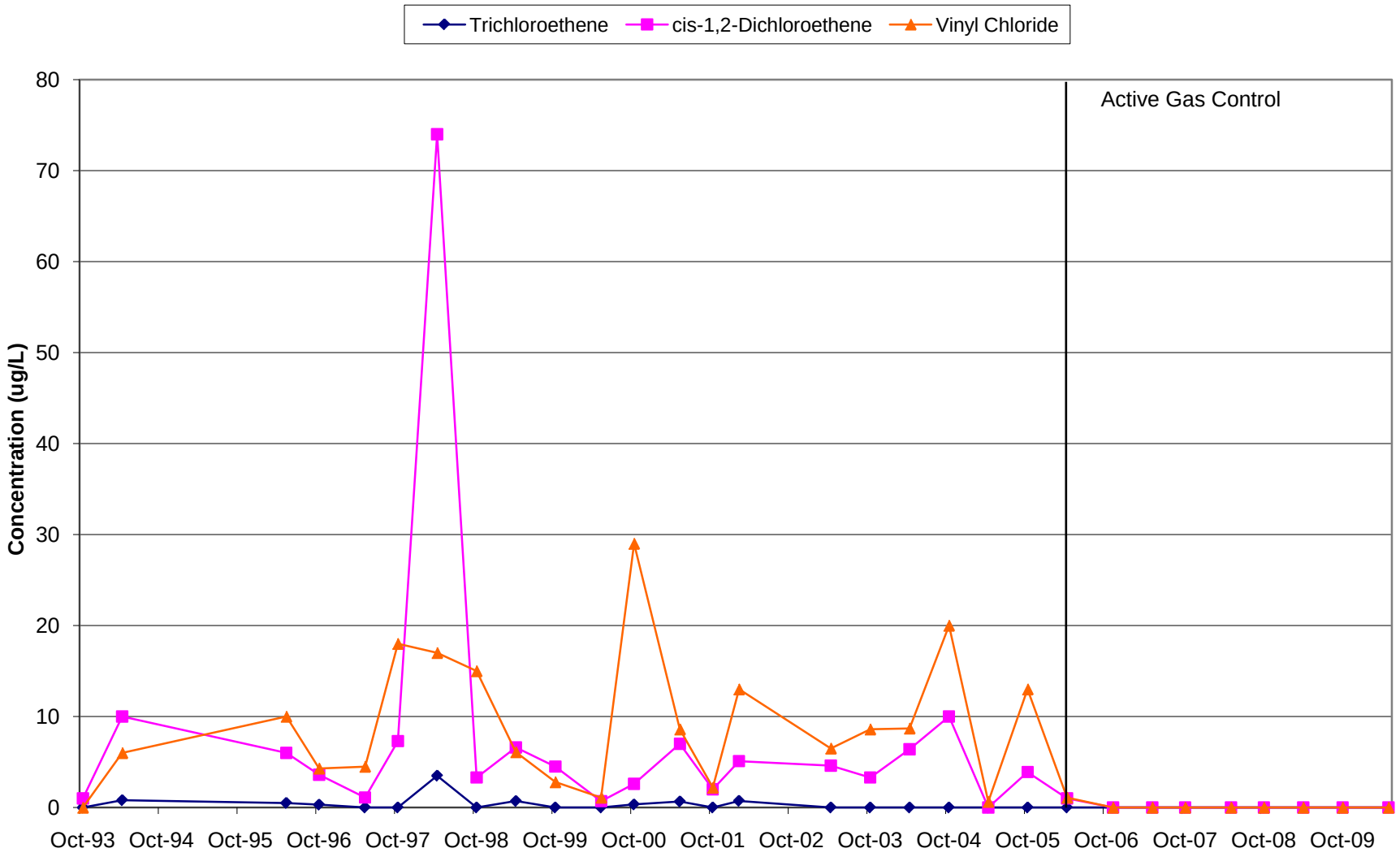

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Chart 4-40: MW-106
Layer 1 Well

Side gradient

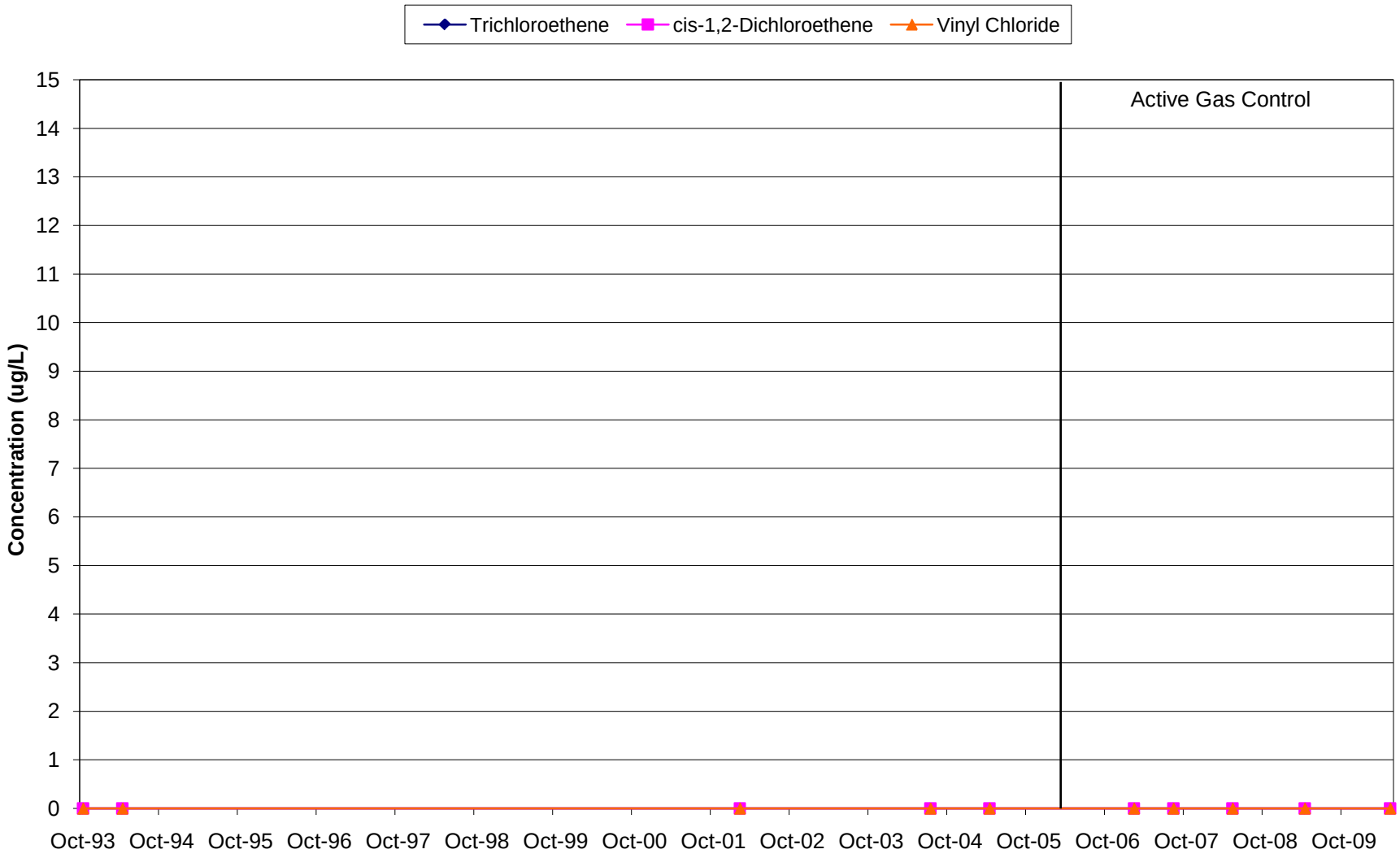

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Chart 4-41: MW-107
Layer 1 Well

370' Down gradient

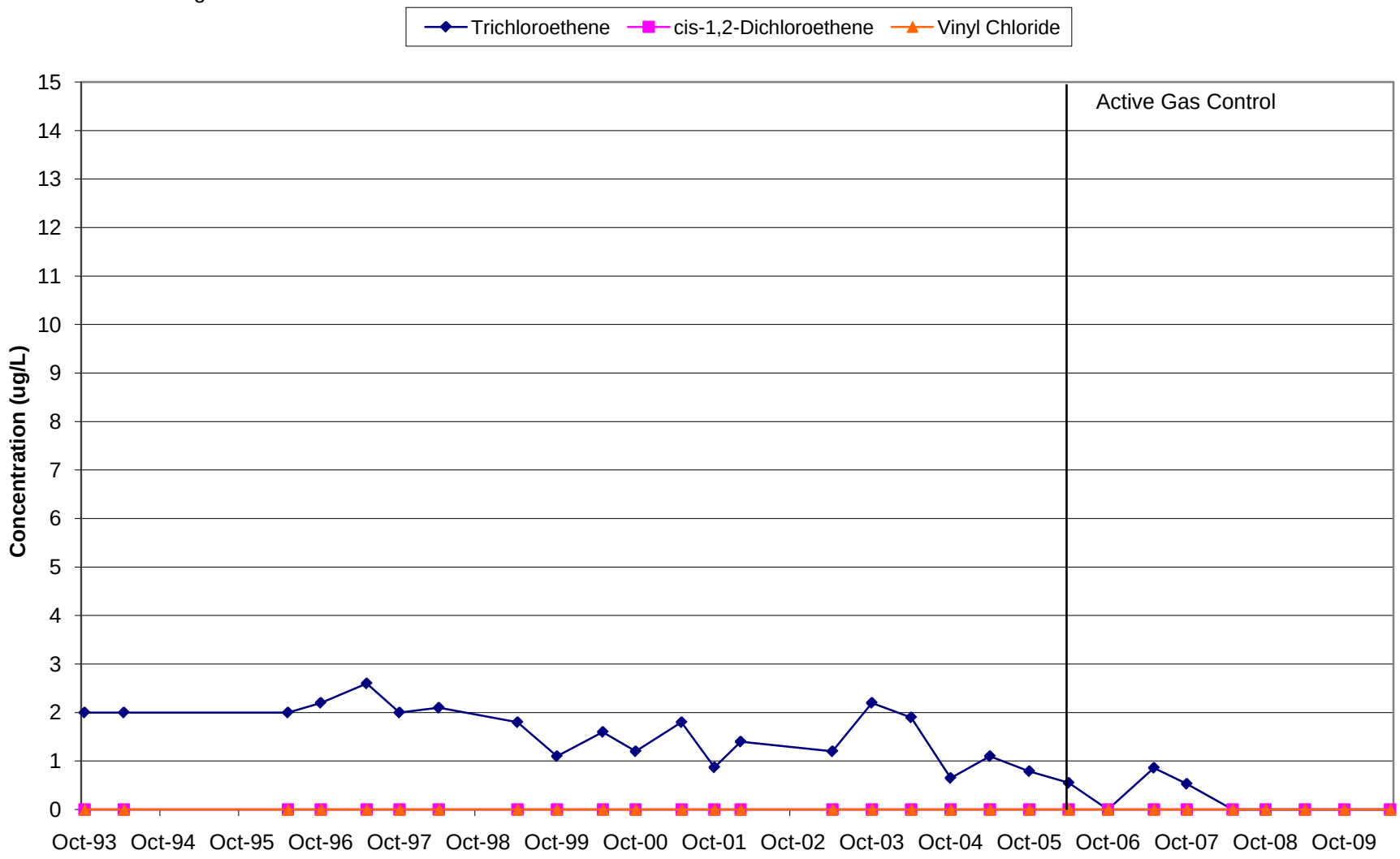

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Chart 4-42: MW-108
Layer 1 Well

Side gradient

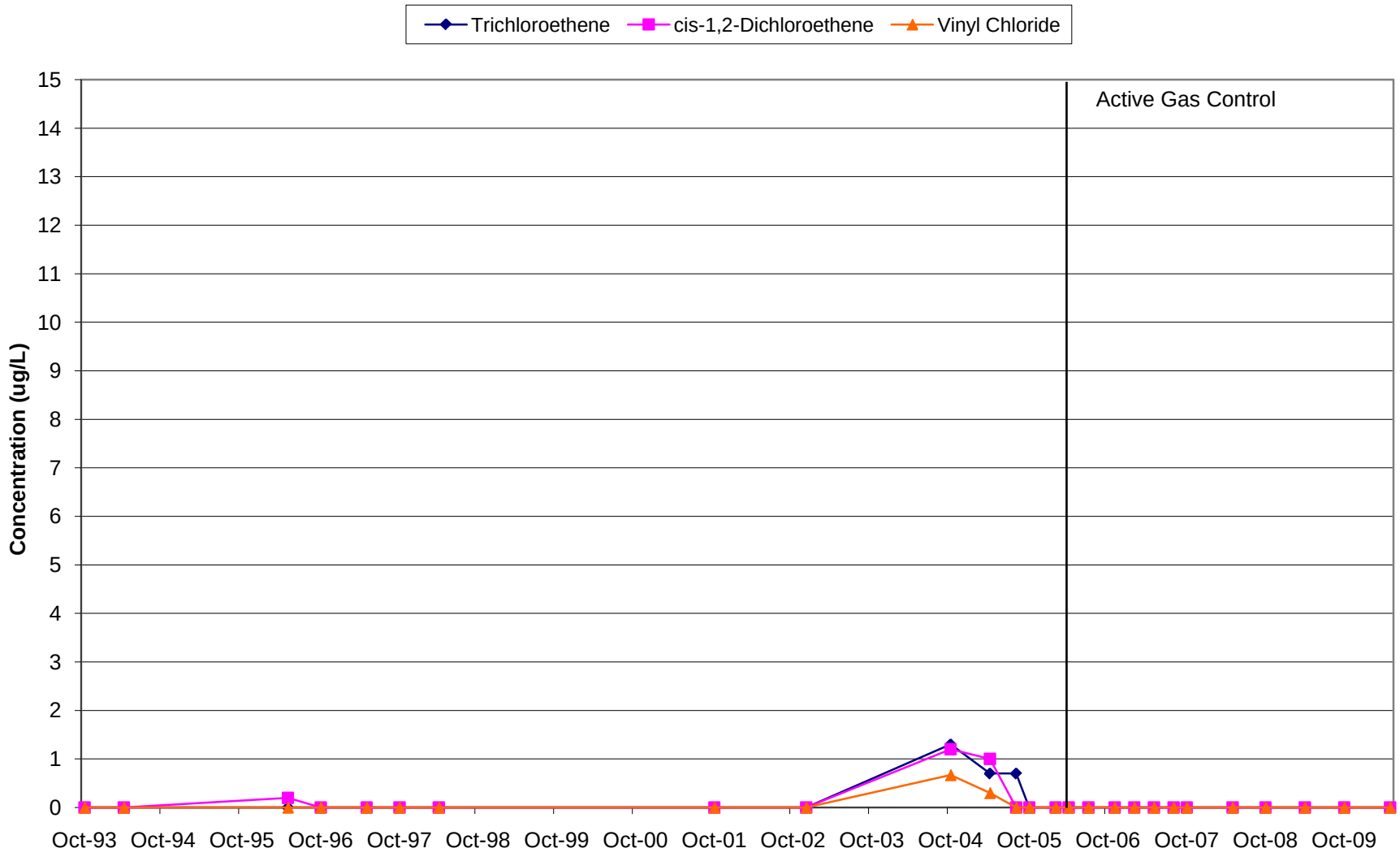

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Chart 4-43: MW-111
Layer 1 Well

900' Down gradient

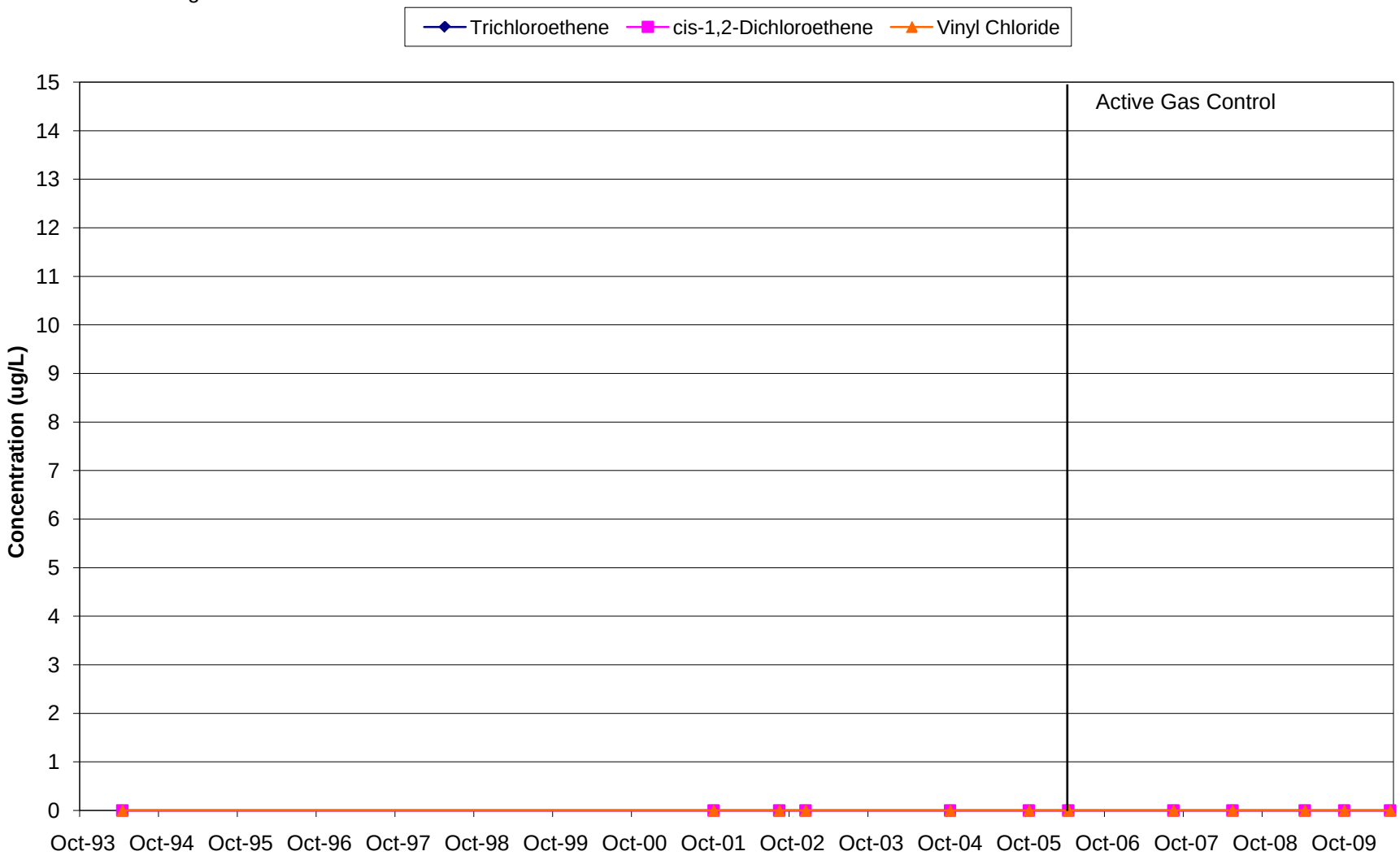

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Chart 4-44: MW-112
Layer 1 Well

50' Down gradient

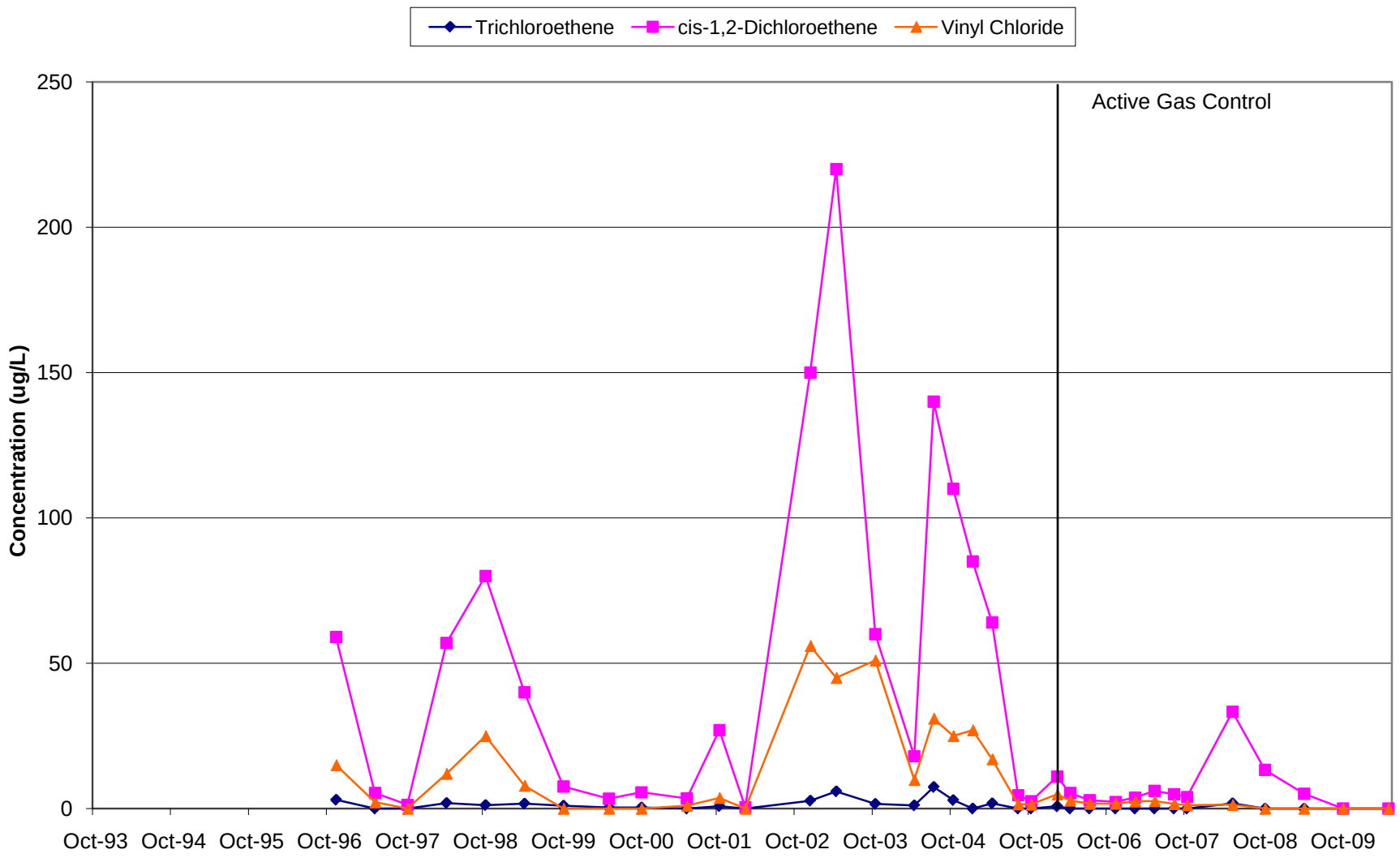

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Chart 4-45: P-101
Layer 2 Well

Upgradient

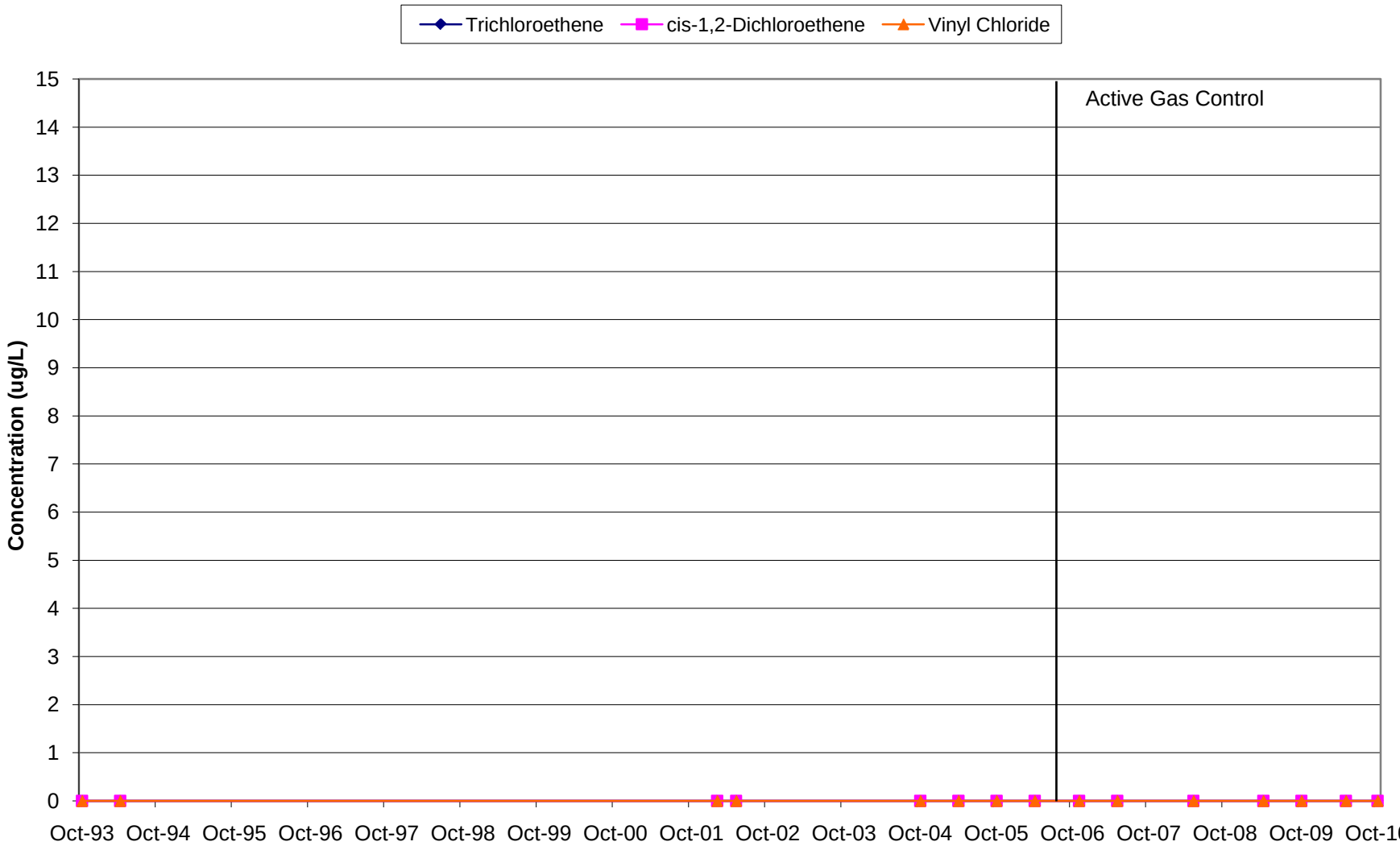

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Chart 4-46: P-102
Layer 2 Well

Side gradient

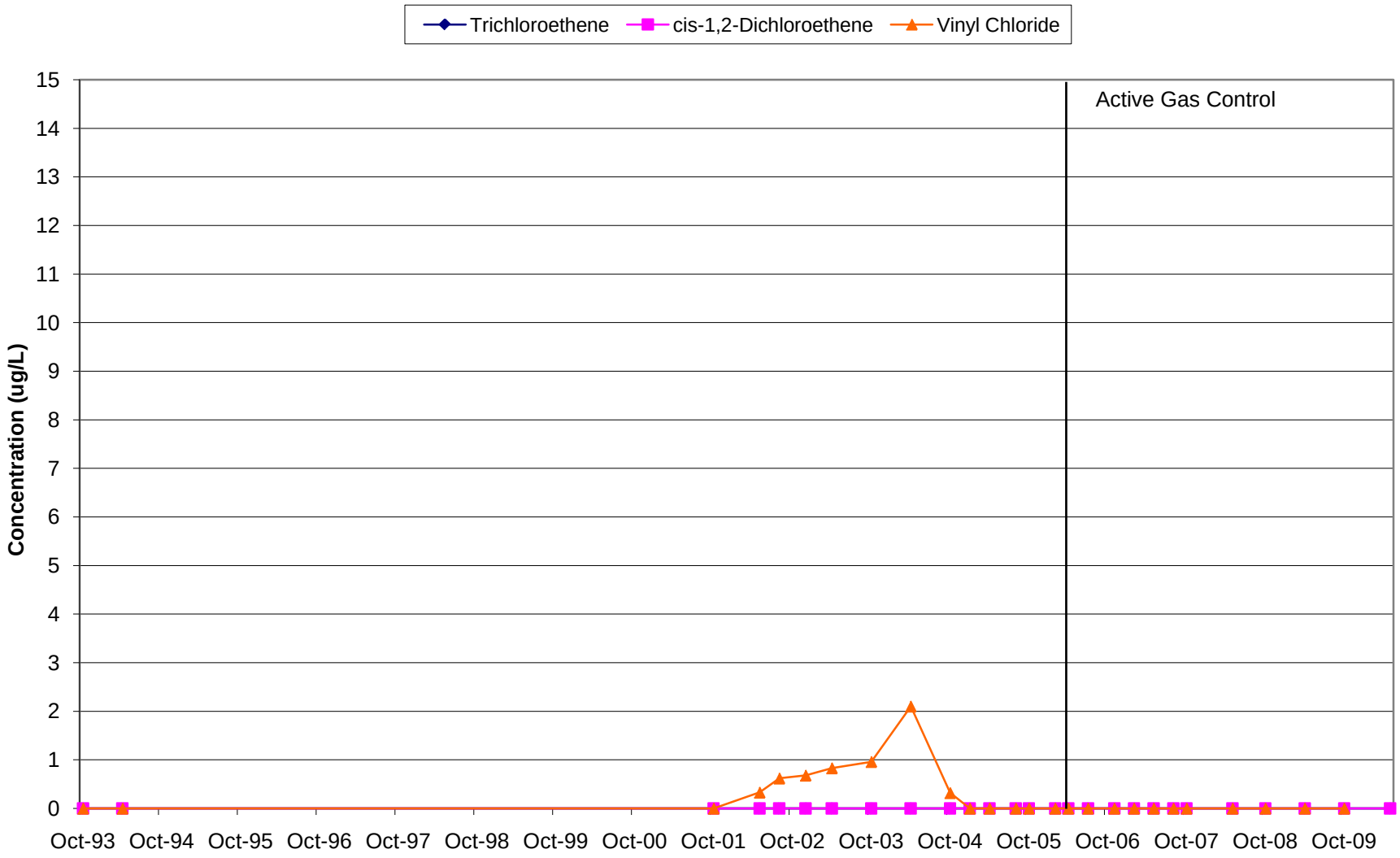

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Chart 4-47: P-103
Layer 2 Well

10' Down gradient

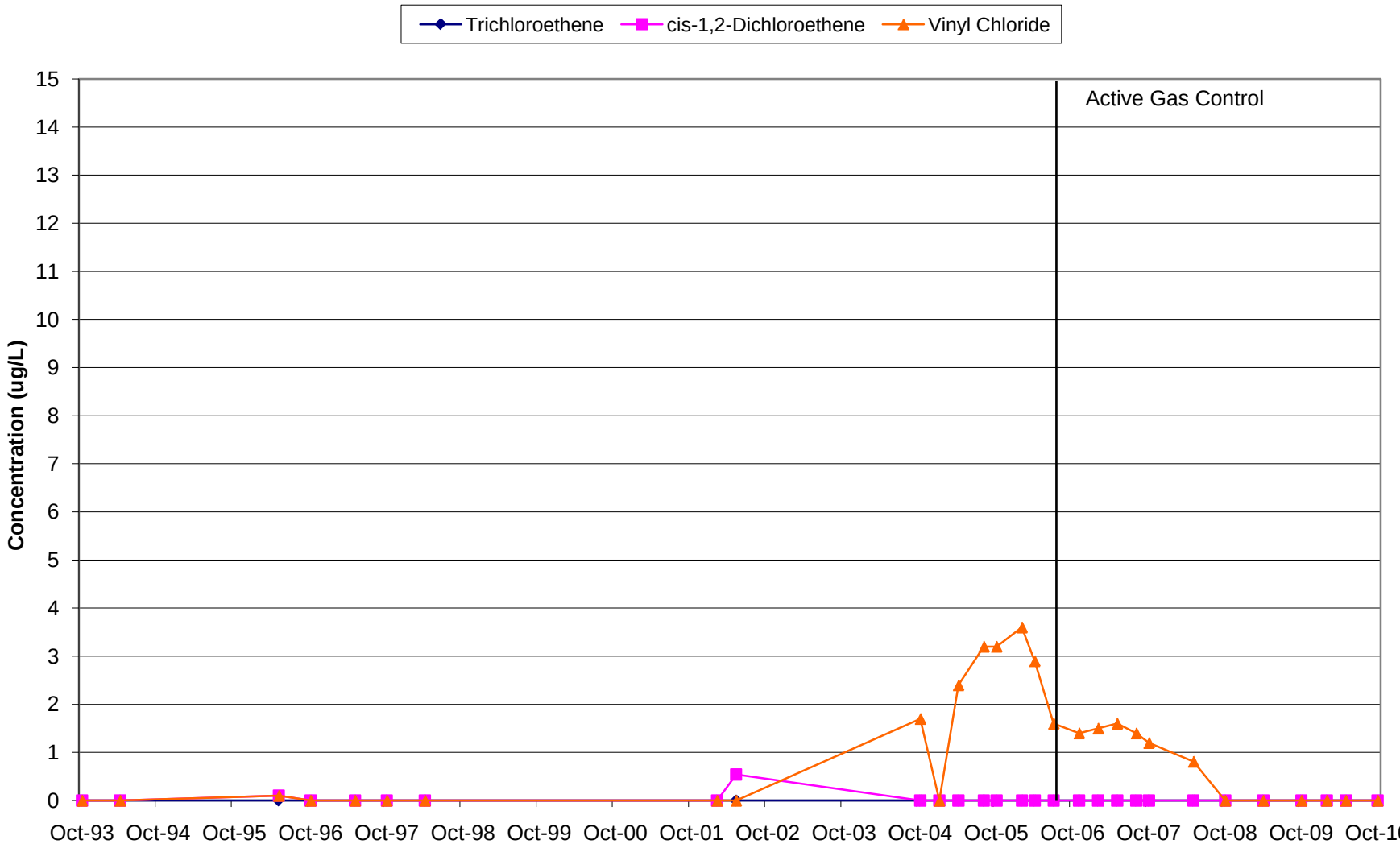

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Chart 4-48: P-104
Layer 2 Well

Side gradient

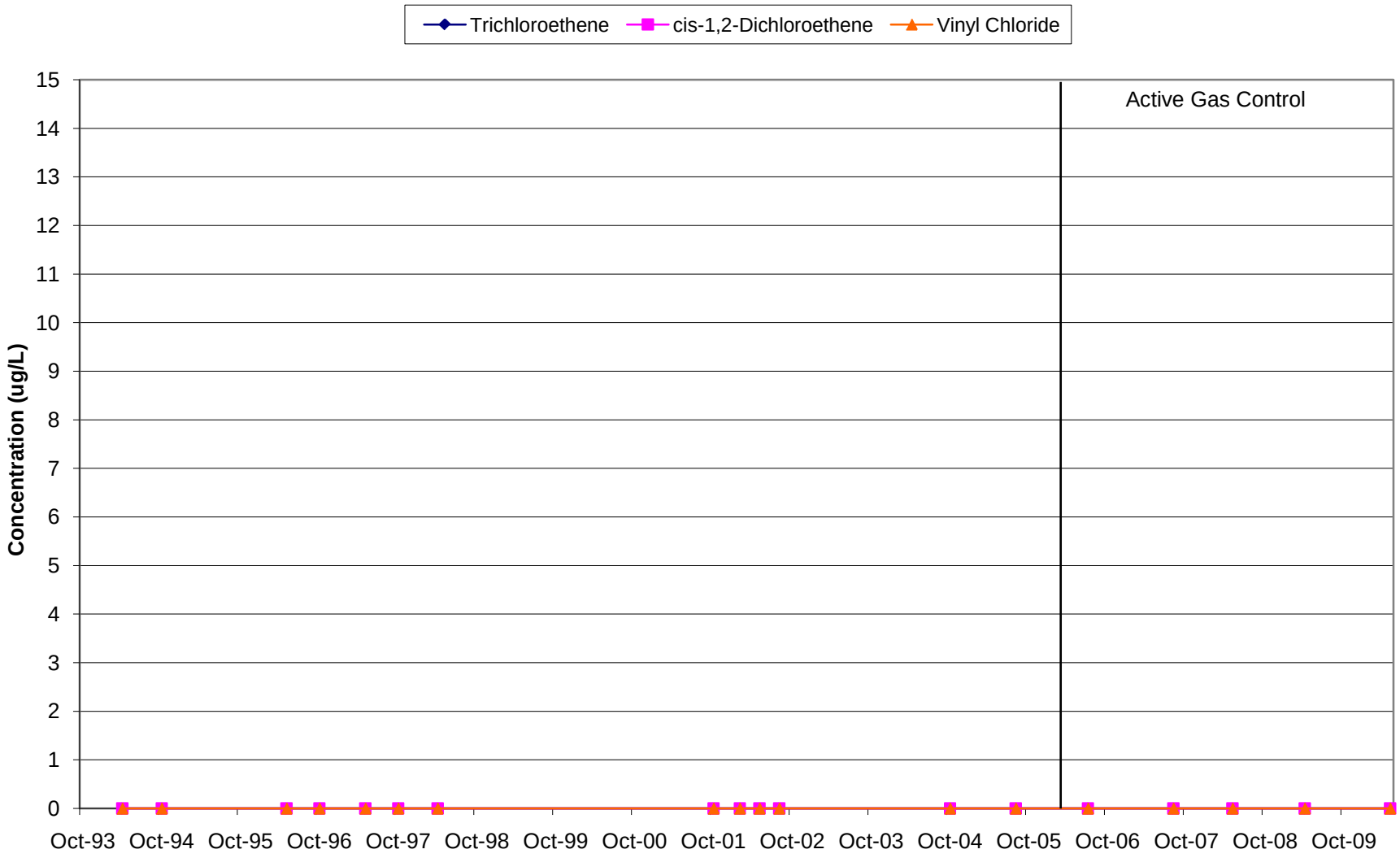

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Chart 4-49: P-106
Layer 2 Well

Side gradient

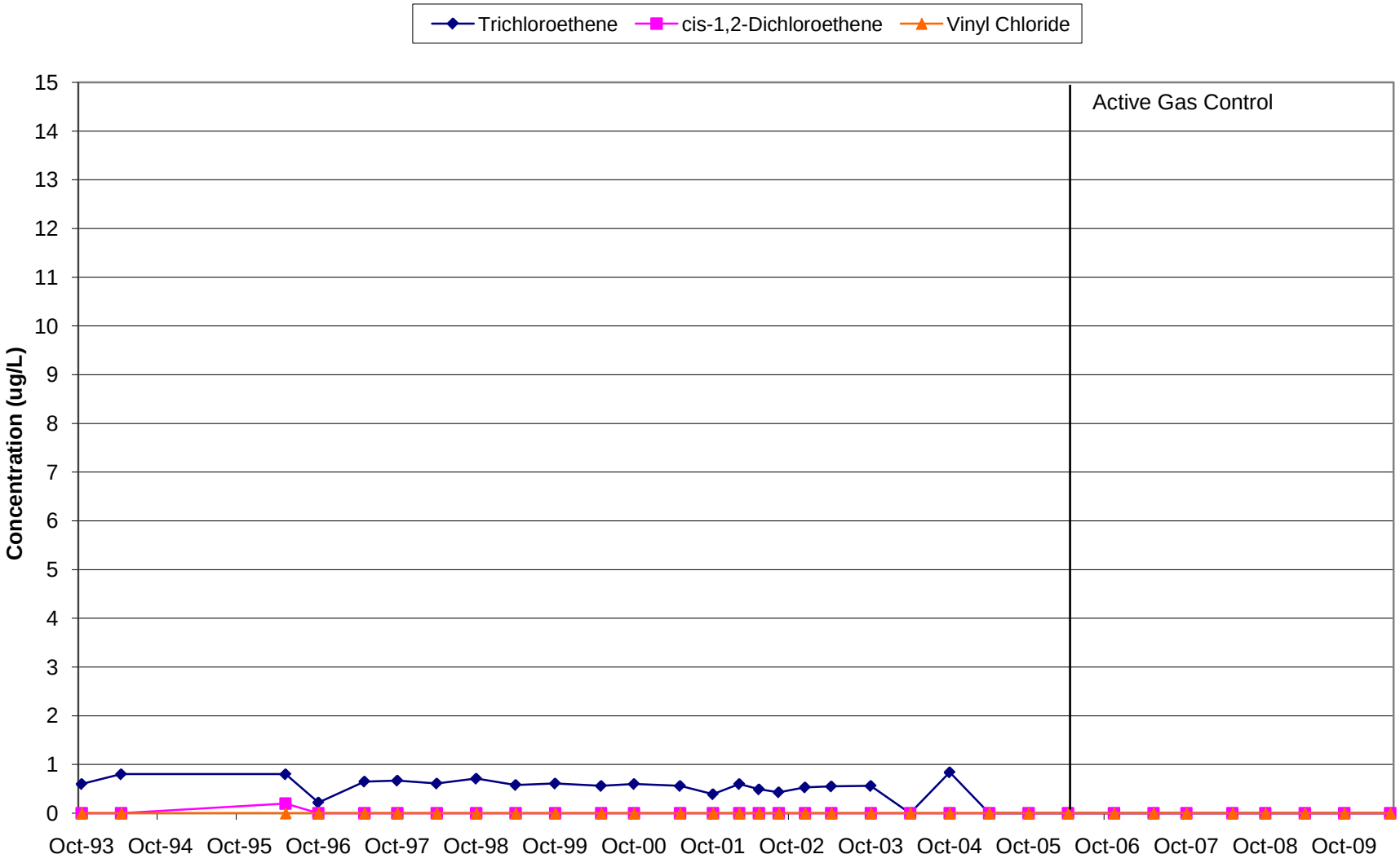

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Chart 4-50: P-107
Layer 2 Well

370' Down gradient

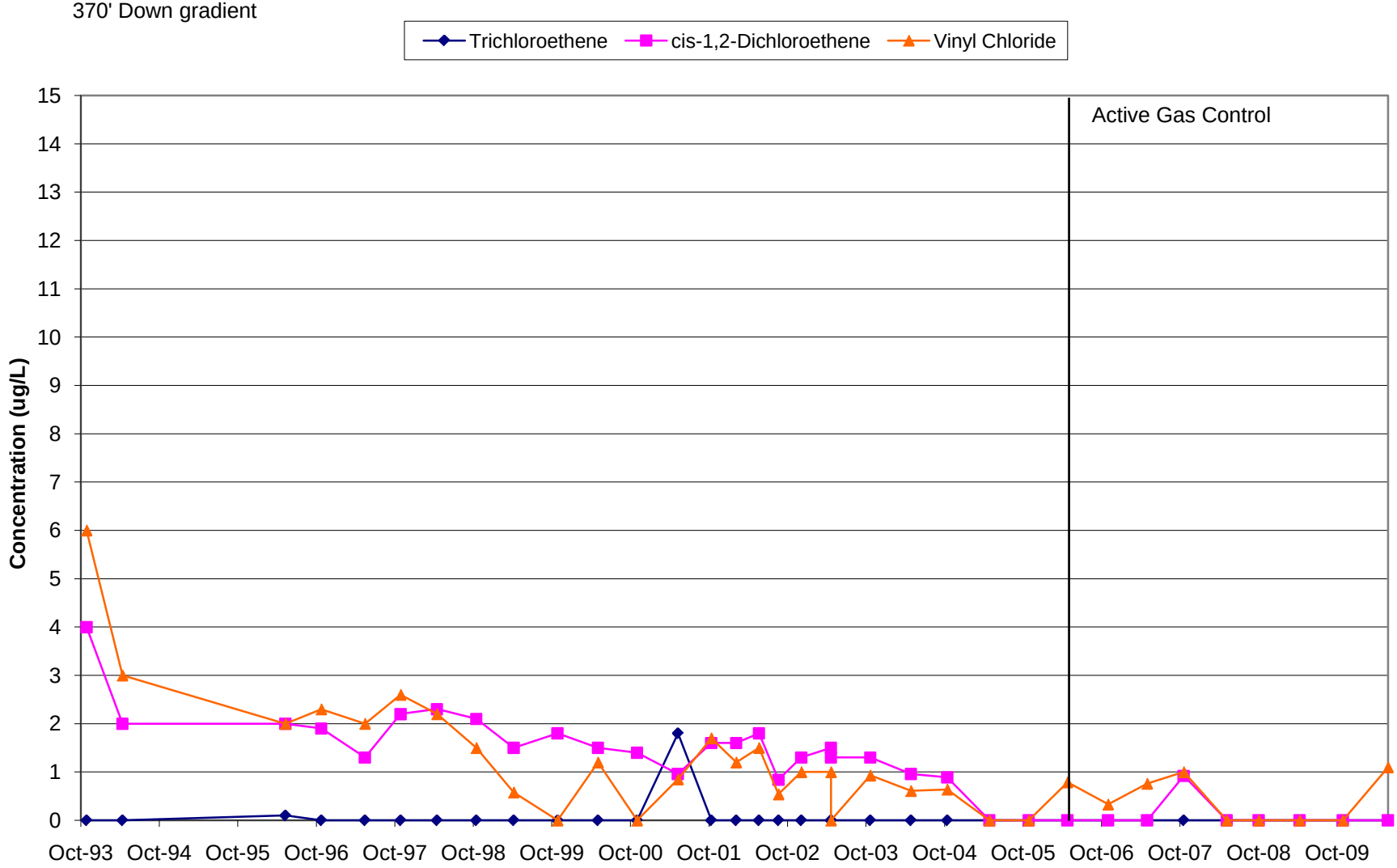

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Chart 4-51: P-108
Layer 2 Well

Side gradient

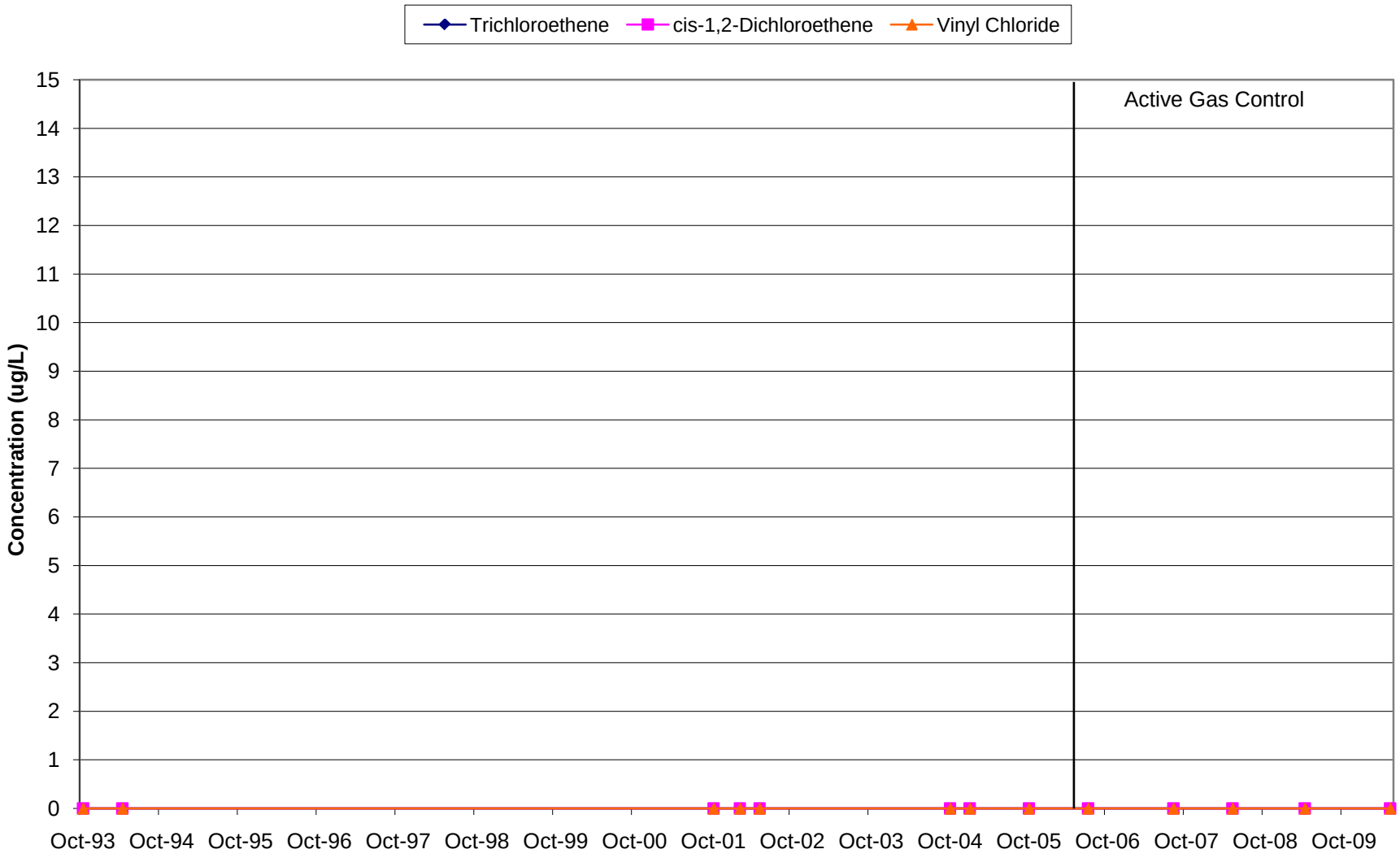

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Chart 4-52: P-111
Layer 2 Well

900' Down gradient

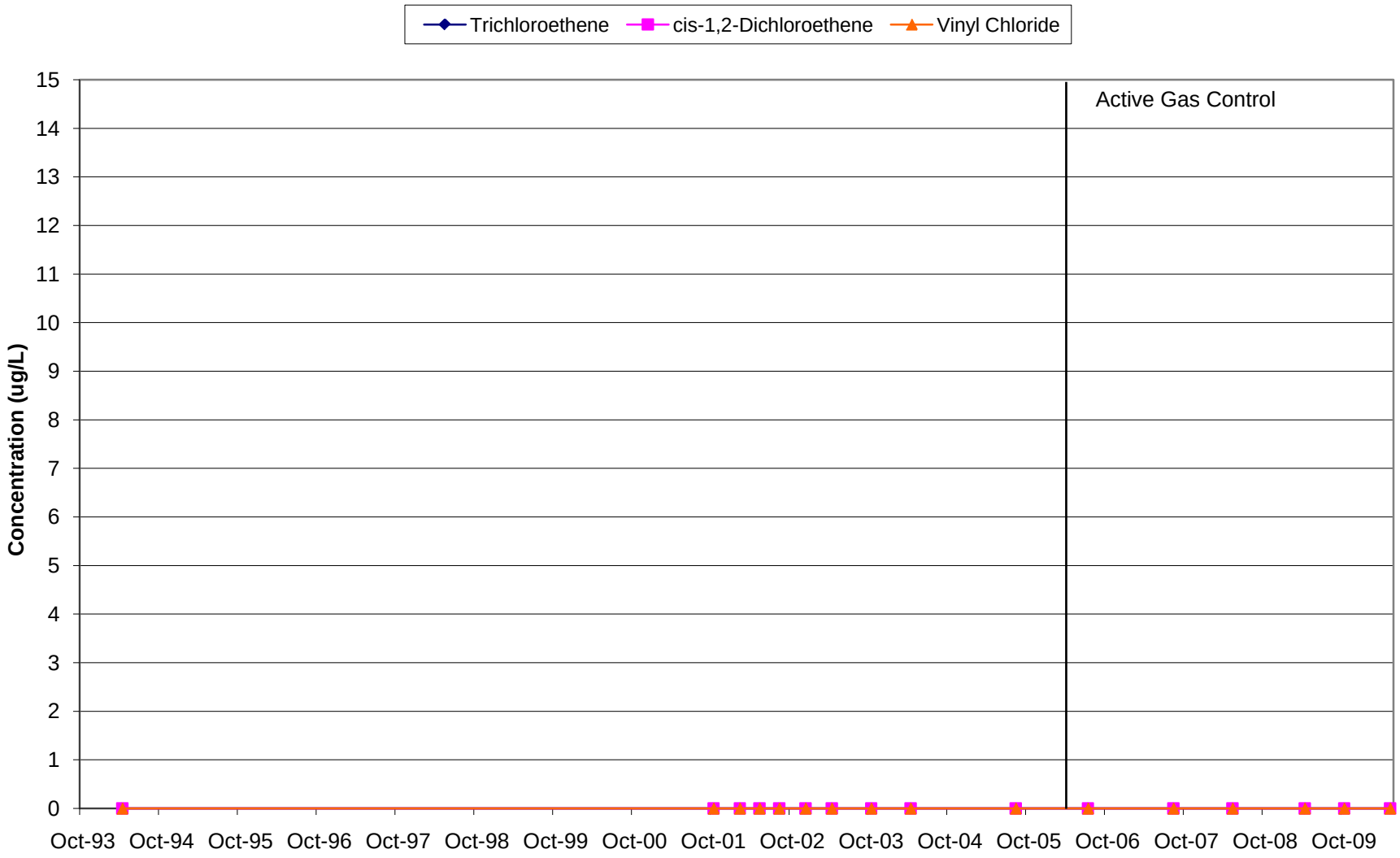

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Chart 4-53: P-103D
Layer 3 Well

10' Down gradient

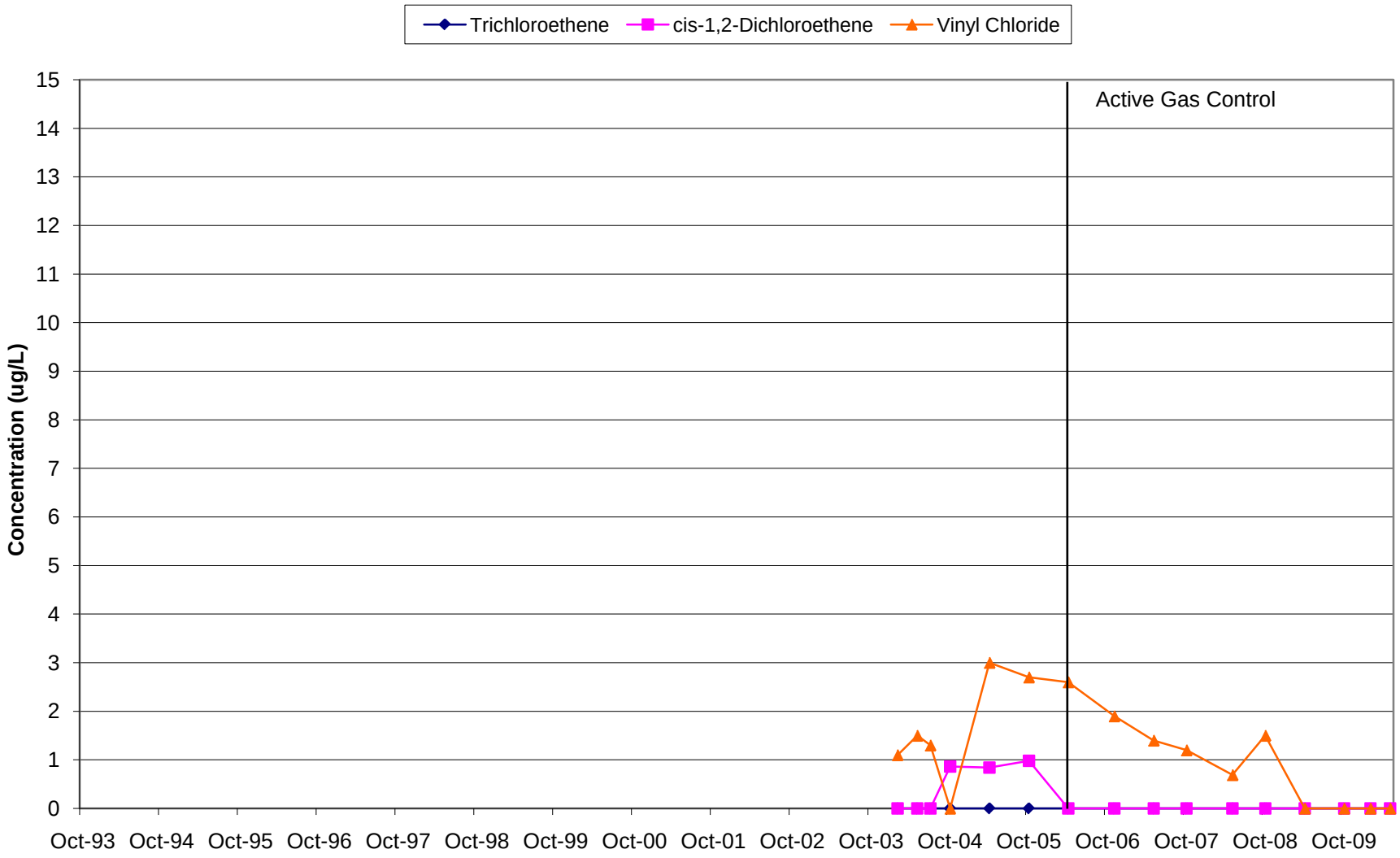

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Chart 4-54: P-111D
Layer 3 Well

900' Down gradient

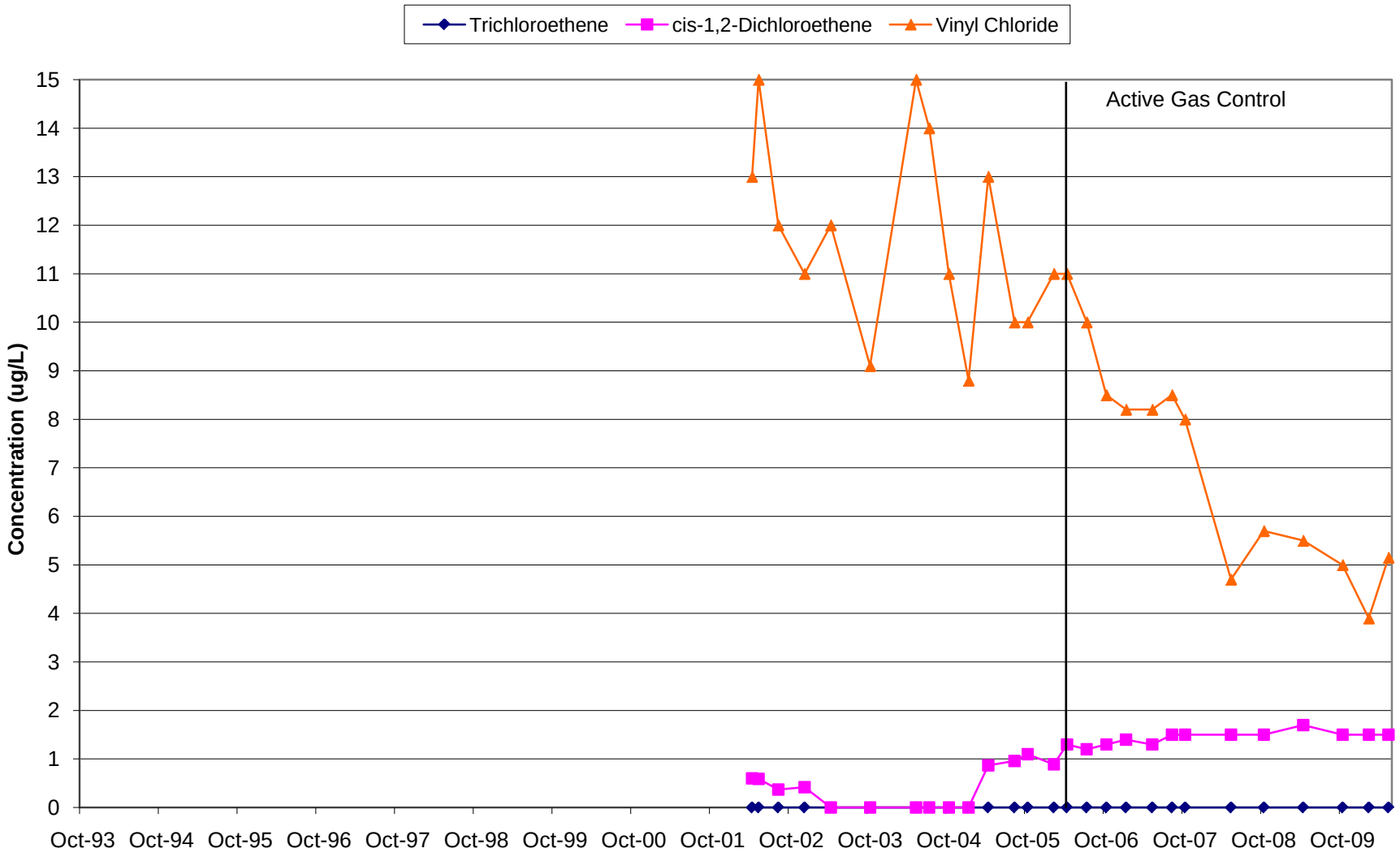

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Chart 4-55: MW-3B
Layer 3 Well

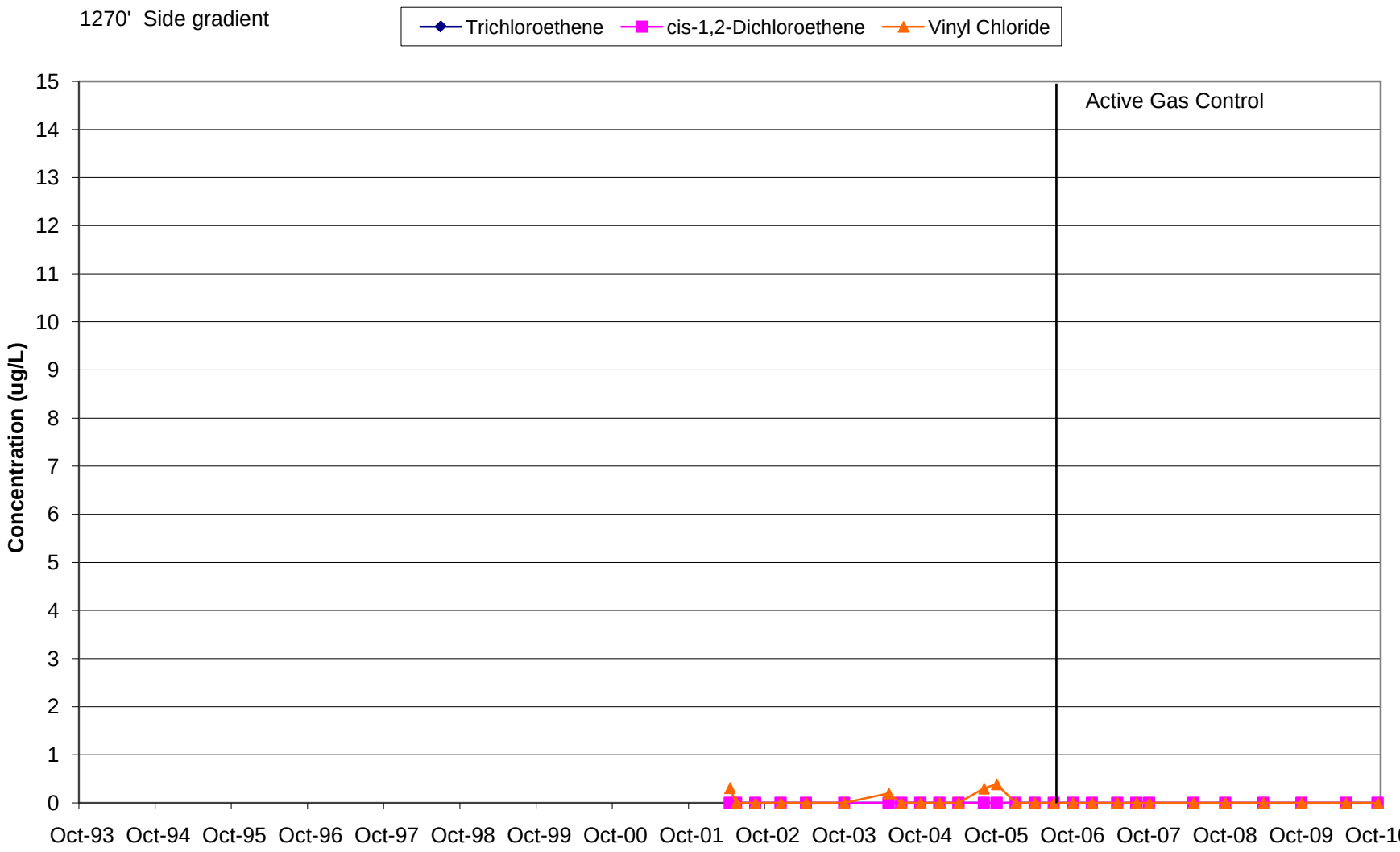

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Chart 4-56: P-113B
Layer 3 Well

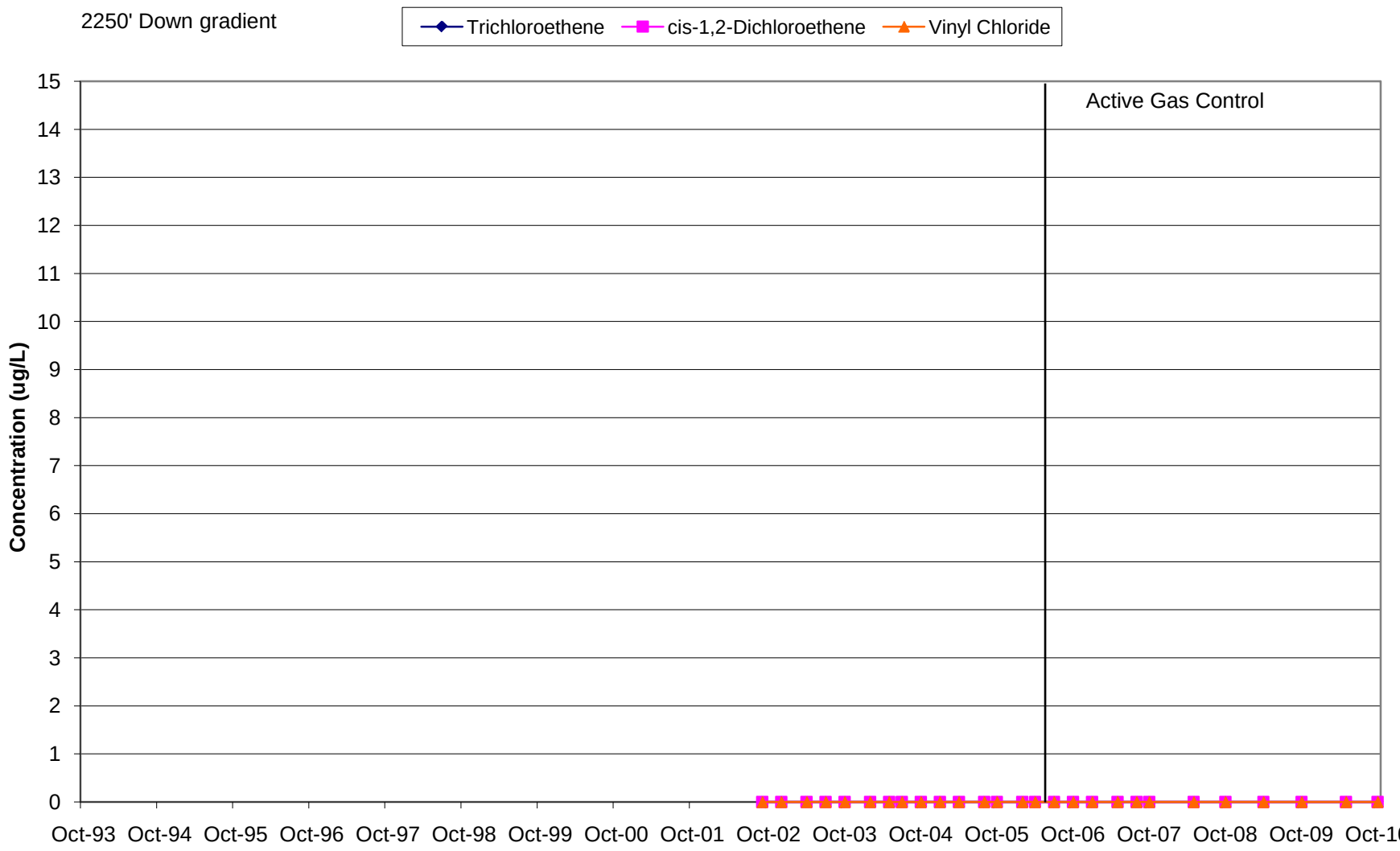

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Chart 4-57: P-114
Layer 3 Well

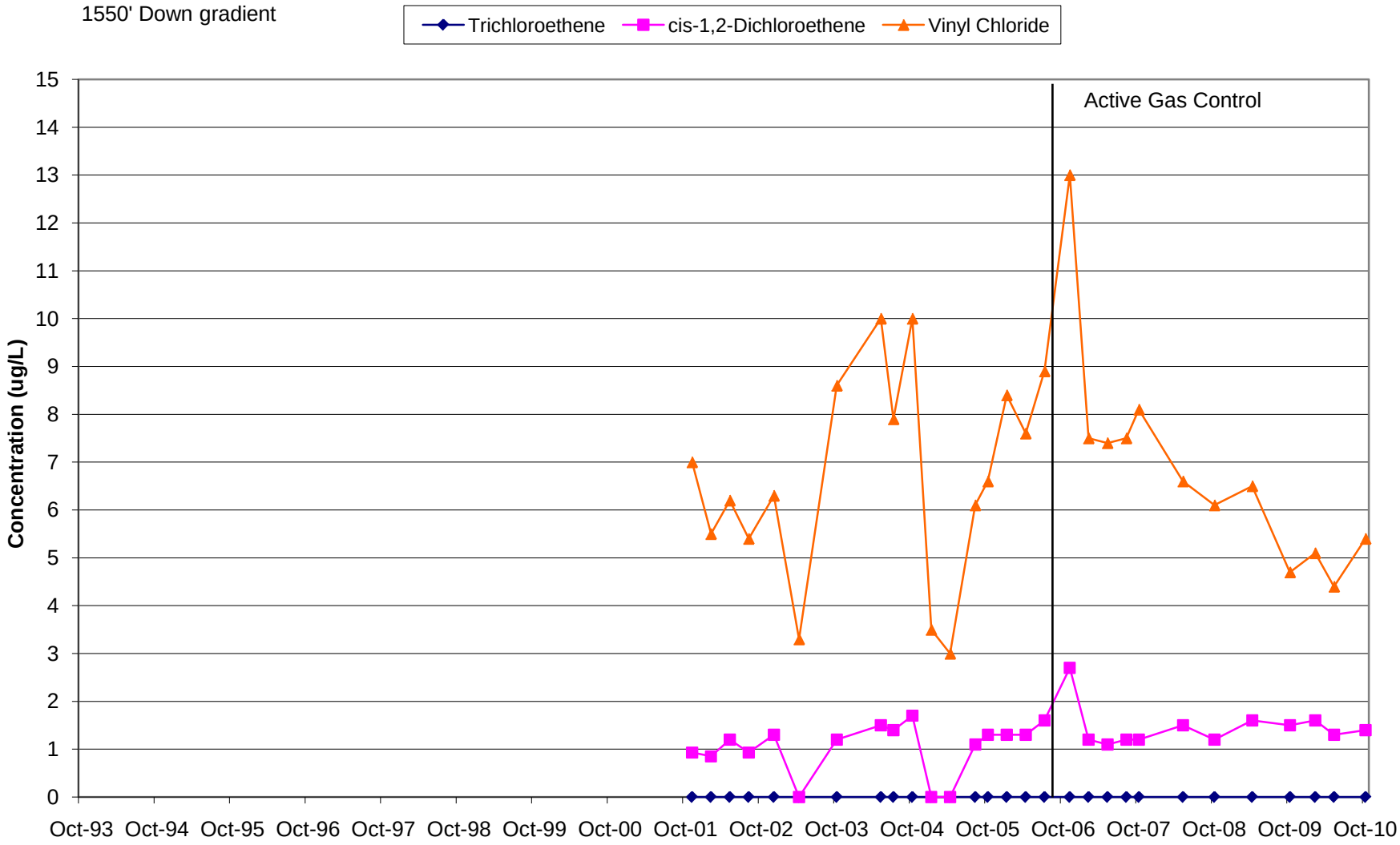

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Chart 4-58: P-115
Layer 3 Well

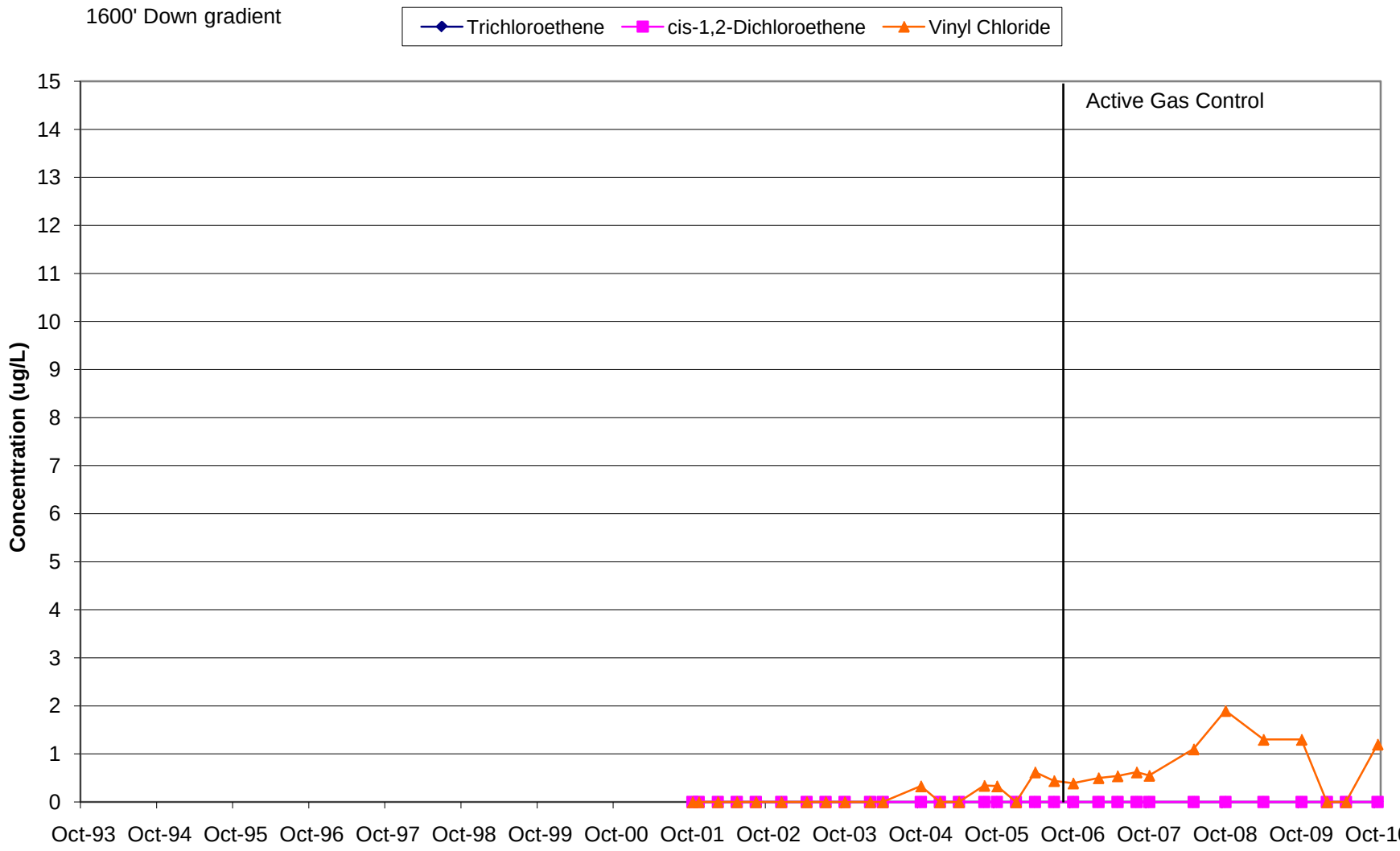

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Chart 4-59: P-116
Layer 3 Well

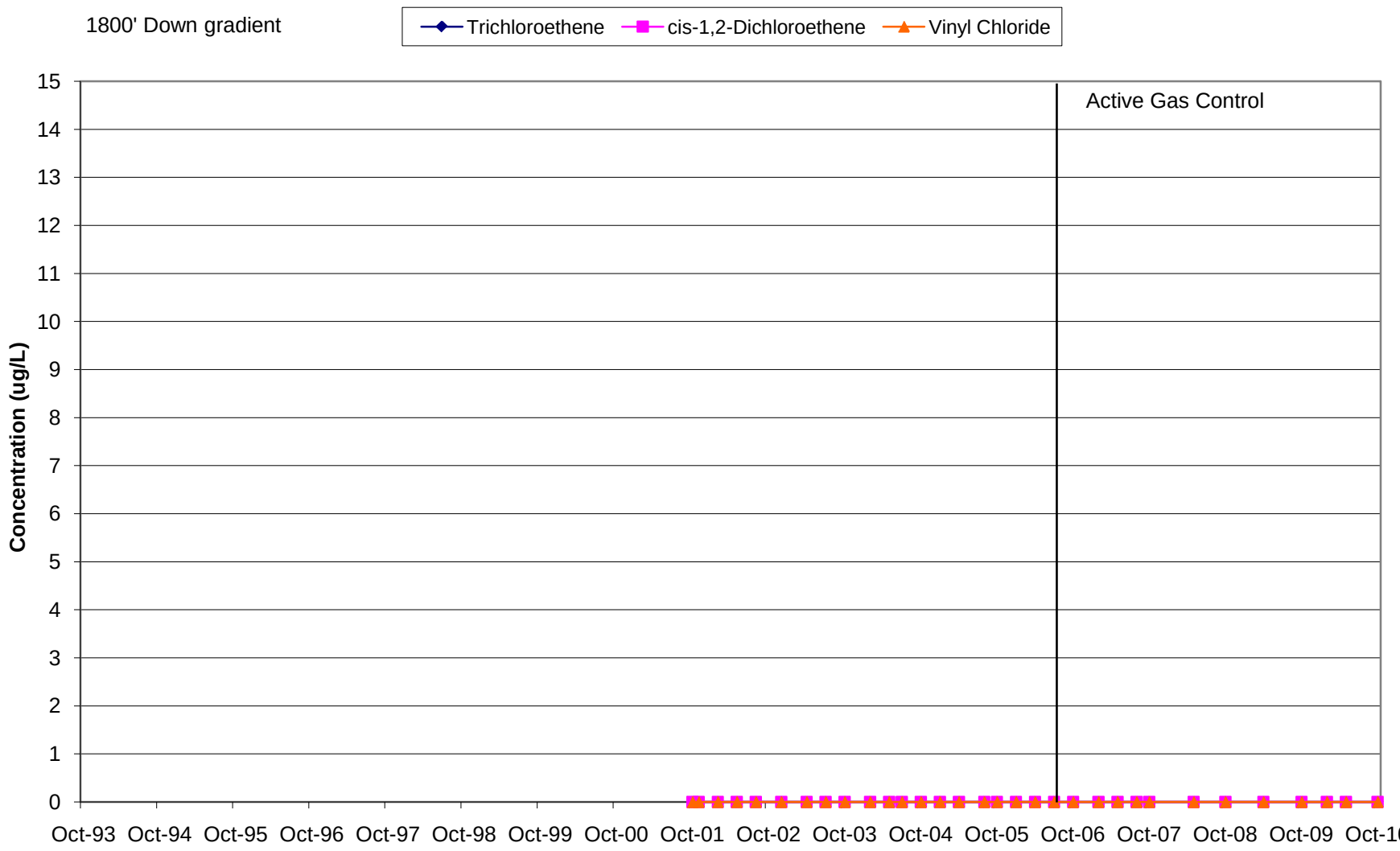

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Chart 4-60: MW-3A
Layer 4 Well

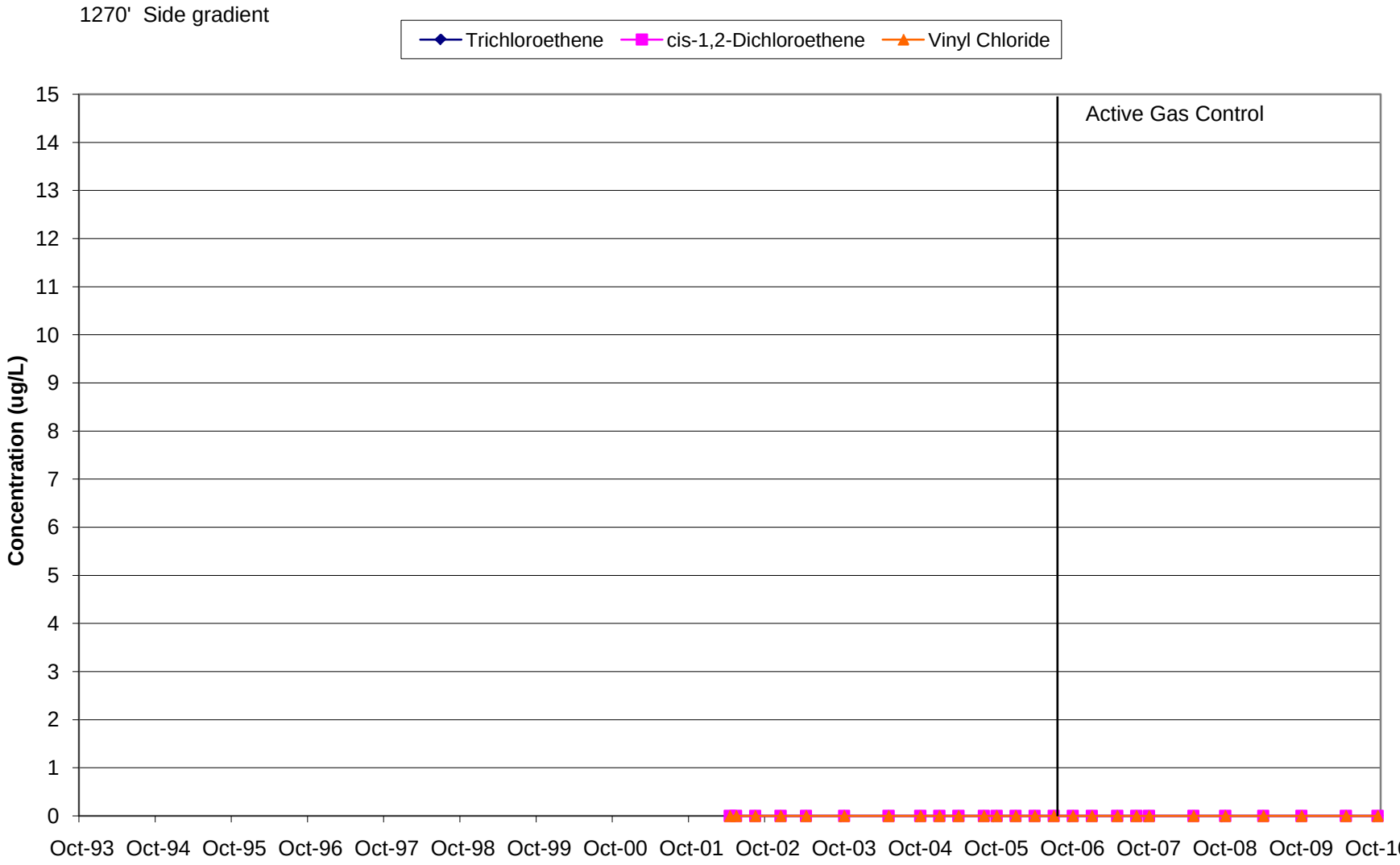

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Chart 4-61: P-107D
Layer 4 Well

370' Down gradient

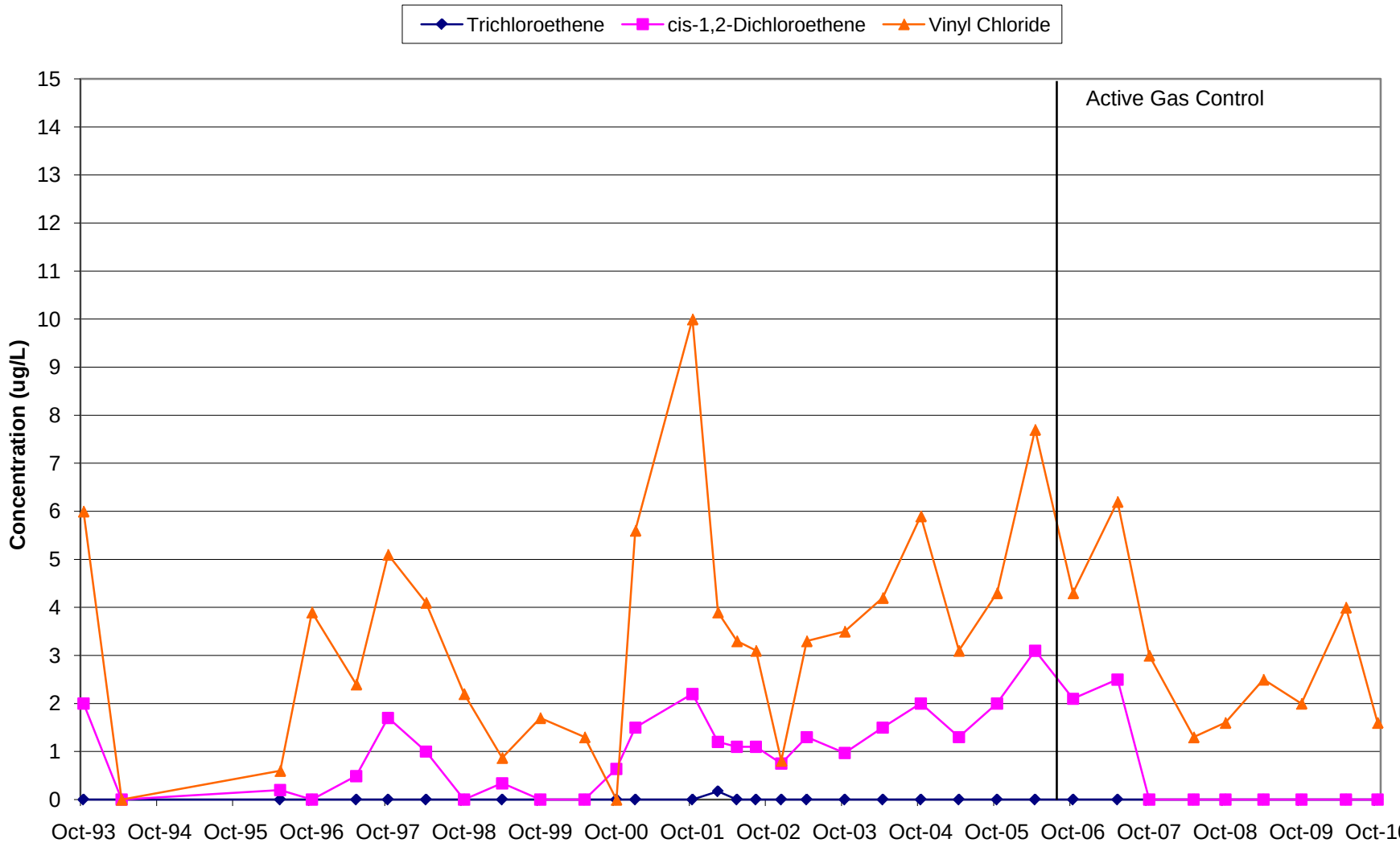

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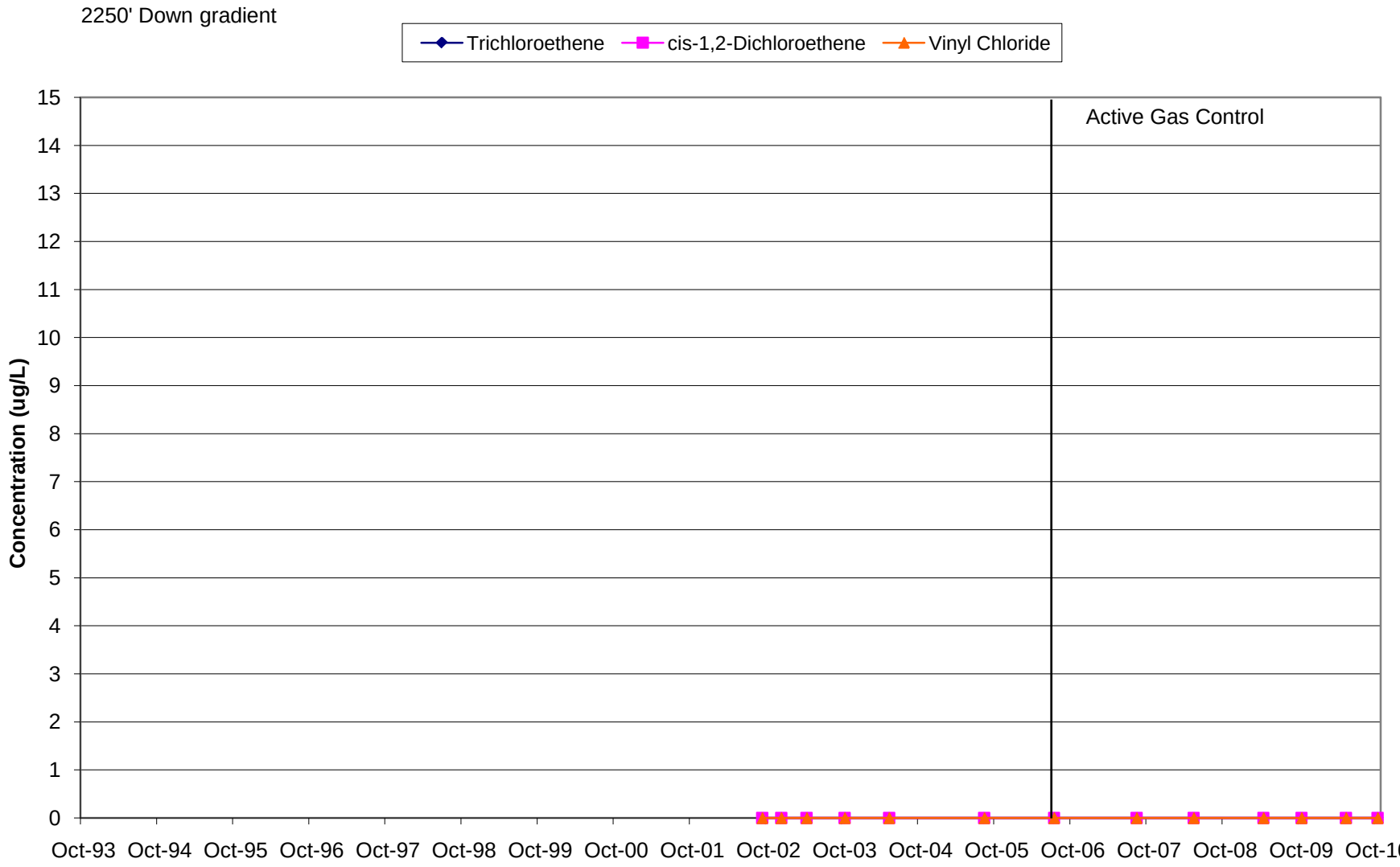
Chart 4-62: P-113A
Layer 4 Well



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