RAC2

REMEDIAL ACTION CONTRACT FOR

Remedial, Enforcement Oversight, and
Non-Time Critical Removal Activities at Sites of Release
or Threatened Release of Hazardous Substances in Region V

2006 ANNUAL REPORT
PENTA WOOD PRODUCTS SITE

Town of Daniels, Wisconsin
Long-Term Response Action
WA No. 004-LRLR-05WE / Contract No. EP-S5-06-01
March 2007

PREPARED FOR

U.S. Environmental Protection Agency

PREPARED BY

CH2M HILL
Ecology and Environment, Inc.
Environmental Design International, Inc.
Teska Associates, Inc.

Schultz, Bill P - DNR

From: Schultz, Bill P - DNR
Sent: Monday, February 26, 2007 6:52 AM
To: williams.thomas@epamail.epa.gov
Cc: 'William.Andrae@CH2M.com'
Subject: Review of the "draft" 2006 Annual Report for the Penta Wood Products Site

Tom:

I have reviewed the above referenced report and have listed my comments below. I would like to discuss these issues further with both you and CH2M Hill yet this spring before the next round of sampling is to take place.

- The format of the report and its content were for the most part satisfactory. My Appendix "D" contained two copies of the December 14, 2006 letter for private well sampling in the area. Should not there have been an earlier letter covering the May/June 2006 private well sampling? In future annual reports I would like to have a summary table of all historical private well sampling results. I would also request that I be copied on the residential well sampling results letters at the time the letters are sent from CH2M Hill to EPA. By state statute the WDNR is required to notify private well owners of the results of their wells every time that they are sampled. Do you know if this was done this year for both the May and September sampling rounds? Copies of these letters should also be a part of this annual report.

- In the report it states that *"The extraction system has operated consistently in 2006, with only a few shutdowns."* yet in 2006 the groundwater extraction system was only operated 188 days out of 365 or about 52% of the time. Although I understand the complex nature of the system and break-downs and maintenance operations are required, I think that this percentage of time the system is up and running is inadequate. The State of Wisconsin will take over the operation of the site after the 10-years of joint operation between USEPA and the State, and before then we want the extraction and treatment system to be run as continuously as possible. Mechanical breakdown need to be addressed ASAP. This may include "overnighting" people or parts to get the system up and running again. Computer crashes and compressor failures should not be the reason for the system to be shut down for weeks. Some maintenance issues can be anticipated and bundled concurrently to minimize the known time that the treatment system will be off-line. For example, items such as carbon change-outs should be scheduled at the same time as maintenance on the extraction pumps.

- The State considers one of the most important item in operation at the site (second to keeping the system up and running) is the ongoing monitoring at the site to show the systems effectiveness. This includes the protection of the nearby potable wells, containment of the groundwater plume, reduction in LNAPL and the dissolved plume. In 2006 our monitoring did not achieve all of these goals. Both the May and September 2006 water level measurements were recorded during non-steady state conditions (the groundwater system was off or not running just previous to the sampling), so evaluation of the capture zone could not be made. Future sampling events **must** be coordinated to occur while the system is continuously operating. If the extraction system is down, groundwater level measurements need to be postponed until stead state conditions are assured. Many of the monitoring wells could not be sampled due to maintenance issues. We need to try and do better to anticipate and address previous sampling problems. After every round of sampling we need to reevaluate what wells are being sampled, would different or additional wells help us evaluate the effectiveness of the treatment system.

- Maintenance and preventative maintenance of the monitoring system are critical. How often are the wells resurveyed? Do we feel that resurveying is needed for good groundwater level measurements? Protective well casing have settled and some monitoring wells should be cut down. Silted monitoring well need to be redeveloped. A maintenance plan requiring redevelopment of all the monitoring wells (not just the ones we are monitoring at this time) on a specific schedule should be proposed. If monitoring wells are broken and need repair or replacement we need to get them taken care of. If we know that the

groundwater table is low due to drought, pumps that are set too high need to be reset before sampling is to take place. Monitoring well we are not using and most likely will not use should be proposed to be properly abandoned.

William P. Schultz, PE
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Northern Region
Bureau of Remediation and Redevelopment
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CH2MHILL

March 29, 2007

344511.PC.01

Mr. Tom Williams
Work Assignment Manager (SR-6J)
U.S. Environmental Protection Agency
77 West Jackson Boulevard
Chicago, IL 60604-3507

Subject: 2006 Annual Report for the Penta Wood Products Site
Penta Wood Products Site, Siren, WI
WA No. 004-LRLR-05WE, Contract No. EP-S5-06-01

Dear Mr. Williams:

This letter is to address the comments on the Draft 2006 Annual Report for the Penta Wood Products Site. Comments were received from Bill Schultz of the Wisconsin Department of Natural Resources on Monday, February 26, 2007. CH2M HILL has addressed the comments as shown below in italics.

1. The format of the report and its content were for the most part satisfactory. My Appendix "D" contained two copies of the December 14, 2006 letter for private well sampling in the area. Should not there have been an earlier letter covering the May/June 2006 private well sampling?

   The July 26, 2006 letter on private well sampling was inadvertently omitted from the hard copy report but was included in the PDF report transmitted on February 20, 2007. The letter is included in the revised hard copy report.

2. In future annual reports I would like to have a summary table of all historical private well sampling results. I would also request that I be copied on the residential well sampling results letters at the time the letters are sent from CH2M Hill to EPA. By state statute the WDNR is required to notify private well owners of the results of their wells every time that they are sampled. Do you know if this was done this year for both the May and September sampling rounds? Copies of these letters should also be a part of this annual report.

   Summary tables have been included in the revised hard copy report providing historic results for each residential well. The tables are included in Appendix D with the Residential Well Memoranda. WDNR will be copied on future letters from CH2M HILL to the USEPA with the sampling results. Letters with the results have previously been provided by USEPA to the residents if the results in the residential well exceeded Wisconsin NR 140 enforcement standards.

2. *The results from May and September 2006 were below the Wisconsin NR 140 enforcement standards so letters were not submitted to the residents.*

3. In the report it states that "The extraction system has operated consistently in 2006, with only a few shutdowns." yet in 2006 the groundwater extraction system was only operated 188 days out of 365 or about 52% of the time. Although I understand the complex nature of the system and break-downs and maintenance operations are required, I think that this percentage of time the system is up and running is inadequate. The State of Wisconsin will take over the operation of the site after the 10-years of joint operation between USEPA and the State, and before then we want the extraction and treatment system to be run as continuously as possible. Mechanical breakdown need to be addressed ASAP. This may include "overnighting" people or parts to get the system up and running again. Computer crashes and compressor failures should not be the reason for the system to be shut down for weeks. Some maintenance issues can be anticipated and bundled concurrently to minimize the known time that the treatment system will be off-line. For example, items such as carbon change-outs should be scheduled at the same time as maintenance on the extraction pumps.

   System modifications are currently being evaluated to improve system operations. Options that are being evaluated include the addition of a backwash system for the 10,000 lb carbon vessels and modifications to the polymer system. In addition, an autodialer system is being connected to contact the operator in case of system failures to reduce the amount of time before the system is restarted or repairs can be performed. Additional modifications will be evaluated if warranted by the system operation. The USEPA and WDNR will be notified in the future of any non-routine shutdowns which will result in extended down-time for the system to further communicate issues as they occur.

4. The State considers one of the most important items in operation at the site (second to keeping the system up and running) is the ongoing monitoring at the site to show the systems effectiveness. This includes the protection of the nearby potable wells, containment of the groundwater plume, reduction in LNAPL and the dissolved plume. In 2006 our monitoring did not achieve all of these goals. Both the May and September 2006 water level measurements were recorded during non-steady state conditions (the groundwater system was off or not running just previous to the sampling), so evaluation of the capture zone could not be made. Future sampling events must be coordinated to occur while the system is continuously operating. If the extraction system is down, groundwater level measurements need to be postponed until steady state conditions are assured. Many of the monitoring wells could not be sampled due to maintenance issues. We need to try and do better to anticipate and address previous sampling problems. After every round of sampling we need to reevaluate what wells are being sampled,

would different or additional wells help us evaluate the effectiveness of the treatment system.

Water level measurements will be measured as soon as is possible with the snow cover and ground conditions. If water levels in the wells are measurable (not unavailable due to silting) and a representative contour map can be created, the results will be submitted as an addendum to the annual report to illustrate groundwater containment. If significant silting still prohibits water level measurements, the water level measurements will be collected after well redevelopment. Well maintenance is being planned to redevelop and repair damaged wells this spring. For future sampling events, water level measurements will be performed while the system is operating and steady state conditions are expected.

5. Maintenance and preventative maintenance of the monitoring system are critical. How often are the wells resurveyed? Do we feel that resurveying is needed for good groundwater level measurements? Protective well casing have settled and some monitoring wells should be cut down. Silted monitoring well need to be redeveloped. A maintenance plan requiring redevelopment of all the monitoring wells (not just the ones we are monitoring at this time) on a specific schedule should be proposed. If monitoring wells are broken and need repair or replacement we need to get them taken care of. If we know that the groundwater table is low due to drought, pumps that are set too high need to be reset before sampling is to take place. Monitoring well we are not using and most likely will not use should be proposed to be properly abandoned.

   CH2M HILL is currently planning well maintenance and redevelopment activities to be performed this spring. In preparation of the well maintenance and redevelopment, well logs, water level data, and field data are currently being reviewed to identify action items for well maintenance. The site operator will verify in the field prior to the well maintenance. Wells will be resurveyed after maintenance if necessary.

   Future monitoring for silting will be performed by measuring the depth to the bottom of the wells every other year during the annual events. This is not routinely performed due to the additional decontamination time required. The bottom will not be measured in wells which have dedicated pumps where removal of the pumps from the wells would be required. Well construction information will be available to the groundwater sampling team during field activities. Field observations will be reviewed after each sampling event to identify if there are any new maintenance issues to address.

The finalized 2006 Annual Report is attached. If you have any questions, please feel free to call me at 414-847-0341.

Sincerely,

CH2M HILL

Beth Rohde for

Bill Andrae
Site Manager

c: Stephen Nathan, PO/U.S. EPA, Region 5 (w/o enclosure)
Charles Foss, CO/U.S. EPA, Region 5 (w/o enclosure)
Bill Schultz/WDNR, Rhinelander
Ike Johnson, PM/CH2M HILL, Milwaukee
Dan Plomb, DPM/CH2M HILL, Milwaukee
Regina Bayer, QAM/CH2M HILL, Milwaukee
Beth Rohde, ASM/CH2M HILL , Milwaukee
Cherie Wilson, AA/CH2M HILL, Milwaukee

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CH2MHILL

June 14, 2007

344511.PC.01

Mr. Tom Williams
Work Assignment Manager (SR-6J)
U.S. Environmental Protection Agency
77 West Jackson Boulevard
Chicago, IL 60604-3507

Subject: 2006 Annual Report Addendum
Penta Wood Products Site, Siren, WI
WA No. 004-LRLR-05WE, Contract No. EP-S5-06-01

Dear Mr. Williams:

Enclosed for your review, please find the 2006 Annual Report Addendum for the Penta Wood Products Site in Siren, Wisconsin dated June 14, 2007.

If you have any questions, please feel free to call me at 414-847-0561.

Sincerely,

CH2M HILL

Keli McKenna

Keli McKenna
Project Engineer

Enclosures
c: Stephen Nathan, PO/U.S. EPA, Region 5 (w/o enclosure)
Charles Foss, CO/U.S. EPA, Region 5 (w/o enclosure)
Bill Schultz/WDNR, Rhinelander
Ike Johnson, PM/CH2M HILL, Milwaukee
Dan Plomb, DPM/CH2M HILL, Milwaukee
Regina Bayer, QAM/CH2M HILL, Milwaukee
Bill Andrae/SM/CH2M HILL, Milwaukee
Beth Rohde/ASM/CH2M HILL , Milwaukee
Cherie Wilson, AA/CH2M HILL, Milwaukee

2006 Annual Report Addendum
Penta Wood Products Site, Siren, Wisconsin
WA No. 004-LRLR-05WE, Contract No. EP-S5-06-01

PREPARED FOR: Tom Williams/USEPA

PREPARED BY: CH2M HILL

COPIES: Bill Schultz/WDNR

DATE: June 14, 2007

Groundwater Elevation Measurements

The groundwater elevation measurements during the May and September 2006 sampling events did not represent steady-state conditions due to system shutdowns. As a result, groundwater elevations in all monitoring wells were measured in April 2007 to evaluate groundwater capture with steady-state operating conditions. A water level indicator and oil/water interface probe were used to measure the distance from the top of the inner well casing to the water surface and, where applicable, to the product surface.

Unconfined Aquifer Groundwater

In the unconfined aquifer during April 2007, groundwater displayed a varied local flow pattern across the site (Figure 1). The variability of the observed water table surface in the unconfined aquifer was likely a function of both the influence of the treatment system's pumping wells and varying surface infiltration rates across the site. The effect of the discharge of the treated groundwater at the infiltration basin has continued to show minimal to no response in the unconfined aquifer.

The water levels recorded in April 2007 continue to show a capture zone in the unconfined aquifer resulting from the operation of the groundwater collection system. The April 2007 potentiometric surface indicated the capture zone of the extraction wells in the Corrective Action Management Unit (CAMU) extends to MW-09 on the north, MW-16 on the west, and MW-06S to the south, as indicated in Figure 1.

Groundwater elevations in the unconfined aquifer in April 2007 were generally 1 to 2 feet lower than measured in the spring events since 2002 as a result of drought conditions that have been experienced at the site. As a result of the lowered water table, the unconfined groundwater elevation contour pattern observed in spring of 2007 was similar to those observed in 2001 when a lower water table was present.

Semiconfined Aquifer Groundwater

During April 2007, a groundwater divide ran north-south beneath the site and intersected the infiltration basin (Figure 2). Groundwater flow in the semiconfined aquifer was inward

toward the groundwater divide, and potentiometric surface elevations were generally between 1 foot and 3 feet lower than measurements from spring sampling events since 2002. Recharge from the infiltration basin and pumping from the groundwater extraction wells did not appear to have an effect on the semiconfined aquifer potentiometric surface.

Free Product Measurements

In April 2007, light nonaqueous-phase liquid (LNAPL) was observed in MW-10S (0.59 foot), MW-18 (0.04 foot), MW-19 (0.74 foot), and MW-20 (1.22 feet). The thickness and locations of LNAPL were consistent with observations made in the past several years. Groundwater elevations, oil/water interface measurement data, and other observations are included in Attachment 1.

Figures

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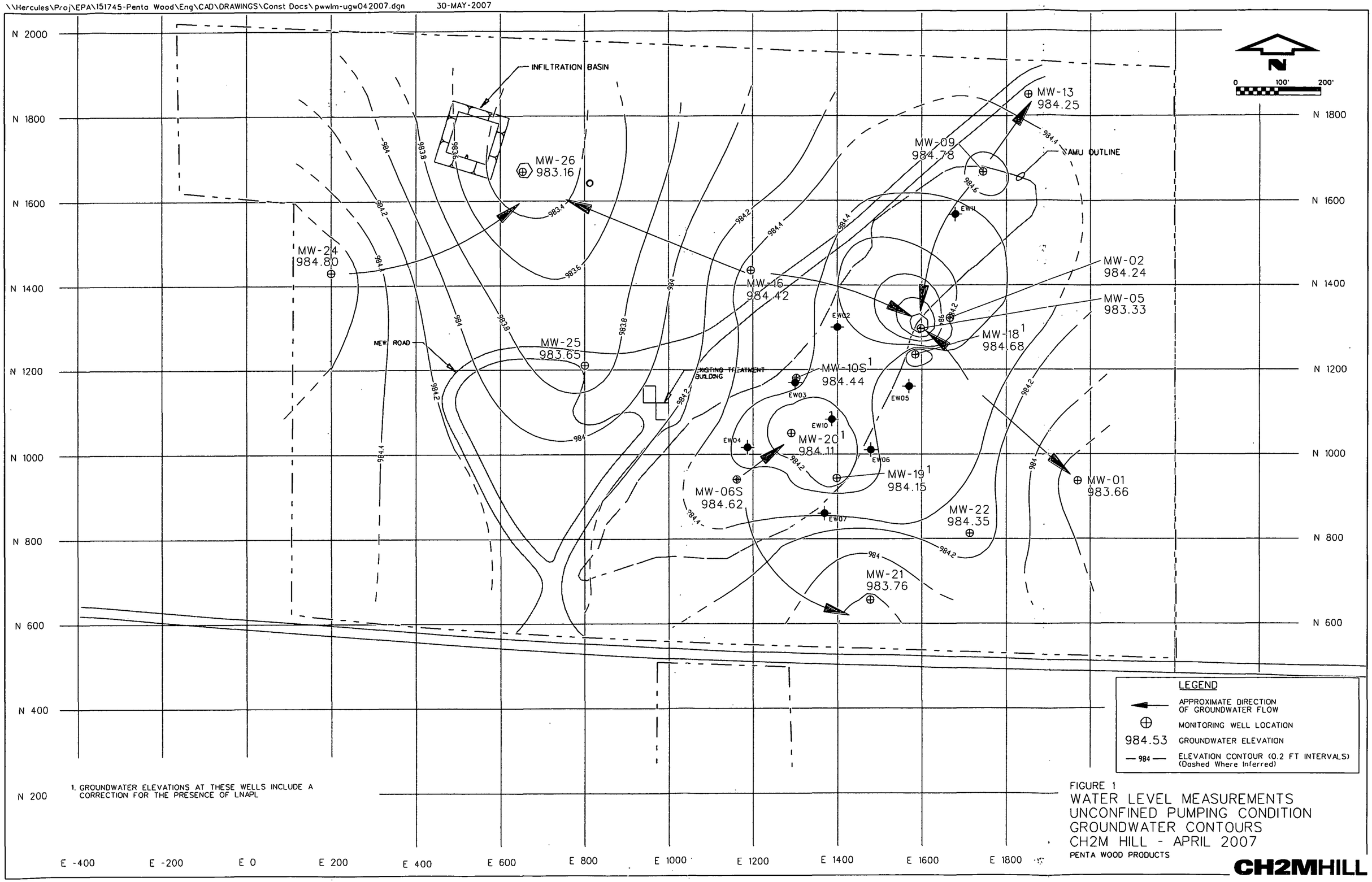

1. GROUNDWATER ELEVATIONS AT THESE WELLS INCLUDE A CORRECTION FOR THE PRESENCE OF LNAPL

FIGURE 1
WATER LEVEL MEASUREMENTS
UNCONFINED PUMPING CONDITION
GROUNDWATER CONTOURS
CH2M HILL - APRIL 2007
PENTA WOOD PRODUCTS

CH2MHILL

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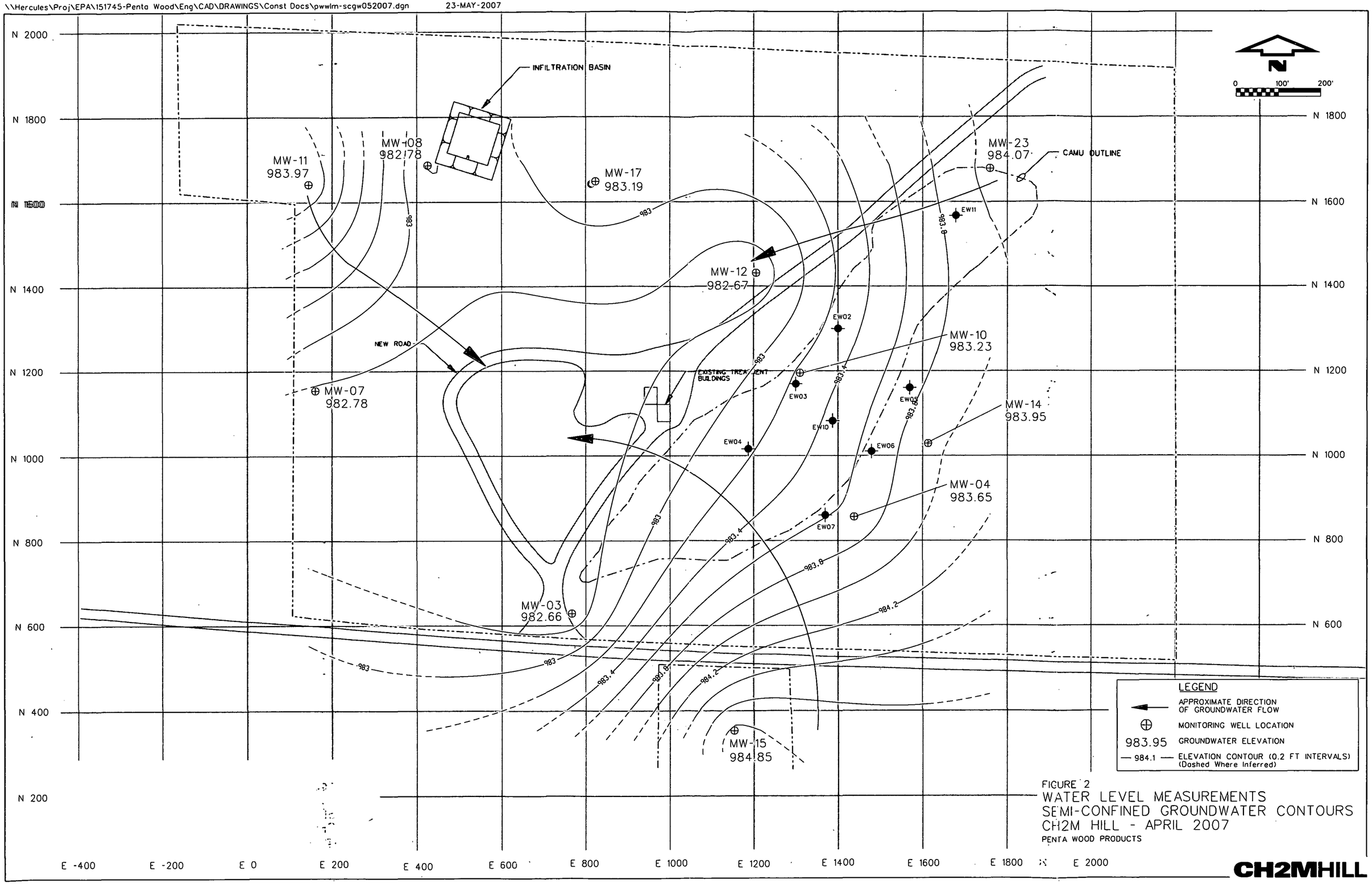

FIGURE 2
WATER LEVEL MEASUREMENTS
SEMI-CONFINED GROUNDWATER CONTOURS
CH2M HILL - APRIL 2007
PENTA WOOD PRODUCTS

CH2MHILL

Attachment 1

Attachment 1

Groundwater Elevations and Observations

Well	Casing Dia. (inches)	Approx. Well Depth (ft)	TOC Elev. (ft MSL)	Aquifer[a]	April 2007 New TOC Elev. (ft MSL)	Depth to Water - TOC (ft)	GW Elev. (ft MSL)	GW Elev Corrected (ft MSL)	Comments (DTP=Depth to Product)
MW-01	2	97	1072.32	UC	1072.32	88.66	983.66		
MW-02	2	85	1065.66	UC	1064.85	80.61	984.24		
MW-03	4	182	1129.52	SC	1129.5	146.84	982.66		
MW-04	4	187	1089.86	SC	1087.81	104.16	983.65		
MW-05	4	118	1074.24	UC	1071.73	88.40	983.33		
MW-06 S	2	112.5	1094.59	UC	1108.63	124.01	984.62		
MW-07	4	140.5	1096.42	SC	1096.39	113.61	982.78		
MW-08	4	160	1091.23	SC	1091.28	108.50	982.78		
MW-09	2	54	1020.70	UC	1020.71	35.93	984.78		
MW-10	4	131	1083.90	SC	1089.74	106.51	983.23		
MW-10 S	2	107.5	1085.34	UC	1090.43	106.49	983.94	984.44	DTP=105.91 [b]
MW-11	2	155.5	1085.33	SC	1085.58	101.61	983.97		
MW-12	2	135	1081.86	SC	1081.99	99.32	982.67		
MW-13	2	27	1006.16	UC	1006.1	21.85	984.25		
MW-14	2	175	1078.61	SC	1078.5	94.55	983.95		
MW-15	2	170	1127.13	SC	1127.22	142.37	984.85		
MW-16	2	106.5	1081.88	UC	1081.92	97.50	984.42		
MW-17	2	134	1084.42	SC	1084.5	101.31	983.19		
MW-18	6	116	1076.31	UC	1072.44	87.79	984.65	984.68	DTP=87.75 [c]
MW-19	2	112	1088.00	UC	1088.17	104.66	983.51	984.15	DTP=103.92 [d]
MW-20	2	107.5	1087.73	UC	1097.76	114.71	983.05	984.11	DTP=113.49 [e]
MW-21	2	114.9	--	UC	1095.7	111.94	983.76		
MW-22	2	105.16	--	UC	1084.7	100.35	984.35		
MW-23	2	125	--	SC	1017.57	33.50	984.07		
MW-24	2	125	--	UC	1084.1	99.30	984.8		
MW-25	2	117.8	--	UC	1095.24	111.59	983.65		
MW-26	2	141		UC	1087.07	103.91	983.16		

[a] UC=Unconfined aquifer; SC=semiconfined aquifer

[b] MW-10S NAPL thickness = 0.59 ft in April 2007

[c] MW-18 NAPL thickness = 0.04 ft in April 2007

[d] MW-19 NAPL thickness = 0.74 ft in April 2007

[e] MW-20 NAPL thickness = 1.22 ft in April 2007

2006 ANNUAL REPORT

PENTA WOOD PRODUCTS SITE

Town of Daniels, Wisconsin

Long-Term Response Action

WA No. 004-LRLR-05WE / Contract No. EP-S5-06-01

March 2007

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Abbreviations and Acronyms

µg/L	micrograms per liter
BTEX	benzene, toluene, ethylbenzene, and xylene
CAMU	Corrective Action Management Unit
ES	Enforcement Standard
EW	extraction well
ft^3	cubic feet
g/cm^3	grams per cubic centimeter
gal	gallon
gpm	gallons per minute
GW	groundwater
HVAC	heating, ventilating, and air conditioning
lb	pound
LNAPL	light nonaqueous phase liquid
mg/L	milligrams per liter
MS/MSD	matrix spike/matrix spike duplicate
MW	monitoring well
ORP	oxidation-reduction potential
PAL	Preventive Action Limit
PCP	pentachlorophenol
PVC	polyvinyl chloride
QC	quality control
RA	remedial action
RDVF	rotary drum vacuum filter
SM	Site Manager
STL	Severn Trent Laboratories
USEPA	United States Environmental Protection Agency
WA	Work Assignment
WAM	Work Assignment Manager
WDC	Water Development Corporation
WDNR	Wisconsin Department of Natural Resources

Introduction

This Annual Report documents the groundwater sampling, hazardous waste generation and disposal, and site inspection and maintenance activities conducted at the Penta Wood Products Site as performed by CH2M HILL for the U.S. Environmental Protection Agency (USEPA) under Work Assignment (WA) No. 201-RALR-05WE prior to July 29, 2006. Work after that date has been performed on the new contract under WA No. 004-LRLR-05WE.

2006 Groundwater Sampling Results

Introduction

Semiannual groundwater sampling was conducted at the Penta Wood Products Site in late May 2006 and early June 2006 at five monitoring wells, five residential wells, and one onsite potable well, along with static water level measurements collected at all monitoring wells, and product level measurements in wells with product. The sixth annual post-remedial action (RA) groundwater sampling event was conducted in September 2006 and consisted of sampling 14 monitoring wells, 5 residential wells, and 1 onsite potable well, and measuring static water levels in all monitoring wells and product levels in wells with product. This report presents the results of the two groundwater sampling events and includes tables and figures presenting historical groundwater data. It is an update of the previous year's report, retaining and updating evaluations based on the new data.

The treatment system operated for approximately 1 year prior to September 2001, when it was shut down to allow for pilot testing and plant modifications intended to help meet effluent criteria. Having been restarted on February 27, 2004, the treatment system has been running continuously with the exception of occasional down-time from routine maintenance and repairs. The September 2006 monitoring well results reflect approximately 2.5 years of system operation since the system was restarted.

Purpose and Scope

The purpose of the groundwater sampling events is to monitor groundwater contaminant levels, remaining product thickness, and natural attenuation parameters to assess the effectiveness of the groundwater and product extraction, treatment, and natural attenuation. Parameters that are analyzed include pentachlorophenol (PCP); naphthalene; benzene, toluene, ethylbenzene, and xylene (BTEX); dissolved metals; and natural attenuation parameters (see the analytical results in Appendix A and B). Water level measurements were also collected during each sampling event to assess groundwater flow direction.

Water Level Measurements

Water levels in all monitoring wells were measured in May and September 2006. An oil/water interface probe was used to measure the distance from the top of the inner well casing to the water surface and, where applicable, to the product surface.

Unconfined Aquifer Groundwater

The treatment system had been shut down on May 23, 2006 for a carbon changeout. During the shutdown, the computer was infected with a virus and the system was unable to be restarted until after the water level measurements were collected and the sampling event was completed. As a result, the potentiometric surface map generated for May 2006 represents non-pumping conditions, and may not represent steady-state conditions if groundwater levels were still recovering to stable non-pumping conditions at that time.

During the September 2006 sampling event, several monitoring wells could not be measured for various reasons. Across the site, many monitoring wells were found to have unusually low water levels that are suspected to be due to a combination of heavy silting of well screens and drought conditions in the area. In some instances, wells contained water and were able to be sampled, but the water level was below the pump mounts within the well casing so water level measurements could not be made. The treatment system had been shut down for nearly a month prior to restart on September 25, 2006 due to an air compressor failure which is discussed in the Site Inspection and Maintenance section. The water levels measured on September 25 and 26, 2006 do not represent steady-state pumping conditions.

Because the unconfined aquifer water levels recorded in May and September 2006 were recorded during non-steady state conditions, the potentiometric surface maps generated are not useful in evaluating capture zones . Due to the high number of wells that could not be measured in September 2006, and the non-steady state pumping conditions on the aquifer, no potentiometric surface map for the September 2006 water level data has been generated. An attempt will be made to coordinate future sampling events to occur while the treatment system is continuously operating, so that capture zones within the aquifer can be more effectively assessed.

The May 2006 potentiometric surface (Figure 1) indicates a local groundwater divide in the unconfined aquifer running southwest to northeast between monitoring wells MW-09 and MW-16. Monitoring wells MW-09 and MW-16 exhibit the local groundwater highs within this divide, possibly indicating infiltration within the unconfined aquifer as a result of surface water runoff from the Corrective Action Management Unit (CAMU). Groundwater flows radially away from these two wells and towards wells MW-02, MW-21, and MW-26.

The effect of the discharge of the treated groundwater at the infiltration basin has continued to show minimal to no response on the unconfined aquifer. The variability of the water table surface observed in the unconfined aquifer in 2006 is likely a function of both the influence of the treatment system's pumping wells and varying surface infiltration rates across the site.

Semiconfined Aquifer Groundwater

Groundwater in the semiconfined aquifer exhibited non-pumping flow patterns in May 2006, due to the aforementioned treatment system shutdown several days before water levels were recorded (Figure 2). During May 2006, a groundwater divide ran north-south beneath the site, between wells MW-03 and MW-08. Groundwater flows east and west off this divide, with the water flowing to the east focused well MW-14. The effect of the recharge from the infiltration basin continues to show an elevated potentiometric surface in this area. The effects of the infiltration basin do not impact the collection of contaminated groundwater by the groundwater collection system. Like the unconfined aquifer, the semi-confined aquifer potentiometric surface map generated for May 2006 may not represent steady-state conditions, as groundwater levels may still have been recovering to stable non-pumping conditions.

As in the unconfined aquifer, during September 2006, the semiconfined aquifer exhibited a number of monitoring wells that could not be measured; therefore, no potentiometric surface map for the September 2006 water level data has been generated.

Light Nonaqueous Phase Liquid Thickness

In May 2006, light nonaqueous phase liquid (LNAPL) was observed only in monitoring well MW-19 (0.29 feet). During September 2006, LNAPL was observed in MW-18 (0.05 feet), MW-19 (0.8 feet), and MW-20 (0.69 feet). This is consistent with historic observations, with the exception of the lack of LNAPL in MW-10S. Groundwater elevations, oil/water interface measurement data, historic LNAPL thickness data, and other observations are included in Appendix C.

Monitoring Well Sampling and Analysis

For the semiannual sampling round conducted in May and June 2006, five monitoring wells and five residential wells were sampled. The monitoring wells selected for this event were MW-01, MW-12, MW-19, MW-21, and MW-26. MW-19 was chosen to represent the unconfined groundwater in the LNAPL area; MW-01, MW-12, and MW-21 were chosen to assess the impacts of plant operation to the perimeter of the plume, particularly in the direction of residential wells; and MW-26 was chosen to monitor groundwater quality near the treated water infiltration basin. Sampling of these wells was started on May 31 and June 1; however, a pump control box failure required that the remaining wells be sampled on June 7, 2006. All monitoring wells were purged of at least three well volumes before sampling. MW-12 and MW-19 were purged and sampled with dedicated Grundfos pumps installed in 2005. The remaining monitoring wells were purged and sampled using disposable polyvinyl chloride (PVC) bailers.

Severn Trent Laboratories (STL) of Chicago, Illinois, analyzed the samples. Quality control (QC) samples consisting of field blanks, duplicate samples, and matrix spike/matrix spike duplicate (MS/MSD) samples were collected at the frequency specified in the Sampling and Analysis Plan (CH2M HILL, 2000; revised February 2005).

For the annual sampling event conducted during September 2006, 14 monitoring wells, 5 residential wells, and 1 potable-water well were sampled. The monitoring wells sampled for this event were MW-02, MW-05, MW-06S, MW-07, MW-10, MW-10S, MW-11, MW-12, MW-15, MW-16, MW-17, MW-19, MW-20, and MW-26. Sampling of the wells was completed between September 25 and September 28, 2006. During the September sampling event, an unusually high number of wells were unable to produce water due to heavy silting of well screens which resulted in monitoring wells MW-01, MW-03, MW-08, MW-13, MW-21, and MW-22 not being sampled. The groundwater level at well MW-26 was below the top of the pump; however, there was sufficient water at the pump inlet to allow purging and sample collection. Wells MW-07 and MW-15 went dry during purging and required a number of recharge cycles to complete sample collection.

All monitoring wells, with the exception of MW-06S and MW-16 were purged and sampled with dedicated Grundfos Redi-Flo 2 pumps, which were installed in 2005. Wells MW-06S and MW-16 were purged and sampled using disposable PVC bailers.

The samples were analyzed by STL of Chicago, Illinois. QC samples consisting of field blanks, duplicate samples, and MS/MSD samples were collected at the frequency specified in the Sampling and Analysis Plan (CH2M HILL, 2000; revised February 2005).

All monitoring well and residential well sample result packages were submitted to the director of USEPA Region 5 Central Regional Laboratory for data validation.

Residential Well Analytical Results

The residential well sample information (names, addresses, and telephone numbers) and the analytical results were submitted under separate cover to Tom Williams, USEPA Work Assignment Manager (WAM), on July 27, 2006, and December 14, 2006 (Appendix D).

Semiannual sampling (May/June 2006) results received from STL showed that PCP was present at low concentrations at one residential well and at the onsite potable well. PCP concentrations were 0.048 micrograms per liter (µg/L) in the residential well and 0.039 µg/L in the onsite potable well. No other site contaminants (BTEX or naphthalene) were detected in the semiannual residential well groundwater samples.

Annual sampling (September 2006) results received from STL showed that PCP was present at a low concentration in a field duplicate sample collected at one residential well; however, this compound was not detected in the parent sample. The PCP concentration reported in the field duplicate was 0.023 µg/L. No other site contaminants were detected in the annual residential well groundwater samples.

Evaluation of Groundwater Contaminant Trends

Trend analysis of historical groundwater data is presented to evaluate the performance of the RA at the site. The analysis has the following objectives:

- Evaluate the influent data from the groundwater extraction system to determine the amount of PCP removed to date. The system was in operation from September 2000 to September 2001, and from February 2004 to the present, with occasional short-term periods where the system was shut down for maintenance and repair.
- Evaluate the current monitoring data to determine whether the plume is declining in size since the February 2004 restart of the treatment system.
- Evaluate the infiltration basin area to determine the effect of reinfiltration on groundwater quality.
- Identify changes needed to groundwater monitoring strategy.

For completeness, the results of the previous analyses and new data from 2006 are presented below.

Groundwater Extraction System PCP Removal Estimates

The groundwater extraction system was operated between September 27, 2000, and September 27, 2001, for a total of 280 days, with flow rates ranging from 35 gallons per minute (gpm) to 120 gpm during operation. A total volume of 30 million gallons of

groundwater, or roughly 2 pore volumes of the extraction zone, was removed. PCP influent concentrations were typically in the 5,000 to 14,000 µg/L range. Based on this information, the estimated PCP mass removed was about 2,500 pounds (see Table 1).

TABLE 1
PCP Mass Removed with the Groundwater Extraction System: September 27, 2000–September 27, 2001; and February 27, 2004–December 31, 2006
Penta Wood Products Site

Operation Period	Days Operated[a]	Average Flow Rate (gpm)	Average PCP Influent Concentration (µg/L)	PCP Mass Removed (lb])
09/27/00 to 12/18/00	83	98	12,535	1,224
02/2/01 to 02/8/01	8	60	12,535	72
03/16/01 to 06/10/01	86	75	10,356	802
06/15/01 to 09/27/01	103	46	7,535	429
		Total PCP Mass Removed 2000 to 2001		**2,527**
02/27/04 to 12/31/04	240[1]	80	9,227	2,128
01/01/05 to 12/31/05	190	74	7,300	1,233
01/01/06 to 12/31/06	188	75	8,351	1,414
		Total PCP Mass Removed 2000 to 2006		**7,302**

[a] Number of days operated is approximate because of start-up/shut-down times.

The groundwater extraction system was restarted on February 27, 2004. From February to July 2004, the extraction system operated intermittently, and from July 2004 to December 2005, it operated more consistently. A total volume of approximately 49 million gallons of groundwater, or roughly 4 pore volumes of the extraction zone, were removed during this period.

The extraction system has operated consistently in 2006, with only a few shutdowns. Over 2006, groundwater extraction rates ranged from 44 to 82 gpm. A total volume of approximately 13 million gallons of groundwater, or roughly 1 pore volume of the extraction zone, were removed during the year. PCP influent concentrations in 2006 ranged from 2,600 to 22,600, with an average of 8,351 µg/L. Based on this information, the estimated PCP mass removed was approximately 1,400 pounds (see Table 1).

The total PCP mass removed since September 2000 is about 7,302 pounds. This represents about 91 percent of the dissolved phase PCP mass that was present prior to the operation of the extraction system. However, as shown in Table 2 on the following page, it is estimated that there is considerably more PCP mass adsorbed on the aquifer matrix (9,000 pounds) than in the groundwater (3,000 pounds). All the remaining PCP mass is present in the LNAPL residual zone (12,000 pounds). It should be noted that the contaminant mass estimates are based on many simplifying assumptions and expected to be accurate only to within a one order-of-magnitude range. As a result, they are intended for general comparisons of the relative significance of contaminant mass in different media.

With the installation of the new dedicated Grundfos Redi-Flo 2 MP1 pumps in September 2005, more representative sampling occurred because the task of bailing from

these wells was eliminated. Bailing of wells that contained free product required repeatedly passing the bailer through the LNAPL to sample the groundwater. This caused the introduction of product to the sample and biased results higher than expected. The new pumps allowed for more reliable samples, which could result in lower or nondetect results, and it may be possible to redefine the areas in Table 2 in the future for better estimates of saturated zone contaminant mass.

Table 3 summarizes the PCP mass estimate for 2006 at the Penta Wood Site.

The volume of liquid waste that was obtained from the separator can be used to make a rough estimate of the volume of LNAPL that was removed by groundwater extraction. While the plant was operating in 2006, approximately 6,665 gallons of liquid waste were captured in the separator; if the assumption is made that one-half of this waste was water, then roughly 3,333 gallons of LNAPL were removed. Assuming an LNAPL density of 0.84 grams per cubic centimeter (g/cm^3) and a PCP concentration of 5 percent, this volume equates to about 1,168 pounds of PCP.

TABLE 2
Estimate of 2006 Saturated Zone Contaminant Mass
Penta Wood Products Site

Contaminant	Parameter	Unconfined MW10S, 19, 20 (Area 1)	Unconfined MW6S, PW01 (Area 2)	Unconfined MW3 (Area 3)	Unconfined MW16 (Area 4)	Semiconfined MW5,10,18 (Area 1)	Semiconfined MW6, PW01 (Area 2)	Semiconfined MW3 (Area 3)	Semiconfined MW12 (Area 4)	Total Contaminant Mass (lb)
	Aquifer Media Volume (ft^3):	3,540,000	2,790,000	1,800,000	6,100,000	5,900,000	4,650,000	3,000,000	10,200,000	
	Aquifer Water Volume (ft^3):	1,416,000	1,116,000	720,000	2,440,000	2,360,000	1,860,000	1,200,000	4,080,000	
Mass in 2006 (2nd Year Following Groundwater Extraction System restarted in February 2004) Based on Groundwater Sampling in September, 2006										
PCP	Conc. (µg/L)	18,233	0.1			11,730	0.1		3,100	
K_d[b] = 0.60	Mass in soil (lb)	4,302	0	0	0	4,612	0	0	2,107	11,021
	Mass in GW (lb)	1608	0	0	0	1724	0	0	788	4,118
	Total Mass (lb)	5,509	0	0	0	6,336	0	0	2,895	15,140

[a] Where April 2000 groundwater data is not available for an MW, April 2001 data is used.
[b] K_d from Hydrogeologic Investigation, December 1994.
[c] LNAPL product present in all three wells in this subarea. As a result, PCP concentrations are not reliable. Concentrations are assumed to be similar to 2003.
[d] MW10 could not be sampled during the September 2005 sampling event.

Notes:

Contaminant mass estimates are based on many simplifying assumptions and are expected to be accurate only to within a one order-of-magnitude range. As a result, they are intended as general comparisons of the relative significance of contaminant mass in different media.

Soil Density = 1.78 g/cm^3; ft^3 = cubic feet; GW = groundwater

TABLE 3
Summary of 2006 PCP Mass Estimates

Penta Wood Products Site	September 2006 PCP Mass (lb)	Notes
Unsaturated Zone	115,000	No additional data to estimate actual degradation of PCP in the unsaturated zone.
LNAPL Residual Zone	15,000	No additional data to estimate actual degradation of PCP in LNAPL zone.
Saturated Zone—Adsorbed	11,000	Based on groundwater concentration and a PCP K_d of 0.6.
Saturated Zone—Dissolved	4,100	Based on weighted average groundwater concentrations.
Total PCP Mass	145,500	
Removed by LNAPL Recovery System 2000–2001 / 2006	1,200	Assuming 50% of recovered liquid is LNAPL and LNAPL is 5% PCP.
Removed by GW Extraction System 2000–2001 / 2006	7,300	

Note: Contaminant mass estimates are based on many simplifying assumptions and are expected to be accurate only to within a one order-of-magnitude range. As a result, they are intended as general comparisons of the relative significance of contaminant mass in different media.

PCP Plume

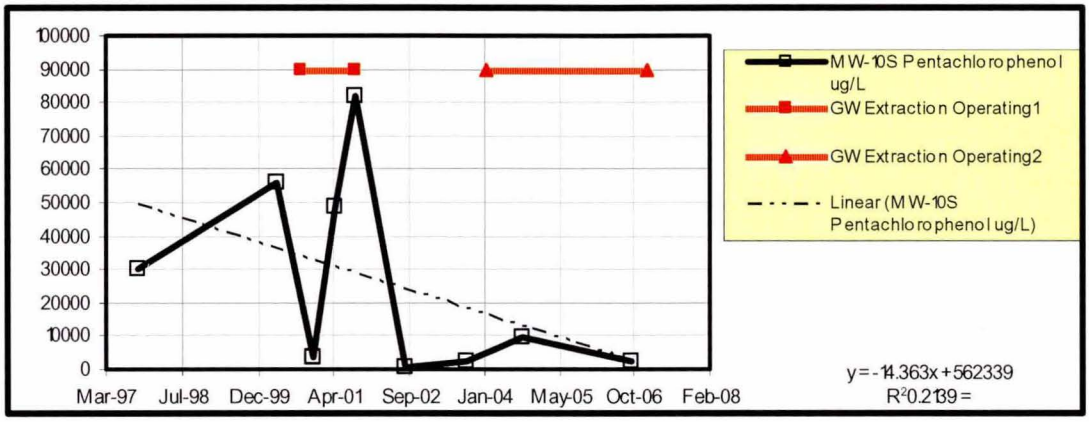
The monitoring well analytical results tables presented in Appendix A are formatted into two unique tables: the May/June 2006 semiannual sampling results and the September 2006 annual sampling results.

To observe PCP trends over time, PCP concentration contours that exceed 1,000 µg/L are presented in Figure 1 of Appendix C. PCP concentration contours that exceed the Wisconsin NR 140 enforcement standard of 1 µg/L are presented in Figure 2 of Appendix C. A comparison of the 1,000 µg/L PCP contour lines in Figure 1 for 1997, 2005, and 2006 shows that the high concentration plume has shrunk from 1997 to 2006. The high concentration plume shrank a small amount from 2005 to 2006. A greater amount of shrinking is not anticipated until a more significant amount of LNAPL is removed, given the large mass of PCP that can solubilize from the LNAPL residual.

The 2006 extent of the plume exceeding the 1 µg/L contour, as shown in Figure 2 (Appendix C), remains similar to the 2005 contour. Because monitoring wells MW-09 and MW-13 could not be sampled during the September 2006 annual sampling event (due to dry conditions), the northeast area of the plume could not be accurately delineated. It was inferred that there would be a decline in PCP concentrations at well MW-09. Sampling this well during the next annual sampling event (September 2007) will allow for this section of the plume to be more exactly delineated. There continues to be a sharp decline in PCP concentrations between the high concentration area where LNAPL is present and the surrounding perimeter of the plume, that is, the 1-µg/L contour is only slightly larger than the 1,000-µg/L contour. This is likely due to a combination of the groundwater collection system drawing water towards the approximate center of the plume and biodegradation resulting from the availability of oxygen in groundwater around the plume perimeter.

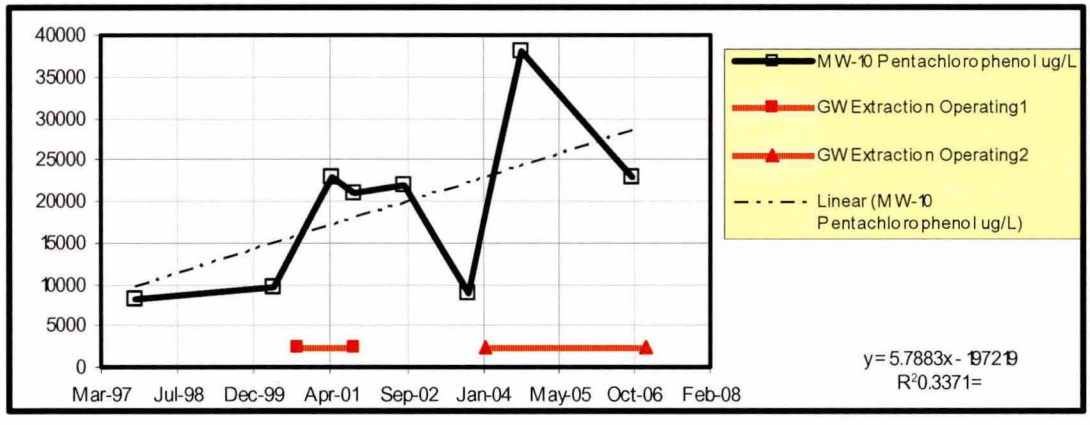
Monitoring well MW-10S has shown wide fluctuations in PCP during groundwater collection periods as can be seen in Figure 3. Overall, PCP has declined from 56,100 µg/L prior to groundwater extraction to less than the detection limit in 2005 (<0.11 µg/L), In September 2006, the PCP concentration rose again to 2,700 µg/L. MW-10S is within 100 feet of the high concentration PCP plume in the unconfined aquifer, where relatively clean groundwater can be drawn past the well screen by nearby extraction well (EW) EW-03. Since 2002, the presence of LNAPL (sheen or measurable product) has been inconsistent at MW-10S, explaining the wide range of PCP concentrations. The presence of free product is likely the result of extraction well EW-03 pulling product towards it while actively pumping. The higher PCP concentration observed at MW-10S in September 2006 relative to 2005 is likely due to floating product creating a smear zone as the water level dropped prior to May 2006 (measurable product was observed in this well in May and September of 2005 at 0.29 feet and 0.87 feet, respectively).

FIGURE 3
MW-10S PCP Concentration and Groundwater Extraction Operating Period



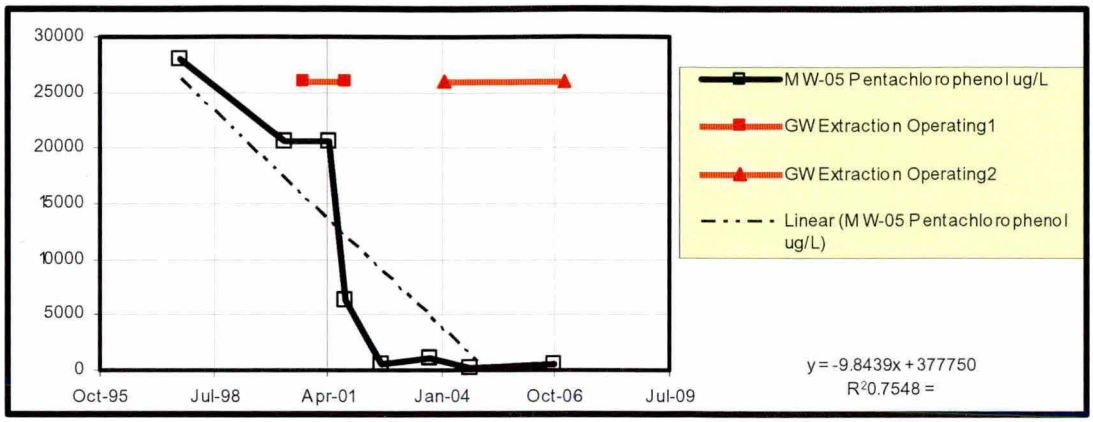
PCP in monitoring well MW-10 increased from 9,530 µg/L shortly before the startup of the treatment system to 22,000 µg/L in August 2002 (see Figure 4). Concentrations in the well did not drop immediately, but by September 2003, concentrations had fallen to 9,000 µg/L. In September 2004, PCP concentrations at MW-10 increased to 38,000 µg/L. This is likely a result of the extraction system restart in February 2004. MW-10 is very near to extraction well EW-03, which pulls product toward it while actively pumping. In September 2005, MW-10 was not sampled because the well was dry; however, in September 2006, a concentration of 23,000 µg/L was reported.

FIGURE 4
MW-10 PCP Concentration and Groundwater Extraction Operating Period



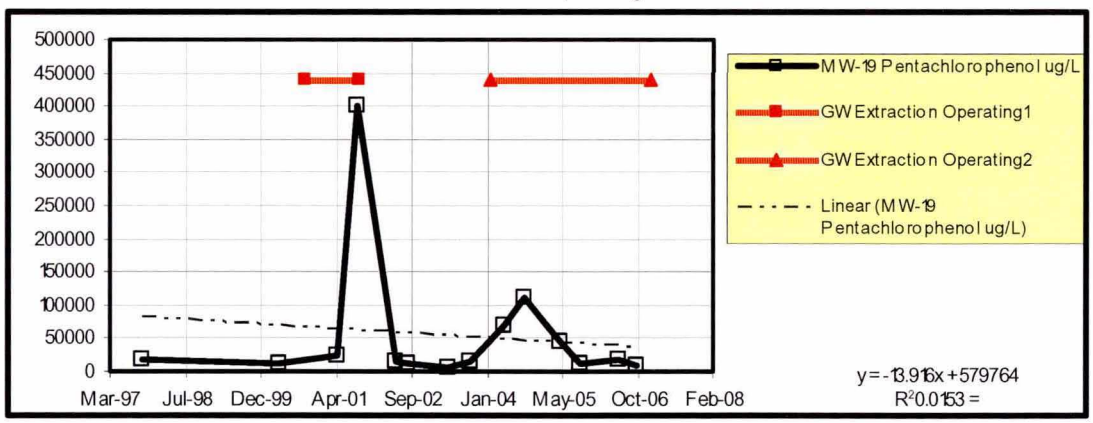
PCP in monitoring well MW-05 has dropped sharply from 20,600 µg/L prior to groundwater collection to 460 µg/L in the most recent sample in September 2006 (see Figure 5). This area of the plume is being remediated relatively quickly because of the nearby uncontaminated groundwater being drawn radially toward EW-02 and EW-05 since their activation in February 2004, thereby purging the aquifer of PCP.

FIGURE 5
MW-05 PCP Concentration and Groundwater Extraction Operating Period



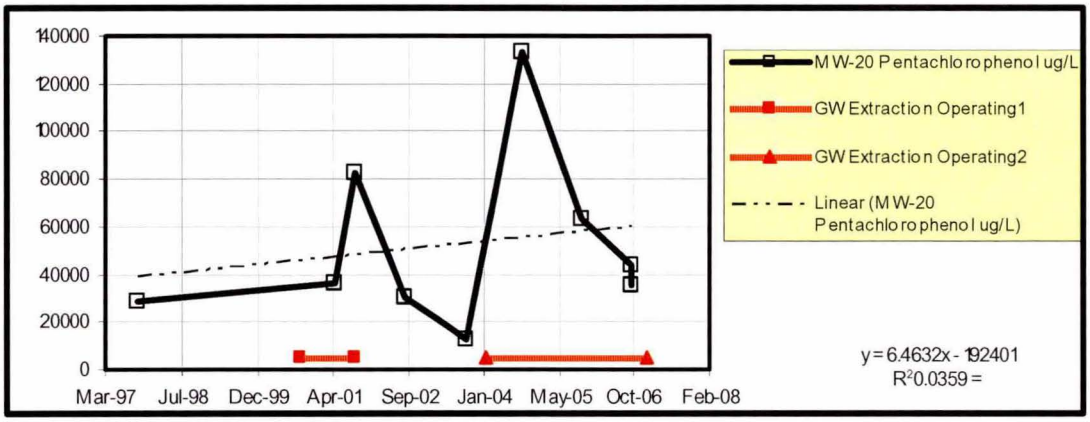
LNAPL has been present in MW-19 since monitoring began (see Figure 6), making the evaluation of PCP trends difficult because any entrainment of LNAPL droplets in the sample will have large effects on PCP concentrations. The LNAPL has resulted in large variations in PCP concentrations that are not believed to be indicative of the dissolved phase groundwater concentrations. The installation of dedicated sampling equipment in the well appears to be reducing the variability of PCP concentrations. The September 2006 PCP concentration of 8,200 µg/L is the second lowest ever reported at this well.

FIGURE 6
MW-19 PCP Concentration and Groundwater Extraction Operating Period



LNAPL has also been present in MW-20 since monitoring began (see Figure 7), with the exception of May 2006, when the well was dry. As with MW-19, the LNAPL has resulted in large variations in PCP that are not believed to be indicative of dissolved phase groundwater concentrations. After eliminating bailer sampling methods with the use of new dedicated Grundfos Redi-Flo 2 MP1 pumps, the entrapment of LNAPL in groundwater samples from this well should be minimized; however, the possibility of significant PCP concentration variability still exists.

FIGURE 7
MW-20 PCP Concentration and Groundwater Extraction Operating Period



Overall, the 2006 PCP concentrations in the high concentration perimeter areas (>1,000 µg/L) are largely similar to those of 2005.

Naphthalene

Naphthalene was detected in five monitoring wells at levels above the reporting limits in 2006: MW-10, MW-10S, MW-12, MW-19, and MW-20, with concentrations ranging from 1.2 µg/L in MW-12 to 180 µg/L in MW-20. All wells where naphthalene was detected are within the area of concentrated PCP (> 1,000 µg/L).

BTEX

BTEX compounds were detected above the reporting limits at five monitoring wells in 2006. All wells where these compounds were detected were located within the area of concentrated PCP (> 1,000 µg/L). Ethylbenzene was detected in four monitoring wells (MW-10, MW-12, MW-19, and MW-20) at concentrations ranging from 0.67µg/L to 5.1µg/L. Toluene was detected at three monitoring wells (MW-10, MW-19, and MW-20) at concentrations ranging from 1.2 µg/L to 41 µg/L. Xylene was detected at five monitoring wells (MW-10, MW-10S, MW-12, MW-19, and MW-20) at concentrations ranging from 1.7 µg/L to 53 µg/L. Benzene was not detected in any well.

Dissolved Metals

In previous years, both total and dissolved metals analyses were performed on samples collected from monitoring wells. For 2006, total metals analyses have been dropped from the sampling plan, as they are often biased high as a result of the frequent presence of suspended solids. Suspended solids often have a significant impact on total metals concentrations and are therefore not indicative of actual groundwater conditions. Dissolved arsenic, copper, iron, manganese, and zinc were sampled in May and September 2006.

Arsenic. Dissolved arsenic was not detected in any of the groundwater samples collected in May and September 2006. All samples had detection limits below the Wisconsin Department of Natural Resources (WDNR) Preventive Action Limit (PAL) of 5 µg/L.

Copper. In 2006, dissolved copper at all monitoring wells was below the WDNR PAL of 130 µg/L and the site's reporting limit of 10 µg/L. Samples collected from the on-site potable water well (DW-01) reported concentrations of 140 µg/L in May 2006 and 100 µg/L in September 2006. This well is not used to monitor site cleanup performance parameters, and copper is expected to be higher than typical groundwater because copper piping was used to provide water service throughout the building, where the samples were collected.

Iron. Dissolved iron was detected above the WDNR ES of 0.3 milligrams per liter (mg/L) at MW-05, which had a reported level of 23 mg/L in September 2006, the highest reading ever observed in this well. The site's reporting limit of 0.15 mg/L was not exceeded in any other well.

There is a slight downward trend for dissolved iron concentrations in a majority of monitoring wells. This is expected as the more oxygen-rich groundwater surrounding the site is drawn into the reducing portion of the plume, increasing the oxidation-reduction potential (ORP) to more oxidative conditions.

Manganese. Dissolved manganese exceeded the WDNR ES of 0.05 mg/L at eight wells (MW-05, MW-06S, MW-07, MW-10, MW-10S, MW-12, MW-19, and MW-20) ranging from 0.068 mg/L (MW-07) to 8.0 mg/L (MW-05).

For most wells, there is an overall downward trend in total and dissolved manganese concentrations, with the exception of a few wells, where the trend is less well-defined and displays some lower manganese concentrations prior to September 2004.

Zinc. Dissolved zinc was detected at three monitoring wells in 2006 (MW-12, MW-15 and MW-17) ranging from 7.5 µg/L to 16 µg/L. There were no WDNR PAL (2.5 mg/L) or ES (5.0 mg/L) exceedances of dissolved zinc in any monitoring wells. The samples from the on-site potable water well (DW-01) reported concentrations of 1,900 µg/L in May 2006 and 1,500 µg/L in September 2006. This well is not used to monitor site cleanup performance parameters and may not be representative of groundwater because it must pass through metal piping to provide water service to the building, where the sample was collected.

Evaluation of Natural Attenuation

Natural attenuation is a remediation approach that relies on natural processes that work to reduce mass and concentration of contaminants in soil and groundwater. Natural attenuation processes include dispersion, dilution, abiotic transformation, volatilization, sorption, and biodegradation. Biodegradation is often the most important process for compounds that can be transformed or reduced by indigenous microorganisms.

Appendix B contains a table presenting the natural attenuation parameters for each well as measured in 1997, 2000, 2001, 2002, 2003, 2004, 2005 and 2006.

Limitations in Field Measurements of Natural Attenuation Parameters. The natural attenuation parameters measured in the field may not be truly representative of groundwater because of the limitations that exist in measurement methods. Installation of the new dedicated Grundfos Redi-Flo 2 MP1 pumps in 2005 has greatly reduced the potential for measurement-induced errors in natural attenuation parameters. Use of these dedicated pumps minimizes suspended solids in samples and decreases aeration during sample collection. Dissolved metals will again be representative of groundwater because of new pump installation. However, if sample locations are frequently turbid (such as MW-03) or if metal casings in wells have corroded, total metals data may not be representative of groundwater conditions. Dedicated downhole Grundfos Redi-Flo 2 pumps are installed into MW-03, MW-05, MW-07, MW-08, MW-09, MW-10, MW-10S, MW-11, MW-12, MW-15, MW-17, MW-19, MW-20, and MW-26.

Oxidation/Reduction. Evaluation of the data generated during 2006 suggested that areas at the perimeter of or outside the PCP plume are under slight to strong oxidizing conditions. Oxidation-reduction potential at wells in the most concentrated area of the PCP plume (>1,000 µg/L) have not been measured, due to the possibility of LNAPL impacting the field measurements. It is expected that these wells would exhibit reducing conditions.

Chloride. Elevated chloride concentrations are an indicator of PCP degradation. About 700 µg/L of chloride is produced for each 1,000 µg/L of PCP degraded. Generally, chloride is higher at the plume interior wells than at the perimeter wells; however, because some of the wells in the monitoring program were dry, and the treatment system was shut down the prior month, it is difficult to make a direct comparison between areas or over time. In 2006, the semi-confined wells had chloride levels ranging from 14 mg/L to 16 mg/L, with slightly higher levels reported in May (21 mg/L). The unconfined wells ranged from 1.6 mg/L to 65 mg/L with the highest levels reported in MW-21, MW-26 (near the infiltration basin), and MW-06S (in the CAMU). Historically, MW-03 and MW-21 have reported the highest chloride levels, possibly because of their proximity to the highway where influence from seasonal road salting may be causing elevated chloride concentrations. MW-03 was not sampled in September 2006 because it was dry.

Since the beginning of groundwater extraction, correlation between PCP degradation and chloride production has been difficult because, as chloride is produced, it is removed by the extraction system, creating a net effect that is difficult to discern.

Nitrate. In 2006, nitrate levels remained relatively low, ranging from 0.12 to 5.5 mg/L, and remaining comparable to concentrations observed in 2005.

Methane. Methane, a product of anaerobic degradation, was detected in three wells in September 2006 (MW-05, MW-06S, and MW-07) at low concentrations ranging from 3.5 to 8.7 µg/L. The absence of methane at or above the detection limit in most wells suggests that degradation is occurring primarily under nonmethanogenic, anaerobic iron, or sulfate-reducing conditions.

Sulfate. Once oxygen and nitrate are depleted, sulfate can also be used as an electron acceptor. Sulfate continues to fluctuate within the plume and has not shown any clear trends. Sulfate levels in 2006 are similar to previous years.

Effects of Reinfiltration on Groundwater Quality

Large quantities of treated groundwater were reinjected at the site's infiltration basin since the beginning of operation. A total of 92 million gallons of groundwater have been reinfiltrated. The water would be expected to displace groundwater over a considerable area. Assuming that a 20-foot thickness of the aquifer is affected, the area occupied by 92 million gallons equals roughly 47 acres.

MW-26 is used to determine the effects the infiltration basin has on groundwater in the area. The well, however, was not sampled prior to the discharge of groundwater. As a result, MW-08, located about 200 feet upgradient, is used to establish the local background concentrations.

PCP in MW-26 has remained similar to background levels. Based on surrounding background concentrations, chloride increased from an expected background of about 5 mg/L to a range of 10 to 30 mg/L during the operation of the groundwater collection and treatment system.

Sulfate concentrations have increased from a background value of less than 10 mg/L to as high as 200 mg/L in May 2005, with the most recent September 2006 result at 87 mg/L.

Iron concentrations have dropped significantly at MW-26. This was also expected because the aeration of the groundwater results in precipitation and removal of iron from treated groundwater. Nitrate concentrations have also dropped as expected because the source area groundwater has minimal nitrate.

Another benefit of reinfiltrating groundwater is that treatment results in aeration and reoxygenation of the groundwater. Assuming a portion of this water flows towards the extraction wells and into the PCP plume, it would result in a considerable supply of oxygen for aerobic biodegradation of the PCP. In previous years, water sourced from the infiltration basin has been shown to migrate towards the PCP plume in both the unconfined and confined aquifers. In 2006, the potentiometric surfaces of both aquifers did not generally follow this pattern observed in past years; however, the stop or start of the treatment system shortly before water level measurements were collected meant that the flow patterns observed were not indicative of steady-state conditions within the aquifers. Groundwater elevations recorded from 2005 shows that the infiltration basin is situated on a groundwater divide. Groundwater flow is shown to migrate bilaterally from the infiltration flowing west-northwest and east. Fate of the groundwater flowing east will consequently migrate towards the PCP plume. Conversely, groundwater flow west of the infiltration basin will continue on a westward path traveling offsite.

Summary

Semiannual groundwater sampling was conducted at the Penta Wood Products Site in May and June 2006 for five monitoring wells, five residential wells, and one onsite potable

well. The fifth post-RA annual groundwater sampling event was conducted in September 2006 and consisted of 14 monitoring wells, 5 residential wells, and 1 onsite potable well.

Results from the residential wells that were sampled in May and September 2006 indicate the presence of PCP at very low concentrations in one residential well (less than half of the NR 140 PAL of 0.1 µg/L) and the onsite potable well. No other contaminant detections were reported in the residential wells sampled in August.

The groundwater extraction system was operated continuously from January 2006 through December 2006. More than 15 million gallons of groundwater, or nearly 2 pore volumes, were removed from the extraction zone. Over 1,400 pounds of PCP were removed.

The PCP plume exceeding 1,000 µg/L has continued to shrink slightly between 1997 and 2006 as a result of continued groundwater extraction and natural attenuation. The extent of the plume, as defined by the 1 µg/L contour, extends out to MW-9 in the northeast and to the east of MW-14 in the southeast. The most notable change in PCP concentration occurred at MW-20, where PCP declined from 63,000 µg/L to 44,000 µg/L.

More rapid plume remediation is limited by the continued dissolution of PCP from the LNAPL. The LNAPL extent or thickness has not declined appreciably even though an estimated 3,300 gallons of LNAPL were removed.

Naphthalene and BTEX were present in several wells in the area of concentrated PCP. They are not present in any of the monitoring wells along or outside the plume perimeter.

Evaluation of the natural attenuation parameters revealed similar conditions as those in 2005, with the only exception being that in the area of PCP plume perimeter, conditions appear to be more oxidizing than in previous years.

Recommendations

It is recommended that the steps recommended in 2005 to minimize the impact of laboratory analytical contaminant carryover during PCP analysis should be continued. It is important that lower concentrations of PCP be accurately determined in groundwater beneath the site. Samples should continue to be submitted in three groups representing PCP concentrations from low to high and will be analyzed in that order. The sample groupings are as follows:

1. Wells with PCP < 100 µg/L
2. Wells with PCP > 100 µg/L and no LNAPL in the well
3. Wells with LNAPL

The continued dissolution of PCP from the LNAPL is limiting the ability to more rapidly remediate the groundwater. A more detailed analysis of LNAPL removal rates and the remaining mass of LNAPL should be undertaken. Analysis of the PCP concentration in the remaining LNAPL may also be warranted.

In addition, the following items have been recommended for 2007:

- Perform an LNAPL recovery pilot study to optimize the LNAPL recovery. This will be accomplished by using submersible pumps with a higher pumping rate in select

extraction wells and varying the groundwater extraction rate to maximize the LNAPL recovery while minimizing the groundwater extraction.

- Evaluate turning on the bioventing wells. This will be considered in conjunction with the LNAPL recovery.
- Coordinate future sampling events to occur while the treatment system is continuously operating, so that capture zones within the aquifer can be more effectively assessed.
- Redevelop wells where there is suspected silting within the well. This is proposed to be performed prior to the May 2007 semi-annual sampling event.

Waste Generation and Disposal Summary

The RA activities at the site result in the generation of hazardous waste. Hazardous waste management procedures for the Penta Wood Products Site (USEPA ID No. WID006176945) are outlined in the Waste Handling Plan (CH2M HILL, 2005).

Table 4 summarizes the amount of waste generated and disposed of offsite.

TABLE 4
Hazardous Waste Generation Summary
Penta Wood Products Site

Manifest #	Date	Filter Cake (lbs)	Misc. Debris (lbs)	Carbon (lbs)	LNAPL (lbs)	Water (gal)	Yearly Total (lbs)
IL9408187	12/19/2000				5,009		
IL9408188	12/19/2000		200	6,000			
	Total (lb):	**0**	**200**	**6,000**	**5,009**		**11,209**
WIK168068	08/28/2001		400	3,600	4,239		
WIK169159	04/03/2001			44,000			
WIK169160	04/03/2001			8,500	1,927		
	Total (lb):	**0**	**400**	**56,100**	**6,166**		**62,665**
WIK179411	01/08/2002			40,000			
WIK179412	01/08/2002		200	8,000			
WIK179225	04/04/2002		200		3,083		
WIK298473	06/09/2002		1,000		7,707		
IL10328513	06/25/2002					3328	
	Total (lb):	**0**	**1,400**	**48,000**	**10,790**	**27,756**	**87,944**
WIK296620	10/30/2003		600		3,083		
IL10329166	10/30/2003					165	
	Total (lb):	**0**	**600**	**0**	**3,083**	**1,376**	**5,059**
WIK359186	02/11/2004		200	8,000			
WIK359185	02/12/2004			38,000			
WIK359334	05/04/2004			6,000			
2159985	05/19/2004		1,200				
WIK359343	05/19/2004	10,700					
WIK278209	05/19/2004			10,000			
WIK376767	06/07/2004	24,000					

TABLE 4
Hazardous Waste Generation Summary
Penta Wood Products Site

Manifest #	Date	Filter Cake (lbs)	Misc. Debris (lbs)	Carbon (lbs)	LNAPL (lbs)	Water (gal)	Yearly Total (lbs)
WIK376681	07/12/2004	18,860					
WIK363235	08/05/2004	19,140					
CWM0027842	08/10/2004				25,500		
WIK363114	09/14/2004	18,700					
WIK363151	10/20/2004	15,660					
WIK361532	11/22/2004		1,800	40,000			
WIK448461	11/22/2004	24,900					
WIK361540	12/04/2004				28,022		
WIK446853	12/29/2004	24,000					
	Total (lb):	**155,960**	**3,200**	**102,000**	**53,522**		**314,682**
WIK361592	01/19/2005	13.26					
WIK361599	02/02/2005	0.40	140	19,465			
WIK302737	03/09/2005	14.05					
WIK390017	03/20/2005			24,498			
WIK390019	03/21/2005				24,415		
WIK390053	05/04/2005		76	18,492			
WIK417972	05/05/2005	14.27					
WIK390072	06/20/2005	16.48					
WIK390144	07/14/2005	2.66	787	19,138			
WIK390188	10/04/2005	13.58					
WIK390189	10/04/2005		287	23,394			
WIK511343	11/29/2005	14.70					
	Total (lb):	**178,775**	**1,290**	**104,987**	**24,415**		**309,467**
WIK511358	1/3/2006				24,085		
WIK511369	1/24/2006	28,500					
WIK511500	2/17/2006		200	44,380			
WIK490587	4/5/2006	30,760					
WIK490632	5/12/2006		800	18,780			
WIK361872	6/20/2006	27,080					
WIK361873	6/20/2006				28,807		

TABLE 4
Hazardous Waste Generation Summary
Penta Wood Products Site

Manifest #	Date	Filter Cake (lbs)	Misc. Debris (lbs)	Carbon (lbs)	LNAPL (lbs)	Water (gal)	Yearly Total (lbs)
WIK490607	6/20/2006		200	18,800			
WIK361868	8/14/2006	26,300					
000598697JJK	10/19/2006			54,560			
	Total (lb):	**112,640**	**1,200**	**136,520**	**52,892**		**303,252**

Misc. Debris assumes 200 lb/drum
Weight of Fuel Oil (LNAPL) = 8.34 lb/gal water x 0.84 density
Weight of Water = 8.34 lb/gal
Weight of Carbon based on 2,000 lb/filter bag

gal = gallon

Site Inspection and Maintenance

Community Relations

During 2006, there were no trespassing, neighbor, or township/community issues at the site.

Site Condition

During 2006, the overall condition of the site was very good. The CAMU cap remains heavily vegetated with grasses and no erosion was observed on the CAMU cover.

Treatment System

In February and April, Champion Coatings was onsite to reline the small carbon vessel and both large carbon vessels with new epoxy. The original liners were damaged by the previous carbon changeout subcontractor, who was not retained due to performance and safety concerns. The relining work required 1 week cure times for the epoxy before the vessels could be filled with carbon.

Also in February, a filter was installed on the potable water line to remove sand particles and protect downstream plumbing fixtures.

In April, the operation issue with Extraction Well No. 4 was identified as a power supply wiring fault rather than a variable frequency drive (VFD) issue. The wiring fault was located and repaired at the well vault.

During August, the main air compressor failed. The air compressor service company previously subcontracted is no longer in business which resulted in a delay for service of the air compressor at the site. A new qualified air compressor service company was identified and subcontracted and the system was restarted in September.

In November, Water Development Corporation (WDC) was onsite to replace the well pumps in extraction well numbers 10 and 11. The pumps were restarted; however, well pump number 11 is still not functioning due to issues with the variable frequency drive or a wiring fault.

Health and Safety

There were no health and safety issues during 2006.

Recommendations

- Evaluate alternate polymer delivery systems. While the same polymer would be used, it may be either dry or emulsion depending on the delivery system.

- Backwashing of the large carbon vessels should be evaluated in terms of the additional piping and tanks that would be needed and installation cost.
- Backwashing of the large carbon vessels should be evaluated in terms of the additional piping and tanks that would be needed and installation cost.

Some erosion preventative maintenance (Figure 8) will be required during 2007 including:

- Recrowning of the site driveway because erosion is causing minor flooding in the building
- Erosion repairs on the north side of the building
- Erosion repairs near the east sedimentation basin
- Seeding of the area east of the CAMU to further minimize erosion in that area
- Reshaping the driveway to alleviate sharp corners and facilitate Semi Tractor Trailer traffic, especially in the winter
- Rip rap any natural drainage areas identified by spring runoff to minimize further erosion.
- Seeding barren areas throughout the site to minimize erosion.

References

CH2M HILL. 2000. Sampling and Analysis Plan. Revised April 2001.

CH2M HILL. 2005. Waste Handling Plan.

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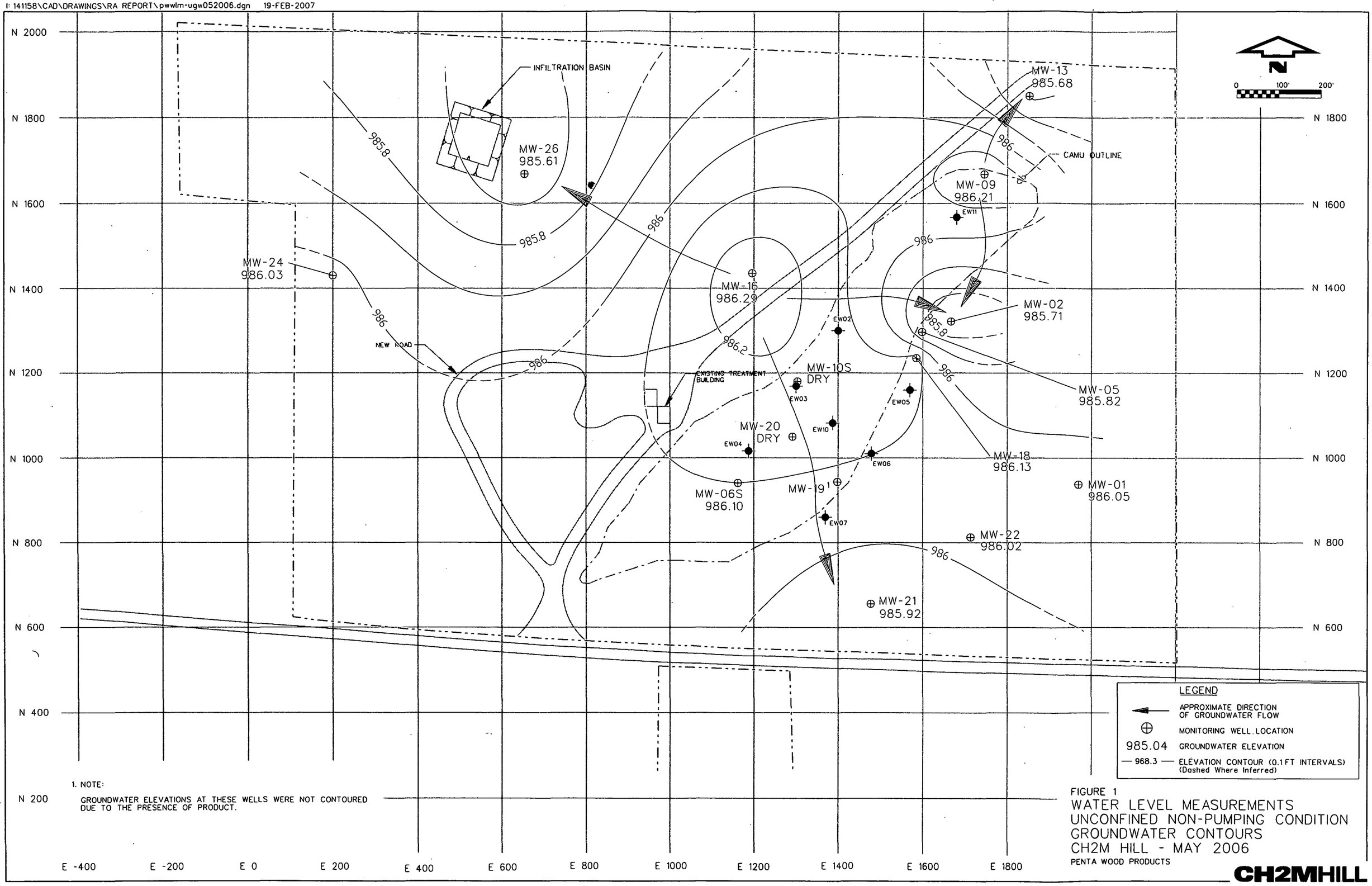

LEGEND

- APPROXIMATE DIRECTION OF GROUNDWATER FLOW
- ⊕ MONITORING WELL LOCATION
- 985.04 GROUNDWATER ELEVATION
- — 968.3 — ELEVATION CONTOUR (0.1 FT INTERVALS) (Dashed Where Inferred)

1. NOTE:
GROUNDWATER ELEVATIONS AT THESE WELLS WERE NOT CONTOURED DUE TO THE PRESENCE OF PRODUCT.

FIGURE 1
WATER LEVEL MEASUREMENTS
UNCONFINED NON-PUMPING CONDITION
GROUNDWATER CONTOURS
CH2M HILL - MAY 2006
PENTA WOOD PRODUCTS

CH2MHILL

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N 2000
N 1800
N 1600
N 1400
N 1200
N 1000
N 800
N 600
N 400
N 200

E -400
E -200
E 0
E 200
E 400
E 600
E 800
E 1000
E 1200
E 1400
E 1600
E 1800

0 100' 200'

INFILTRATION BASIN
MW-11 985.19
MW-08 985.76
MW-17 985.64
MW-23 985.32
CAMU OUTLINE
EW11
985.6
985.4
MW-12 985.62
MW-10 985.72
EW02
NEW ROAD
EXISTING TREATMENT BUILDING
EW03
EW05
985.6
985.4
985.2
EW10
EW04
EW06
MW-14 985.17
MW-07 985.67
MW-04 985.21
EW07
985.6
985.4
MW-03 985.74
985.8
MW-15 985.87

LEGEND
- APPROXIMATE DIRECTION OF GROUNDWATER FLOW
- MONITORING WELL LOCATION
- 985.04 GROUNDWATER ELEVATION
- — 968.3 — ELEVATION CONTOUR (0.1 FT INTERVAL) (Dashed Where Inferred)

FIGURE 2
WATER LEVEL MEASUREMENTS
SEMI-CONFINED NON-PUMPING CONDITION
GROUNDWATER CONTOURS
CH2M HILL - MAY 2006
PENTA WOOD PRODUCTS

CH2MHILL

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N

0 100' 200'

N 2200
N 2000
N 1800
N 1600
N 1400
N 1200
N 1000
N 800
N 600

E 200 E 400 E 600 E 800 E 1000 E 1200 E 1400 E 1600 E 1800 E 2000 E 2200 E 2400 E 2600

INFILTRATION BASIN
MW-08
MW 11
MW26
MW 17
MW 13
PROPERTY BOUNDARY
SEDIMENT TRAPS EMPTIED (2005)
MW23
MW 9
CAMU OUTLINE
EW11
MW24
NEW ROCK LINED DITCH AND EROSION REPAIR (2005)
MW 16
MW 12
AREA RECOMMENDED FOR EROSION REPAIR (2006)
AREA RECOMMENDED FOR EROSION REPAIR (2006)
EW02
MW 5
MW 2
SG04
MW 18
NEW ROCK LINED DITCH (2005)
AREA RECOMMENDED FOR SUPPLEMENTAL SEEDING (2006)
AREA RECOMMENDED FOR SUPPLEMENTAL SEEDING (2006)
MW 10
MW 10S
EW03
EW05
MW 7
EW10
SG05
AREA RECOMMENDED FOR RECROWNING OF ROAD (2006)
EW04
MW 20
EW06
MW14
TREATMENT BUILDINGS
MW 6S
MW 6
SG07
MW 19
MW 1
SG06
BV08
EW07
MW 4
MW22
SG22
BV09
PW 01
MW21
RECOMMENDED WIDENING OF DRIVEWAY
NEW CHECK DAMS (2005)
MW 3
DANIELS 70
MW 15

LEGEND

- EW11 EXTRACTION WELL NEST
- BV09 BIOVENTING WELL NEST
- SG05 SOIL GAS WELL NEST
- UNCONFINED MONITORING WELL LOCATION
- SEMICONFINED MONITORING WELL LOCATION
- MW 7 WELL ID

FIGURE 8
EROSION CONTROL AREAS
PENTA WOOD PRODUCTS

CH2MHILL

Appendix A
Analytical Results

Penta Wood
Dissolved Gas Results
May 2006 Groundwater Samples - Monitoring Wells

Field Site Identifier:		01	01	01	01	01	01
Field Sample Location:		MW-01	MW-12	MW-19	MW-21	MW-26	MW-26
Sample Interval:		N/A	N/A	N/A	N/A	N/A	N/A
Matrix:		Water	Water	Water	Water	Water	Water, Dup
Sample Collection Date:		5/31/2006	6/7/2006	6/7/2006	6/1/2006	6/7/2006	6/7/2006
Field Sample Identification:		06CA20-03	06CA20-04	06CA20-05	06CA20-06	06CA20-07	06CA20-08
Dissolved Gasses	**Units**						
METHANE	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U

QUALIFIER KEY: "U" - Analyte not found at the listed detection limit; "J" - Estimated Result; "B" - Analyte detected In Blank; No Qualifier - Analyte found; "R" - Rejected; "NR" - Not Reported

Penta Wood
Dissolved Metal Results
May 2006 Groundwater Samples – Monitoring Wells

Field Site Identifier:		01	01	01	01	01	01
Field Sample Location:		MW-01	MW-12	MW-19	MW-21	MW-26	MW-26
Sample Interval:		N/A	N/A	N/A	N/A	N/A	N/A
Matrix:		Water	Water	Water	Water	Water	Water, Dup
Sample Collection Date:		5/31/2006	6/7/2006	6/7/2006	6/1/2006	6/7/2006	6/7/2006
Field Sample Identification:		06CA20-03	06CA20-04	06CA20-05	06CA20-06	06CA20-07	06CA20-08
Dissolved Metals (Filtered)	**Units**						
ARSENIC	µg/L	1.0 UJ	1.0 UJ	1.0 UJ	1.0 UJ	1.0 UJ	1.0 UJ
COPPER	µg/L	10 UJ	2.3 J	4.4 J	10 UJ	10 UJ	10 UJ
IRON	µg/L	50 UJ	50 R	50 UJ	47 J	50 UJ	50 UJ
MANGANESE	µg/L	10 UJ	1,100 J	2,700 J	17 J	2.5 UJ	1.0 UJ
ZINC	µg/L	20 UJ	20 UJ	20 UJ	20 UJ	20 UJ	20 UJ

QUALIFIER KEY: "U" - Analyte not found at the listed detection limit; "J" - Estimated Result; "B" - Analyte detected in Blank; No Qualifier - Analyte found; "R" - Rejected; "NR" - Not Reported

Penta Wood
Semivolatile Results
May 2006 Groundwater Samples - Monitoring Wells

Field Site Identifier:		01	01	01	01	01	01
Field Sample Location:		MW-01	MW-12	MW-19	MW-21	MW-26	MW-26
Sample Interval:		N/A	N/A	N/A	N/A	N/A	N/A
Matrix:		Water	Water	Water	Water	Water	Water, Dup
Sample Collection Date:		5/31/2006	6/7/2006	6/7/2006	6/1/2006	6/7/2006	6/7/2006
Field Sample Identification:		06CA20-03	06CA20-04	06CA20-05	06CA20-06	06CA20-07	06CA20-08
Semivolatile Organic Compounds	**Units**						
NAPHTHALENE	µg/L	1.0 U	0.94 U	59 =	0.99 U	0.95 U	0.94 U
PENTACHLOROPHENOL	µg/L	0.049 J	6,100 J	17,000 J	0.023 J	0.11 UJ	0.091 J

QUALIFIER KEY: "U" - Analyte not found at the listed detection limit; "J" - Estimated Result; "B" - Analyte detected in Blank; No Qualifier - Analyte found; "R" - Rejected; "NR" - Not Reported

Penta Wood
Volatile Results
May 2006 Groundwater Samples - Monitoring Wells

Field Site Identifier:		01	01	01	01	01	01
Field Sample Location:		MW-01	MW-12	MW-19	MW-21	MW-26	MW-26
Sample Interval:		N/A	N/A	N/A	N/A	N/A	N/A
Matrix:		Water	Water	Water	Water	Water	Water, Dup
Sample Collection Date:		5/31/2006	6/7/2006	6/7/2006	6/1/2006	6/7/2006	6/7/2006
Field Sample Identification:		06CA20-03	06CA20-04	06CA20-05	06CA20-06	06CA20-07	06CA20-08
Volatile Organic Compounds	**Units**						
BENZENE	µg/L	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
ETHYLBENZENE	µg/L	5.0 U	0.67 J	1.5 J	5.0 U	5.0 U	5.0 U
TOLUENE	µg/L	5.0 U	5.0 U	1.3 J	5.0 U	5.0 U	5.0 U
XYLENES	µg/L	5.0 U	3.4 J	22 =	5.0 U	5.0 U	5.0 U

QUALIFIER KEY: "U" - Analyte not found at the listed detection limit; "J" - Estimated Result; "B" - Analyte detected in Blank; No Qualifier - Analyte found; "R" - Rejected; "NR" - Not Reported

Penta Wood
Wet Chemistry Results
May 2006 Groundwater Samples - Monitoring Wells

Field Site Identifier:	01	01	01	01	01	01
Field Sample Location:	MW-01	MW-12	MW-19	MW-21	MW-26	MW-26
Sample Interval:	N/A	N/A	N/A	N/A	N/A	N/A
Matrix:	Water	Water	Water	Water	Water	Water, Dup
Sample Collection Date:	5/31/2006	6/7/2006	6/7/2006	6/1/2006	6/7/2006	6/7/2006
Field Sample Identification:	06CA20-03	06CA20-04	06CA20-05	06CA20-06	06CA20-07	06CA20-08
Wet Chemistry	**Units**					
ALKALINITY, TOTAL (AS CACO3)	mg/L	110 J	400 J	120 J	140 J	260 J	250 J
CHLORIDE (AS CL)	mg/L	2.3 J	21 J	18 J	65 J	29 J	29 J
HARDNESS (AS CACO3)	mg/l	100 J	400 J	360 J	140 =	320 J	350 J
NITROGEN, NITRATE (AS N)	mg/L	1.6 J	2.1 J	0.76 J	2.7 J	1.8 J	1.8 J
SULFATE (AS SO4)	mg/L	17 =	32 =	36 =	20 =	140 =	150 =
SULFIDE	mg/L	1.0 UJ	1.0 UJ	0.50 J	1.0 UJ	0.40 J	1.0 UJ
TOTAL CARBON	mg/L	1.7 J	7.2 J	20 J	1.5 J	1.4 J	0.94 J

QUALIFIER KEY: "U" - Analyte not found at the listed detection limit; "J" - Estimated Result; "B" - Analyte detected in Blank; No Qualifier - Analyte found; "R" - Rejected; "NR" - Not Reported

Penta Wood
Dissolved Gas Results
May 2006 Groundwater Samples – Residential Wells

Field Site Identifier:	01
Field Sample Location:	DW-01
Sample Interval:	N/A
Matrix:	Water
Sample Collection Date:	5/31/2006
Field Sample Identification:	06CA20-01

Dissolved Gasses	**Units**	
METHANE	µg/L	2.0 U

QUALIFIER KEY: "U" - Analyte not found at the listed detection limit; "J" - Estimated Result; "B" - Analyte detected in Blank; No Qualifier - Analyte found; "R" - Rejected; "NR" - Not Reported

Penta Wood
Dissolved Metal Results
May 2006 Groundwater Samples - Residential Wells

Field Site Identifier:	01
Field Sample Location:	DW-01
Sample Interval:	N/A
Matrix:	Water
Sample Collection Date:	5/31/2006
Field Sample Identification:	06CA20-01

Dissolved Metals (Filtered)	**Units**	
ARSENIC	µg/L	1.0 UJ
COPPER	µg/L	140 J
IRON	µg/L	50 UJ
MANGANESE	µg/L	4.0 UJ
ZINC	µg/L	1,900 J

QUALIFIER KEY: "U" - Analyte not found at the listed detection limit; "J" - Estimated Result; "B" - Analyte detected in Blank; No Qualifier - Analyte found; "R" - Rejected; "NR" - Not Reported

Penta Wood
Semivolatile Results
May 2006 Groundwater Samples - Residential Wells

Field Site Identifier:		01	01	01	01	01	01	01
Field Sample Location:		DW-01	RW-01	RW-01	RW-02	RW-03	RW-04	RW-05
Sample Interval:		N/A	N/A	N/A	N/A	N/A	N/A	N/A
Matrix:		Water	Water	Water, Dup	Water	Water	Water	Water
Sample Collection Date:		5/31/2006	5/31/2006	5/31/2006	5/31/2006	5/31/2006	5/31/2006	5/31/2006
Field Sample Identification:		06CA20-01	06CA20-09	06CA20-10	06CA20-11	06CA20-12	06CA20-13	06CA20-14
Semivolatile Organic Compounds	**Units**							
NAPHTHALENE	µg/L	0.95 U	0.93 U	0.94 U	0.93 U	0.94 U	0.97 U	0.94 U
PENTACHLOROPHENOL	µg/L	0.039 J	0.048 J	0.055 J	0.11 UJ	0.11 UJ	0.11 UJ	0.11 UJ

QUALIFIER KEY: "U" - Analyte not found at the listed detection limit; "J" - Estimated Result; "B" - Analyte detected in Blank; No Qualifier - Analyte found; "R" - Rejected; "NR" - Not Reported

Penta Wood
Volatile Results
May 2006 Groundwater Samples - Residential Wells

Field Site Identifier:		01	01	01	01	01	01	01
Field Sample Location:		DW-01	RW-01	RW-01	RW-02	RW-03	RW-04	RW-05
Sample Interval:		N/A	N/A	N/A	N/A	N/A	N/A	N/A
Matrix:		Water	Water	Water, Dup	Water	Water	Water	Water
Sample Collection Date:		5/31/2006	5/31/2006	5/31/2006	5/31/2006	5/31/2006	5/31/2006	5/31/2006
Field Sample Identification:		06CA20-01	06CA20-09	06CA20-10	06CA20-11	06CA20-12	06CA20-13	06CA20-14
Volatile Organic Compounds	**Units**							
BENZENE	µg/L	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
ETHYLBENZENE	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
TOLUENE	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
XYLENES	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U

QUALIFIER KEY: "U" - Analyte not found at the listed detection limit; "J" - Estimated Result; "B" - Analyte detected In Blank; No Qualifier - Analyte found; "R" - Rejected; "NR" - Not Reported

Penta Wood
Wet Chemistry Results
May 2006 Groundwater Samples – Residential Wells

Field Site Identifier:	01
Field Sample Location:	DW-01
Sample Interval:	N/A
Matrix:	Water
Sample Collection Date:	5/31/2006
Field Sample Identification:	06CA20-01

Wet Chemistry	**Units**	
ALKALINITY, TOTAL (AS $CACO^3$)	mg/L	270 J
CHLORIDE (AS CL)	mg/L	29 J
HARDNESS (AS $CACO^3$)	mg/l	260 J
NITROGEN, NITRATE (AS N)	mg/L	1.5 J
SULFATE (AS SO_4)	mg/L	6.5 =
SULFIDE	mg/L	1.0 UJ
TOTAL CARBON	mg/L	1.1 J

QUALIFIER KEY: "U" - Analyte not found at the listed detection limit; "J" - Estimated Result; "B" - Analyte detected in Blank; No Qualifier - Analyte found; "R" - Rejected; "NR" - Not Reported

Penta Wood
Dissolved Gas Results
September 2006 Groundwater Samples – Monitoring Wells

	Field Site Identifier:	01	01	01	01	01	01	01
	Field Sample Location:	MW-02	MW-05	MW-06S	MW-07	MW-10	MW-10S	MW-11
	Sample Interval:	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Matrix:	Water	Water	Water	Water	Water	Water	Water
	Sample Collection Date:	9/26/2006	9/26/2006	9/27/2006	9/26/2006	9/27/2006	9/26/2006	9/27/2006
	Field Sample Identification:	06CA22-03	06CA22-06	06CA22-07	06CA22-08	06CA22-11	06CA22-12	06CA22-13
Dissolved Gasses	**Units**							
METHANE	µg/L	2.0 UJ	8.7 J	3.5 J	4.3 J	2.0 UJ	2.0 UJ	2.0 UJ

QUALIFIER KEY: "U" - Analyte not found at the listed detection limit; "J" - Estimated Result; "B" - Analyte detected in Blank; No Qualifier - Analyte found; "R" - Rejected; "NR" - Not Reported

Penta Wood
Dissolved Gas Results
September 2006 Groundwater Samples - Monitoring Wells

	Field Site Identifier:	01	01	01	01	01	01	01
	Field Sample Location:	MW-12	MW-12	MW-15	MW-16	MW-17	MW-19	MW-20
	Sample Interval:	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Matrix:	Water	Water, Dup	Water	Water	Water	Water	Water, Dup
	Sample Collection Date:	9/26/2006	9/26/2006	9/27/2006	9/27/2006	9/26/2006	9/27/2006	9/27/2006
	Field Sample Identification:	06CA22-14	06CA22-24	06CA22-16	06CA22-17	06CA22-18	06CA22-19	06CA22-05
Dissolved Gasses	**Units**							
METHANE	ug/l	2.0 UJ	2.0 UJ	2.0 UJ	2.0 UJ	2.0 UJ	2.0 UJ	2.0 UJ

QUALIFIER KEY: "U" - Analyte not found at the listed detection limit; "J" - Estimated Result; "B" - Analyte detected in Blank; No Qualifier - Analyte found; "R" - Rejected; "NR" - Not Reported

Penta Wood
Dissolved Gas Results
September 2006 Groundwater Samples - Monitoring Wells

Field Site Identifier:		01	01
Field Sample Location:		MW-20	MW-26
Sample Interval:		N/A	N/A
Matrix:		Water	Water
Sample Collection Date:		9/27/2006	9/26/2006
Field Sample Identification:		06CA22-20	06CA22-23
Dissolved Gasses	**Units**		
METHANE	ug/l	2.0 UJ	2.0 UJ

QUALIFIER KEY: "U" - Analyte not found at the listed detection limit; "J" - Estimated Result; "B" - Analyte detected in Blank; No Qualifier - Analyte found; "R" - Rejected; "NR" - Not Reported

Penta Wood
Dissolved Metal Results
September 2006 Groundwater Samples – Monitoring Wells

Field Site Identifier:		01	01	01	01	01	01	01
Field Sample Location:		MW-02	MW-05	MW-06S	MW-07	MW-10	MW-10S	MW-11
Sample Interval:		N/A	N/A	N/A	N/A	N/A	N/A	N/A
Matrix:		Water	Water	Water	Water	Water	Water	Water
Sample Collection Date:		9/26/2006	9/26/2006	9/27/2006	9/26/2006	9/27/2006	9/26/2006	9/27/2006
Field Sample Identification:		06CA22-03	06CA22-06	06CA22-07	06CA22-08	06CA22-11	06CA22-12	06CA22-13
Dissolved Metals (Filtered)	**Units**							
ARSENIC	µg/L	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ
COPPER	µg/L	10 UJ	10 UJ	2.6 J	10 U	4.3 J	2.2 J	10 UJ
IRON	µg/L	50 U	23,000 J	50 U	50 U	120 =	50 U	50 UJ
MANGANESE	µg/L	2.6 UB	8,000 J	590 =	68 J	2,600 =	2,500 =	10 UJ
ZINC	µg/L	20 UJ	20 UJ	20 U	20 U	20 U	20 U	20 UJ

QUALIFIER KEY: "U" - Analyte not found at the listed detection limit; "J" - Estimated Result; "B" - Analyte detected in Blank; No Qualifier - Analyte found; "R" - Rejected; "NR" - Not Reported

Penta Wood
Dissolved Metal Results
September 2006 Groundwater Samples - Monitoring Wells

Field Site Identifier:		01	01	01	01	01	01	01
Field Sample Location:		MW-12	MW-12	MW-15	MW-16	MW-17	MW-19	MW-20
Sample Interval:		N/A	N/A	N/A	N/A	N/A	N/A	N/A
Matrix:		Water	Water, Dup	Water	Water	Water	Water	Water, Dup
Sample Collection Date:		9/26/2006	9/26/2006	9/27/2006	9/27/2006	9/26/2006	9/27/2006	9/27/2006
Field Sample Identification:		06CA22-14	06CA22-24	06CA22-16	06CA22-17	06CA22-18	06CA22-19	06CA22-05
Dissolved Metals (Filtered)	**Units**							
ARSENIC	ug/L	1.0 UJ	1.0 UJ	1.0 UJ	1.0 UJ	1.0 UJ	1.0 U	1.0 UJ
COPPER	ug/L	3.2 J	2.5 UJ	3.5 J	10 UJ	10 UJ	6.4 J	4.8 J
IRON	ug/L	50 UJ	46 J	50 UJ	50 UJ	50 UJ	50 U	94 J
MANGANESE	ug/L	1,200 J	1,200 J	2.0 UB	0.59 UB	10 UJ	3,100 =	4,200 =
ZINC	ug/L	16 J	20 UJ	13 J	20 UJ	7.5 J	20 U	20 U

QUALIFIER KEY: "U" - Analyte not found at the listed detection limit; "J" - Estimated Result; "B" - Analyte detected In Blank; No Qualifier - Analyte found; "R" - Rejected; "NR" - Not Reported

Penta Wood
Dissolved Metal Results
September 2006 Groundwater Samples - Monitoring Wells

Field Site Identifier:		01	01
Field Sample Location:		MW-20	MW-26
Sample Interval:		N/A	N/A
Matrix:		Water	Water
Sample Collection Date:		9/27/2006	9/26/2006
Field Sample Identification:		06CA22-20	06CA22-23
Dissolved Metals (Filtered)	**Units**		
ARSENIC	ug/L	1.0 U	1.0 UJ
COPPER	ug/L	3.8 J	10 UJ
IRON	ug/L	48 J	50 UJ
MANGANESE	ug/L	4,200 =	10 UJ
ZINC	ug/L	20 U	20 UJ

QUALIFIER KEY: "U" - Analyte not found at the listed detection limit; "J" - Estimated Result; "B" - Analyte detected in Blank; No Qualifier - Analyte found; "R" - Rejected; "NR" - Not Reported

Penta Wood
Semivolatile Results
September 2006 Groundwater Samples – Monitoring Wells

Field Site Identifier:		01	01	01	01	01	01	01
Field Sample Location:		MW-02	MW-05	MW-06S	MW-07	MW-10	MW-10S	MW-11
Sample Interval:		N/A	N/A	N/A	N/A	N/A	N/A	N/A
Matrix:		Water	Water	Water	Water	Water	Water	Water
Sample Collection Date:		9/26/2006	9/26/2006	9/27/2006	9/26/2006	9/27/2006	9/26/2006	9/27/2006
Field Sample Identification:		06CA22-03	06CA22-06	06CA22-07	06CA22-08	06CA22-11	06CA22-12	06CA22-13
Semivolatile Organic Compounds	**Units**							
NAPHTHALENE	µg/L	1.7 U	1.4 U	1.1 U	0.92 U	50 =	1.2 =	0.93 U
PENTACHLOROPHENOL	µg/L	2.3 =	460 =	0.21 =	0.087 J	23,000 J	2,700 J	0.11 U

QUALIFIER KEY: "U" - Analyte not found at the listed detection limit; "J" - Estimated Result; "B" - Analyte detected in Blank; No Qualifier - Analyte found; "R" - Rejected; "NR" - Not Reported

Penta Wood
Semivolatile Results
September 2006 Groundwater Samples - Monitoring Wells

Field Site Identifier:		01	01	01	01	01	01	01
Field Sample Location:		MW-12	MW-12	MW-15	MW-16	MW-17	MW-19	MW-20
Sample Interval:		N/A	N/A	N/A	N/A	N/A	N/A	N/A
Matrix:		Water	Water, Dup	Water	Water	Water	Water	Water, Dup
Sample Collection Date:		9/26/2006	9/26/2006	9/27/2006	9/27/2006	9/26/2006	9/27/2006	9/27/2006
Field Sample Identification:		06CA22-14	06CA22-24	06CA22-16	06CA22-17	06CA22-18	06CA22-19	06CA22-05
Semivolatile Organic Compounds	**Units**							
NAPHTHALENE	ug/L	1.5 =	1.4 =	0.91 U	0.92 U	0.91 U	69 =	180 =
PENTACHLOROPHENOL	ug/L	3,100 =	2,000 =	0.11 U	0.046 J	0.11 U	8,200 J	44,000 J

QUALIFIER KEY: "U" - Analyte not found at the listed detection limit; "J" - Estimated Result; "B" - Analyte detected in Blank; No Qualifier - Analyte found; "R" - Rejected; "NR" - Not Reported

Penta Wood
Semivolatile Results
September 2006 Groundwater Samples - Monitoring Wells

Field Site Identifier:		01	01
Field Sample Location:		MW-20	MW-26
Sample Interval:		N/A	N/A
Matrix:		Water	Water
Sample Collection Date:		9/27/2006	9/26/2006
Field Sample Identification:		06CA22-20	06CA22-23
Semivolatile Organic Compounds	**Units**		
NAPHTHALENE	ug/L	160 =	0.91 U
PENTACHLOROPHENOL	ug/L	35,000 J	0.11 U

QUALIFIER KEY: "U" - Analyte not found at the listed detection limit; "J" - Estimated Result; "B" - Analyte detected in Blank; No Qualifier - Analyte found; "R" - Rejected; "NR" - Not Reported

Penta Wood
Volatile Results
September 2006 Groundwater Samples – Monitoring Wells

Field Site Identifier:		01	01	01	01	01	01	01
Field Sample Location:		MW-02	MW-05	MW-06S	MW-07	MW-10	MW-10S	MW-11
Sample Interval:		N/A	N/A	N/A	N/A	N/A	N/A	N/A
Matrix:		Water	Water	Water	Water	Water	Water	Water
Sample Collection Date:		9/26/2006	9/26/2006	9/27/2006	9/26/2006	9/27/2006	9/26/2006	9/27/2006
Field Sample Identification:		06CA22-03	06CA22-06	06CA22-07	06CA22-08	06CA22-11	06CA22-12	06CA22-13
Volatile Organic Compounds	**Units**							
BENZENE	µg/L	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
ETHYLBENZENE	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	2.0 J	5.0 U	5.0 U
TOLUENE	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	1.7 J	5.0 U	5.0 U
XYLENES	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	16 =	2.6 J	5.0 U

QUALIFIER KEY: "U" - Analyte not found at the listed detection limit; "J" - Estimated Result; "B" - Analyte detected in Blank; No Qualifier - Analyte found; "R" - Rejected; "NR" - Not Reported

Penta Wood
Volatile Results
September 2006 Groundwater Samples - Monitoring Wells

Field Site Identifier:		01	01	01	01	01	01	01
Field Sample Location:		MW-12	MW-12	MW-15	MW-16	MW-17	MW-19	MW-20
Sample Interval:		N/A	N/A	N/A	N/A	N/A	N/A	N/A
Matrix:		Water	Water, Dup	Water	Water	Water	Water	Water, Dup
Sample Collection Date:		9/26/2006	9/26/2006	9/27/2006	9/27/2006	9/26/2006	9/27/2006	9/27/2006
Field Sample Identification:		06CA22-14	06CA22-24	06CA22-16	06CA22-17	06CA22-18	06CA22-19	06CA22-05
Volatile Organic Compounds	**Units**							
BENZENE	ug/L	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
ETHYLBENZENE	ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	1.4 J	5.1 =
TOLUENE	ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	1.2 J	4.1 J
XYLENES	ug/L	2.9 J	1.7 J	5.0 U	5.0 U	5.0 U	19 =	53 =

QUALIFIER KEY: "U" - Analyte not found at the listed detection limit; "J" - Estimated Result; "B" - Analyte detected in Blank; No Qualifier - Analyte found; "R" - Rejected; "NR" - Not Reported

Penta Wood
Volatile Results
September 2006 Groundwater Samples - Monitoring Wells

Field Site Identifier:		01	01
Field Sample Location:		MW-20	MW-26
Sample Interval:		N/A	N/A
Matrix:		Water	Water
Sample Collection Date:		9/27/2006	9/26/2006
Field Sample Identification:		06CA22-20	06CA22-23
Volatile Organic Compounds	**Units**		
BENZENE	ug/L	0.50 U	0.50 U
ETHYLBENZENE	ug/L	4.8 J	5.0 U
TOLUENE	ug/L	4.1 J	5.0 U
XYLENES	ug/L	51 =	5.0 U

QUALIFIER KEY: "U" - Analyte not found at the listed detection limit; "J" - Estimated Result; "B" - Analyte detected in Blank; No Qualifier - Analyte found; "R" - Rejected; "NR" - Not Reported

Penta Wood
Wet Chemistry Results
September 2006 Groundwater Samples – Monitoring Wells

Field Site Identifier:	01	01	01	01	01	01	01
Field Sample Location:	MW-02	MW-05	MW-06S	MW-07	MW-10	MW-10S	MW-11
Sample Interval:	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Matrix:	Water	Water	Water	Water	Water	Water	Water
Sample Collection Date:	9/26/2006	9/26/2006	9/27/2006	9/26/2006	9/27/2006	9/26/2006	9/27/2006
Field Sample Identification:	06CA22-03	06CA22-06	06CA22-07	06CA22-08	06CA22-11	06CA22-12	06CA22-13
Wet Chemistry	**Units**						
ALKALINITY, TOTAL (AS $CACO^3$)	mg/L	160 J	290 J	320 J	280 J	450 J	180 J	220 J
CHLORIDE (AS CL)	mg/L	1.6 J	16 J	18 =	15 =	14 =	8.6 =	16 J
HARDNESS (AS $CACO^3$)	mg/l	220 =	370 =	350 =	390 =	440 =	310 =	240 =
NITROGEN, NITRATE (AS N)	mg/L	0.12 J	0.10 J	3.9 =	1.8 =	0.10 U	1.2 =	0.53 J
SULFATE (AS SO_4)	mg/L	20 J	27 J	18 =	110 =	24 =	79 =	8.8 J
SULFIDE	mg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TOTAL CARBON	mg/L	3.1 =	6.6 =	4.1 =	2.4 =	21 =	6.5 =	2.3 =

QUALIFIER KEY: "U" - Analyte not found at the listed detection limit; "J" - Estimated Result; "B" - Analyte detected in Blank; No Qualifier - Analyte found; "R" - Rejected; "NR" - Not Reported

Penta Wood
Wet Chemistry Results
September 2006 Groundwater Samples - Monitoring Wells

Field Site Identifier:		01	01	01	01	01	01	01
Field Sample Location:		MW-12	MW-12	MW-15	MW-16	MW-17	MW-19	MW-20
Sample Interval:		N/A	N/A	N/A	N/A	N/A	N/A	N/A
Matrix:		Water	Water, Dup	Water	Water	Water	Water	Water, Dup
Sample Collection Date:		9/26/2006	9/26/2006	9/27/2006	9/27/2006	9/26/2006	9/27/2006	9/27/2006
Field Sample Identification:		06CA22-14	06CA22-24	06CA22-16	06CA22-17	06CA22-18	06CA22-19	06CA22-05
Wet Chemistry	**Units**							
ALKALINITY, TOTAL (AS CACO3)	mg/L	390 J	390 J	260 J	83 J	170 J	160 J	230 J
CHLORIDE (AS CL)	mg/L	14 J	15 J	14 J	4.1 J	2.9 J	14 =	16 =
HARDNESS (AS CACO3)	mg/l	380 =	370 =	250 =	100 =	170 =	190 =	380 =
NITROGEN, NITRATE (AS N)	mg/L	1.9 J	2.0 J	4.7 J	1.2 J	5.5 J	0.66 J	0.19 =
SULFATE (AS SO4)	mg/L	15 J	15 J	5.9 J	32 J	6.5 J	30 =	65 =
SULFIDE	mg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TOTAL CARBON	mg/L	10 =	10 =	2.1 =	1.3 =	1.1 =	35 =	22 =

QUALIFIER KEY: "U" - Analyte not found at the listed detection limit; "J" - Estimated Result; "B" - Analyte detected in Blank; No Qualifier - Analyte found; "R" - Rejected; "NR" - Not Reported

Penta Wood
Wet Chemistry Results
September 2006 Groundwater Samples - Monitoring Wells

Field Site Identifier:	01	01
Field Sample Location:	MW-20	MW-26
Sample Interval:	N/A	N/A
Matrix:	Water	Water
Sample Collection Date:	9/27/2006	9/26/2006
Field Sample Identification:	06CA22-20	06CA22-23

Wet Chemistry	**Units**		
ALKALINITY, TOTAL (AS CACO3)	mg/L	220 J	270 J
CHLORIDE (AS CL)	mg/L	16 =	23 J
HARDNESS (AS CACO3)	mg/l	240 =	350 =
NITROGEN, NITRATE (AS N)	mg/L	0.22 =	1.5 J
SULFATE (AS SO4)	mg/L	71 =	87 J
SULFIDE	mg/L	1.0 U	1.0 U
TOTAL CARBON	mg/L	23 =	2.0 =

QUALIFIER KEY: "U" - Analyte not found at the listed detection limit; "J" - Estimated Result; "B" - Analyte detected in Blank; No Qualifier - Analyte found; "R" - Rejected; "NR" - Not Reported

Penta Wood
Dissolved Gas Results
September 2006 Groundwater Samples - Residential Wells

Field Site Identifier:	01
Field Sample Location:	DW-01
Sample Interval:	N/A
Matrix:	Water
Sample Collection Date:	9/26/2006
Field Sample Identification:	06CA22-01

Dissolved Gasses	**Units**	
METHANE	µg/L	2.0 UJ

QUALIFIER KEY: "U" - Analyte not found at the listed detection limit; "J" - Estimated Result; "B" - Analyte detected in Blank; No Qualifier - Analyte found; "R" - Rejected; "NR" - Not Reported

Penta Wood
Dissolved Metal Results
September 2006 Groundwater Samples – Residential Wells

Field Site Identifier:	01
Field Sample Location:	DW-01
Sample Interval:	N/A
Matrix:	Water
Sample Collection Date:	9/26/2006
Field Sample Identification:	06CA22-01

Dissolved Metals (Filtered)	**Units**	
ARSENIC	µg/L	1.0 UJ
COPPER	µg/L	100 =
IRON	µg/L	50 UJ
MANGANESE	µg/L	15 J
ZINC	µg/L	1,500 J

QUALIFIER KEY: "U" - Analyte not found at the listed detection limit; "J" - Estimated Result; "B" - Analyte detected in Blank; No Qualifier - Analyte found; "R" - Rejected; "NR" - Not Reported

Penta Wood
Semivolatile Results
September 2006 Groundwater Samples – Residential Wells

Field Site Identifier:		01	01	01	01	01	01	01
Field Sample Location:		DW-01	RW-01	RW-01	RW-02	RW-03	RW-04	RW-05
Sample Interval:		N/A	N/A	N/A	N/A	N/A	N/A	N/A
Matrix:		Water	Water	Water, Dup	Water	Water	Water	Water
Sample Collection Date:		9/26/2006	9/25/2006	9/25/2006	9/25/2006	9/25/2006	9/25/2006	9/25/2006
Field Sample Identification:		06CA22-01	06CA22-27	06CA22-28	06CA22-29	06CA22-30	06CA22-31	06CA22-32
Semivolatile Organic Compounds	**Units**							
NAPHTHALENE	µg/L	0.93 U	0.93 U	0.93 U	0.93 U	0.93 U	0.93 U	0.93 U
PENTACHLOROPHENOL	µg/L	0.11 U	0.11 U	0.023 J	0.11 U	0.11 U	0.11 U	0.11 U

QUALIFIER KEY: "U" - Analyte not found at the listed detection limit; "J" - Estimated Result; "B" - Analyte detected in Blank; No Qualifier - Analyte found; "R" - Rejected; "NR" - Not Reported

Penta Wood
Volatile Results
September 2006 Groundwater Samples – Residential Wells

Field Site Identifier:		01	01	01	01	01	01	01
Field Sample Location:		DW-01	RW-01	RW-01	RW-02	RW-03	RW-04	RW-05
Sample Interval:		N/A	N/A	N/A	N/A	N/A	N/A	N/A
Matrix:		Water	Water	Water, Dup	Water	Water	Water	Water
Sample Collection Date:		9/26/2006	9/25/2006	9/25/2006	9/25/2006	9/25/2006	9/25/2006	9/25/2006
Field Sample Identification:		06CA22-01	06CA22-27	06CA22-28	06CA22-29	06CA22-30	06CA22-31	06CA22-32
Volatile Organic Compounds	**Units**							
BENZENE	µg/L	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
ETHYLBENZENE	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
TOLUENE	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
XYLENES	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U

QUALIFIER KEY: "U" - Analyte not found at the listed detection limit; "J" - Estimated Result; "B" - Analyte detected in Blank; No Qualifier - Analyte found; "R" - Rejected; "NR" - Not Reported

Penta Wood
Wet Chemistry Results
September 2006 Groundwater Samples – Residential Wells

Field Site Identifier:	01
Field Sample Location:	DW-01
Sample Interval:	N/A
Matrix:	Water
Sample Collection Date:	9/26/2006
Field Sample Identification:	06CA22-01

Wet Chemistry	**Units**	
ALKALINITY, TOTAL (AS $CACO^3$)	mg/L	230 J
CHLORIDE (AS CL)	mg/L	21 J
HARDNESS (AS $CACO^3$)	mg/L	230 J
NITROGEN, NITRATE (AS N)	mg/L	0.67 J
SULFATE (AS SO_4)	mg/L	13 J
SULFIDE	mg/L	1.0 UJ
TOTAL CARBON	mg/L	2.1 =

QUALIFIER KEY: "U" - Analyte not found at the listed detection limit; "J" - Estimated Result; "B" - Analyte detected in Blank; No Qualifier - Analyte found; "R" - Rejected; "NR" - Not Reported

Penta Wood
Chloride and Total Suspended Solids Results
2006 Treatment Plant Samples

Field Site Identifier:		01	01	01	01
Field Sample Location:		EFFLUENT	EFFLUENT	EFFLUENT	EFFLUENT
Sample Interval:		N/A	N/A	N/A	N/A
Matrix:		Waste Water	Waste Water	Waste Water	Waste Water
Sample Collection Date:		3/23/2006	6/15/2006	9/27/2006	12/5/2006
Field Sample Identification:		06CA02-24	06CA02-33	06CA02-44	07CP01-07
Wet Chemistry	**Units**				
CHLORIDE (AS CL)	mg/L	23 =	25 =	20 =	22 =
Total Suspended Solids (TSS)	mg/L	5.0 U	5.0 U	5.0 U	5.0 U

QUALIFIER KEY: "U" - Analyte not found at the listed detection limit; "J" - Estimated Result; "B" - Analyte detected in Blank; No Qualifier - Analyte found; "R" - Rejected; "NR" - Not Reported

Penta Wood
Diesel Range Organic Results
2006 Treatment Plant Samples

	Field Site Identifier:	01	01	01	01	01	01	01
	Field Sample Location:	EFFLUENT	EFFLUENT	EFFLUENT	EFFLUENT	EFFLUENT	EFFLUENT	EFFLUENT
	Sample Interval:	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Matrix:	Waste Water	Waste Water	Waste Water	Waste Water	Waste Water	Waste Water	Waste Water
	Sample Collection Date:	1/17/2006	2/7/2006	3/23/2006	6/15/2006	7/19/2006	9/27/2006	11/16/2006
	Field Sample Identification:	06CA02-17	06CA02-21	06CA02-24	06CA02-33	06CA02-38	06CA02-44	07CP01-03
Diesel Range Organics	**Units**							
DIESEL COMPONENTS	mg/L	0.098 U	0.097 U	0.035 J	0.093 U	0.096 U	0.018 U	0.095 U

QUALIFIER KEY: "U" - Analyte not found at the listed detection limit; "J" - Estimated Result; "B" - Analyte detected in Blank; No Qualifier - Analyte found; "R" - Rejected; "NR" - Not Reported

Penta Wood
Diesel Range Organic Results
2006 Treatment Plant Samples

Field Site Identifier:	01
Field Sample Location:	EFFLUENT
Sample Interval:	N/A
Matrix:	Waste Water
Sample Collection Date:	12/5/2006
Field Sample Identification:	07CP01-07

Diesel Range Organics	**Units**	
DIESEL COMPONENTS	mg/L	0.096 U

QUALIFIER KEY: "U" - Analyte not found at the listed detection limit; "J" - Estimated Result; "B" - Analyte detected in Blank; No Qualifier - Analyte found; "R" - Rejected; "NR" - Not Reported

Penta Wood
2,3,7,8-Tetrachlorodibenzo-p-dioxin Results
2006 Treatment Plant Samples

Field Site Identifier:		01	01
Field Sample Location:		EFFLUENT	EFFLUENT
Sample Interval:		N/A	N/A
Matrix:		Waste Water	Waste Water
Sample Collection Date:		6/15/2006	9/27/2006
Field Sample Identification:		06CA02-33	06CA02-44
Dioxins and Furans	**Units**		
2,3,7,8-TETRACHLORODIBENZO-P-DIOXIN	pg/L	0.87 U	1.6 U

QUALIFIER KEY: "U" - Analyte not found at the listed detection limit; "J" - Estimated Result; "B" - Analyte detected in Blank; No Qualifier - Analyte found; "R" - Rejected; "NR" - Not Reported

Penta Wood
Dioxin and Furan Results
2006 Treatment Plant Samples

Field Site Identifier:	01
Field Sample Location:	EFFLUENT
Sample Interval:	N/A
Matrix:	Waste Water
Sample Collection Date:	3/23/2006
Field Sample Identification:	06CA02-24

Dioxins and Furans	**Units**	
Total HpCDD	pg/l	0.93 U
Total HpCDF	pg/l	0.49 U
Total HxCDD	pg/l	0.38 U
Total HxCDF	pg/l	0.71 U
Total PeCDD	pg/l	0.55 U
Total PeCDF	pg/l	0.27 U
Total TCDD	pg/l	0.32 U
Total TCDF	pg/l	0.14 U
1,2,3,4,6,7,8-HEPTACHLORODIBENZOFURAN	pg/l	0.38 U
1,2,3,4,6,7,8-HEPTACHLORODIBENZO-P-DIOXIN	pg/l	0.93 U
1,2,3,4,7,8,9-HEPTACHLORODIBENZOFURAN	pg/l	0.49 U
1,2,3,4,7,8-HEXACHLORODIBENZOFURAN	pg/l	0.71 U
1,2,3,4,7,8-HEXACHLORODIBENZO-P-DIOXIN	pg/l	0.28 U
1,2,3,6,7,8-HEXACHLORODIBENZOFURAN	pg/l	0.33 U
1,2,3,6,7,8-HEXACHLORODIBENZO-P-DIOXIN	pg/l	0.29 U
1,2,3,7,8,9-HEXACHLORODIBENZOFURAN	pg/l	0.35 U
1,2,3,7,8,9-HEXACHLORODIBENZO-P-DIOXIN	pg/l	0.23 U
1,2,3,7,8-PENTACHLORODIBENZOFURAN	pg/l	0.25 U
1,2,3,7,8-PENTACHLORODIBENZO-P-DIOXIN	pg/l	0.55 U
2,3,4,6,7,8-HEXACHLORODIBENZOFURAN	pg/l	0.25 U
2,3,4,7,8-PENTACHLORODIBENZOFURAN	pg/l	0.27 U
2,3,7,8-TETRACHLORODIBENZOFURAN	pg/l	0.14 U
2,3,7,8-TETRACHLORODIBENZO-P-DIOXIN	pg/l	0.32 U
OCTACHLORODIBENZOFURAN	pg/l	0.80 U
OCTACHLORODIBENZO-P-DIOXIN	pg/l	5.9 U

QUALIFIER KEY: "U" - Analyte not found at the listed detection limit; "J" - Estimated Result; "B" - Analyte detected in Blank; No Qualifier - Analyte found; "R" - Rejected; "NR" - Not Reported

Penta Wood
Metal Results
2006 Treatment Plant Samples

Field Site Identifier:	01	01	01	01
Field Sample Location:	EFFLUENT	EFFLUENT	EFFLUENT	EFFLUENT
Sample Interval:	N/A	N/A	N/A	N/A
Matrix:	Waste Water	Waste Water	Waste Water	Waste Water
Sample Collection Date:	3/23/2006	6/15/2006	9/27/2006	12/5/2006
Field Sample Identification:	06CA02-24	06CA02-33	06CA02-44	07CP01-07

Metals	**Units**				
ARSENIC	µg/L	1.0 U	3.0 =	1.0 U	1.0 U
COPPER	µg/L	10 U	4.3 J	10 U	10 U
IRON	µg/L	50 U	130 =	50 U	50 U
MANGANESE	µg/L	2,300 =	2,300 =	2,000 =	2,300 =
ZINC	µg/L	34 =	52 =	40 =	40 =

QUALIFIER KEY: "U" - Analyte not found at the listed detection limit; "J" - Estimated Result; "B" - Analyte detected in Blank; No Qualifier - Analyte found; "R" - Rejected; "NR" - Not Reported

Penta Wood
Semivolatile Results
2006 Treatment Plant Samples

Field Site Identifier:	01
Field Sample Location:	EFFLUENT
Sample Interval:	N/A
Matrix:	Waste Water
Sample Collection Date:	3/23/2006
Field Sample Identification:	06CA02-24

Semivolatile Organic Compounds	Units	
2,4,6-TRICHLOROPHENOL	µg/L	9.4 U
2,4-DICHLOROPHENOL	µg/L	9.4 U
2,4-DIMETHYLPHENOL	µg/L	9.4 U
2,4-DINITROPHENOL	µg/L	47 U
2-CHLOROPHENOL	µg/L	9.4 U
2-NITROPHENOL	µg/L	9.4 U
4,6-DINITRO-2-METHYLPHENOL	µg/L	47 U
4-CHLORO-3-METHYLPHENOL	µg/L	9.4 U
4-NITROPHENOL	µg/L	47 U
NAPHTHALENE	µg/L	0.93 U
PHENOL	µg/L	9.4 U

QUALIFIER KEY: "U" - Analyte not found at the listed detection limit; "J" - Estimated Result; "B" - Analyte detected in Blank; No Qualifier - Analyte found; "R" - Rejected; "NR" - Not Reported

Penta Wood
Semivolatile Results
2006 Treatment Plant Samples

Field Site Identifier:		01	01	01	01	01	01
Field Sample Location:		EFFLUENT	EFFLUENT	EFFLUENT	EFFLUENT	EFFLUENT	EFFLUENT
Sample Interval:		N/A	N/A	N/A	N/A	N/A	N/A
Matrix:		Waste Water	Waste Water	Waste Water	Waste Water	Waste Water	Waste Water
Sample Collection Date:		1/17/2006	2/7/2006	4/6/2006	5/18/2006	6/15/2006	7/19/2006
Field Sample Identification:		06CA02-17	06CA02-21	06CA02-27	06CA02-30	06CA02-33	06CA02-38
Semivolatile Organic Compounds	**Units**						
NAPHTHALENE	µg/L	0.97 U	0.93 U	0.93 U	0.95 U	0.88 J	0.93 U
PHENOL	µg/L	4.9 U	4.7 U	4.7 U	4.8 U	4.8 U	4.7 U

QUALIFIER KEY: "U" - Analyte not found at the listed detection limit; "J" - Estimated Result; "B" - Analyte detected in Blank; No Qualifier - Analyte found; "R" - Rejected; "NR" - Not Reported

Penta Wood
Semivolatile Results
2006 Treatment Plant Samples

Field Site Identifier:	01	01	01
Field Sample Location:	EFFLUENT	EFFLUENT	EFFLUENT
Sample Interval:	N/A	N/A	N/A
Matrix:	Waste Water	Waste Water	Waste Water
Sample Collection Date:	9/27/2006	11/16/2006	12/5/2006
Field Sample Identification:	06CA02-44	07CP01-03	07CP01-07
Semivolatile Organic Compounds	**Units**		
NAPHTHALENE	µg/L	0.91 U	0.95 U	0.93 U
PHENOL	µg/L	4.5 U	NR	4.7 U

QUALIFIER KEY: "U" - Analyte not found at the listed detection limit; "J" - Estimated Result; "B" - Analyte detected in Blank; No Qualifier - Analyte found; "R" - Rejected; "NR" - Not Reported

Penta Wood
Pentachlorophenol Results
2006 Treatment Plant Samples

Field Site Identifier:		01	01	01	01	01	01	01
Field Sample Location:		DAF-EFFLUENT	DAF-EFFLUENT	DAF-EFFLUENT	DAF-EFFLUENT	EFFLUENT	EFFLUENT	EFFLUENT
Sample Interval:		N/A	N/A	N/A	N/A	N/A	N/A	N/A
Matrix:		Waste Water	Waste Water	Waste Water	Waste Water	Waste Water	Waste Water	Waste Water
Sample Collection Date:		3/23/2006	6/15/2006	9/27/2006	12/5/2006	1/6/2006	1/10/2006	1/17/2006
Field Sample Identification:		06CA02-23	06CA02-32	06CA02-43	07CP01-06	06CA02-15	06CA02-16	06CA02-17
Semivolatile Organic Compounds	**Units**							
PENTACHLOROPHENOL	µg/L	4,900	6,000 =	4,100 =	5,700 =	0.12 U	0.027 J	0.11 U

QUALIFIER KEY: "U" - Analyte not found at the listed detection limit; "J" - Estimated Result; "B" - Analyte detected in Blank; No Qualifier - Analyte found; "R" - Rejected; "NR" - Not Reported

Penta Wood
Pentachlorophenol Results
2006 Treatment Plant Samples

Field Site Identifier:		01	01	01	01	01	01	01
Field Sample Location:		EFFLUENT	EFFLUENT	EFFLUENT	EFFLUENT	EFFLUENT	EFFLUENT	EFFLUENT
Sample Interval:		N/A	N/A	N/A	N/A	N/A	N/A	N/A
Matrix:		Waste Water	Waste Water	Waste Water	Waste Water	Waste Water	Waste Water	Waste Water
Sample Collection Date:		1/25/2006	2/1/2006	2/7/2006	3/15/2006	3/23/2006	3/30/2006	4/6/2006
Field Sample Identification:		06CA02-18	06CA02-19	06CA02-21	06CA01-22	06CA02-24	06CA02-26	06CA02-27
Semivolatile Organic Compounds	**Units**							
PENTACHLOROPHENOL	ug/L	0.11 U	0.11 U	0.11 U	0.11 U	0.027 J	0.11 U	0.11 U

QUALIFIER KEY: "U" - Analyte not found at the listed detection limit; "J" - Estimated Result; "B" - Analyte detected in Blank; No Qualifier - Analyte found; "R" - Rejected; "NR" - Not Reported

Penta Wood
Pentachlorophenol Results
2006 Treatment Plant Samples

Field Site Identifier:		01	01	01	01	01	01	01
Field Sample Location:		EFFLUENT	EFFLUENT	EFFLUENT	EFFLUENT	EFFLUENT	EFFLUENT	EFFLUENT
Sample Interval:		N/A	N/A	N/A	N/A	N/A	N/A	N/A
Matrix:		Waste Water	Waste Water	Waste Water	Waste Water	Waste Water	Waste Water	Waste Water
Sample Collection Date:		5/4/2006	5/11/2006	5/18/2006	6/8/2006	6/15/2006	6/21/2006	6/29/2006
Field Sample Identification:		06CA02-28	06CA02-29	06CA02-30	06CA02-31	06CA02-33	06CA02-35	06CA02-36
Semivolatile Organic Compounds	**Units**							
PENTACHLOROPHENOL	ug/L	0.11 U	0.11 U	0.11 U	0.11 U	0.030 J	0.11 U	0.11 U

QUALIFIER KEY: "U" - Analyte not found at the listed detection limit; "J" - Estimated Result; "B" - Analyte detected in Blank; No Qualifier - Analyte found; "R" - Rejected; "NR" - Not Reported

Penta Wood
Pentachlorophenol Results
2006 Treatment Plant Samples

Field Site Identifier:		01	01	01	01	01	01	01
Field Sample Location:		EFFLUENT	EFFLUENT	EFFLUENT	EFFLUENT	EFFLUENT	EFFLUENT	EFFLUENT
Sample Interval:		N/A	N/A	N/A	N/A	N/A	N/A	N/A
Matrix:		Waste Water	Waste Water	Waste Water	Waste Water	Waste Water	Waste Water	Waste Water
Sample Collection Date:		7/13/2006	7/19/2006	7/27/2006	8/3/2006	8/8/2006	8/24/2006	9/27/2006
Field Sample Identification:		06CA02-37	06CA02-38	06CA02-39	06CA02-40	06CA02-41	06CA02-42	06CA02-44
Semivolatile Organic Compounds	**Units**							
PENTACHLOROPHENOL	ug/L	0.093 U	0.092 U	0.11 U	0.095 U	0.11 U	0.095 U	0.31 =

QUALIFIER KEY: "U" - Analyte not found at the listed detection limit; "J" - Estimated Result; "B" - Analyte detected in Blank; No Qualifier - Analyte found; "R" - Rejected; "NR" - Not Reported

Penta Wood
Pentachlorophenol Results
2006 Treatment Plant Samples

Field Site Identifier:		01	01	01	01	01	01	01
Field Sample Location:		EFFLUENT	EFFLUENT	EFFLUENT	EFFLUENT	EFFLUENT	EFFLUENT	EFFLUENT
Sample Interval:		N/A	N/A	N/A	N/A	N/A	N/A	N/A
Matrix:		Waste Water	Waste Water	Waste Water	Waste Water	Waste Water	Waste Water	Waste Water
Sample Collection Date:		10/5/2006	11/8/2006	11/16/2006	11/20/2006	11/29/2006	12/5/2006	12/27/2006
Field Sample Identification:		07CP01-01	07CP01-02	07CP01-03	07CP01-04	07CP01-05	07CP01-07	07CP01-09
Semivolatile Organic Compounds	**Units**							
PENTACHLOROPHENOL	ug/L	0.094 U	0.098 U	0.096 U	0.095 U	0.093 U	0.097 U	0.083 U

QUALIFIER KEY: "U" - Analyte not found at the listed detection limit; "J" - Estimated Result; "B" - Analyte detected in Blank; No Qualifier - Analyte found; "R" - Rejected; "NR" - Not Reported

Penta Wood
Pentachlorophenol Results
2006 Treatment Plant Samples

Field Site Identifier:	01
Field Sample Location:	GAC-EFFLUENT
Sample Interval:	N/A
Matrix:	Waste Water
Sample Collection Date:	2/7/2006
Field Sample Identification:	06CA02-20

Semivolatile Organic Compounds	**Units**	
PENTACHLOROPHENOL	ug/L	78 =

QUALIFIER KEY: "U" - Analyte not found at the listed detection limit; "J" - Estimated Result; "B" - Analyte detected in Blank; No Qualifier - Analyte found; "R" - Rejected; "NR" - Not Reported

Penta Wood
Total Organic Carbon Results
2006 Treatment Plant Samples

Field Site Identifier:		01	01	01	01	01	01	01
Field Sample Location:		EFFLUENT	EFFLUENT	EFFLUENT	EFFLUENT	EFFLUENT	EFFLUENT	EFFLUENT
Sample Interval:		N/A	N/A	N/A	N/A	N/A	N/A	N/A
Matrix:		Waste Water	Waste Water	Waste Water	Waste Water	Waste Water	Waste Water	Waste Water
Sample Collection Date:		1/17/2006	2/7/2006	3/23/2006	6/15/2006	7/19/2006	9/27/2006	11/16/2006
Field Sample Identification:		06CA02-17	06CA02-21	06CA02-24	06CA02-33	06CA02-38	06CA02-44	07CP01-03
Wet Chemistry	**Units**							
TOTAL CARBON	mg/L	0.81 J	0.67 J	0.68 J	0.43 J	0.61 J	0.89 J	1.4 =

QUALIFIER KEY: "U" - Analyte not found at the listed detection limit; "J" - Estimated Result; "B" - Analyte detected in Blank; No Qualifier - Analyte found; "R" - Rejected; "NR" - Not Reported

Penta Wood
Total Organic Carbon Results
2006 Treatment Plant Samples

Field Site Identifier:	01
Field Sample Location:	EFFLUENT
Sample Interval:	N/A
Matrix:	Waste Water
Sample Collection Date:	12/5/2006
Field Sample Identification:	07CP01-07

Wet Chemistry	**Units**	
TOTAL CARBON	mg/L	0.91 J

QUALIFIER KEY: "U" - Analyte not found at the listed detection limit; "J" - Estimated Result; "B" - Analyte detected in Blank; No Qualifier - Analyte found; "R" - Rejected; "NR" - Not Reported

Penta Wood
Volatile Results
2006 Treatment Plant Samples

Field Site Identifier:	01	01	01	01
Field Sample Location:	EFFLUENT	EFFLUENT	EFFLUENT	EFFLUENT
Sample Interval:	N/A	N/A	N/A	N/A
Matrix:	Waste Water	Waste Water	Waste Water	Waste Water
Sample Collection Date:	3/23/2006	6/15/2006	9/27/2006	12/5/2006
Field Sample Identification:	06CA02-24	06CA02-33	06CA02-44	07CP01-07
Volatile Organic Compounds	**Units**			
1,2,4-TRIMETHYLBENZENE	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
1,3,5-TRIMETHYLBENZENE (MESITYLENE)	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
BENZENE	µg/L	0.50 U	0.50 U	0.50 U	0.50 U
ETHYLBENZENE	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
TOLUENE	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
TRIMETHYL BENZENE	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
XYLENES	µg/L	5.0 U	5.0 U	5.0 U	5.0 U

QUALIFIER KEY: "U" - Analyte not found at the listed detection limit; "J" - Estimated Result; "B" - Analyte detected in Blank; No Qualifier - Analyte found; "R" - Rejected; "NR" - Not Reported

Appendix B
Natural Attenuation Data

Pentawood Products Site
Natural Attenuation Trend Data
Annual Groundwater Sampling

Well	Sample Date	mg Temp. (C)	Specific Cond. (umhos/cm^2)	DO (mg/L)	DO (%)	pH	ORP (mV)	Turbidity (ntu)	Nitrate (mg/L)	Dissolved Manganese (mg/L)	Dissolved Iron (mg/L)	Sulfate (mg/L)	Methane (mg/L)	PCP (ug/L)	Chloride (mg/L)
DW-01	9/24/2003								1.48	<0.005	<0.05	<2	<0.5	<0.05	66.9
DW-01	5/31/2005								1.5 J	0.004 UJ	0.05 UJ	6.5	0.002 U	0.039 J	29 J
MW-01	10/9/1997	8.46	475	11.23	96.2	7.32	171.0		6.5	NT	<0.02	6.3	<0.01	2.0	18
MW-01	4/5/2000	8.56	416	10.34	86.5	7.14	290.6		1.6	<0.002	<0.05	2.5	0.0003	<0.5	8.7
MW-01	4/24/2001	8.69	431	9.83	84.6	7.08	168.7		6.5	<0.015	<0.025	13.0	<0.00011	<0.1	24
MW-01	9/11/2001	10.18	370	10.63	NR	7.00	235.8		2.6	0.001	<0.035	<8.2	<0.01	0.5	10
MW-01	5/14/2002	8.89	541	9.68	83.6	7.17	113.7		2.7	0.005	<0.011	7.8		0.1	9
MW-01	8/6/2002	8.82	439	NR	89.2	7.33	241.1		<0.15	0.00095 B	<0.011	7.9	<0.01	0.1	7
MW-01	4/29/2003	9.03	383	3.03	26.5	7.13	151.8		2.6	<0.005 UJ	<0.025	10.0	<0.0005	<0.1 UJ	4.3
MW-01	9/24/2003	9.22	349	10.23	89.2	7.16	322.6	53.2	2.61	0.036	0.1 J	<2	<0.0005	0.1	3.3
MW-01	5/4/2004	9.15	314	--	93.8	7.05	217.0		2.1 J	15.0 R	790 R	2.0 R		1.06 J	4.3 R
MW-01	9/21/2004	10.05	279	10.89	97.1	7.07	91.1	160	1.8 J	2.60 J	838.0	5.2 J		0.3	2.7
MW-01	5/10/2005	9.30	540	11.68	102.2	7.08	190.8	155	1.7 J	<0.01	<0.05	14 R	<0.002	0.1	3.6 J
MW-01	9/29/2005	8.96	282	12.12	105.1	7.15	154.6	217	1.9	0.0038 J	<0.05	16.0	<0.002	0.1	6.2
MW-01	5/31/2006	10.76	252	9.33	94.0	7.62	156.3	85	1.6 J	<0.01	<0.05	17.0	<0.002	0.049 J	2.3 J
MW-01	9/25/2006	Well Dry							Well Dry						
MW-02	10/9/1997	9.49	143	8.82	77.2	6.42	274.1		1.1	NT	<0.02	17.0	<0.01	<1.0	4
MW-02	4/5/2000	9.47	111	9.59	81.4	6.85	305.8		<0.1	0.003	<0.05	58.3	0.0003	<0.5	1
MW-02	9/12/2001	12.00	172	11.50	99.8	7.62	96.9		2.3	0.057	<0.035	10	<0.01	0.51	6.2
MW-02	8/6/2002	9.96	128	6.31	NR	5.41	380.5		<0.15	0.018	0.0	10.0	<0.01	0.1	3
MW-02	9/24/2003	9.85	172	7.07	62.8	6.19	326.2	Off Scale	2.02	0.443	3.03	3 J	<0.0005	0.28	1 J
MW-02	9/21/2004	10.29	319	1.17	10.7	6.01	182.6	Off Scale	1.4 J	0.0222 J	25800.00	4.0 R		1.26	12 J
MW-02	9/28/2005	10.27	358	8.95	88.0	6.26	156.2	Off Scale	<0.1	0.0093 J	0.07	27.0	<0.002	2.2 J	6
MW-02	9/26/2006	11.03	345	2.44	22.5	6.28	205.0	Off Scale	0.12	<0.0026	<0.05	20.0	<0.002	2.3	1.6 J

Well	Sample Date	mg Temp. (C)	Specific Cond. (umhos/cm²)	DO (mg/L)	DO (%)	pH	ORP (mV)	Turbidity (ntu)	Nitrate (mg/L)	Dissolved Manganese (mg/L)	Dissolved Iron (mg/L)	Sulfate (mg/L)	Methane (mg/L)	PCP (ug/L)	Chloride (mg/L)
MW-03	10/8/1997	10.34	696	3.52	31.5	6.91	38.4		4.4	0.011	0.3	16.0	<0.01	<1.0	42
MW-03	4/4/2000	Parameters not measured							2.8	0.010	0.5	12.5	0.0016	<0.6	64
MW-03	4/25/2001	10.27	1039	3.77	33.8	6.83	169.1		4.42	0.008	0.1	11.0	NT	<0.11	47
MW-03	9/13/2001	11.53	1118	16.44	NR	6.93	99.0		4	0.031	0.9	14.0	<0.01	0.093	58
MW-03	8/7/2002	10.36	1007	4.50	NR	6.74	165.1		<0.15	0.011	0.2	16.0	<0.01	0.1	69
MW-03	9/23/2003	10.32	873	5.68	50.9	7.06	147.3	0.65	4.43	0.008 J	<0.001	<2	0.0025	0.31	52.4
MW-03	9/21/2004	10.70	1071	0.38	3.4	6.80	87.2	10.6	3.5 J	4.99 J	278.0	8.9 R		0.37	62 J
MW-03	9/28/2005	10.58	948	24.95	(*)	6.82	242.6	25.9	3.3	0.0067 J	0.1	24.0	<0.002	0.2 J	62.0
MW-03	9/25/2006	Well Dry							Well Dry						
MW-04	10/9/1997	9.61	228	1.09	8.0	8.41	-137.9		<0.1	NT	0.04	6.3	0.139	<1.0	7.3
MW-04	4/4/2000	9.43	237	1.38	NR	8.49	NR		<0.1	0.047	<0.05	10.8	0.0008	<0.5	9.6
MW-05	10/10/1997	10.68	887	0.38	3.4	6.24	28.8		<0.1	NT	4.9	15.0	<0.01	28000.0	50
MW-05	4/7/2000	8.76	737	4.81	39.3	6.03	119.4		<0.1	3.350	3.4	34.3	0.0009	20600.0	49
MW-05	4/26/2001	12.29	1018	3.71	36.0	6.40	-39.7		<0.13	11.300	7.6	28.0	NT	20600.0	42
MW-05	9/13/2001	11.45	698	10.19	97.0	6.80	-68.6		0.17	8.500	4.1	22.0	<0.01	6300	29
MW-05	8/7/2002	11.80	589	5.02	NR	6.15	35.2		<0.15	7.840	7.9	21.0		510.0	26
MW-05	9/25/2003	10.60	559	2.99	27.0	6.54	-21.3		<0.05	8.320	13.4	20.0	0.00047 J	1100.0	22.1
MW-05	9/22/2004	11.80	749	8.43	82.8	6.53	-98.5	56.8	0.01 R	5,650 J	30.5	24 R		194.0	29 J
MW-05	9/28/2005	11.13	627	3.27	30.3	6.47	-60.4	0.98	<0.1	7.6	19.0	35.0	0.0230	1100 J	18.0
MW-05	9/26/2006	11.49	736	4.79	46.5	6.64	221.0	0.72	<0.1	8.0	23.0	27.0	0.0087 J	460	16.0
MW-06S	10/9/1997	11.26	792	5.25	48.0	6.21	232.1		4.5	NT	0.02	0.9	<0.01	<1.0	72
MW-06S	4/7/2000	Not measured. Sampled for VOCs only													
MW-06S	4/26/2001	12.03	453	2.78	26.7	5.92	142.2		0.87	0.347	<0.025	12	NT	3	14
MW-06S	9/12/2001	Not measured due to product in the well.							1.1	0.8	<0.035	16	<0.01	1.1	12
MW-06S	8/7/2002	12.75	583	NR	41.4	6.08	77.8		<0.15	1.790	3.33	18	0.2700	88 B	17
MW-06S	9/25/2003	Not measured due to product in the well.							1.01	0.961	1.10	17	0.1300	0.33	23.9
MW-06S	9/27/2006	CAMU wells not measured							3.9	0.590	<0.05	18	0.0035 J	0.21	18.0

Well	Sample Date	mg Temp. (C)	Specific Cond. (umhos/cm^2)	DO (mg/L)	DO (%)	pH	ORP (mV)	Turbidity (ntu)	Nitrate (mg/L)	Dissolved Manganese (mg/L)	Dissolved Iron (mg/L)	Sulfate (mg/L)	Methane (mg/L)	PCP (ug/L)	Chloride (mg/L)
MW-07	10/14/1997	10.13	709	8.23	73.0	6.86	6.0		4.9	NT	0.62	6.0	<0.01	<1.0	7.6
MW-07	4/4/2000	9.87	693	5.82	51.5	7.01	156.1		2.7	0.026	0.36	6.1	0.004	<0.5	4.8
MW-07	4/25/2001	12.60	721	7.54	71.2	6.89	127.5		3.6	0.007	0.15	6.5	0.0047	<0.1	8.4
MW-07	9/11/2001	11.04	824	8.36	74.5	6.27	208.0		3	0.0044	0.23	10	0.012	0.083	23
MW-07	8/7/2002	12.68	812	NR	93.7	6.71	256.3		<0.15	0.004 B	0.305	10	<0.01	0.03	21
MW-07	9/24/2003	10.38	680	6.85	61.6	6.90	98.7	1.97	2.97	<0.005	0.09 J	<2	0.0049	0.044 J	12.2
MW-07	9/22/2004	13.90	736	7.89	77.5	6.71	35.2	14.5	3.4 J	9.75 J	1640 J	6.8 R		5.75	7.2 J
MW-07	9/27/2005	10.44	789	8.01	71.9	5.53	146.0	6.97	1.8	0.016	0.88	130 J	0.002 UJ	<0.12	18
MW-07	9/27/2006	11.16	799	5.47	69.1	6.77	220.1	--	1.8	.068 J	<0.05	110	0.0043 J	0.087 J	15
MW-08	10/14/1997	9.73	363	4.28	37.2	7.93	12.2		1.4	NT	0.148	4.5	0.0365	<1.0	4.2
MW-08	4/5/2000	10.07	295	3.78	33.5	6.91	252.3		3.5	0.0053	<0.05	6.5	0.0072	<0.5	6.26
MW-08	4/26/2001	11.08	358	5.50	52.3	7.94	151.3		1.52	0.027	<0.025	7.47	0.0116	0.2	3.25
MW-08	9/11/2001	10.49	386	4.08	NR	7.77	29.3		1.5	0.018	0.07	<7.6	<0.01	0.062	3.8
MW-08	8/8/2002	11.80	375	NR	75.2	7.56	160.9		<0.15	0.0053 B	0.011 B	6	<0.01	<0.04	4.2
MW-08	9/25/2003	10.67	414	6.20	57.8	7.79	125.4	4.15	2.6	0.006 J	<0.05	<2	0.0092	<0.11	11
MW-08	9/23/2004	11.89	449	5.50	52.8	7.14	11.0	2.99	2.4 J	12.0 J	256	5.8 J	3.75 J	1.94	15
MW-08	9/28/2005	11.10	407	8.25	71.0	7.56	195.2	52.2	2.0 J	0.016	0.13	19	0.0026	0.031 J	20
MW-08	9/25/2006	Well Dry							Well Dry						
MW-09	10/8/1997	10.59	171	6.30	54.9	5.63	217.6		4.2	NT	<0.0001	3.4	<0.01	<1.0	45
MW-09	4/5/2000	9.65	153	6.36	44.7	5.78	321.7		1.97	0.0217	<0.05	8.46	0.000396	0.6	3.15
MW-09	4/23/2001	9.62	172	5.21	43.1	5.72	162.7		2.46	0.034	<0.025	27	<0.00012	0.12	3.22
MW-09	9/12/2001	11.23	206	5.75	NR	5.54	309.8		3.3	0.016	0.11	<6.8	<0.01	0.76	6.5
MW-09	8/6/2002	9.21	253	1.96	17.3	5.27	391.9		<0.15	0.0063 B	<0.011	22	<0.01	0.54	11
MW-09	9/25/2003	9.22	206	3.53	34.3	5.62	278.7	73.3	2.36	0.016	0.24	24	<0.0005	2.3	4.4
MW-09	9/22/2004	11.91	228	4.99	47.5	5.28	148.1	5.93	1.8 J	8.51 J	0.24 J	26 R	10.0 UJ	2.92	3.2 J
MW-09	9/27/2005	10.45	168	(*)	--	4.33	333.6	0.76	1.9 J	0.0054 J	<0.05	20	0.002 UJ	0.57	2.6
MW-09	9/25/2006	Well Dry							Well Dry						

Well	Sample Date	mg Temp. (C)	Specific Cond. (umhos/cm^2)	DO (mg/L)	DO (%)	pH	ORP (mV)	Turbidity (ntu)	Nitrate (mg/L)	Dissolved Manganese (mg/L)	Dissolved Iron (mg/L)	Sulfate (mg/L)	Methane (mg/L)	PCP (ug/L)	Chloride (mg/L)
MW-10	10/15/1997	10.88	803	0.38	3.4	6.83	-33.2		4.9	NT	0.00219	13	0.0135	3400	35
MW-10	4/6/2000	10.76	988	0.47	4.2	6.82	27.4		1.72	1.59	0.1159	13.8	0.003067	9530	55.9
MW-10	4/26/2001	12.31	1029	4.52	42.8	6.89	-103.5		0.18	2.38	5.65	22	NT	22800	48
MW-10	9/12/2001	11.18	1188	6.55	63.1	6.89	-71.1		0.13	3.2	2.4	23	<0.01	21000	61
MW-10	8/7/2002	14.24	1010	NR	60.9	6.30	-147.8		<0.15	2.54	10.7	20	0.011	22000	56
MW-10	10/1/2003								<0.05	1.85	2.59	3	0.00062	9000	22
MW-10	9.23/2004	Not measured due to product in the well							0.0018 J	1.81	0.0241	18	10.0 U	38000	38
MW-10	9/29/2005	Well Dry													
MW-10	9/27/2006	CAMU wells not measured							<0.1	2.6	0.12	24	<0.002	23000 J	14
MW-10S	10/15/1997	13.18	339	10.49	100.0	7.55	135.6		<0.1	NT	0.0000454	23	<0.01	12000	38
MW-10S	4/7/2000	9.41	599	5.02	41.5	6.37	331.6		<100	10.1	<0.05	138	0.001567	56100	53
MW-10S	4/25/2001	Not measured due to product in the well							1.5	6.03	11.30	8.6	0.0006	49000	11
MW-10S	9/12/2001	Not measured due to product in the well							4.7	7.60	0.048	13	<0.01	82000	10
MW-10S	8/7/2002	13.62	431	NR	66.1	6.31	303.8		0.11	7.07	0.0673	14	<0.01	390	10
MW-10S	9/25/2003	Not measured due to product in the well							3.41	5.9	<0.05	2	<0.0005	2200	6.7
MW-10S	9/22/2004	Not measured due to product in the well							3.6 J	3740 J	0.0227 J	15 R	10.0 UJ	9490	24 J
MW-10S	9/29/2005	Not measured due to product in the well							2.0 J	3.9	<0.05	120 J	<0.002	<0.11	16
MW-10S	9/27/2006	CAMU wells not measured							1.2	2.5	<0.05	79	<0.002	2700 J	8.6
MW-11	10/15/1997	13.98	398	4.86	47.2	7.94	144.3		3.4	NT	<0.0001	12	<0.01	<1.0	7.5
MW-11	4/4/2000	13.24	427	6.57	61.9	7.80	215.5		3.09	<0.002	<0.05	9.41	0.000138	<0.6	6.98
MW-11	4/4/2001	12.98	337	6.98	67.6	7.86	138.5		3.74	<0.015	<0.025	3.48	<0.00011	<0.11	6.25
MW-11	9/10/2001	13.13	414	9.09	NR	7.77	100.0		3.1	0.00045	<0.035	<7.4	<0.010	0.091	8
MW-11	8/6/2002	13.12	455	5.37	NR	7.58	240.6		<0.15	0.0012 B	<0.011	7.6	<0.01	<0.04	7.8
MW-11	9/23/2003	12.66	396	6.29	60.7	7.81	245.9	11.3	2.94	<0.005	<0.05	<2	<0.0005	<0.11	6.7
MW-11	9/21/2004	12.15	494	0.48	4.4	7.64	159.3	7.76	3.0 J	1.40 J	15.6	6.2 J	10.0 U	0.0656	9
MW-11	9/29/2005	11.55	502	8.12	96.9	7.26	177.2	0.32	2.4 J	0.003 J	<0.05	9.7	<0.002	740 J	14
MW-11	9/27/2006	11.91	490	--	53.8	7.82	159.2	0.16	0.53 J	0.01 UJ	0.05 UJ	8.8 J	0.002 UJ	<0.11	16 J

Pentawood Products Site
Natural Attenuation Trend Data
Annual Groundwater Sampling

Well	Sample Date	mg Temp. (C)	Specific Cond. (umhos/cm²)	DO (mg/L)	DO (%)	pH	ORP (mV)	Turbidity (ntu)	Nitrate (mg/L)	Dissolved Manganese (mg/L)	Dissolved Iron (mg/L)	Sulfate (mg/L)	Methane (mg/L)	PCP (ug/L)	Chloride (mg/L)
MW-12	10/15/1997	10.16	1044	2.86	25.0	6.93	41.2		<0.1	NT	0.000267	15	<0.01	5000	48
MW-12	4/6/2000	10.10	1097	0.63	5.6	6.89	169.9		0.483	1.59	0.1128	11.9	0.001553	10300	54.5
MW-12	4/6/2001	Parameters not measured							0.43	1.57	0.131	16	0.048	1500	48
MW-12	9/13/2001	11.02	1142	3.95	36.7	6.84	22.2		<0.53	1.4	0.74	16	<0.01	18000	47
MW-12	5/14/2002	10.28	933	0.75	7.0	6.72	110.0		0.67	1.68	<0.011	17		4300	40
MW-12	8/7/2002	12.21	920	NR	45.9	6.69	150.0		0.46	1.6	0.105	15	<0.01	6400	37
MW-12	4/29/2003	10.95	982	5.24	47.2	6.80	126.1		0.8	1.56	<0.025	20	<0.05	3000	31
MW-12	9/23/2003	10.89	864	3.07	27.8	6.62	306.1	0.54	1.17	1.53	<0.05	<2	0.00049 J	10000	30.8
MW-12	5/4/2004	10.64	897	7.50	71.7	7.15	126.2		1.1 J	1480 R	52.7	14 R	1.34 J	11200 J	29
MW-12	9/22/2004	13.49	939	3.87	37.6	6.77	95.6	0.83	1.1 J	1230 J	53.9	12 R	10.0 UJ	9060 J	26 J
MW-12	5/12/2005	11.24	1774	2.79	26.4	6.88	176.6	0.46	1.3 J	1.4	<0.05	16 R	<0.002	8300 J	23 J
MW-12	9/27/2005	11.67	760	0.70	6.4	6.56	169.3	4.28	1.1 J	1.3	<0.05	26 J	0.002 UJ	8500 J	20
MW-12	6/7/2006	12.10	788	4.85	38.1	6.76	175.9	2.13	2.1 J	1.1 J	0.05 R	32	<0.002	6100 J	21 J
MW-12	9/26/2006	12.39	872	--	41.5	7.07	214.1	1.29	1.9 J	1.2 J	<0.05	15 J	0.002 UJ	3100	14 J
MW-13	10/8/1997	12.79	185	6.00	54.1	6.19	206.7		1.3	0.000027	0.0000067	1.4	<0.01	0.7	2.7
MW-13	4/5/2000	9.67	189	8.29	51.5	5.49	296.7		<100	0.112	<0.05	431	0.0003	0.8	4.4
MW-13	4/23/2001	9.08	140	3.44	26.8	5.59	207.9		1.8	0.110	<0.025	35	<0.00012	0.2	3.5
MW-13	9/10/2001	10.69	203	NR	NR	5.54	196.0		2.5	0.027	0.052	<7.5	<0.01	0.69	5.4
MW-13	8/5/2002	11.49	223	5.36	48.3	5.38	333.1		<0.15	0.045	1.31	8.4	<0.01	0.64	6.8
MW-13	9/23/2003	11.16	195	3.50	32.3	5.80	317.0	432	1.86	0.182	0.96	7	<0.0005	2.9	5.1
MW-13	9/21/2004	11.13	208	1.57	13.8	5.60	229.7	151	2.4 J	3.67 J	0.124 UJ	6.4 R	10.0 UJ	4.67	6.5 J
MW-13	9/27/2005	12.48	168	(*)	--	5.19	335.1	221	0.6	0.0071 J	<0.05	19	0.002 UJ	0.85	3.1
MW-13	9/25/2006	Well Dry							Well Dry						
MW-14	10/9/1997	9.32	252	6.43	56.2	8.09	108.9		1.6	NT	<0.0001	2.4	<0.01	<1.0	8.0
MW-14	4/6/2000	9.10	283	6.92	60.0	7.42	257.3		2.2	<0.002	<0.05	4.1	0.0002	<0.5	15.7

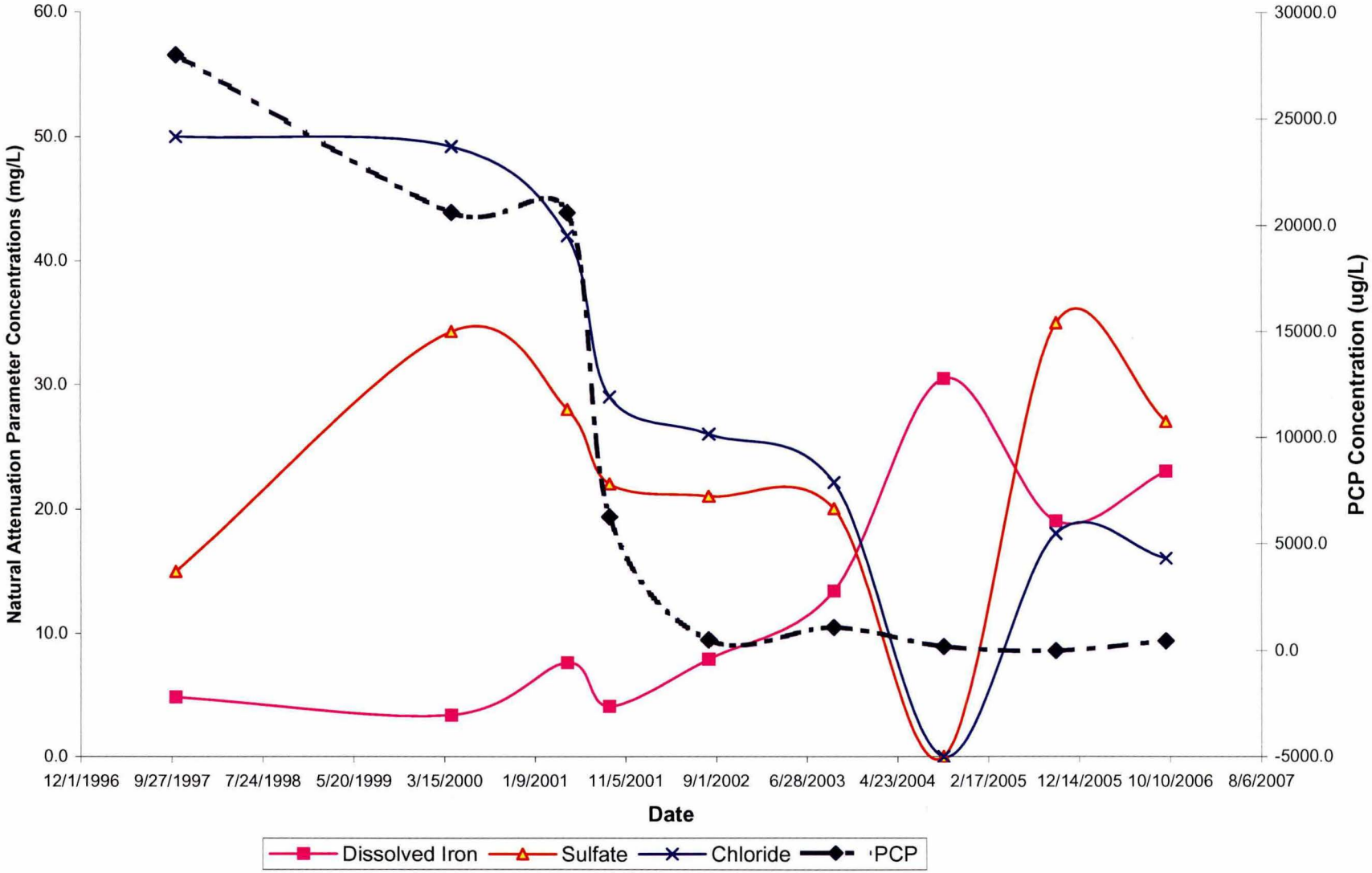
Well	Sample Date	mg Temp. (C)	Specific Cond. (umhos/cm^2)	DO (mg/L)	DO (%)	pH	ORP (mV)	Turbidity (ntu)	Nitrate (mg/L)	Dissolved Manganese (mg/L)	Dissolved Iron (mg/L)	Sulfate (mg/L)	Methane (mg/L)	PCP (ug/L)	Chloride (mg/L)
MW-15	10/16/1997	9.29	409	4.49	39.1	8.22	149.8		4.1	NT	0.00001	6.3	<0.01	<1	6.5
MW-15	4/4/2000	8.08	483	10.72	85.1	7.69	284.1		3.5	<0.002	<0.05	10	0.0003	<0.5	12.3
MW-15	4/25/2001	11.79	675	8.73	81.3	7.73	179.4		4.0	<0.015	<0.025	3	<0.0001	<0.11	15.0
MW-15	9/12/2001	9.74	548	9.80	NR	8.00	153.3		3.7	0.000	<0.035	<4.5	<0.01	0.077	17.0
MW-15	8/6/2002	10.24	508	NR	101.4	7.72	285.7		<0.15	<0.00042	<0.011	5	<0.01	<0.04	16.0
MW-15	9/23/2003	9.74	483	9.14	81.7	7.90	213.6	26.1	3.8	<0.005	<0.05	<2	<0.0005	<0.1	17.4
MW-15	9/21/2004	9.85	514	8.49	77.4	7.55	73.5	4.11	3.2 J	0.976 J	36.70	3.9 J	10.0 U	0.3	16.0
MW-15	9/29/2005	11.44	580	10.25	89.3	7.58	163.8	1.50	4.2 J	0.0016 J	<0.05	6	<0.002	<0.11	17.0
MW-15	9/27/2006	11.95	607	--	89.5	7.84	118.3	3.68	4.7 J	0.002 UB	0.05 UJ	5.9 J	0.002 UJ	< 0.11	14 J
MW-16	10/14/1997	9.86	409	8.57	74.8	6.82	99.4		3.2	NT	0.00002	8.10	<0.01	<1	6.1
MW-16	4/6/2000	9.77	169	8.16	70.0	6.63	310.9		3.9	1.69	<0.05	24.1	<0.001068	<0.5	6.5
MW-16	4/26/2001	10.46	1102	4.72	43.2	6.81	75.6		8.7	0.009	0.03	29.0	<0.00012	<0.11	3.6
MW-16	9/10/2001	Parameters not measured							5.8	0.00082	<0.035	11.0	<0.01	0.17	1.8
MW-16	8/6/2002	11.70	247	10.86	NR	6.11	331.3		<0.15	0.0091 B	0.08	13.0	<0.01	0.0	2.0
MW-16	9/23/2003	10.97	216	10.27	93.2	6.34	349.1	29.0	3.5	<0.005	<0.05	3 J	<0.0005	0.089 J	6.2
MW-16	9/21/2004	10.68	222	0.07	0.6	6.49	173.9	37.4	2.1 J	0.617 J	0.025	5.5 J	10.0 U	0.1	3.7
MW-16	9/29/2005	10.48	373	11.12	97.6	6.79	233.4	12.8	1.5	0.0021 J	<0.05	71 J	<0.002	<0.11	11.0
MW-16	9/26/2006	10.69	278	9.33	87.7	6.45	232.3	51.80	1.2 J	0.00059 UB	0.05 UJ	32 J	0.002 UJ	0.046 J	4.1 J
MW-17	10/15/1997	9.26	399	4.53	39.0	7.89	147.2		4.1	NT	<0.0001	10	<0.01	<1	4.8
MW-17	4/6/2000	9.15	438	4.81	41.8	7.73	254.9		4.2	<0.002	<0.05	<3	0.0001	<0.5	4.9
MW-17	4/26/2001	10.38	412	9.64	85.7	7.77	58.6		5.0	<0.015	<0.025	6.8	NT	0.7	4.1
MW-17	9/11/2001	11.44	457	6.96	62.9	7.49	262.0		4.4	<0.00027	0.31	<9.3	<0.01	<0.059	4.8
MW-17	8/8/2002	12.88	425	NR	65.8	7.64	204.5		<0.15	<0.00042	<0.011	7.4	<0.01	0.032	4.6
MW-17	9/25/2003	9.80	405	6.45	57.3	7.80	206.0	358	5.1	<0.005	<0.05	<2	<0.0005	0.46	4.4
MW-17	9/22/2004	11.02	498	9.13	87.0	7.57	150.5	8.23	4.8 J	0.045 J	0.0139 J	8.6 R	10.0 UJ	2.82	4.1 J
MW-17	9/27/2005	11.94	368	(*)	--	6.31	325.4	0.23	5.1 J	<0.01	<0.05	7.8	0.002 UJ	0.054 J	3.9
MW-17	9/26/2006	11.74	429	--	61.9	7.75	222.0	1.05	5.5 J	0.01 UJ	0.05 UJ	6.5 J	0.002 UJ	0.11 U	2.9 J
MW-18	10/10/1997	11.51	777	1.03	9.2	6.13	-12.1		<0.1	NT	0.03	11.0	<0.01	8800	49

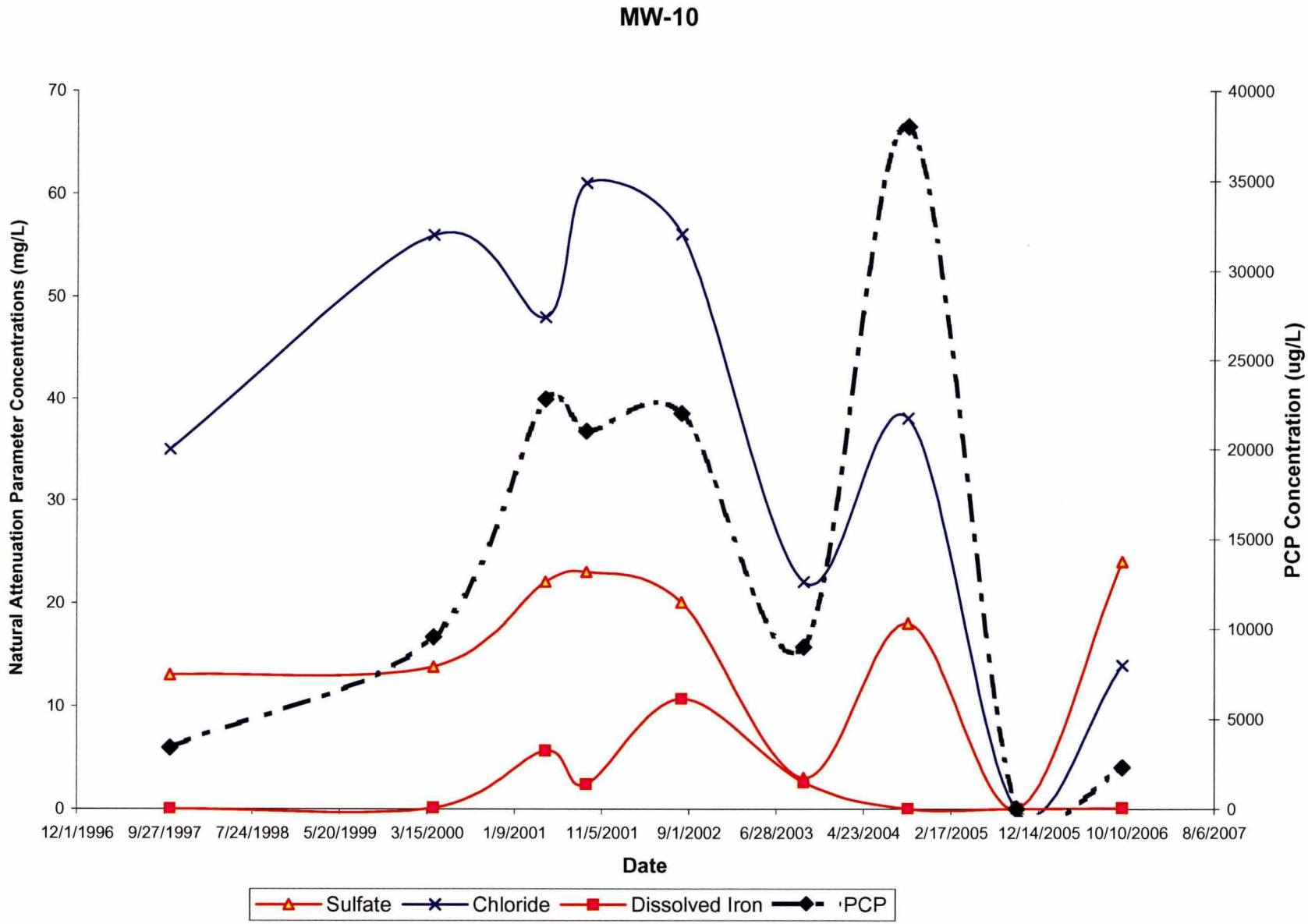
Well	Sample Date	mg Temp. (C)	Specific Cond. (umhos/cm^2)	DO (mg/L)	DO (%)	pH	ORP (mV)	Turbidity (ntu)	Nitrate (mg/L)	Dissolved Manganese (mg/L)	Dissolved Iron (mg/L)	Sulfate (mg/L)	Methane (mg/L)	PCP (ug/L)	Chloride (mg/L)
MW-19	10/16/1997	8.43	662	12.11	103.4	8.23	133.6		3.8	NT	<0.0001	19	<0.01	8900	47
MW-19	4/7/2000	7.80	650	5.02	40.3	6.75	323.2		7.0	<0.002	<0.05	90	0.0003	11000	37.4
MW-19	4/7/2001	Not measured due to product in the well.							3.37	1.79	<0.025	47	NT	25600	39
MW-19	9/12/2001	Not measured due to product in the well.							1.3	1.8	0.071	<9.7	0.0160	400000	19
MW-19	5/13/2002	Not measured due to product in the well.							2	2.07	<0.011	16		14000	33
MW-19	8/8/2002	Not measured due to product in the well.							0.16	3.11	0.218	16	<0.01	11000	22
MW-19	4/29/2003	Not measured due to product in the well.							3	3.59	<0.025	27	0.0024	4900	20
MW-19	9/25/2003	Not measured due to product in the well.							2	4.47	0.05 J	90	0.0057	15000	17.5
MW-19	5/4/2004	Not measured due to product in the well.							0.71 J	3.36	0.031	16 R	1.13 J	70000 J	25.0
MW-19	9/22/2004	Not measured due to product in the well.							1.5 J	2.65	<0.124	23 R	10.0 UJ	111000	15 J
MW-19	5/10/2005	Not measured due to product in the well.							0.76 J	2.3	<0.05	29 R	<0.002	45000 J	18 J
MW-19	9/29/2005	Not measured due to product in the well.							0.75	2.7	<0.05	40 J	<0.002	13000 J	19.0
MW-19	6/7/2006	Not measured due to product in the well.							0.76 J	2.7 J	0.05 UJ	36	<0.002	17000 J	18 J
MW-19	9/27/2006	CAMU wells not measured							0.66 J	3.1	<0.05	30	0.002 UJ	8200 J	14.0
MW-20	10/15/1997	Dry. Could not collect parameter sample.							NT	NT	NT	NT	<0.01	11000	NT
MW-20	4/26/2001	Not measured due to product in the well.							<0.13	2.25	0.84	67	NT	36600	24
MW-20	9/12/2001	Not measured due to product in the well.							0.15	2.8	<0.035	24	<0.01	83000	16
MW-20	8/7/2002	Not measured due to product in the well.							<0.15	3.28	0.206	25	<0.01	30000 B	22
MW-20	9/25/2003	Not measured due to product in the well.							<1.25	3.25	0.35	80 J	0.0054	13000	19.4 J
MW-20	9/22/2004	Not measured due to product in the well.							0.29 J	2.32	2.07	23 R	10.0 UJ	133000	24 J
MW-20	10/25/2005	Not measured due to product in the well.							2.1 J	2.4	0.14	39 J	<0.002	63000 J	13
MW-20	9/27/2006	CAMU wells not measured							0.22	4.2	0.094 J	71	0.002 UJ	44000 J	16
MW-21	2/9/1998	8.50	559	8.35	NT	7.05	177.5		NT	NT	<0.1	9.1	0.011	<1.0	71
MW-21	5/14/2002	9.29	457	10.66	93.5	5.86	152.0		2.0		0.130	7.3		0.1	69
MW-21	8/6/2002	10.72	444	NR	99.0	6.79	297.6		<0.15	0.00063 B	<0.011	9.6		0.0	49
MW-21	4/29/2003	9.91	473	3.72	NR	6.65	144.9		2.5	<0.005	<0.025	12.0	<0.0005	0.2	41
MW-21	9/24/2003	9.30	491	11.13	97.7	6.74	326.0	400	2.6	<0.005	<0.05	<2	<0.0005	0.063 J	48
MW-21	5/4/2004	10.10	557	--	89.2	6.50	196.3		2.3 J	0.718 R	14000 R	3.6 R	10.0 U	0.135 UB	67
MW-21	9/21/2004	9.80	510	10.37	92.5	6.61	102.1	365	2.4 J	0.484 J	10300 J	4.8 R	10.0 UJ	0.5	63 J
MW-21	5/10/2005	10.47	544	10.89	94.1	6.63	159.6	103	2.8 J	0.00047 J	<0.05	12 R	<0.002	0.3	49 J
MW-21	9/27/2005	10.45	444	13.46	(*)	6.32	129.8	969	2.4 J	0.0098 J	0.036 J	17.0	0.002 UJ	0.046 J	47
MW-21	6/1/2006	9.76	496	8.23	62.7	6.77	200.8	684	2.7 J	0.017 J	0.047 J	20.0	<0.002	0.023 J	65 J
MW-21	9/25/2006	Well Dry							Well Dry						

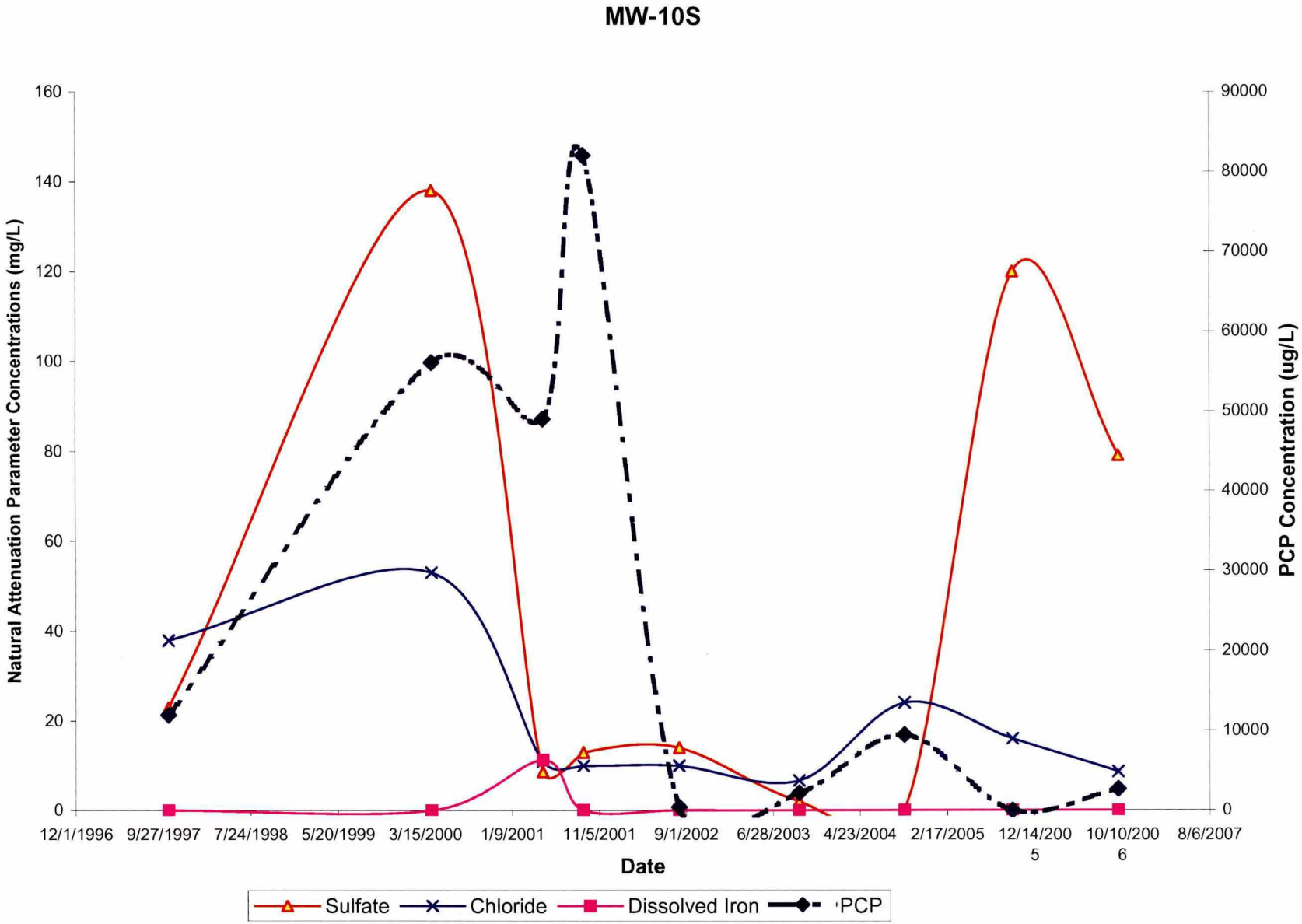
Well	Sample Date	mg Temp. (C)	Specific Cond. (umhos/cm²)	DO (mg/L)	DO (%)	pH	ORP (mV)	Turbidity (ntu)	Nitrate (mg/L)	Dissolved Manganese (mg/L)	Dissolved Iron (mg/L)	Sulfate (mg/L)	Methane (mg/L)	PCP (ug/L)	Chloride (mg/L)
MW-22	2/9/1998	8.70	558	7.50	NT	6.86	119.5		NT	NT	<0.1	18	0.013	<1.0	56
MW-22	5/14/2002	9.91	423	10.25	91.3	6.77	85.5		3.7 J	0.0035	0.023	14		0.1	18
MW-22	8/6/2002	11.37	343	NR	101.6	6.86	323.7		<0.15	<0.00042	0.025 B	12	<0.01	0.1	7
MW-22	9/24/2003	9.70	303	10.92	96.4	6.89	345.4	1038	2.2	0.542	2.77	3 J	<0.0005	0.3	5
MW-22	9/21/2004	9.78	316	10.59	94.5	6.64	99.3	777	2.2 J	15.0 UJ	0.025 UJ	6.7 R	10.0 UJ	0.2	11 J
MW-22	9/28/2005	9.70	Meter not working		87.4	6.66	260.8	59.5	1.7 J	0.0013 J	<0.05	18	<0.002	0.16 J	10
MW-22	9/25/2006	Well Dry							Well Dry						
MW-23	2/27/1998	9.63	270	13.68	122.3	7.93	159.0		NT	NT	<0.1	7.6	0.0566	<1.0	8.7
MW-23	9/11/2001	11.57	322	3.21	28.8	7.46	112.6		<0.13	0.029	<0.035	<8.2	<0.01	0.49	10
MW-24	2/8/1998	13.80	524	5.35	NT	6.62	80.0		NT	NT	<0.1	5.2	<0.01	<1	19
MW-24	4/24/2001	15.30	634	3.67	34.9	6.28	209.2		3.6	0.0024	<0.025	12	<0.0001	0.1	36
MW-25	2/9/1998	8.69	808	8.16	NT	6.95	55.0		NT	NT	<0.1	9.9	0.017	<1.0	16
MW-26	4/24/2001	11.24	646	7.73	71.8	7.05	190.2		5.0	<0.015	0.04	10	<0.0001	<0.1	22
MW-26	9/10/2001	Parameters not measured							3.2	<0.004	0.1	12	<0.01	0.16	30
MW-26	5/14/2002	12.28	588.00	7.55	72.8	7.11	17.8		3 J	0.00073	<0.011	15		0.1	27
MW-26	8/5/2002	11.30	588.00	NR	66.3	6.52	280.1		<0.15	0.00056 B	<0.011	14	<0.01	0.03	18
MW-26	4/29/2003	10.58	621.00	8.68	79.2	6.53	157.3		3.5	<0.005	<0.025	14	<0.0005	<0.1	18
MW-26	9/23/2003	10.84	513	7.41	67.7	6.70	279.8	23.7	3.74	<0.005	<0.05	<2	<0.0005	<0.11	11
MW-26	5/4/2004	9.85	172	7.07	62.8	6.19	326.2		3.9 J	1.23 R	0.039	42 R	10.0 U	0.242 UB	17
MW-26	9/23/2004	13.16	931	8.85	87.2	6.44	63.4	44.6	1.5 J	19.3	620	120	10.0 U	0.393	28
MW-26	5/10/2005	11.49	1120	10.48	97.2	6.92	197.0		2.8 J	0.0018 J	<0.05	200 R	<0.002	0.061 J	26 J
MW-26	9/27/2005	12.13	845	6.77	63.2	6.78	129.2	5.24	1.9 J	<0.01	<0.05	170 J	0.002 UJ	0.027 J	25
MW-26	6/7/2006	11.71	830	7.97	74.7	7.00	113.3	2.93	1.8 J	0.0025 UJ	0.05 UJ	150	<0.002	150	29 J
MW-26	9/27/2006	12.24	1011	7.10	66.6	7.11	227.3	1.03	1.5 J	0.01 UJ	0.05 UJ	87 J	0.002 UJ	0.11 U	23 J
PW-01	10/23/1997	11.10	550	5.00	NT	8.92	185.0		7.7	NT	0.0012	10	0.0195	5	48
PZ-03	2/9/1998	7.50	212	11.02	NT	6.91	164.0		NT	NT	NT	NT	NT	<1	NT

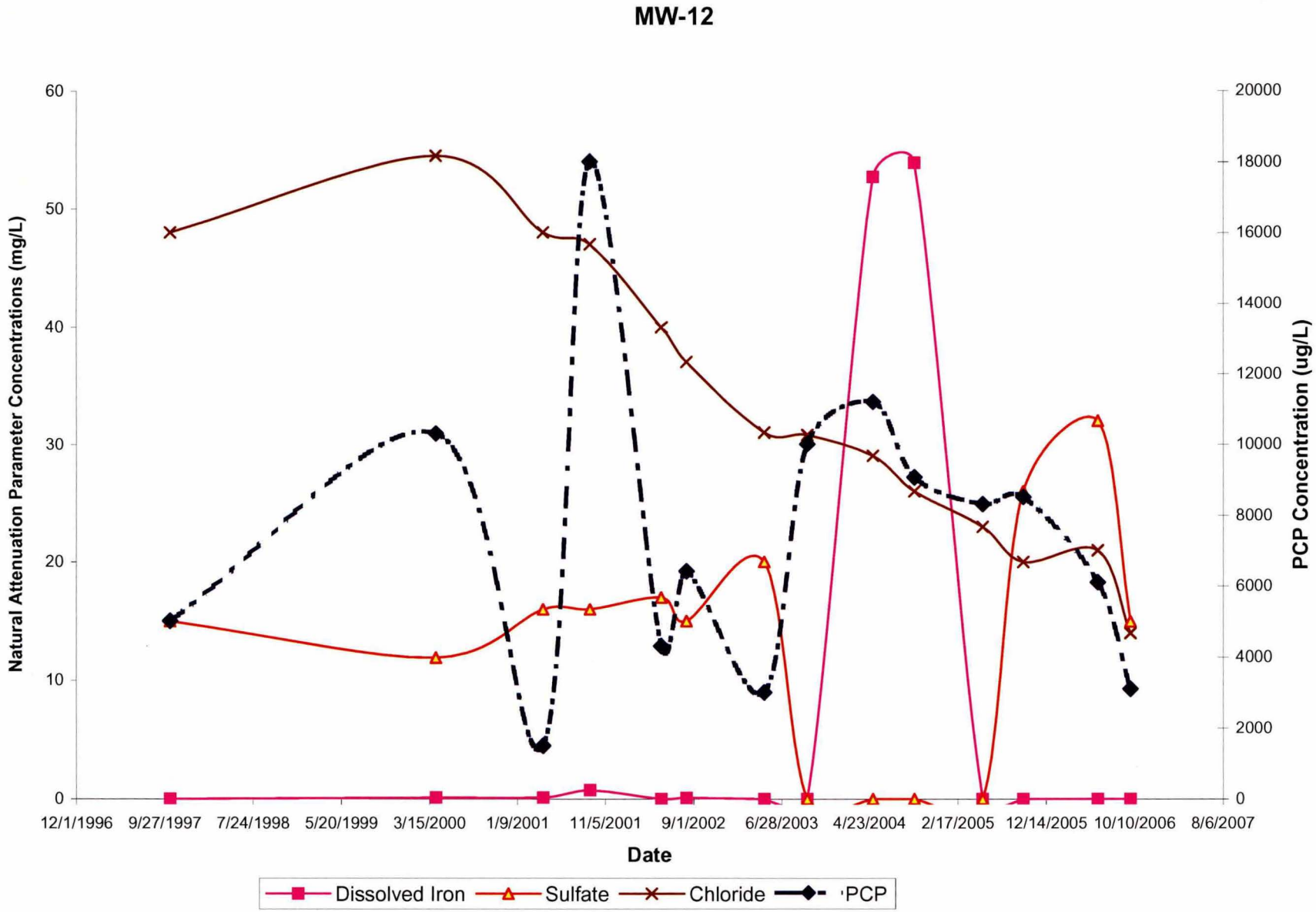
(*) Readings outside normal range, instrument response in question.
NR - Parameter not Recorded.
NT - Parameter not tested.

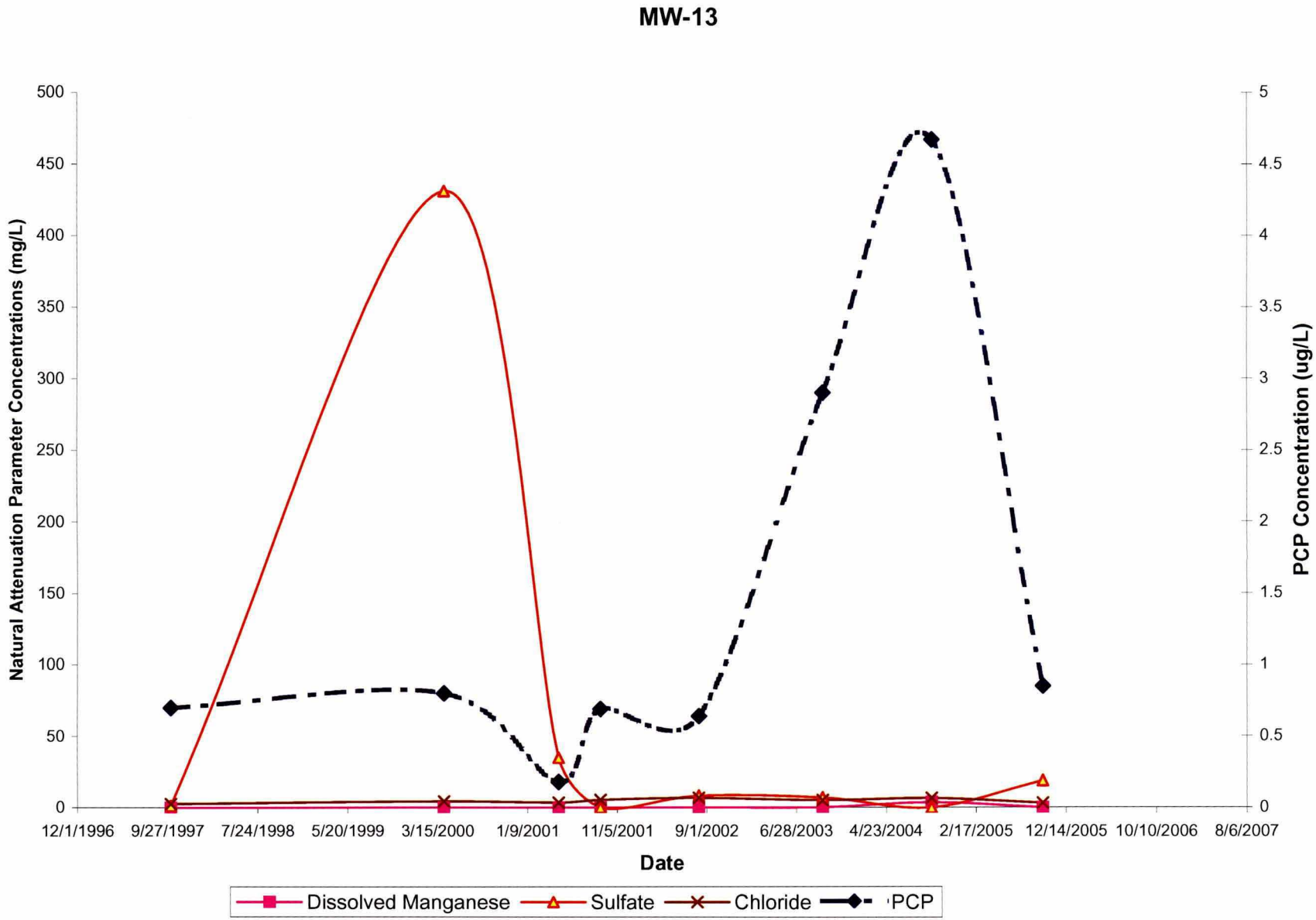
MW-05

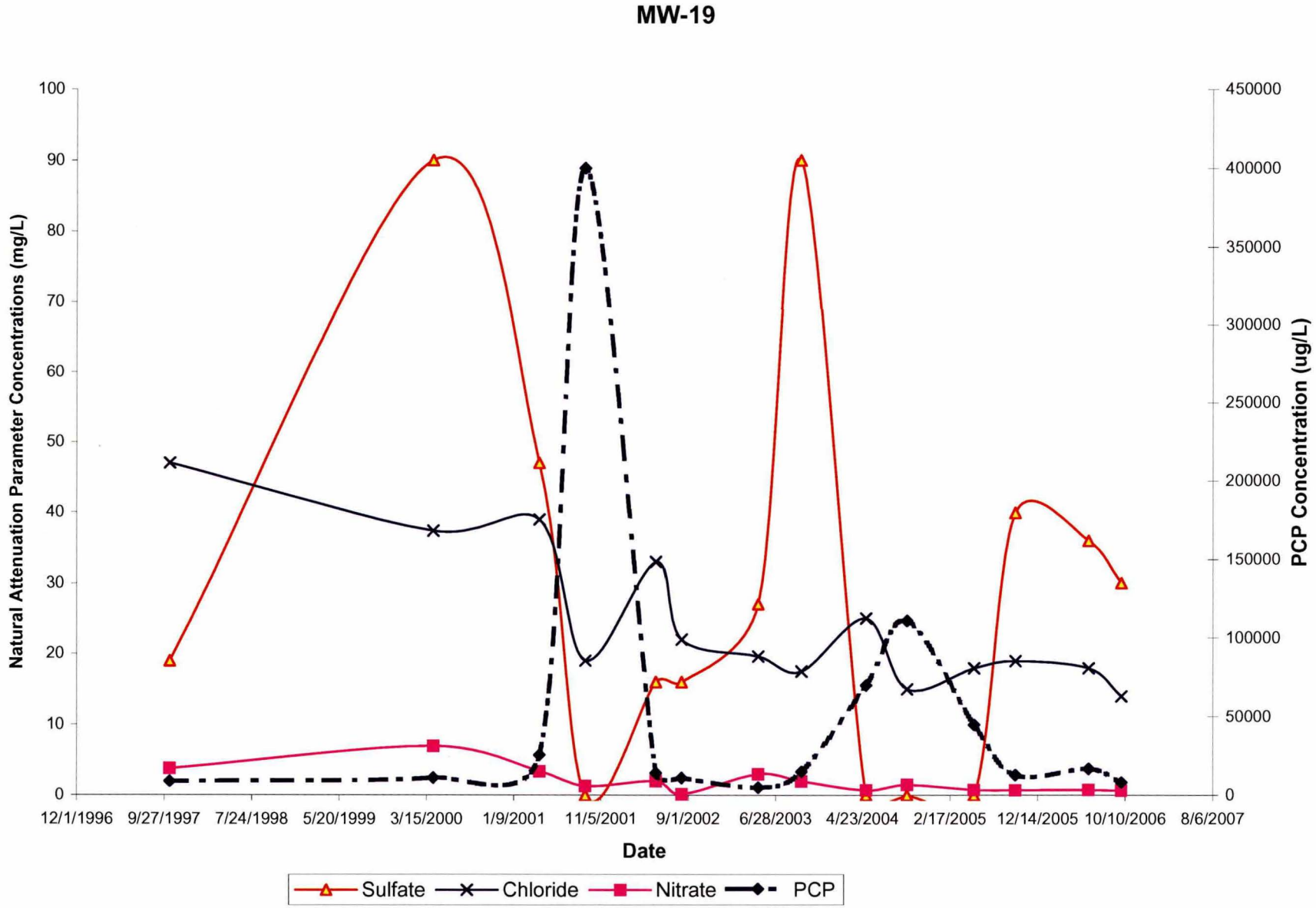

60.0
50.0
40.0
30.0
20.0
10.0
0.0
Natural Attenuation Parameter Concentrations (mg/L)
30000.0
25000.0
20000.0
15000.0
10000.0
5000.0
0.0
-5000.0
PCP Concentration (ug/L)
12/1/1996
9/27/1997
7/24/1998
5/20/1999
3/15/2000
1/9/2001
11/5/2001
9/1/2002
6/28/2003
4/23/2004
2/17/2005
12/14/2005
10/10/2006
8/6/2007
Date
Dissolved Iron
Sulfate
Chloride
PCP


MW-10
Natural Attenuation Parameter Concentrations (mg/L)
PCP Concentration (ug/L)
70
60
50
40
30
20
10
0
40000
35000
30000
25000
20000
15000
10000
5000
0
12/1/1996
9/27/1997
7/24/1998
5/20/1999
3/15/2000
1/9/2001
11/5/2001
9/1/2002
6/28/2003
4/23/2004
2/17/2005
12/14/2005
10/10/2006
8/6/2007
Date
Sulfate
Chloride
Dissolved Iron
PCP


MW-10S
Natural Attenuation Parameter Concentrations (mg/L)
PCP Concentration (ug/L)
160
140
120
100
80
60
40
20
0
90000
80000
70000
60000
50000
40000
30000
20000
10000
0
12/1/1996
9/27/1997
7/24/1998
5/20/1999
3/15/2000
1/9/2001
11/5/2001
9/1/2002
6/28/2003
4/23/2004
2/17/2005
12/14/2005
10/10/2006
8/6/2007
Date
Sulfate
Chloride
Dissolved Iron
PCP


MW-12
Natural Attenuation Parameter Concentrations (mg/L)
PCP Concentration (ug/L)
60
50
40
30
20
10
0
20000
18000
16000
14000
12000
10000
8000
6000
4000
2000
0
12/1/1996
9/27/1997
7/24/1998
5/20/1999
3/15/2000
1/9/2001
11/5/2001
9/1/2002
6/28/2003
4/23/2004
2/17/2005
12/14/2005
10/10/2006
8/6/2007
Date
Dissolved Iron
Sulfate
Chloride
PCP


MW-13
Natural Attenuation Parameter Concentrations (mg/L)
PCP Concentration (ug/L)
500
450
400
350
300
250
200
150
100
50
0
5
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
12/1/1996
9/27/1997
7/24/1998
5/20/1999
3/15/2000
1/9/2001
11/5/2001
9/1/2002
6/28/2003
4/23/2004
2/17/2005
12/14/2005
10/10/2006
8/6/2007
Date
Dissolved Manganese
Sulfate
Chloride
PCP


MW-19
Natural Attenuation Parameter Concentrations (mg/L)
PCP Concentration (ug/L)
100
90
80
70
60
50
40
30
20
10
0
450000
400000
350000
300000
250000
200000
150000
100000
50000
0
12/1/1996
9/27/1997
7/24/1998
5/20/1999
3/15/2000
1/9/2001
11/5/2001
9/1/2002
6/28/2003
4/23/2004
2/17/2005
12/14/2005
10/10/2006
8/6/2007
Date
Sulfate
Chloride
Nitrate
PCP

Appendix C
Groundwater Contour Maps, Groundwater Elevations and Observations, and Oil Measurements

Groundwater Elevations and Observations

Well	Casing Dia. (inches)	Approx. Well Depth (ft)	TOC Elev. (ft MSL)	Aquifer[a]	May 2006 New TOC Elev. (ft MSL)	May 2006 Depth to Water - TOC (ft)	May 2006 GW Elev. (ft MSL)	May 2006 GW Elev Corrected (ft MSL)	May 2006 Comments (DTP=Depth to Product)	September 2006 New TOC Elev. (ft MSL)	September 2006 Depth to Water - TOC (ft)	September 2006 GW Elev. (ft MSL)	September 2006 GW Elev Corrected (ft MSL)	September 2006 Comments (DTP=Depth to Product)
MW-01	2	97	1072.32	UC	1072.32	86.27	986.05			1072.32	Dry[b]	--		
MW-02	2	85	1065.66	UC	1064.85	79.14	985.71			1064.85	79.53	985.32		
MW-03	4	182	1129.52	SC	1129.5	143.76	985.74			1129.5	Dry[b]	--		
MW-04	4	187	1089.86	SC	1087.81	102.60	985.21			1087.81	Dry[b]	--		
MW-05	4	118	1074.24	UC	1071.73	86.02	985.71			1071.73	87.28	984.45		
MW-06 S	2	112.5	1094.59	UC	1108.63	122.53	986.1			1108.63	122.88	--		
MW-07	4	140.5	1096.42	SC	1096.39	110.72	985.67			1096.39	111.21	985.18		
MW-08	4	160	1091.23	SC	1091.28	105.52	985.76			1091.28	Dry[b]	--		
MW-09	2	54	1020.70	UC	1020.71	34.50	986.21			1020.71	Dry[b]	--		
MW-10	4	131	1083.90	SC	1089.74	104.02	--			1089.74	104.38	--		
MW-10 S	2	107.5	1085.34	UC	1090.43	Dry[b]	--		Dry, no NAPL[c]	1090.43	104.87	985.56		No NAPL[g]
MW-11	2	155.5	1085.33	SC	1085.58	100.39	985.19			1085.58	100.85	984.73		
MW-12	2	135	1081.86	SC	1081.99	96.37	985.62			1081.99	97.22	984.77		
MW-13	2	27	1006.16	UC	1006.1	20.42	--			1006.1	Dry[b]	--		
MW-14	2	175	1078.61	SC	1078.5	93.33	985.17			1078.5	Dry[b]	--		
MW-15	2	170	1127.13	SC	1127.22	141.35	985.87			1127.22	141.70	985.52		
MW-16	2	106.5	1081.88	UC	1081.92	95.63	986.29			1081.92	96.02	985.9		
MW-17	2	134	1084.42	SC	1084.5	98.86	985.64			1084.5	Dry[b]	--		
MW-18	6	116	1076.31	UC	1072.44	86.31	986.13		No NAPL[d]	1072.44	86.76		985.96	DTP=86.71[h]
MW-19	2	112	1088.00	UC	1088.17	102.80		985.58	DTP=102.51[e]	1088.17	103.66		984.72	DTP=102.86[i]
MW-20	2	107.5	1087.73	UC	1097.76	Dry[b]	--		Dry, no NAPL[f]	1097.76	112.79		985.00	DTP=112.10[j]
MW-21	2	114.9	--	UC	1095.7	109.78	985.92			1095.7	Dry[b]	--		
MW-22	2	105.16	--	UC	1084.7	98.68	986.02			1084.7	Dry[b]	--		
MW-23	2	125	--	SC	1017.57	32.25	985.32			1017.57	Dry[b]	--		
MW-24	2	125	--	UC	1084.1	98.07	986.03			1084.1	98.61	985.49		
MW-25	2	117.8	--	UC	1095.24	No measurement				1095.24	Dry[b]	--		
MW-26	2	141		UC	1087.07	101.46	985.61			1087.07	Dry[b]	--		

[a] UC=Unconfined aquifer; SC=semiconfined aquifer

[b] "Dry" indicates that water was not detected in the well to the bottom of the well or to the top of the pump. Water below the top of the pump could exist.

[c] MW-10S NAPL typically present in this well

[d] MW-18 NAPL typically present in this well

[e] MW-19 NAPL thickness = 0.29 ft in May 2006

[f] MW-20 NAPL typically present in this well

[g] MW-10S NAPL typically present in this well

[h] MW-18 NAPL thickness = 0.05 ft in September 2006

[i] MW-19 NAPL thickness = 0.80 ft in September 2006

[j] MW-20 NAPL thickness = 0.69 ft in September 2006

Penta Wood Products

Attachment C

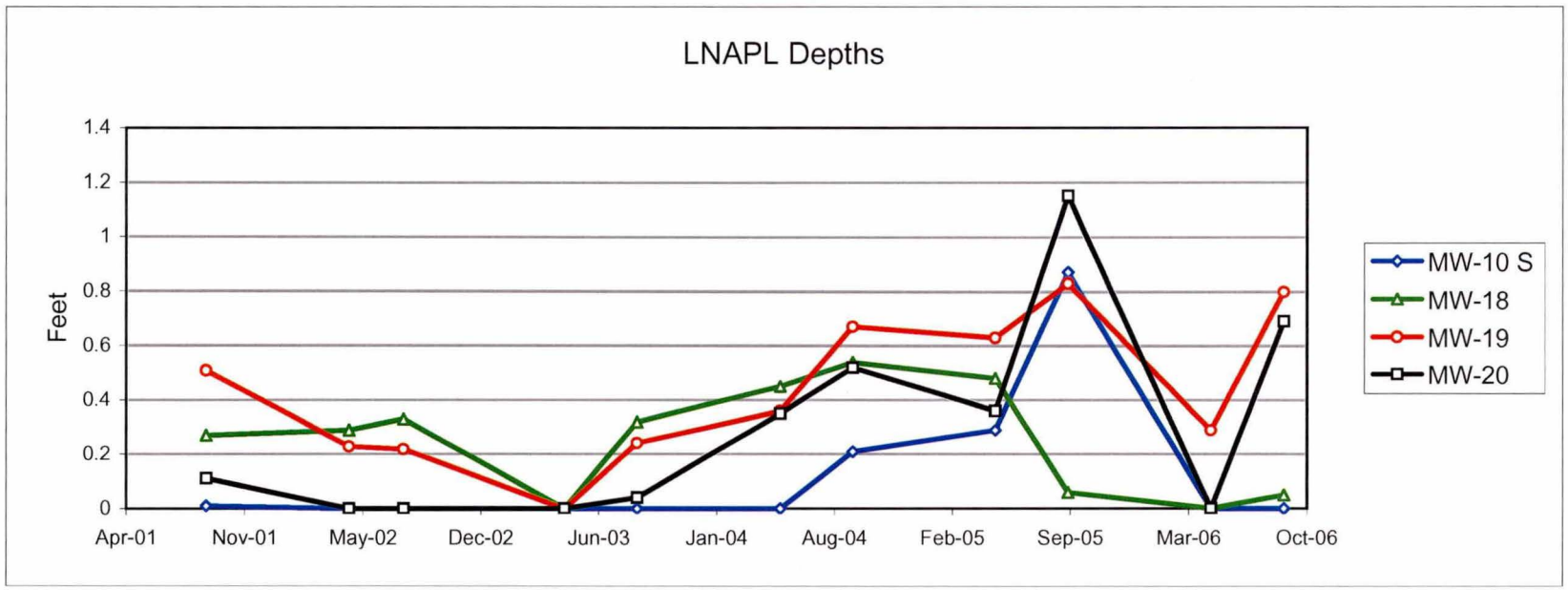
Historical LNAPL Observations in Monitoring Wells

Well	Casing Dia. (inches)	Approx. Well Depth (ft)	Aquifer[a]	September 2001	May 2002	August 2002	May 2003	September 2003	May 2004	September 2004	May 2005	September 2005	May 2006	September 2006
MW-04	4	187	SC			Trace[c]								
MW-06 S	2	112.5	UC		Trace[c]									
MW-09	2	54	UC							Trace[c]				
MW-10	4	131	SC			Trace[c]				Trace[c]				
MW-10 S	2	107.5	UC	0.01	Trace[c]					0.21	0.29	0.87		
MW-18	6	116	UC	0.27	0.29	0.33		0.32	0.45	0.54	0.48	0.06		0.05
MW-19	2	112	UC	0.51	0.23	0.22		0.24	0.36	0.67	0.63	0.83	0.29	0.80
MW-20	2	107.5	UC	0.11				0.04	0.35	0.52	0.36	1.15		0.69

[a] UC=Unconfined aquifer; SC=semiconfined aquifer

[b] LNAPL = Light Non-Aqueous Phase Liquid

[c] Trace = Trace product visually detected (e.g. *sheen*), not detected by product interface probe.



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N

0 100' 200'

N 2200 N 2000 N 1800 N 1600 N 1400 N 1200 N 1000 N 800 N 600

E 400 E 600 E 800 E 1000 E 1200 E 1400 E 1600 E 1800 E 2000 E 2200 E 2400 E 2600

INFILTRATION BASIN

PROPERTY BOUNDARY

CAMU OUTLINE

EXISTING TREATMENT BUILDING

PROPOSED LOCATION OF NEW TREATMENT BUILDING

NEW ROAD

DANIELS 70

MW 11 0.11U

MW-08 NT

MW26 0.11U

MW 17 0.11U

MW 13 NT

MW23 NT

MW 9 NT

EW11

MW24 NT

MW 16 0.046J

MW 12 3,100J

EW02

MW 2 2.3

MW 5 460

SG04

MW 18 NT

MW 10 23,000J

MW 10S 2,700

EW03

EW05

MW 7 0.087J

EW10

SG05

MW 20 44,000J

EW06

MW 14 NT

EW04

MW 19 8,200J

MW 6S 0.21

MW6

SG07

SG06

MW 1 NT

BV08

SG22

EW07

MW 4 NT

MW22 NT

BV09

PW 01 NT

MW 3 NT

MW21 NT

MW 15 0.11 U

LEGEND

EW11	EXTRACTION WELL NEST
BV09	BIOVENTING WELL NEST
SG05	SOIL GAS WELL NEST
	UNCONFINED MONITORING WELL LOCATION
	SEMICONFINED MONITORING WELL LOCATION
MW 7	WELL ID
0.12 U	PCP CONCENTRATIONS IN GROUNDWATER (2006)
NT	NOT TESTED FOR OR NOT DETECTED
J	PCP IS PRESENT BUT THE REPORTED VALUE IS ESTIMATED
U	PCP WAS NOT DETECTED AT THE SPECIFIED DETECTION LIMIT
	APPROXIMATE EXTENT OF 1000 ug/L PCP CONCENTRATIONS, 1997
	APPROXIMATE EXTENT OF 1000 ug/L PCP CONCENTRATIONS, 2005
	APPROXIMATE EXTENT OF 1000 ug/L PCP CONCENTRATIONS, 2006 (DASHED WHERE INFERRED)

FIGURE 1
PENTACHLOROPHENOL
CONCENTRATION CONTOURS
2006, 2005, AND 1997

CH2MHILL

I:\141158\CAD\DRAWINGS\RI\ pw_2004-pcp_1 in gw fig01.dgn 19-FEB-2007

N 2200 N 2000 N 1800 N 1600 N 1400 N 1200 N 1000 N 800 N 600

E 400 E 600 E 800 E 1000 E 1200 E 1400 E 1600 E 1800 E 2000 E 2200 E 2400 E 2600

0 100' 200'

INFILTRATION BASIN

PROPERTY BOUNDARY

CAMU OUTLINE

PROPOSED LOCATION OF NEW TREATMENT BUILDING

NEW ROAD

EXISTING TREATMENT BUILDING

DANIELS 70

MW 11 0.11 U

MW-08 NT

MW26 0.11 U

MW 17 0.11 U

MW24 NT

MW 7 0.087J

MW 13 NT

MW23 NT

MW 9 NT

EW11

MW 2 2.3

MW 16 0.046J

MW 12 3,100J

EW02

MW 5 460

SG04

MW 10 23,000J

MW 10S 2,700

MW 18 NT

EW03

EW05

SG05

MW 20 44,000J

EW10

MW 14 NT

EW06

EW04

SG07

MW 6

MW 19 8,200J

SG06

MW 1 NT

MW 6S 0.21

BV08

SG22

EW07

MW 4 NT

MW22 NT

BV09

PW 01 NT

MW 3 NT

MW21 NT

MW 15 0.11 U

LEGEND

EW11	EXTRACTION WELL NEST
BV09	BIOVENTING WELL NEST
SG05	SOIL GAS WELL NEST
	UNCONFINED MONITORING WELL LOCATION
	SEMICONFINED MONITORING WELL LOCATION
MW 7	WELL ID
0.12 U	PCP CONCENTRATIONS IN GROUNDWATER (2006)
NT	NOT TESTED FOR OR NOT DETECTED
J	PCP IS PRESENT BUT THE REPORTED VALUE IS ESTIMATED
U	PCP WAS NOT DETECTED AT THE SPECIFIED DETECTION LIMIT
	APPROXIMATE EXTENT OF 1.0 ug/L PCP CONCENTRATIONS, 1997
	APPROXIMATE EXTENT OF 1.0 ug/L PCP CONCENTRATIONS, 2005
	APPROXIMATE EXTENT OF 1.0 ug/L PCP CONCENTRATIONS, 2006 (DASHED WHERE INFERRED)

FIGURE 2
PENTACHLOROPHENOL
CONCENTRATION CONTOURS
2006, 2005, AND 1997

CH2MHILL

Appendix D
Residential Well Memoranda and Results Summary

Residential Well Results Summary

Penta Wood
Residential Well Results (RW-01)
Historical Data

Field Site Identifier:		01	01	01	01	01	01	01
Field Sample Location:		RW-01	RW-01	RW-01	RW-01	RW-01	RW-01	RW-01
Sample Interval:		N/A	N/A	N/A	N/A	N/A	N/A	N/A
Matrix:		WP	Water	Water	Water	Water	Water	Water
Sample Collection Date:		10/9/1997	4/23/2001	9/11/2001	9/28/2001	9/28/2001	5/14/2002	8/6/2002
Field Sample Identification:		98ZR01-01	01CB07-62	01CB28-27	01CB28-53	01CB28-59	02CB14-17	02CB18-55
Semivolatile Organic Compounds	**Units**							
NAPHTHALENE	µg/L	NR	5.3 U	0.26 U	NR	NR	5 U	5 U
PENTACHLOROPHENOL	µg/L	1 U	0.1 U	0.071 J	0.1 U	0.05 U	0.23 =	0.04 =

QUALIFIER KEY: "U" - Analyte not found at the listed detection limit; "J" - Estimated Result; "B" - Analyte detected in Blank; No Qualifier - Analyte found; "R" - Rejected; "NR" - Not Reported

Penta Wood
Residential Well Results (RW-01)
Historical Data

Field Site Identifier:		01	01	01	01	01	01	01
Field Sample Location:		RW-01	RW-01	RW-01	RW-01	RW-01	RW-01	RW-01
Sample Interval:		N/A	N/A	N/A	N/A	N/A	N/A	N/A
Matrix:		Water	Water	Water	Water	Water, Dup	Water	Water, Dup
Sample Collection Date:		4/29/2003	9/23/2003	11/20/2003	5/4/2004	5/4/2004	9/22/2004	9/22/2004
Field Sample Identification:		03CB08-13	03CB14-51	03CB14-71	04CB05-12	04CB05-13	04CA14-53	04CA14-54
Semivolatile Organic Compounds	**Units**							
NAPHTHALENE	µg/L	7.1 U	0.97 U	NR	5 U	5 U	5 U	5 U
PENTACHLOROPHENOL	µg/L	0.1 J	0.28 =	0.24 =	0.14 UB	0.134 UB	0.201 =	1.51 =

QUALIFIER KEY: "U" - Analyte not found at the listed detection limit; "J" - Estimated Result; "B" - Analyte detected in Blank; No Qualifier - Analyte found; "R" - Rejected; "NR" - Not Reported

Penta Wood
Residential Well Results (RW-01)
Historical Data

Field Site Identifier:		01	01	01	01	01	01	01
Field Sample Location:		RW-01	RW-01	RW-01	RW-01	RW-01	RW-01	RW-01
Sample Interval:		N/A	N/A	N/A	N/A	N/A	N/A	N/A
Matrix:		Water	Water	Water, Dup	Water	Water, Dup	Water	Water, Dup
Sample Collection Date:		11/1/2004	5/10/2005	5/10/2005	7/7/2005	7/7/2005	9/27/2005	9/27/2005
Field Sample Identification:		05CA01-11	05CA31-10	05CA31-11	05CA31-27	05CA31-28	05CA43-50	05CA43-51
Semivolatile Organic Compounds	**Units**							
NAPHTHALENE	µg/L	NR	0.93 U	0.93 U	0.95 U	0.96 U	0.92 UJ	0.93 UJ
PENTACHLOROPHENOL	µg/L	0.0952 U	0.068 J	0.053 J	0.043 J	0.035 J	0.050 J	0.049 J

QUALIFIER KEY: "U" - Analyte not found at the listed detection limit; "J" - Estimated Result; "B" - Analyte detected in Blank; No Qualifier - Analyte found; "R" - Rejected; "NR" - Not Reported

Penta Wood
Residential Well Results (RW-01)
Historical Data

Field Site Identifier:		01	01	01	01
Field Sample Location:		RW-01	RW-01	RW-01	RW-01
Sample Interval:		N/A	N/A	N/A	N/A
Matrix:		Water	Water, Dup	Water	Water, Dup
Sample Collection Date:		5/31/2006	5/31/2006	9/25/2006	9/25/2006
Field Sample Identification:		06CA20-09	06CA20-10	06CA22-27	06CA22-28
Semivolatile Organic Compounds	**Units**				
NAPHTHALENE	µg/L	0.93 U	0.94 U	0.93 U	0.93 U
PENTACHLOROPHENOL	µg/L	0.048 J	0.055 J	0.11 U	0.023 J

QUALIFIER KEY: "U" - Analyte not found at the listed detection limit; "J" - Estimated Result; "B" - Analyte detected in Blank; No Qualifier - Analyte found; "R" - Rejected; "NR" - Not Reported

Penta Wood
Residential Well Results (RW-01)
Historical Data

Field Site Identifier:		01	01	01	01	01	01	01
Field Sample Location:		RW-01	RW-01	RW-01	RW-01	RW-01	RW-01	RW-01
Sample Interval:		N/A	N/A	N/A	N/A	N/A	N/A	N/A
Matrix:		Water	Water	Water	Water	Water	Water	Water
Sample Collection Date:		4/23/2001	9/11/2001	5/14/2002	8/6/2002	4/29/2003	9/23/2003	5/4/2004
Field Sample Identification:		01CB07-62	01CB28-27	02CB14-17	02CB18-55	03CB08-13	03CB14-51	04CB05-12
Volatile Organic Compounds	**Units**							
BENZENE	µg/L	0.5 U	0.44 U	1 U	1 U	0.5 U	0.25 U	0.5 U
ETHYLBENZENE	µg/L	5 U	0.5 U	5 U	5 U	5 U	2.5 U	5 U
TOLUENE	µg/L	5 U	0.4 U	2 J	5 U	5 U	2.5 U	5 U
XYLENES	µg/L	5 U	1.2 U	2 J	5 U	5 U	2.5 U	5 U

QUALIFIER KEY: "U" - Analyte not found at the listed detection limit; "J" - Estimated Result; "B" - Analyte detected in Blank; No Qualifier - Analyte found; "R" - Rejected; "NR" - Not Reported

Penta Wood
Residential Well Results (RW-01)
Historical Data

Field Site Identifier:		01	01	01	01	01	01	01
Field Sample Location:		RW-01	RW-01	RW-01	RW-01	RW-01	RW-01	RW-01
Sample Interval:		N/A	N/A	N/A	N/A	N/A	N/A	N/A
Matrix:		Water, Dup	Water	Water, Dup	Water	Water, Dup	Water	Water, Dup
Sample Collection Date:		5/4/2004	9/22/2004	9/22/2004	5/10/2005	5/10/2005	7/7/2005	7/7/2005
Field Sample Identification:		04CB05-13	04CA14-53	04CA14-54	05CA31-10	05CA31-11	05CA31-27	05CA31-28
Volatile Organic Compounds	**Units**							
BENZENE	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
ETHYLBENZENE	µg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U
TOLUENE	µg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U
XYLENES	µg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U

QUALIFIER KEY: "U" - Analyte not found at the listed detection limit; "J" - Estimated Result; "B" - Analyte detected in Blank; No Qualifier - Analyte found; "R" - Rejected; "NR" - Not Reported

Penta Wood
Residential Well Results (RW-01)
Historical Data

Field Site Identifier:		01	01	01	01	01	01
Field Sample Location:		RW-01	RW-01	RW-01	RW-01	RW-01	RW-01
Sample Interval:		N/A	N/A	N/A	N/A	N/A	N/A
Matrix:		Water	Water, Dup	Water	Water, Dup	Water	Water, Dup
Sample Collection Date:		9/27/2005	9/27/2005	5/31/2006	5/31/2006	9/25/2006	9/25/2006
Field Sample Identification:		05CA43-50	05CA43-51	06CA20-09	06CA20-10	06CA22-27	06CA22-28
Volatile Organic Compounds	**Units**						
BENZENE	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
ETHYLBENZENE	µg/L	5 U	5 U	5 U	5 U	5 U	5 U
TOLUENE	µg/L	5 U	5 U	5 U	5 U	5 U	5 U
XYLENES	µg/L	5 U	5 U	5 U	5 U	5 U	5 U

QUALIFIER KEY: "U" - Analyte not found at the listed detection limit; "J" - Estimated Result; "B" - Analyte detected in Blank; No Qualifier - Analyte found; "R" - Rejected; "NR" - Not Reported

Penta Wood
Residential Well Results (RW-02)
Historical Data

Field Site Identifier:	01	01	01	01	01	01	01
Field Sample Location:	RW-02	RW-02	RW-02	RW-02	RW-02	RW-02	RW-02
Sample Interval:	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Matrix:	WP	WP, Dup	WP	WP	Water	Water	Water
Sample Collection Date:	10/9/1997	10/9/1997	10/24/1997	4/8/1998	4/24/2001	9/11/2001	9/28/2001
Field Sample Identification:	98ZR01-02	98ZR01-24	98ZR01-67	98ZR02-58	01CB07-80	01CB28-28	01CB28-54
Semivolatile Organic Compounds	**Units**						
NAPHTHALENE	µg/L	NR	NR	NR	NR	5.4 U	0.25 U	NR
PENTACHLOROPHENOL	µg/L	0.9 J	2 =	1 U	1 U	0.1 U	9.5 =	0.1 U

QUALIFIER KEY: "U" - Analyte not found at the listed detection limit; "J" - Estimated Result; "B" - Analyte detected in Blank; No Qualifier - Analyte found; "R" - Rejected; "NR" - Not Reported

Penta Wood
Residential Well Results (RW-02)
Historical Data

Field Site Identifier:		01	01	01	01	01	01	01
Field Sample Location:		RW-02	RW-02	RW-02	RW-02	RW-02	RW-02	RW-02
Sample Interval:		N/A	N/A	N/A	N/A	N/A	N/A	N/A
Matrix:		Water	Water	Water	Water	Water	Water	Water
Sample Collection Date:		9/28/2001	9/28/2001	9/28/2001	5/14/2002	8/6/2002	8/6/2002	4/29/2003
Field Sample Identification:		01CB28-55	01CB28-60	01CB28-61	02CB14-18	02CB18-57	02CB18-99	03CB08-14
Semivolatile Organic Compounds	**Units**							
NAPHTHALENE	µg/L	NR	NR	NR	5 U	5 U	5 U	6.8 U
PENTACHLOROPHENOL	µg/L	0.1 U	0.05 U	0.05 U	0.1 =	0.04 U	0.04 U	0.11 U

QUALIFIER KEY: "U" - Analyte not found at the listed detection limit; "J" - Estimated Result; "B" - Analyte detected in Blank; No Qualifier - Analyte found; "R" - Rejected; "NR" - Not Reported

Penta Wood
Residential Well Results (RW-02)
Historical Data

Field Site Identifier:		01	01	01	01	01	01	01
Field Sample Location:		RW-02	RW-02	RW-02	RW-02	RW-02	RW-02	RW-02
Sample Interval:		N/A	N/A	N/A	N/A	N/A	N/A	N/A
Matrix:		Water	Water	Water	Water	Water	Water	Water
Sample Collection Date:		9/24/2003	9/24/2003	5/4/2004	9/22/2004	11/1/2004	5/10/2005	9/27/2005
Field Sample Identification:		03CB14-52	03CB14-53	04CB05-14	04CA14-55	05CA01-12	05CA31-12	05CA43-52
Semivolatile Organic Compounds	**Units**							
NAPHTHALENE	µg/L	0.97 U	0.96 U	5 U	5 U	NR	0.93 U	0.92 UJ
PENTACHLOROPHENOL	µg/L	0.11 U	0.11 U	0.0252 UB	0.398 =	0.0962 U	0.11 U	0.11 U

QUALIFIER KEY: "U" - Analyte not found at the listed detection limit; "J" - Estimated Result; "B" - Analyte detected In Blank; No Qualifier - Analyte found; "R" - Rejected; "NR" - Not Reported

Penta Wood
Residential Well Results (RW-02)
Historical Data

Field Site Identifier:		01	01
Field Sample Location:		RW-02	RW-02
Sample Interval:		N/A	N/A
Matrix:		Water	Water
Sample Collection Date:		5/31/2006	9/25/2006
Field Sample Identification:		06CA20-11	06CA22-29
Semivolatile Organic Compounds	**Units**		
NAPHTHALENE	µg/L	0.93 U	0.93 U
PENTACHLOROPHENOL	µg/L	0.11 UJ	0.11 U

QUALIFIER KEY: "U" - Analyte not found at the listed detection limit; "J" - Estimated Result; "B" - Analyte detected in Blank; No Qualifier - Analyte found; "R" - Rejected; "NR" - Not Reported

Penta Wood
Residential Well Results (RW-02)
Historical Data

Field Site Identifier:		01	01	01	01	01	01	01
Field Sample Location:		RW-02	RW-02	RW-02	RW-02	RW-02	RW-02	RW-02
Sample Interval:		N/A	N/A	N/A	N/A	N/A	N/A	N/A
Matrix:		Water	Water	Water	Water	Water	Water	Water
Sample Collection Date:		4/24/2001	9/11/2001	5/14/2002	8/6/2002	8/6/2002	4/29/2003	9/24/2003
Field Sample Identification:		01CB07-80	01CB28-28	02CB14-18	02CB18-57	02CB18-99	03CB08-14	03CB14-52
Volatile Organic Compounds	**Units**							
BENZENE	µg/L	0.1 U	0.44 U	1 U	1 U	1 U	0.5 U	0.25 U
ETHYLBENZENE	µg/L	1 U	0.5 U	5 U	5 U	5 U	5 U	2.5 U
TOLUENE	µg/L	1 U	0.4 U	5 U	5 U	5 U	5 U	2.5 U
XYLENES	µg/L	1 U	1.2 U	5 U	5 U	5 U	5 U	2.5 U

QUALIFIER KEY: "U" - Analyte not found at the listed detection limit; "J" - Estimated Result; "B" - Analyte detected in Blank; No Qualifier - Analyte found; "R" - Rejected; "NR" - Not Reported

Penta Wood
Residential Well Results (RW-02)
Historical Data

Field Site Identifier:		01	01	01	01	01	01	01
Field Sample Location:		RW-02	RW-02	RW-02	RW-02	RW-02	RW-02	RW-02
Sample Interval:		N/A	N/A	N/A	N/A	N/A	N/A	N/A
Matrix:		Water	Water	Water	Water	Water	Water	Water
Sample Collection Date:		9/24/2003	5/4/2004	9/22/2004	5/10/2005	9/27/2005	5/31/2006	9/25/2006
Field Sample Identification:		03CB14-53	04CB05-14	04CA14-55	05CA31-12	05CA43-52	06CA20-11	06CA22-29
Volatile Organic Compounds	**Units**							
BENZENE	µg/L	0.25 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
ETHYLBENZENE	µg/L	2.5 U	5 U	5 U	5 U	5 U	5 U	5 U
TOLUENE	µg/L	2.5 U	5 U	5 U	5 U	5 U	5 U	5 U
XYLENES	µg/L	2.5 U	5 U	5 U	5 U	5 U	5 U	5 U

QUALIFIER KEY: "U" - Analyte not found at the listed detection limit; "J" - Estimated Result; "B" - Analyte detected in Blank; No Qualifier - Analyte found; "R" - Rejected; "NR" - Not Reported

Penta Wood
Residential Well Results (RW-03)
Historical Data

Field Site Identifier:		01	01	01	01	01	01	01
Field Sample Location:		RW-03	RW-03	RW-03	RW-03	RW-03	RW-03	RW-03
Sample Interval:		N/A	N/A	N/A	N/A	N/A	N/A	N/A
Matrix:		WP	Water	Water	Water	Water	Water	Water
Sample Collection Date:		10/9/1997	9/11/2001	9/28/2001	9/28/2001	5/14/2002	8/6/2002	4/29/2003
Field Sample Identification:		98ZR01-03	01CB28-25	01CB28-56	01CB28-62	02CB14-19	02CB18-59	03CB08-15
Semivolatile Organic Compounds	**Units**							
NAPHTHALENE	µg/L	NR	0.28 U	NR	NR	5 U	5 U	6.8 U
PENTACHLOROPHENOL	µg/L	1 U	0.1 J	0.1 U	0.05 U	0.094 J	0.04 U	0.11 U

QUALIFIER KEY: "U" - Analyte not found at the listed detection limit; "J" - Estimated Result; "B" - Analyte detected in Blank; No Qualifier - Analyte found; "R" - Rejected; "NR" - Not Reported

Penta Wood
Residential Well Results (RW-03)
Historical Data

Field Site Identifier:		01	01	01	01	01	01	01
Field Sample Location:		RW-03	RW-03	RW-03	RW-03	RW-03	RW-03	RW-03
Sample Interval:		N/A	N/A	N/A	N/A	N/A	N/A	N/A
Matrix:		Water	Water	Water	Water	Water	Water	Water
Sample Collection Date:		9/23/2003	5/4/2004	9/22/2004	11/1/2004	5/10/2005	9/27/2005	5/31/2006
Field Sample Identification:		03CB14-54	04CB05-15	04CA14-56	05CA01-13	05CA31-13	05CA43-53	06CA20-12
Semivolatile Organic Compounds	**Units**							
NAPHTHALENE	µg/L	0.96 U	5 U	5 U	NR	0.93 U	0.93 UJ	0.94 U
PENTACHLOROPHENOL	µg/L	0.11 U	0.0952 U	2.18 =	0.0962 U	0.11 U	0.11 U	0.11 UJ

QUALIFIER KEY: "U" - Analyte not found at the listed detection limit; "J" - Estimated Result; "B" - Analyte detected in Blank; No Qualifier - Analyte found; "R" - Rejected; "NR" - Not Reported

Penta Wood
Residential Well Results (RW-03)
Historical Data

Field Site Identifier:	01
Field Sample Location:	RW-03
Sample Interval:	N/A
Matrix:	Water
Sample Collection Date:	9/25/2006
Field Sample Identification:	06CA22-30

Semivolatile Organic Compounds	**Units**	
NAPHTHALENE	µg/L	0.93 U
PENTACHLOROPHENOL	µg/L	0.11 U

QUALIFIER KEY: "U" - Analyte not found at the listed detection limit; "J" - Estimated Result; "B" - Analyte detected in Blank; No Qualifier - Analyte found; "R" - Rejected; "NR" - Not Reported

Penta Wood
Residential Well Results (RW-03)
Historical Data

Field Site Identifier:		01	01	01	01	01	01	01
Field Sample Location:		RW-03	RW-03	RW-03	RW-03	RW-03	RW-03	RW-03
Sample Interval:		N/A	N/A	N/A	N/A	N/A	N/A	N/A
Matrix:		Water	Water	Water	Water	Water	Water	Water
Sample Collection Date:		9/11/2001	5/14/2002	8/6/2002	4/29/2003	9/23/2003	5/4/2004	9/22/2004
Field Sample Identification:		01CB28-25	02CB14-19	02CB18-59	03CB08-15	03CB14-54	04CB05-15	04CA14-56
Volatile Organic Compounds	**Units**							
BENZENE	µg/L	0.44 U	1 U	1 U	0.5 U	0.25 U	0.5 U	0.5 U
ETHYLBENZENE	µg/L	0.5 U	5 U	5 U	5 U	2.5 U	5 U	5 U
TOLUENE	µg/L	0.4 U	5 U	5 U	5 U	2.5 U	5 U	5 U
XYLENES	µg/L	1.2 U	5 U	5 U	5 U	2.5 U	5 U	5 U

QUALIFIER KEY: "U" - Analyte not found at the listed detection limit; "J" - Estimated Result; "B" - Analyte detected in Blank; No Qualifier - Analyte found; "R" - Rejected; "NR" - Not Reported

Penta Wood
Residential Well Results (RW-03)
Historical Data

Field Site Identifier:		01	01	01	01
Field Sample Location:		RW-03	RW-03	RW-03	RW-03
Sample Interval:		N/A	N/A	N/A	N/A
Matrix:		Water	Water	Water	Water
Sample Collection Date:		5/10/2005	9/27/2005	5/31/2006	9/25/2006
Field Sample Identification:		05CA31-13	05CA43-53	06CA20-12	06CA22-30
Volatile Organic Compounds	**Units**				
BENZENE	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
ETHYLBENZENE	µg/L	5 U	5 U	5 U	5 U
TOLUENE	µg/L	5 U	5 U	5 U	5 U
XYLENES	µg/L	5 U	5 U	5 U	5 U

QUALIFIER KEY: "U" - Analyte not found at the listed detection limit; "J" - Estimated Result; "B" - Analyte detected in Blank; No Qualifier - Analyte found; "R" - Rejected; "NR" - Not Reported

Penta Wood
Residential Well Results (RW-04)
Historical Data

Field Site Identifier:		01	01	01	01	01	01	01
Field Sample Location:		RW-04	RW-04	RW-04	RW-04	RW-04	RW-04	RW-04
Sample Interval:		N/A	N/A	N/A	N/A	N/A	N/A	N/A
Matrix:		WP	Water	Water	Water	Water	Water	Water
Sample Collection Date:		10/9/1997	4/23/2001	9/11/2001	9/28/2001	9/28/2001	5/14/2002	8/6/2002
Field Sample Identification:		98ZR01-04	01CB07-61	01CB28-26	01CB28-57	01CB28-63	02CB14-20	02CB18-61
Semivolatile Organic Compounds	**Units**							
NAPHTHALENE	µg/L	NR	5 U	0.25 U	NR	NR	5 U	5 U
PENTACHLOROPHENOL	µg/L	1 U	0.1 U	0.073 J	0.1 U	0.05 U	0.13 =	0.04 U

QUALIFIER KEY: "U" - Analyte not found at the listed detection limit; "J" - Estimated Result; "B" - Analyte detected in Blank; No Qualifier - Analyte found; "R" - Rejected; "NR" - Not Reported

Penta Wood
Residential Well Results (RW-04)
Historical Data

Field Site Identifier:		01	01	01	01	01	01	01
Field Sample Location:		RW-04	RW-04	RW-04	RW-04	RW-04	RW-04	RW-04
Sample Interval:		N/A	N/A	N/A	N/A	N/A	N/A	N/A
Matrix:		Water	Water	Water	Water	Water	Water	Water
Sample Collection Date:		4/29/2003	9/23/2003	5/4/2004	9/22/2004	10/1/2004	5/10/2005	9/27/2005
Field Sample Identification:		03CB08-16	03CB14-55	04CB05-16	04CA14-57	05CA01-14	05CA31-14	05CA43-54
Semivolatile Organic Compounds	**Units**							
NAPHTHALENE	µg/L	7.4 U	0.99 U	5 U	5 U	NR	0.94 U	0.91 UJ
PENTACHLOROPHENOL	µg/L	0.11 U	0.11 U	0.100 U	0.266 =	0.0962 R	0.11 U	0.11 U

QUALIFIER KEY: "U" - Analyte not found at the listed detection limit; "J" - Estimated Result; "B" - Analyte detected in Blank; No Qualifier - Analyte found; "R" - Rejected; "NR" - Not Reported

Penta Wood
Residential Well Results (RW-04)
Historical Data

Field Site Identifier:		01	01
Field Sample Location:		RW-04	RW-04
Sample Interval:		N/A	N/A
Matrix:		Water	Water
Sample Collection Date:		5/31/2006	9/25/2006
Field Sample Identification:		06CA20-13	06CA22-31
Semivolatile Organic Compounds	**Units**		
NAPHTHALENE	µg/L	0.97 U	0.93 U
PENTACHLOROPHENOL	µg/L	0.11 UJ	0.11 U

QUALIFIER KEY: "U" - Analyte not found at the listed detection limit; "J" - Estimated Result; "B" - Analyte detected in Blank; No Qualifier - Analyte found; "R" - Rejected; "NR" - Not Reported

Penta Wood
Residential Well Results (RW-04)
Historical Data

Field Site Identifier:		01	01	01	01	01	01	01
Field Sample Location:		RW-04	RW-04	RW-04	RW-04	RW-04	RW-04	RW-04
Sample Interval:		N/A	N/A	N/A	N/A	N/A	N/A	N/A
Matrix:		Water	Water	Water	Water	Water	Water	Water
Sample Collection Date:		4/23/2001	9/11/2001	5/14/2002	8/6/2002	4/29/2003	9/23/2003	5/4/2004
Field Sample Identification:		01CB07-61	01CB28-26	02CB14-20	02CB18-61	03CB08-16	03CB14-55	04CB05-16
Volatile Organic Compounds	**Units**							
BENZENE	µg/L	0.5 U	0.44 U	1 U	1 U	0.5 U	0.25 U	0.5 U
ETHYLBENZENE	µg/L	5 U	0.5 U	5 U	5 U	5 U	2.5 U	5 U
TOLUENE	µg/L	5 U	0.4 U	5 U	5 U	5 U	2.5 U	5 U
XYLENES	µg/L	5 U	1.2 U	5 U	5 U	5 U	2.5 U	5 U

QUALIFIER KEY: "U" - Analyte not found at the listed detection limit; "J" - Estimated Result; "B" - Analyte detected in Blank; No Qualifier - Analyte found; "R" - Rejected; "NR" - Not Reported

Penta Wood
Residential Well Results (RW-04)
Historical Data

Field Site Identifier:		01	01	01	01	01
Field Sample Location:		RW-04	RW-04	RW-04	RW-04	RW-04
Sample Interval:		N/A	N/A	N/A	N/A	N/A
Matrix:		Water	Water	Water	Water	Water
Sample Collection Date:		9/22/2004	5/10/2005	9/27/2005	5/31/2006	9/25/2006
Field Sample Identification:		04CA14-57	05CA31-14	05CA43-54	06CA20-13	06CA22-31
Volatile Organic Compounds	**Units**					
BENZENE	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
ETHYLBENZENE	µg/L	5 U	5 U	5 U	5 U	5 U
TOLUENE	µg/L	5 U	5 U	5 U	5 U	5 U
XYLENES	µg/L	5 U	5 U	5 U	5 U	5 U

QUALIFIER KEY: "U" - Analyte not found at the listed detection limit; "J" - Estimated Result; "B" - Analyte detected in Blank; No Qualifier - Analyte found; "R" - Rejected; "NR" - Not Reported

Penta Wood
Residential Well Results (RW-05)
Historical Data

Field Site Identifier:		01	01	01	01	01	01	01
Field Sample Location:		RW-05	RW-05	RW-05	RW-05	RW-05	RW-05	RW-05
Sample Interval:		N/A	N/A	N/A	N/A	N/A	N/A	N/A
Matrix:		Water	Water	Water	Water	Water	Water	Water
Sample Collection Date:		5/4/2004	9/22/2004	11/1/2004	5/10/2005	9/27/2005	5/31/2006	9/25/2006
Field Sample Identification:		04CB05-17	04CA14-58	05CA01-15	05CA31-15	05CA43-55	06CA20-14	06CA22-32
Semivolatile Organic Compounds	**Units**							
NAPHTHALENE	µg/L	5 U	5U	NR	0.93 U	0.92 UJ	0.94 U	0.93 U
PENTACHLOROPHENOL	µg/L	0.0935 U	0.293 =	0.0962 U	0.11 U	0.11 U	0.11 UJ	0.11 U

QUALIFIER KEY: "U" - Analyte not found at the listed detection limit; "J" - Estimated Result; "B" - Analyte detected in Blank; No Qualifier - Analyte found; "R" - Rejected; "NR" - Not Reported

Penta Wood
Residential Well Results (RW-05)
Historical Data

Field Site Identifier:		01	01	01	01	01	01
Field Sample Location:		RW-05	RW-05	RW-05	RW-05	RW-05	RW-05
Sample Interval:		N/A	N/A	N/A	N/A	N/A	N/A
Matrix:		Water	Water	Water	Water	Water	Water
Sample Collection Date:		5/4/2004	9/22/2004	5/10/2005	9/27/2005	5/31/2006	9/25/2006
Field Sample Identification:		04CB05-17	04CA14-58	05CA31-15	05CA43-55	06CA20-14	06CA22-32
Volatile Organic Compounds	**Units**						
BENZENE	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
ETHYLBENZENE	µg/L	5 U	5 U	5 U	5 U	5 U	5 U
TOLUENE	µg/L	5 U	5 U	5 U	5 U	5 U	5 U
XYLENES	µg/L	5 U	5 U	5 U	5 U	5 U	5 U

QUALIFIER KEY: "U" - Analyte not found at the listed detection limit; "J" - Estimated Result; "B" - Analyte detected in Blank; No Qualifier - Analyte found; "R" - Rejected; "NR" - Not Reported

July 27, 2006, Residential Well Memorandum (May 2006 Sampling Results)

CH2M HILL
135 South 84th Street
Suite 325
Milwaukee, WI 53214
Tel 414.272.2426
Fax 414.272.4408

CH2MHILL

July 27, 2006

Mr. Tom Williams
Remedial Project Manager (SR-6J)
U.S. Environmental Protection Agency
77 West Jackson Boulevard
Chicago, IL 60604-3507

Subject: Subcontract No. 333, Penta Wood Products, WI
May 2006 Sampling Results
WA No. 201-RALR-05WE, Contract No. 68-W6-0025

Dear Tom:

Attached are the Pentachlorophenol (PCP) results of the residential and potable well sampling event that took place on May 31, 2006. This sampling event also included the analysis of benzene, ethylbenzene, toluene, xylene (BTEX), and napthalene. All analyses were performed by Severn Trent Laboratories (STL) of University Park, Illinois. The well description information is shown in the following table:

LTRA Residential Well Information
Penta Wood Products – Siren, Wisconsin

Location ID	Resident Name	Resident Address	Resident Phone Number	WI Well #
RW01	Bill Ellis (formerly Skold)	8713 Daniels 70	(715) 349-5840	SX 303
RW02	LaVonne Brethorst	8627 Daniels 70	(715) 349-5237	Unknown
RW03	Ken and Sheri Nelson	Daniels 70 (same driveway as V. Engstrom)	(715) 349-8070	JB 251
RW04	Vayne Engstrom	8526 Daniels 70	(715) 349-5212	AN 547
RW05	Timothy Tjader	8783 Daniels 70	(715) 349-5192	Unknown

The results of the May 2006 sampling event showed no detections of BTEX and naphthalene. However, PCP concentrations were estimated to be above the detection limit of 0.018 µg/L but less than the reporting limit of 0.1 µg/L at RW-01 (Ellis residence) and DW-01 (potable

well). These estimated concentrations were found at 0.055 µg/L and 0.039 µg/L, respectively.

If you have any questions or comments, please give me a call at 414.272.1052 ext. 476, or Bill Andrae at ext. 341.

Sincerely,

CH2M HILL

Steven Paukner
Project Chemist

c: Stephen Nathan, PO/U.S. EPA, Region 5 (w/o enclosure)
Dave Alberts, CO/U.S. EPA, Region 5 (w/o enclosure)
Bill Andrae, SM/CH2M HILL, Milwaukee
Ike Johnson, PM/CH2M HILL, Milwaukee
Dan Plomb, DPM/CH2M HILL, Milwaukee
Gina Bayer, RTL/CH2M HILL, Milwaukee
Dave Shekoski/CH2M HILL, Milwaukee
Cherie Wilson, AA/CH2M HILL, Milwaukee

[redacted]-D[redacted]01

Potable Well

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LABORATORY TEST RESULTS

Job Number: 246864

Date:06/22/2006

CUSTOMER: CH2M HILL INC PROJECT: USEPA PENTA WOOD ATTN: Steven Paukner

Customer Sample ID: 06CA20-01
Date Sampled.....: 05/31/2006
Time Sampled.....: 17:00
Sample Matrix.....: Water

Laboratory Sample ID: 246864-1
Date Received.....: 06/02/2006
Time Received.....: 10:00

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
8151A	Herbicides Pentachlorophenol	0.039	J	a	0.018	0.11	1.00000	ug/L	183842		06/08/06 0702	kdl

* In Description = Dry Wgt.

STL Chicago

Bill Ellis (formerly Skeels)
8713 Daniels Td
715-349-5840
WI Well ID# SX303

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LABORATORY TEST RESULTS

Job Number: 246864

Date:06/22/2006

CUSTOMER: CH2M HILL INC PROJECT: USEPA PENTA WOOD ATTN: Steven Paukner

Customer Sample ID: 06CA20-09
Date Sampled.....: 05/31/2006
Time Sampled.....: 12:31
Sample Matrix.....: Water

Laboratory Sample ID: 246864-3
Date Received.....: 06/02/2006
Time Received.....: 10:00

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
8151A	Herbicides Pentachlorophenol	0.048	J	a	0.018	0.11	1.00000	ug/L	183842		06/08/06 0802	kdl

* In Description = Dry Wgt.

STL Chicago

Bill Ellis (formerly Skold)
8713 Daniels 70
715-349-5840
WI Well ID # SX303

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LABORATORY TEST RESULTS

Job Number: 246864

Date:06/22/2006

CUSTOMER: CH2M HILL INC PROJECT: USEPA PENTA WOOD ATTN: Steven Paukner

Customer Sample ID: 06CA20-10
Date Sampled.....: 05/31/2006
Time Sampled.....: 12:36
Sample Matrix.....: Water

Laboratory Sample ID: 246864-4
Date Received.....: 06/02/2006
Time Received.....: 10:00

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
8151A	Herbicides											
	Pentachlorophenol	0.055	J	a	0.018	0.11	1.00000	ug/L	183842		06/08/06 0903	kdl

* In Description = Dry Wgt.

STL Chicago

PWP-KW02
LaVonne Brethorst
8627 Daniels 70
715-349-5237
WI Well ID# Unknown

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LABORATORY TEST RESULTS

Job Number: 246864

Date:06/22/2006

CUSTOMER: CH2M HILL INC PROJECT: USEPA PENTA WOOD ATTN: Steven Paulkner

Customer Sample ID: 06CA20-11
Date Sampled.....: 05/31/2006
Time Sampled.....: 16:45
Sample Matrix.....: Water

Laboratory Sample ID: 246864-7
Date Received.....: 06/02/2006
Time Received.....: 10:00

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
8151A	Herbicides Pentachlorophenol	0.11	U		0.018	0.11	1.00000	ug/L	183842		06/08/06 1104	kdl

* In Description = Dry Wgt.

STL Chicago

[redacted]

Ken and Sheri Nelson
Daniels 70
715-349-8070
WI well ID# JB 251

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LABORATORY TEST RESULTS

Job Number: 246864

Date:06/22/2006

CUSTOMER: CH2M HILL INC | PROJECT: USEPA PENTA WOOD | ATTN: Steven Paulkner

Customer Sample ID: 06CA20-12
Date Sampled.....: 05/31/2006
Time Sampled.....: 17:04
Sample Matrix.....: Water

Laboratory Sample ID: 246864-8
Date Received.....: 06/02/2006
Time Received.....: 10:00

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
8151A	Herbicides Pentachlorophenol.	0.11	U		0.018	0.11	1.00000	ug/L	183842		06/08/06 1305	kdl

* In Description = Dry Wgt.

STL Chicago

Vayne Engstrom
8526 Daniels 70
715-349-5212
WI Well ID# AN 547

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LABORATORY TEST RESULTS

Job Number: 246864

Date:06/22/2006

CUSTOMER: CH2M HILL INC PROJECT: USEPA PENTA WOOD ATTN: Steven Paukner

Customer Sample ID: 06CA20-13
Date Sampled.....: 05/31/2006
Time Sampled.....: 17:24
Sample Matrix.....: Water

Laboratory Sample ID: 246864-5
Date Received.....: 06/02/2006
Time Received.....: 10:00

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
8151A	Herbicides											
	Pentachlorophenol	0.11	U		0.018	0.11	1.00000	ug/L	183842		06/08/06 1004	kdl

* In Description = Dry Wgt.

STL Chicago

Timothy Tjader
8783 Daniels 70
715-349-5190
WI well ID # unknown

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LABORATORY TEST RESULTS

Job Number: 246864

Date:06/22/2006

CUSTOMER: CH2M HILL INC PROJECT: USEPA PENTA WOOD ATTN: Steven Paukner

Customer Sample ID: 06CA20-14
Date Sampled.....: 05/31/2006
Time Sampled.....: 16:14
Sample Matrix.....: Water

Laboratory Sample ID: 246864-9
Date Received.....: 06/02/2006
Time Received.....: 10:00

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
8151A	Herbicides Pentachlorophenol	0.11	U		0.018	0.11	1.00000	ug/L	183842		06/08/06 1405	kdl

* In Description = Dry Wgt.

STL Chicago

Potable Well

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LABORATORY TEST RESULTS

Job Number: 246864

Date:06/21/2006

CUSTOMER: CH2M HILL INC PROJECT: USEPA PENTA WOOD ATTN: Steven Paukner

Customer Sample ID: 06CA20-01
Date Sampled.....: 05/31/2006
Time Sampled.....: 17:00
Sample Matrix.....: Water

Laboratory Sample ID: 246864-1
Date Received.....: 06/02/2006
Time Received.....: 10:00

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
8270C	Semivolatile Organics Naphthalene, Low Level Water	0.95	U		0.081	0.95	1.00000	ug/L	183054		06/09/06 1831	dpk

* In Description = Dry Wgt.

STL Chicago

Bill Ellis (formerly Skold)
8713 Daniels 70
715-349-5840
WI Well ID # SX303

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LABORATORY TEST RESULTS

Job Number: 246864

Date:06/21/2006

CUSTOMER: CH2M HILL INC | PROJECT: USEPA PENTA WOOD | ATTN: Steven Paukner

Customer Sample ID: 06CA20-09
Date Sampled.....: 05/31/2006
Time Sampled.....: 12:31
Sample Matrix.....: Water

Laboratory Sample ID: 246864-3
Date Received.....: 06/02/2006
Time Received.....: 10:00

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
8270C	Semivolatile Organics Naphthalene, Low Level Water	0.93	U		0.079	0.93	1.00000	ug/L	183054		06/09/06 1855	dpk

* In Description = Dry Wgt.

STL Chicago

Bill Ellis (formerly Skold)
8713 Daniels 70
715-349-5840
WI Well ID# SX303

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LABORATORY TEST RESULTS

Job Number: 246864

Date:06/21/2006

CUSTOMER: CH2M HILL INC | PROJECT: USEPA PENTA WOOD | ATTN: Steven Paukner

Customer Sample ID: 06CA20-10
Date Sampled.....: 05/31/2006
Time Sampled.....: 12:36
Sample Matrix.....: Water

Laboratory Sample ID: 246864-4
Date Received.....: 06/02/2006
Time Received.....: 10:00

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
8270C	Semivolatile Organics Naphthalene, Low Level Water	0.94	U		0.080	0.94	1.00000	ug/L	183054		06/09/06 1918	dpk

* In Description = Dry Wgt.

STL Chicago

LaVonne Brethorst
8627 Daniels 70
715-349-5237
WI Well ID # Unknown

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LABORATORY TEST RESULTS

Job Number: 246864

Date:06/21/2006

CUSTOMER: CH2M HILL INC

PROJECT: USEPA PENTA WOOD

ATTN: Steven Paulkner

Customer Sample ID: 06CA20-11
Date Sampled.....: 05/31/2006
Time Sampled.....: 16:45
Sample Matrix.....: Water

Laboratory Sample ID: 246864-7
Date Received.....: 06/02/2006
Time Received.....: 10:00

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
8270C	Semivolatile Organics Naphthalene, Low Level Water	0.93	U		0.079	0.93	1.00000	ug/L	183054		06/09/06 2004	dpk

* In Description = Dry Wgt.

STL Chicago

Ken & Sheri Nelson
Daniels 70
715-349-8070
WI well ID# JB 251

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LABORATORY TEST RESULTS

Job Number: 246864

Date:06/21/2006

CUSTOMER: CH2M HILL INC PROJECT: USEPA PENTA WOOD ATTN: Steven Paulkner

Customer Sample ID: 06CA20-12
Date Sampled.....: 05/31/2006
Time Sampled.....: 17:04
Sample Matrix.....: Water

Laboratory Sample ID: 246864-8
Date Received.....: 06/02/2006
Time Received.....: 10:00

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
8270C	Semivolatile Organics Naphthalene, Low Level Water	0.94	U		0.080	0.94	1.00000	ug/L	183054		06/09/06 2027	dpk

* In Description = Dry Wgt.

STL Chicago

Wayne Engstrom
8526 Daniels Tr
715-349-5212
WI well ID# AN 547

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LABORATORY TEST RESULTS

Job Number: 246864

Date:06/21/2006

CUSTOMER: CH2M HILL INC PROJECT: USEPA PENTA WOOD ATTN: Steven Paulkner

Customer Sample ID: 06CA20-13
Date Sampled.....: 05/31/2006
Time Sampled.....: 17:24
Sample Matrix.....: Water

Laboratory Sample ID: 246864-5
Date Received.....: 06/02/2006
Time Received.....: 10:00

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
8270C	Semivolatile Organics Naphthalene, Low Level Water	0.97	U		0.083	0.97	1.00000	ug/L	183054		06/09/06 1941	dpk

* In Description = Dry Wgt.

STL Chicago

Timothy Tjaden
8783 Daniels Tr
715-349-5192
WI Well ID# Unknown

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LABORATORY TEST RESULTS

Job Number: 246864

Date:06/21/2006

CUSTOMER: CH2M HILL INC PROJECT: USEPA PENTA WOOD ATTN: Steven Paulkner

Customer Sample ID: 06CA20-14
Date Sampled.....: 05/31/2006
Time Sampled.....: 16:14
Sample Matrix.....: Water

Laboratory Sample ID: 246864-9
Date Received.....: 06/02/2006
Time Received.....: 10:00

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
8270C	Semivolatile Organics Naphthalene, Low Level Water	0.94	U		0.080	0.94	1.00000	ug/L	183054		06/09/06 2050	dpk

* In Description = Dry Wgt.

STL Chicago

Potable well

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LABORATORY TEST RESULTS

Job Number: 246864

Date:06/21/2006

CUSTOMER: CH2M HILL INC

PROJECT: USEPA PENTA WOOD

ATTN: Steven Paukner

Customer Sample ID: 06CA20-01
Date Sampled.....: 05/31/2006
Time Sampled.....: 17:00
Sample Matrix.....: Water

Laboratory Sample ID: 246864-1
Date Received.....: 06/02/2006
Time Received.....: 10:00

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
8260B	Volatile Organics											
	Benzene	0.50	U		0.23	0.50	1.00000	ug/L	182988		06/09/06 0505	djd
	Toluene	5.0	U		0.18	5.0	1.00000	ug/L	182988		06/09/06 0505	djd
	Ethylbenzene	5.0	U		0.21	5.0	1.00000	ug/L	182988		06/09/06 0505	djd
	Xylenes (total)	5.0	U		0.54	5.0	1.00000	ug/L	182988		06/09/06 0505	djd

* In Description = Dry Wgt.

STL Chicago

Bill Ellis (formerly Skold)
8713 Daniels Ln
715-349-5840
WI Well ID# SX 303

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LABORATORY TEST RESULTS

Job Number: 246864

Date:06/21/2006

CUSTOMER: CH2M HILL INC | PROJECT: USEPA PENTA WOOD | ATTN: Steven Paukner

Customer Sample ID: 06CA20-09
Date Sampled.....: 05/31/2006
Time Sampled.....: 12:31
Sample Matrix.....: Water

Laboratory Sample ID: 246864-3
Date Received.....: 06/02/2006
Time Received.....: 10:00

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
8260B	Volatile Organics											
	Benzene	0.50	U		0.23	0.50	1.00000	ug/L	182988		06/09/06 0551	djd
	Toluene	5.0	U		0.18	5.0	1.00000	ug/L	182988		06/09/06 0551	djd
	Ethylbenzene	5.0	U		0.21	5.0	1.00000	ug/L	182988		06/09/06 0551	djd
	Xylenes (total)	5.0	U		0.54	5.0	1.00000	ug/L	182988		06/09/06 0551	djd

* In Description = Dry Wgt.

STL Chicago

Bill Ellis (formerly Skold)
8713 Daniels Tr
715-349-5840
WI Well ID# SX 303

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LABORATORY TEST RESULTS

Job Number: 246864

Date:06/21/2006

CUSTOMER: CH2M HILL INC | PROJECT: USEPA PENTA WOOD | ATTN: Steven Paukner

Customer Sample ID: 06CA20-10
Date Sampled.....: 05/31/2006
Time Sampled.....: 12:36
Sample Matrix.....: Water

Laboratory Sample ID: 246864-4
Date Received.....: 06/02/2006
Time Received.....: 10:00

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
8260B	Volatile Organics											
	Benzene	0.50	U		0.23	0.50	1.00000	ug/L	182988		06/09/06 0614	djd
	Toluene	5.0	U		0.18	5.0	1.00000	ug/L	182988		06/09/06 0614	djd
	Ethylbenzene	5.0	U		0.21	5.0	1.00000	ug/L	182988		06/09/06 0614	djd
	Xylenes (total)	5.0	U		0.54	5.0	1.00000	ug/L	182988		06/09/06 0614	djd

* In Description = Dry Wgt.

STL Chicago

LaVonne Brethorst
8627 Daniels Rd
715-349-5237
WI Well ID# Unknown

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LABORATORY TEST RESULTS

Job Number: 246864

Date:06/21/2006

CUSTOMER: CH2M HILL INC | PROJECT: USEPA PENTA WOOD | ATTN: Steven Paulkner

Customer Sample ID: 06CA20-11
Date Sampled.....: 05/31/2006
Time Sampled.....: 16:45
Sample Matrix.....: Water

Laboratory Sample ID: 246864-7
Date Received.....: 06/02/2006
Time Received.....: 10:00

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
8260B	Volatile Organics											
	Benzene	0.50	U		0.23	0.50	1.00000	ug/L	182988		06/09/06 0723	djd
	Toluene	5.0	U		0.18	5.0	1.00000	ug/L	182988		06/09/06 0723	djd
	Ethylbenzene	5.0	U		0.21	5.0	1.00000	ug/L	182988		06/09/06 0723	djd
	Xylenes (total)	5.0	U		0.54	5.0	1.00000	ug/L	182988		06/09/06 0723	djd

* In Description = Dry Wgt.

STL Chicago

[redacted] Ken & Sheri Nelson
Daniels 70
715-349-8070
WI Well ID# JB 251

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LABORATORY TEST RESULTS

Job Number: 246864

Date:06/21/2006

CUSTOMER: CH2M HILL INC

PROJECT: USEPA PENTA WOOD

ATTN: Steven Paulkner

Customer Sample ID: 06CA20-12
Date Sampled:.....: 05/31/2006
Time Sampled.....: 17:04
Sample Matrix.....: Water

Laboratory Sample ID: 246864-8
Date Received.....: 06/02/2006
Time Received.....: 10:00

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
8260B	Volatile Organics											
	Benzene	0.50	U		0.23	0.50	1.00000	ug/L	182988		06/09/06 0746	djd
	Toluene	5.0	U		0.18	5.0	1.00000	ug/L	182988		06/09/06 0746	djd
	Ethylbenzene	5.0	U		0.21	5.0	1.00000	ug/L	182988		06/09/06 0746	djd
	Xylenes (total)	5.0	U		0.54	5.0	1.00000	ug/L	182988		06/09/06 0746	djd

* In Description = Dry Wgt.

STL Chicago

Vayne Engstrom
8526 Daniels Tr
715-349-5212
WI well ID# AN 547

88

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LABORATORY TEST RESULTS

Job Number: 246864

Date:06/21/2006

CUSTOMER: CH2M HILL INC PROJECT: USEPA PENTA WOOD ATTN: Steven Paulkner

Customer Sample ID: 06CA20-13
Date Sampled.....: 05/31/2006
Time Sampled.....: 17:24
Sample Matrix.....: Water

Laboratory Sample ID: 246864-5
Date Received.....: 06/02/2006
Time Received.....: 10:00

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
8260B	Volatile Organics											
	Benzene	0.50	U		0.23	0.50	1.00000	ug/L	182988		06/09/06 0637	djd
	Toluene	5.0	U		0.18	5.0	1.00000	ug/L	182988		06/09/06 0637	djd
	Ethylbenzene	5.0	U		0.21	5.0	1.00000	ug/L	182988		06/09/06 0637	djd
	Xylenes (total)	5.0	U		0.54	5.0	1.00000	ug/L	182988		06/09/06 0637	djd

* In Description = Dry Wgt.

STL Chicago

[redacted]

Timothy Jader
8783 Daniels Tr
715-349-5192
WI well ID# Unknown

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LABORATORY TEST RESULTS

Job Number: 246864

Date:06/21/2006

CUSTOMER: CH2M HILL INC | PROJECT: USEPA PENTA WOOD | ATTN: Steven Paukner

Customer Sample ID: 06CA20-14
Date Sampled.....: 05/31/2006
Time Sampled.....: 16:14
Sample Matrix.....: Water

Laboratory Sample ID: 246864-9
Date Received.....: 06/02/2006
Time Received.....: 10:00

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
8260B	Volatile Organics											
	Benzene	0.50	U		0.23	0.50	1.00000	ug/L	182988		06/09/06 0808	djd
	Toluene	5.0	U		0.18	5.0	1.00000	ug/L	182988		06/09/06 0808	djd
	Ethylbenzene	5.0	U		0.21	5.0	1.00000	ug/L	182988		06/09/06 0808	djd
	Xylenes (total)	5.0	U		0.54	5.0	1.00000	ug/L	182988		06/09/06 0808	djd

* In Description = Dry Wgt.

STL Chicago

December 14, 2006, Residential Well Memorandum (September 2006 Sampling Results)

CH2M HILL
135 South 84th Street
Suite 325
Milwaukee, WI 53214-1456
Tel 414.272.2426
Fax 414.272.4408

CH2MHILL

December 14, 2006

Mr. Tom Williams
Remedial Project Manager (SR-6J)
U.S. Environmental Protection Agency
77 West Jackson Boulevard
Chicago, IL 60604-3507

Subject: Subcontract No. 521, Penta Wood Products, WI
September 2006 Sampling Results
WA No. 004-LRLR-05WE, Contract No. EP-S5-06-01

Dear Mr. Williams:

Attached are the Pentachlorophenol (PCP) results for the residential and potable well sampling event that took place on September 26, 2006. This sampling event also included the analysis of benzene, ethylbenzene, toluene, xylene (BTEX), and napthalene. All analyses were performed by Severn Trent Laboratories (STL) of University Park, Illinois. The well description information is shown in the following table:

LTRA Residential Well Information
Penta Wood Products – Siren, Wisconsin

Location ID	Resident Name	Resident Address	Resident Phone Number	WI Well #
RW01	Bill Ellis (formerly Skold)	8713 Daniels 70	(715) 349-5840	SX 303
RW02	LaVonne Brethorst	8627 Daniels 70	(715) 349-5237	Unknown
RW03	Ken and Sheri Nelson	Daniels 70 (same driveway as V. Engstrom)	(715) 349-8070	JB 251
RW04	Vayne Engstrom	8526 Daniels 70	(715) 349-5212	AN 547
RW05	Timothy Tjader	8783 Daniels 70	(715) 349-5192	Unknown

The results of the September 2006 sampling event showed no detections of PCP, BTEX or naphthalene. However, the PCP concentration was estimated to be above the detection limit of 0.018 µg/L but less than the reporting limit of 0.11 µg/L in the duplicate sample at RW-01 (Ellis residence). The estimated concentration in the duplicate sample is 0.023 µg/L.

The native sample collected from RW-01 showed no detection of PCP, and will be the reported value for this sample. The estimated result of 0.023 µg/L in the duplicate sample is consistent with historical data for this location; therefore, no corrective action is deemed necessary.

If you have any questions or comments, please give me a call at 414.272.1052 ext. 228, or Bill Andrae at ext. 341.

Sincerely,

CH2M HILL

Adrienne Unger
Project Chemist

c: Stephen Nathan, PO/U.S. EPA, Region 5 (w/o enclosure)
Dave Alberts, CO/U.S. EPA, Region 5 (w/o enclosure)
Bill Andrae, SM/CH2M HILL, Milwaukee
Ike Johnson, PM/CH2M HILL, Milwaukee
Dan Plomb, DPM/CH2M HILL, Milwaukee
Gina Bayer, RTL/CH2M HILL, Milwaukee
Steven Paukner/CH2M HILL, Milwaukee
Dave Shekoski/CH2M HILL, Milwaukee
Cherie Wilson, AA/CH2M HILL, Milwaukee

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LABORATORY TEST RESULTS

Job Number: 248859 Date: 10/12/2006

CUSTOMER: CH2M HILL INC PROJECT: USEPA PENTA WOOD ATTN: Steven Paulkner

Customer Sample ID: 06CA22-01
Date Sampled.....: 09/26/2006
Time Sampled.....: 07:50
Sample Matrix.....: Water

Laboratory Sample ID: 248859-1
Date Received.....: 09/27/2006
Time Received.....: 10:10

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME
8151A	Herbicides Pentachlorophenol	0.11	U		0.018	0.11	1.00000	ug/L	191180		10/03/06 1129

* In Description = Dry Wgt.

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LABORATORY TEST RESULTS

Job Number: 248861

Date: 10/12/2006

CUSTOMER: CH2M HILL INC | PROJECT: USEPA PENTA WOOD | ATTN: Steven Paukner

Customer Sample ID: 06CA22-27
Date Sampled.....: 09/25/2006
Time Sampled.....: 17:50
Sample Matrix.....: Water

Laboratory Sample ID: 248861-6
Date Received.....: 09/27/2006
Time Received.....: 10:10

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME
8151A	Herbicides Pentachlorophenol	0.11	U		0.018	0.11	1.00000	ug/L	191185		10/03/06 1401

* In Description = Dry Wgt.

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LABORATORY TEST RESULTS

Job Number: 248861

Date: 10/12/2006

CUSTOMER: CH2M HILL INC | PROJECT: USEPA PENTA WOOD | ATTN: Steven Faulkner

Customer Sample ID: 06CA22-28
Date Sampled.....: 09/25/2006
Time Sampled.....: 18:15
Sample Matrix.....: Water

Laboratory Sample ID: 248861-7
Date Received.....: 09/27/2006
Time Received.....: 10:10

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME
8151A	Herbicides Pentachlorophenol	0.023	J	a	0.018	0.11	1.00000	ug/L	191185		10/03/06 1432

* In Description = Dry Wgt.

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LABORATORY TEST RESULTS

Job Number: 248861

Date:10/12/2006

CUSTOMER: CH2M HILL INC | PROJECT: USEPA PENTA WOOD | ATTN: Steven Peukner

Customer Sample ID: 06CA22-29
Date Sampled.....: 09/25/2006
Time Sampled.....: 16:45
Sample Matrix.....: Water

Laboratory Sample ID: 248861-5
Date Received.....: 09/27/2006
Time Received.....: 10:10

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	PT	DATE/TIME	TI
8151A	Herbicides Pentachlorophenol	0.11	U		0.018	0.11	1.00000	ug/L	191185		10/03/06 1331	kr

* In Description = Dry Wgt.

STL Chicago

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LABORATORY TEST RESULTS

Job Number: 248861

Date: 10/12/2006

CUSTOMER: CH2M HILL INC | PROJECT: USEPA PENTA WOOD | ATTN: Steven Paukner

Customer Sample ID: 06CA22-30
Date Sampled.....: 09/25/2006
Time Sampled.....: 15:40
Sample Matrix.....: Water

Laboratory Sample ID: 248861-1
Date Received.....: 09/27/2006
Time Received.....: 10:10

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DF	DATE/TIME
8151A	Herbicides Pentachlorophenol	0.11	U		0.018	0.11	1.00000	ug/L	191185		10/03/06 1159

* In Description = Dry Wgt.

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LABORATORY TEST RESULTS

Job Number: 248861

Date: 10/12/2006

CUSTOMER: CH2M HILL INC | PROJECT: USEPA PENTA WOOD | ATTN: Steven Paukner

Customer Sample ID: 06CA22-31
Date Sampled.....: 09/25/2006
Time Sampled.....: 16:12
Sample Matrix.....: Water

Laboratory Sample ID: 248861-2
Date Received.....: 09/27/2006
Time Received.....: 10:10

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	T
8151A	Herbicides Pentachlorophenol	0.11	U		0.018	0.11	1.00000	ug/L	191185		10/03/06 1230	4

* In Description = Dry Wgt.

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LABORATORY TEST RESULTS

Job Number: 248861 Date:10/12/2006

CUSTOMER: CH2M HILL INC PROJECT: USEPA PENTA WOOD ATTN: Steven Paukner

Customer Sample ID: 06CA22-32
Date Sampled.....: 09/25/2006
Time Sampled.....: 18:15
Sample Matrix.....: Water

Laboratory Sample ID: 248861-3
Date Received.....: 09/27/2006
Time Received.....: 10:10

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME
8151A	Herbicides Pentachlorophenol	0.11	U		0.018	0.11	1.00000	ug/L	191185		10/03/06 1300

* In Description = Dry Wgt.

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LABORATORY TEST RESULTS

Job Number: 248859

Date:10/09/2006

CUSTOMER: CH2M HILL INC | PROJECT: USEPA PENTA WOOD | ATTN: Steven Paulkner

Customer Sample ID: 06CA22-01
Date Sampled.....: 09/26/2006
Time Sampled.....: 07:50
Sample Matrix.....: Water

Laboratory Sample ID: 248859-1
Date Received.....: 09/27/2006
Time Received.....: 10:10

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	QT	DATE/TIME
8260B	Volatile Organics										
	Benzene	0.50	U		0.23	0.50	1.00000	ug/L	190631		10/05/06 0654
	Toluene	5.0	U		0.18	5.0	1.00000	ug/L	190631		10/05/06 0654
	Ethylbenzene	5.0	U		0.21	5.0	1.00000	ug/L	190631		10/05/06 0654
	Xylenes (total)	5.0	U		0.54	5.0	1.00000	ug/L	190631		10/05/06 0654

* In Description = Dry Wgt.

LABORATORY TEST RESULTS

Job Number: 248861 Date: 10/10/2006

CUSTOMER: CH2M HILL, INC PROJECT: USEPA PENTA WOOD ATTN: Steven Faulkner

Customer Sample ID: 06CA22-27
Date Sampled.....: 09/25/2006
Time Sampled.....: 17:50
Sample Matrix.....: Water

Laboratory Sample ID: 248861-6
Date Received.....: 09/27/2006
Time Received.....: 10:10

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME
8260B	Volatile Organics										
	Benzene	0.50	U		0.23	0.50	1.00000	ug/L	190631		10/05/06 0506
	Toluene	5.0	U		0.18	5.0	1.00000	ug/L	190631		10/05/06 0506
	Ethylbenzene	5.0	U		0.21	5.0	1.00000	ug/L	190631		10/05/06 0506
	Xylenes (total)	5.0	U		0.54	5.0	1.00000	ug/L	190631		10/05/06 0506

* In Description = Dry Wgt.

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LABORATORY TEST RESULTS

Job Number: 248861

Date: 10/10/2006

CUSTOMER: CH2M HILL INC PROJECT: USEPA PENTA WOOD ATTN: Steven Paukner

Customer Sample ID: 06CA22-28
Date Sampled.....: 09/25/2006
Time Sampled.....: 18:15
Sample Matrix.....: Water

Laboratory Sample ID: 248861-7
Date Received.....: 09/27/2006
Time Received.....: 10:10

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME
8260B	Volatile Organics										
	Benzene	0.50	U		0.23	0.50	1.00000	ug/L	190631		10/05/06 0611
	Toluene	5.0	U		0.18	5.0	1.00000	ug/L	190631		10/05/06 0611
	Ethylbenzene	5.0	U		0.21	5.0	1.00000	ug/L	190631		10/05/06 0611
	Xylenes (total)	5.0	U		0.54	5.0	1.00000	ug/L	190631		10/05/06 0611

* In Description = Dry Wgt.

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LABORATORY TEST RESULTS

Job Number: 248861

Date: 10/10/2006

CUSTOMER: CR2M HILL INC PROJECT: USEPA PENTA WOOD ATTN: Steven Paulkner

Customer Sample ID: 06CA22-29
Date Sampled.....: 09/25/2006
Time Sampled.....: 16:45
Sample Matrix.....: Water

Laboratory Sample ID: 248861-5
Date Received.....: 09/27/2006
Time Received.....: 10:10

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME
82608	Volatile Organics										
	Benzene	0.50	U		0.23	0.50	1.00000	ug/L	190631		10/05/06 0444
	Toluene	5.0	U		0.18	5.0	1.00000	ug/L	190631		10/05/06 0444
	Ethylbenzene	5.0	U		0.21	5.0	1.00000	ug/L	190631		10/05/06 0444
	Xylenes (total)	5.0	U		0.54	5.0	1.00000	ug/L	190631		10/05/06 0444

* In Description = Dry Wgt.

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LABORATORY TEST RESULTS

Job Number: 248861

Date: 10/10/2006

CUSTOMER: CH2M HILL INC. PROJECT: USEPA PENTA 4000 ATTN: Steven Paukner

Customer Sample ID: 06CA22-30
Date Sampled.....: 09/25/2006
Time Sampled.....: 15:40
Sample Matrix.....: Water

Laboratory Sample ID: 248861-1
Date Received.....: 09/27/2006
Time Received.....: 10:10

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	QT	DATE/TIME
82608	Volatile Organics										
	Benzene	0.50	U		0.23	0.50	1.00000	ug/L	190631		10/05/06 0316
	Toluene	5.0	U		0.18	5.0	1.00000	ug/L	190631		10/05/06 0316
	Ethylbenzene	5.0	U		0.21	5.0	1.00000	ug/L	190631		10/05/06 0316
	Xylenes (total)	5.0	U		0.54	5.0	1.00000	ug/L	190631		10/05/06 0316

* In Description = Dry Wgt.

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LABORATORY TEST RESULTS

Job Number: 248859

Date: 10/17/2006

CUSTOMER: CH2M HILL INC PROJECT: USERA PENTA WOOD ATTN: Steven Paulsen

Customer Sample ID: 06CA22-01
Date Sampled.....: 09/26/2006
Time Sampled.....: 07:50
Sample Matrix.....: Water

Laboratory Sample ID: 248859-1
Date Received.....: 09/27/2006
Time Received.....: 10:10

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DF	DATE/TIME
8270C	Semivolatile Organics Naphthalene, Low Level Water	0.93	U		0.079	0.93	1.00000	ug/L	191387		10/16/06 1341

* In Description = Dry Wgt.

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LABORATORY TEST RESULTS

Job Number: 248861 Date:10/17/2006

CUSTOMER: CH2M HILL, INC. PROJECT: USEPA PENTA WOOD ATTN: Steven Paukner

Customer Sample ID: 06CA22-27
Date Sampled.....: 09/25/2006
Time Sampled.....: 17:50
Sample Matrix.....: Water

Laboratory Sample ID: 248861-6
Date Received.....: 09/27/2006
Time Received.....: 10:10

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME
8270C	Semivolatile Organics Naphthalene, Low Level Water	0.93	U		0.079	0.93	1.00000	ug/L	191387		10/16/06 1533

* In Description = Dry Wgt.

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LABORATORY TEST RESULTS

Job Number: 248861

Date:10/17/2006

CUSTOMER: CH2M HILL INC | PROJECT: USEPA PENTA WOOD | ATTN: Steven Paukner

Customer Sample ID: 06GA22-28
Date Sampled.....: 09/25/2006
Time Sampled.....: 18:15
Sample Matrix.....: Water

Laboratory Sample ID: 248861-7
Date Received.....: 09/27/2006
Time Received.....: 10:10

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME
8270C	Semivolatile Organics Naphthalene, Low Level Water	0.93	U		0.079	0.93	1.00000	ug/L	191387		10/16/06 1555

* In Description = Dry Wgt.

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LABORATORY TEST RESULTS

Job Number: 248861

Date: 10/17/2006

CUSTOMER: CH2M HILL, INC. PROJECT: USEPA PENTA WOOD ATTN: Steven Faulkner

Customer Sample ID: 06CA22-29
Date Sampled.....: 09/25/2006
Time Sampled.....: 16:45
Sample Matrix.....: Water

Laboratory Sample ID: 248861-5
Date Received.....: 09/27/2006
Time Received.....: 10:10

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME
8270C	Semivolatile Organics Naphthalene, Low Level Water	0.93	U		0.079	0.93	1.00000	ug/L	191387		10/16/06 1510

* In Description = Dry Wgt.

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LABORATORY TEST RESULTS

Job Number: 248861

Date: 10/17/2006

CUSTOMER: CH2M HILL INC PROJECT: USEPA PENTA WOOD ATTN: Steven Paulner

Customer Sample ID: 06CA22-30
Date Sampled.....: 09/25/2006
Time Sampled.....: 15:40
Sample Matrix.....: Water

Laboratory Sample ID: 248861-1
Date Received.....: 09/27/2006
Time Received.....: 10:10

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME
8270C	Semivolatile Organics Naphthalene, Low Level Water	0.93	U		0.079	0.93	1.00000	ug/L	191387		10/16/06 1403

* In Description = Dry Wgt.

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LABORATORY TEST RESULTS

Job Number: 248861

Date: 10/17/2006

CUSTOMER: CH2M HILL INC. PROJECT: USEPA PENTA WOOD ATTN: Steven Paulkner

Customer Sample ID: 06CA22-31
Date Sampled.....: 09/25/2006
Time Sampled.....: 16:12
Sample Matrix.....: Water

Laboratory Sample ID: 248861-2
Date Received.....: 09/27/2006
Time Received.....: 10:10

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DI	DATE/TIME	D
8270C	Semivolatile Organics Naphthalene, Low Level Water	0.93	U		0.079	0.93	1.00000	ug/L	191387		10/16/06 1425	c

* In Description = Dry Wgt.

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LABORATORY TEST RESULTS

Job Number: 248861

Date:10/17/2006

CUSTOMER: CH2M HILL INC. PROJECT: USEPA PENTA WOOD ATTN: Steven Paulkner

Customer Sample ID: 06CA22-32
Date Sampled.....: 09/25/2006
Time Sampled.....: 18:15
Sample Matrix.....: Water

Laboratory Sample ID: 248861-3
Date Received.....: 09/27/2006
Time Received.....: 10:10

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME
8270C	Semivolatile Organics Naphthalene, Low Level Water	0.93	U		0.079	0.93	1.00000	ug/L	191387		10/16/06 1448

* In Description = Dry Wgt.