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CH2MHILL

December 4, 2001

Mr. Tony Rutter
Remedial Project Manager
U.S. Environmental Protection Agency
Remedial Response Branch (SR-6J)
77 West Jackson Boulevard
Chicago, IL 60604-3590

Dear Tony:

Subject: Groundwater Sampling Results Technical Memorandum
PentaWood Products Site
Town of Daniels, Wisconsin
Work Assignment No. 101-RALR-05WE
Contract No. 68-W6-0025

Enclosed please find a technical memorandum with post-Remedial Action groundwater sampling results. Please feel free to call me with any questions or concerns.

Sincerely,

CH2M HILL

Regina Bayer

Regina Bayer

Site Manager

c: Stephen Nathan/PO/USEPA (w/o enclosure)
Dave Alberts/CO/USEPA (w/o enclosure)
Bill Schultz/WDNR, Spooner
Ike Johnson/PM/CH2M HILL, Milwaukee
Dan Plomb/DPM/CH2M HILL, Milwaukee
Phil Smith/RTL/CH2M HILL, Milwaukee
Bill Andrae/ASM/CH2M HILL, Milwaukee
Paul Arps/Chemist/CH2M HILL, Milwaukee
Cherie Wilson/AA/CH2M HILL, Milwaukee

Post-RA Groundwater Sampling Results June 2001 and September 2001 Sampling Events PentaWood Products Site

PREPARED FOR: Tony Rutter, USEPA

PREPARED BY: Regina Bayer, CH2M HILL

COPIES: Bill Schultz, WDNR
Bill Andrae, CH2M HILL
Phil Smith, CH2M HILL
Paul Arps, CH2M HILL

DATE: December 4, 2001

A quarterly groundwater sampling event was conducted at the PentaWood Products site in June 2001 for five monitoring wells. The first post-Remedial Action annual groundwater sampling event was conducted in September 2001. The annual groundwater sampling event consisted of twenty monitoring wells and four residential wells. This technical memorandum presents the results from the two groundwater sampling events and includes tables and figures presenting historical groundwater data. A table and graph depicting the groundwater treatment plant operation status is also included.

Purpose and Scope

The purpose of the groundwater sampling events is to periodically monitor groundwater contaminant levels and natural attenuation parameters to assess the effectiveness of the ongoing treatment. Parameters that are analyzed consist of PCP, BTEX, naphthalene, total and dissolved metals, and natural attenuation parameters (see the analytical results in Attachment 1 for the entire list). Water level measurements and oil thickness levels are also collected during each sampling event to assess the groundwater extraction capture zone.

From April to September 2001, the treatment plant operated at partial capacity. High organic loading has caused problems in meeting effluent criteria from the start of operation. On September 27, 2001, the plant was shutdown pending pilot tests and an addition of a Dissolved Air Flotation (DAF) treatment component.

Water Level Measurements

Water levels in all monitoring wells were measured in June 2001 and in September 2001. A 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 oil. Continuous water drawdown measurements are also monitored via transducers in the extraction wells. In general the extraction wells pull the water table down two feet at each well when in operation. A ground water elevation map for both the unconfined and semi-confined aquifers, as

measured in September 2001, is included as Attachment 2. Oil measurement data is also included in Attachment 2.

Well Sampling

The five monitoring wells chosen for the June 2001 sampling round were MW02, MW13, MW14, MW18, and MW26. MW18 was chosen to represent the LNAPL area, MW13 to represent the northeast edge of the plume, MW02 and MW14 to assess the deeper semiconfined groundwater at the edge of the LNAPL area, and MW 26 to monitor groundwater quality near the treated water infiltration basin. The wells were sampled on June 18 and 19, 2001 by Paul Arps, Steve Beck, Bill Andrae, and Gina Bayer of CH2M HILL. All wells were purged of three well volumes and sampled by bailing. The generator was lost during the tornado that hit the site the evening of June 18.

A total of twenty monitoring wells and four residential wells were sampled during the September 2001 annual sampling event. The wells were sampled from September 10 through September 13, 2001 by Paul Arps, Rob Stryker, Gina Bayer, Mary Wicklund, and Keli McKenna of CH2M HILL. MW3, MW7, MW8, MW12, and MW17 were purged and sampled with dedicated Timco bladder pumps that had been installed in 1997. The remainder of the wells were purged with disposable PVC bailers, or Waterra® pumps and sampled with PVC bailers.

The samples from the June sampling round were analyzed by PEL Laboratories. Because of the events that took place on September 11, the samples from the September sampling round was analyzed by the Wisconsin-certified laboratory EnChem, of Madison, WI. With Federal Express and all other shipping services temporarily shut down, samples were held on ice until the decision was made to courier them to a local laboratory. Quality control samples consisting of field blanks, duplicate samples, and matrix spike/matrix spike duplicate samples were collected at the frequency specified in the Sampling and Analysis Plan during both sampling events (CH2M HILL, November, 2000, and revised April 2001).

Preliminary results received from EnChem on September 27 showed trace levels of PCP in three residential wells, and higher levels in the fourth residential well. PCP was also detected in the field blank associated with these samples. The residential wells were resampled immediately on September 28, with samples being sent to both EnChem and PEL. Results from both labs showed no detections of PCP in any of the residential wells. It appears that holding the samples most of the week within the treatment plant building may have contaminated the samples with trace levels of PCP.

Monitoring well and residential well sample result packages were forwarded to USEPA for data validation on December 3, 2001 to the attention of Dennis Wesolowski. As data validation results have not been received yet, the results presented in this memorandum are considered unvalidated, and thus preliminary.

Monitoring Well Analytical Results

The monitoring well analytical results tables presented in Attachment 1 are formatted into three distinct tables; the June 2001 quarterly sampling results, the September 2001 annual sampling results, and a compilation table that presents annual sampling results from 1997, 2000, and 2001. Figure 1 depicts PCP concentrations in the monitoring wells from 1994

(samples collected by USEPA Emergency Response Team), 1997, 2000, and 2001. The results from the latest two full sampling rounds, conducted in April 2001 and September 2001, are shown in bold.

As shown on Figure 1, the 2001 PCP concentrations are similar to the 2000 results. The line depicting the PCP plume extent has remained the same, with the exception that a trace amount of PCP was detected on the eastern boundary in MW01 during the September 2001 round. However, this result will most likely be qualified due to the presence of PCP in the field blank. PCP concentrations have increased considerably in interior monitoring wells MW20 and MW19. Napthalene concentrations are also elevated in these wells (890 ug/L in MW20, 240 ug/L in MW19).This is likely due to the influence of extraction well nests EW04 and EW07, which are in close proximity to these monitoring wells. Table 1 in Attachment 5 shows the operating status of the extraction wells. EW04 and EW07 are wells which were operated almost continuously. The extraction wells pool the LNAPL within their area of influence, and draw down the water table which brings the LNAPL closer vertically to the monitoring well screens.

Comparison of the historic arsenic groundwater data shows the total arsenic concentration in MW10S (located in the anaerobic area of the LNAPL plume) increased from 5.3 ug/L in April 2000 to 9.4 ug/L in December 2000 and 18 ug/L in April 2001. As of the September 2001 round, the concentration has decreased to 5.1 ug/L. The WDNR PAL for arsenic is 5 ug/L. Conversely, the total arsenic concentration in MW13 in April 2000 prior to the start of the Remedial Action was 27 ug/L, while the post-RA total arsenic concentration decreased in April 2001 to 14 ug/L, and to 3.9 in September 2001. Copper levels in MW13 also spiked before the RA at 429 ug/L, and dropped afterwards to 92 ug/L in December, 140 ug/L in April 2001, and 49 ug/L in September 2001. The WDNR PAL for copper is 130 ug/L.

Wells where the arsenic groundwater concentrations were above the 5 ug/L WDNR PAL in the April 2001 sampling round were MW10S (18 ug/L), MW13 (14 ug/L), MW5 (5.6 ug/L), MW6S (15 ug/L), MW16 (6.5 ug/L), and MW20 (8.2 ug/L). With the possible exception of MW16, these wells are all within the reducing environment of the LNAPL plume which mobilizes native arsenic from the existing rocks through increasing its solubility. In the September 2001 sampling round, only three wells exceed the arsenic WDNR PAL; MW5 (8.2 ug/L), MW6S (7.4 ug/L), and MW10S (5.1 ug/L).

Monitoring Well Natural Attenuation Parameters

Attachment 3 contains a table presenting the natural attenuation parameters for each well as measured in 1997, 2000, and 2001. The latest data is similar to the 2000 data and indicates the dissolved PCP plume is degrading on the edges, and the anaerobic LNAPL zone is stable.

Residential Well Analytical Results

The residential well sample information including names, addresses, telephone numbers and the analytical results were submitting under separate cover to the WAM on October 31, 2001. These are included again in this memorandum as Attachment 4 for completeness.

There were no detections in the residential well samples, using the September 28, 2001 PCP re-sample results from two laboratories. The re-sample results included a duplicate sample set collected at RW02.

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LEGEND

- EW11 — EXTRACTION WELL NEST
- BV09 — BIOVENTING WELL NEST
- SG05 — SOIL GAS WELL NEST
- UNCONFINED MONITORING WELL LOCATION
- SEMICONFINED MONITORING WELL LOCATION
- FORMER WASTEWATER LAGOON
- FORMER BOUNDARY OF WOOD CHIP PILE
- PCP CONCENTRATION (ug/L)
  - 1994
  - 1997
  - 2000
- 0.12 / 0.8 — APRIL 2001 / SEPTEMBER 2001
- BOUNDARY OF LNAPL
- 1994 ND — 1994 PCP NON-DETECT CONTOUR
- 1997 ND — 1997 PCP NON-DETECT CONTOUR
- 2000 / 2001 ND — 2000 / 2001 PCP NON-DETECT CONTOUR

NOTE:
1. MCL/WDNR ES FOR PCP IS 1.0 ug/L. WDNR PAL FOR PCP IS 0.1 ug/L

N
0 100' 200'

N 2200
N 2000
N 1800
N 1600
N 1400
N 1200
N 1000
N 800
N 600
N 400

E -200
E 0
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

FORMER WOOD CHIP AREA
INFILTRATION BASIN
CAMU OUTLINE
PROPERTY BOUNDARY
TREATMENT BUILDING
DANIELS 70
2000 / 2001 ND
1997 ND
1994 ND

MW 11 0.1U / 0.1
MW 8 0.2/0.1U / 0.1
MW26 0.1U / 0.16 J
MW 17 0.72 / 0.1
MW24 0.1U
MW 7 0.1U / 0.1
MW 16 0.1U / 0.2
MW 12 1,500 / 18,000
MW 13 0.18 / 0.7
MW23 0.5
MW 9 0.12 / 0.8
EW11
20,600 / 6,300
MW 5 0.5
MW 2
EW02
SG04
MW 10
MW 10S
EW03
MW 18
EW05
EW-01
EW10
SG05
EW04
MW 20
MW 14
EW06
MW 19
MW 6
MW 6S
SG07
SG06
EW07
MW 4
MW 1
0.1U / 0.5
MW22
BV08
SG22
BV09
PW 01
MW 3
MW21
25,600 / 400,000
0.1U / 0.1
MW 15
2.5 / 1.1
36,600 / 83,000
22,800 / 21,000
49,000 / 82,000

FIGURE 1
APRIL AND SEPTEMBER 2001
PCP CONCENTRATIONS IN GROUNDWATER
2001 GROUNDWATER MONITORING
PENTA WOOD PRODUCTS

CH2MHILL

Attachment 1

Analytical Results

Penta Wood Products Site LTRA
Quarterly Groundwater Sampling Results
June 2001

Field Site Identifier:		PENTA	PENTA	PENTA	PENTA	PENTA
Field Sample Location:		MW-02	MW-13	MW-14	MW-18	MW-26
Sample Interval:		N/A	N/A	N/A	N/A	N/A
Matrix:		Water	Water	Water	Water	Water
Sample Collection Date:		06/18/2001	06/19/2001	06/19/2001	06/19/2001	06/18/2001
Field Sample Identification:		01CB08-66	01CB08-69	01CB08-70	01CB08-71	01CB08-67
Laboratory Sample Identification:		210611201	210613201	210613202	210613203	210611202
Parameter	**Units**					
Methane	ug/L	0.14 J	0.12 U	0.11 U	0.13 U	0.1 U
Arsenic	ug/L	6.7 =	9.1 =	2 =	4.9 =	3.6 =
Arsenic, Dissolved	ug/L	0.37 J	1.1 =	1.4 =	5 =	1.1 =
Copper	ug/L	109 =	68 =	5.4 J	43 =	18 J
Copper, Dissolved	ug/L	25 U	6.1 J	25 U	21 J	25 U
Iron	ug/L	39900 =	32800 =	1070 =	15200 =	9140 =
Iron, Dissolved	ug/L	24 U	141 =	25 U	13700 =	25 U
Manganese	ug/L	1230 =	848 =	57 =	6540 =	232 =
Manganese, Dissolved	ug/L	8.3 =	26 =	4.4 J	6650 =	15 U
Zinc	ug/L	64 =	45 =	25 U	25 U	28 =
Zinc, Dissolved	ug/L	25 U	25 U	25 U	25 U	25 U
Alkalinity, Total	mg/L	36 =	68 =	104 =	168 =	230 =
Chloride	mg/L	5.73 =	5.73 =	12 =	19 =	27 =
Hardness (As CaCO3)	mg/L	66 =	112 =	124 =	182 =	326 =
Nitrogen, Nitrate (As N)	mg/L	38 =	2.87 =	2.06 =	0.13 U	30 =
Sulfide	mg/L	1 U	NA	1 U	1.7 =	1 U
Sulfate	mg/L	105 =	11 =	3.48 J	33 J	13 =
Total Organic Carbon	mg/L	5.57 =	13 =	6.41 =	6.63 =	6.67 =
Pentachlorophenol	ug/L	0.1 U	0.11 U	0.96 =	27400 =	1 =
Naphthalene	ug/L	5 U	5.3 U	239 =	5 U	5 U
Benzene	ug/L	0.1 U	0.12 =	0.1 U	1.1 =	0.1 U
Ethylbenzene	ug/L	1 U	1 U	1 U	14 =	1 U
M,P-Xylene (Sum Of Isomers)	ug/L	2 U	2 U	2 U	11 J	2 U
O-Xylene	ug/L	1 U	1 U	1 U	9.3 J	1 U
Toluene	ug/L	1 U	1 U	1 U	10 U	1 U
Xylenes (Total)	ug/L	1 U	1 U	1 U	20 =	1 U

QUALIFIER KEY: "U" - Analyte not found at the listed detection limit; "J" - Estimated Result; "B" - Analyte detected in Blank; "=" - Analyte found; "R" - Rejected; "NA" - Not Analyzed

Penta Wood Products Site LTRA
Annual Groundwater Sampling Results
September 2001

Field Site Identifier:		PENTA	PENTA	PENTA	PENTA	PENTA	PENTA	PENTA
Field Sample Location:		MW-01	MW-02	MW-03	MW-05	MW-06S	MW-07	MW-07
Sample Interval:		N/A	N/A	N/A	N/A	N/A	N/A	N/A
Matrix:		Water	Water	Water	Water	Water	Water	Water, Dup
Sample Collection Date:		09/11/2001	09/12/2001	09/13/2001	09/13/2001	09/12/2001	09/11/2001	09/11/2001
Field Sample Identification:		01CB28-21	01CB28-39	01CB28-44	01CB28-46	01CB28-34	01CB28-22	01CB28-23
Laboratory Sample Identification:		913080-024	913080-011	913103-001	913103-006	913080-001	913080-026	913080-027
Parameter	**Units**							
Methane	ug/L	10 U	10 U	10 U	10 U	10 U	12 =	10 U
Arsenic	ug/L	1.3 =	3.9 =	0.35 J	8.2 =	7.4 =	0.4 J	0.47 J
Arsenic, Dissolved	ug/L	0.7 J	0.29 U	0.29 U	3.7 =	0.58 J	0.29 U	0.29 U
Copper	ug/L	25 U	110 =	2.2 U	100 =	190 =	2.2 U	2.2 U
Copper, Dissolved	ug/L	4 J	2.2 U	2.2 U	5.1 J	3.1 J	2.2 U	2.2 U
Iron	ug/L	4000 =	29000 =	2400 =	26000 =	42000 =	560 =	560 =
Iron, Dissolved	ug/L	35 U	35 U	930 =	4100 =	35 U	230 =	230 =
Manganese	ug/L	450 =	1200 =	31 =	8500 =	1900 =	6.4 =	5.7 =
Manganese, Dissolved	ug/L	0.79 J	57 =	31 =	8500 =	800 =	4.4 =	4.6 =
Zinc	ug/L	20 =	69 =	3.7 U	4.2 J	110 =	3.7 U	4.8 J
Zinc, Dissolved	ug/L	3.7 U	5.2 J	3.7 U	6.2 J	5 J	5.2 J	3.9 J
Alkalinity, Total	mg/L	130 =	49 =	440 =	270 =	160 =	340 =	350 =
Chloride	mg/L	10 =	6.2 =	58 =	29 =	12 =	23 =	24 =
Hardness (As CaCO3)	mg/L	170 =	140 =	480 =	240 =	290 =	410 =	400 =
Nitrogen, Nitrate (As N)	mg/L	2.6 =	2.3 =	4 =	0.17 J	1.1 =	3 =	3 =
Sulfide	mg/L	0.4 U	3.3 =	2.7 =	6.7 =	1.1 =	0.8 U	1.3 =
Sulfate	mg/L	8.2 U	10 =	14 =	22 =	16 =	10 =	10 =
Total Organic Carbon	mg/L	3.9 =	4.2 =	1.1 =	27 =	6.3 =	2 =	1.8 =
Pentachlorophenol	ug/L	0.5 =	0.51 =	0.093 J	6300 =	1.1 =	0.083 J	0.13 J
Naphthalene	ug/L	0.24 U	0.24 U	0.26 U	23 =	0.24 U	0.24 U	0.24 U
Benzene	ug/L	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U
Ethylbenzene	ug/L	0.5 U	0.5 U	0.5 U	0.54 J	0.5 U	0.5 U	0.5 U
Toluene	ug/L	0.4 U	0.4 U	0.4 U	0.78 J	0.4 U	0.4 U	0.4 U
Xylenes (Total)	ug/L	1.2 U	1.2 U	1.2 U	4.3 =	1.2 U	1.2 U	1.2 U

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Penta Wood Products Site LTRA
Annual Groundwater Sampling Results
September 2001

Field Site Identifier:		PENTA	PENTA	PENTA	PENTA	PENTA	PENTA	PENTA
Field Sample Location:		MW-08	MW-09	MW-10	MW-10S	MW-11	MW-12	MW-13
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:		09/11/2001	09/12/2001	09/12/2001	09/12/2001	09/10/2001	09/13/2001	09/10/2001
Field Sample Identification:		01CB28-18	01CB28-36	01CB28-32	01CB28-33	01CB28-12	01CB28-45	01CB28-13
Laboratory Sample Identification:		913080-035	913080-004	913080-007	913080-008	913080-013	913103-005	913080-014
Parameter	**Units**							
Methane	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Arsenic	ug/L	1.2 =	0.43 J	4.5 =	5.1 =	1.4 =	1.1 =	3.9 =
Arsenic, Dissolved	ug/L	1 =	0.34 J	3.9 =	0.29 U	1.1 =	0.95 U	0.54 J
Copper	ug/L	2.2 U	6.1 J	40 =	170 =	2.9 J	5 J	49 =
Copper, Dissolved	ug/L	2.2 U	2.2 U	3.9 J	3.2 J	2.2 U	6.8 J	2.8 J
Iron	ug/L	350 =	300 =	20000 =	35000 =	66 J	770 =	14000 =
Iron, Dissolved	ug/L	70 J	110 =	2400 =	48 J	35 U	740 =	52 J
Manganese	ug/L	19 =	27 =	3300 =	8600 =	1.9 =	1300 =	510 =
Manganese, Dissolved	ug/L	18 =	16 =	3200 =	7600 =	0.45 J	1400 =	27 =
Zinc	ug/L	3.7 U	11 J	13 =	100 =	9.1 J	9.3 J	37 =
Zinc, Dissolved	ug/L	4.3 J	6.6 J	9.5 J	3.7 U	3.7 U	12 =	4.7 J
Alkalinity, Total	mg/L	150 =	62 =	540 J	270 J	190 =	490 =	75 =
Chloride	mg/L	3.8 =	6.5 =	61 =	10 =	8 =	47 =	5.4 =
Hardness (As CaCO3)	mg/L	170 =	64 =	630 =	260 =	220 =	470 =	100 =
Nitrogen, Nitrate (As N)	mg/L	1.5 =	3.3 =	0.13 J	4.7 =	3.1 =	0.53 U	2.5 =
Sulfide	mg/L	0.93 U	1.3 =	1.1 =	1.3 =	1.3 =	1.3 =	0.93 U
Sulfate	mg/L	7.6 U	6.8 U	23 =	13 =	7.4 U	16 =	7.5 U
Total Organic Carbon	mg/L	1 J	5.1 =	64 =	19 =	4.2 =	25 =	9.5 =
Pentachlorophenol	ug/L	0.062 J	0.76 =	21000 =	82000 =	0.091 J	18000 =	0.69 =
Naphthalene	ug/L	0.24 U	0.24 U	130 =	75 =	0.24 U	40 =	0.24 U
Benzene	ug/L	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U
Ethylbenzene	ug/L	0.5 U	0.5 U	6.3 =	0.94 J	0.5 U	2.3 U	0.5 U
Toluene	ug/L	0.4 U	0.4 U	10 =	0.41 J	0.4 U	3.2 U	0.4 U
Xylenes (Total)	ug/L	1.2 U	1.2 U	55 =	15 =	1.2 U	20 =	1.2 U

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Penta Wood Products Site LTRA
Annual Groundwater Sampling Results
September 2001

Field Site Identifier:		PENTA	PENTA	PENTA	PENTA	PENTA	PENTA	PENTA
Field Sample Location:		MW-15	MW-16	MW-17	MW-19	MW-20	MW-23	MW-26
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:		09/12/2001	09/10/2001	09/11/2001	09/12/2001	09/12/2001	09/11/2001	09/10/2001
Field Sample Identification:		01CB28-35	01CB28-16	01CB28-24	01CB28-38	01CB28-37	01CB28-20	01CB28-10
Laboratory Sample Identification:		913080-002	913080-019	913080-028	913080-010	913080-005	913080-023	913080-016
Parameter	**Units**							
Methane	ug/L	10 U	10 U	10 U	16 =	10 U	10 U	10 U
Arsenic	ug/L	0.95 U	1.8 =	0.94 =	1.7 J	3.6 =	1.2 =	1.5 =
Arsenic, Dissolved	ug/L	0.95 U	0.29 U	1 =	0.29 U	1.5 =	0.62 J	0.8 J
Copper	ug/L	5.7 J	23 U	2.2 U	44 =	81 =	6.3 J	10 U
Copper, Dissolved	ug/L	2.9 J	2.2 U	2.2 U	6.4 J	15 U	2.2 U	4 J
Iron	ug/L	63 J	5500 =	330 =	5600 =	7900 =	630 =	2300 =
Iron, Dissolved	ug/L	35 U	35 U	310 =	71 J	35 U	35 U	100 J
Manganese	ug/L	2.7 =	520 =	0.27 U	2100 =	3200 =	140 =	94 =
Manganese, Dissolved	ug/L	0.31 J	0.82 J	0.27 U	1800 =	2800 =	29 =	4 U
Zinc	ug/L	36 =	19 =	3.7 U	53 J	36 =	37 =	24 =
Zinc, Dissolved	ug/L	35 =	4.5 J	3.7 U	5.8 J	12 U	4.7 J	3.8 J
Alkalinity, Total	mg/L	240 =	79 =	180 =	320 J	260 J	110 =	260 =
Chloride	mg/L	17 =	1.8 =	4.8 =	19 =	16 =	10 =	30 =
Hardness (As CaCO3)	mg/L	270 =	120 =	210 =	270 =	250 =	140 =	300 =
Nitrogen, Nitrate (As N)	mg/L	3.7 =	5.8 =	4.4 =	1.3 =	0.15 J	0.13 U	3.2 =
Sulfide	mg/L	0.8 U	0.8 U	1.1 =	1.7 =	3.3 =	1.3 =	1.1 =
Sulfate	mg/L	4.5 U	11 =	9.3 U	9.7 U	24 =	8.2 U	12 =
Total Organic Carbon	mg/L	4.5 =	0.34 U	1 J	34 =	65 =	5.6 =	0.34 U
Pentachlorophenol	ug/L	0.077 J	0.17 =	0.059 U	400000 =	83000 =	0.49 =	0.16 J
Naphthalene	ug/L	0.24 U	0.24 U	0.29 U	240 =	890 =	0.24 U	0.24 U
Benzene	ug/L	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U
Ethylbenzene	ug/L	0.5 U	0.5 U	0.5 U	1.9 U	3.4 U	0.5 U	0.5 U
Toluene	ug/L	0.4 U	0.4 U	0.4 U	1.7 U	4.1 U	0.4 U	0.4 U
Xylenes (Total)	ug/L	1.2 U	1.2 U	1.2 U	28 =	37 =	1.2 U	1.2 U

QUALIFIER KEY: "U" - Analyte not found at the listed detection limit; "J" - Estimated Result; "B" - Analyte detected in Blank; "=" - Analyte found; "R" - Rejected; "NA" - Not Analyzed

Penta Wood Products Site LTRA
Annual Groundwater Sampling Results
September 2001

Field Site Identifier:	PENTA
Field Sample Location:	MW-26
Sample Interval:	N/A
Matrix:	Water, Dup
Sample Collection Date:	09/10/2001
Field Sample Identification:	01CB28-11
Laboratory Sample Identification:	913080-017

Parameter	Units	
Methane	ug/L	10 U
Arsenic	ug/L	1.6 =
Arsenic, Dissolved	ug/L	0.75 J
Copper	ug/L	13 =
Copper, Dissolved	ug/L	2.9 J
Iron	ug/L	2500 =
Iron, Dissolved	ug/L	55 J
Manganese	ug/L	96 =
Manganese, Dissolved	ug/L	1.5 U
Zinc	ug/L	24 =
Zinc, Dissolved	ug/L	3.7 U
Alkalinity, Total	mg/L	260 =
Chloride	mg/L	29 =
Hardness (As CaCO3)	mg/L	310 =
Nitrogen, Nitrate (As N)	mg/L	3.2 =
Sulfide	mg/L	1.2 =
Sulfate	mg/L	12 =
Total Organic Carbon	mg/L	2.7 =
Pentachlorophenol	ug/L	0.16 J
Naphthalene	ug/L	0.24 U
Benzene	ug/L	0.44 U
Ethylbenzene	ug/L	0.5 U
Toluene	ug/L	0.4 U
Xylenes (Total)	ug/L	1.2 U

QUALIFIER KEY: "U" - Analyte not found at the listed detection limit; "J" - Estimated Result; "B" - Analyte detected in Blank; "=" - Analyte found; "R" - Rejected; "NA" - Not Analyzed

Penta Wood Products Site LTRA
Groundwater Sampling Results
1997 Thru 2001

Field Site Identifier:		PENTA	PENTA	PENTA	PENTA	PENTA	PENTA	PENTA
Field Sample Location:		MW-01	MW-01	MW-01	MW-01	MW-01	MW-01	MW-02
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
Sample Collection Date:		10/09/1997	10/09/1997	04/05/2000	04/24/2001	04/24/2001	09/11/2001	10/09/1997
Field Sample Identification:		98ZR01-05	98ZR01-26	00CB09-01	01CB07-64	01CB07-65	01CB28-21	98ZR01-06
Laboratory Sample Identification:		26300*12	26300*14	200403802	210420901	210420902	913080-024	26300*4
Parameter	**Units**							
Carbon Dioxide	ug/L	184000 J	183000 J	26900 =	NA	NA	NA	343000 =
Methane	ug/L	10 U	10 U	0.267 =	0.11 U	NA	10 U	10 U
Arsenic	ug/L	2 UJ	2.3 =	2.4 =	2.4 =	NA	1.3 =	2 U
Arsenic, Dissolved	ug/L	2 UJ	2 UJ	2.6 =	NA	1 U	0.7 J	2 UJ
Copper	ug/L	61.6 =	70.9 =	23.9 =	33 =	NA	25 U	11.4 J
Copper, Dissolved	ug/L	2 UJ	3.5 J	NA	NA	25 U	4 J	10.2 J
Iron	ug/L	NA	NA	5670 =	9830 =	NA	4000 =	NA
Iron, Dissolved	ug/L	20 U	20 U	50 U	NA	25 U	35 U	20 U
Manganese	ug/L	1070 =	1180 =	NA	642 =	NA	450 =	50.6 =
Manganese, Dissolved	ug/L	NA	NA	2 U	NA	15 U	0.79 J	NA
Zinc	ug/L	32.8 J	36 J	10.6 =	16 J	NA	20 =	10.7 J
Zinc, Dissolved	ug/L	3 J	3.8 J	NA	NA	25 U	3.7 U	10 J
Alkalinity, Total	mg/L	190 =	190 =	208 =	140 =	NA	130 =	300 =
Chloride	mg/L	18 =	16 =	8.72 =	24 =	NA	10 =	3.5 =
Hardness (As CaCO3)	mg/L	NA	NA	226 =	218 =	NA	170 =	NA
Nitrogen, Ammonia (As N)	mg/L	0.14 =	0.1 U	NA	NA	NA	NA	0.1 U
Nitrogen, Nitrite	mg/L	NA	NA	0.1 U	NA	NA	NA	NA
Nitrogen, Nitrate (As N)	mg/L	6.5 =	4.5 J	1.66 =	6.5 =	NA	2.6 =	1.1 J
Nitrogen, Nitrate-Nitrite	mg/L	NA	NA	NA	NA	NA	NA	NA
Sulfide	mg/L	NA	NA	1 U	1 U	NA	0.4 U	NA
Sulfate	mg/L	6.3 J	5.8 =	2.54 =	13 =	NA	8.2 U	17 =
Total Organic Carbon	mg/L	20 J	43.5 J	3.36 =	3.89 =	NA	3.9 =	2.6 J
Pentachlorophenol	ug/L	2 =	1 =	0.5 U	0.1 U	NA	0.5 =	1 U
Naphthalene	ug/L	NA	NA	11 U	5.6 U	NA	0.24 U	NA
Benzene	ug/L	0.1 U	0.1 U	0.15 U	0.1 U	NA	0.44 U	0.1 U
Ethylbenzene	ug/L	1 U	1 U	1 U	1 U	NA	0.5 U	1 U
M,P-Xylene (Sum Of Isomers)	ug/L	1 U	1 U	1 U	2 U	NA	NA	1 U
O-Xylene	ug/L	1 U	1 U	1 U	1 U	NA	NA	1 U
Toluene	ug/L	1 U	1 U	1 U	1 U	NA	0.4 U	1 U
Xylenes (Total)	ug/L	1 U	1 U	1 U	1 U	NA	1.2 U	1 U

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Penta Wood Products Site LTRA
Groundwater Sampling Results
1997 Thru 2001

Field Site Identifier:		PENTA	PENTA	PENTA	PENTA	PENTA	PENTA	PENTA
Field Sample Location:		MW-02	MW-02	MW-02	MW-03	MW-03	MW-03	MW-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:		04/05/2000	06/18/2001	09/12/2001	10/08/1997	04/04/2000	04/25/2001	04/25/2001
Field Sample Identification:		00CB09-02	01CB08-66	01CB28-39	98ZR01-07	00CB09-03	01CB07-83	01CB07-84
Laboratory Sample Identification:		200403810	210611201	913080-011	26300*1	200402501	210422706	210422707
Parameter	**Units**							
Carbon Dioxide	ug/L	78410 =	NA	NA	394000 =	54680 =	NA	NA
Methane	ug/L	0.261 =	0.14 J	10 U	10 U	1.646 =	NA	NA
Arsenic	ug/L	2.1 U	6.7 =	3.9 =	NA	2.1 U	1 U	NA
Arsenic, Dissolved	ug/L	2.1 U	0.37 J	0.29 U	2 UJ	5 U	NA	1 U
Copper	ug/L	64.2 =	109 =	110 =	NA	5 U	25 U	NA
Copper, Dissolved	ug/L	NA	25 U	2.2 U	2 UJ	NA	NA	25 U
Iron	ug/L	21700 =	39900 =	29000 =	NA	719 =	147 =	NA
Iron, Dissolved	ug/L	50 U	24 U	35 U	257 =	498 J	NA	142 =
Manganese	ug/L	NA	1230 =	1200 =	NA	NA	7.3 J	NA
Manganese, Dissolved	ug/L	3.4 =	8.3 =	57 =	10.9 =	10.3 =	NA	7.9 J
Zinc	ug/L	33.7 =	64 =	69 =	NA	10 U	25 U	NA
Zinc, Dissolved	ug/L	NA	25 U	5.2 J	2 UJ	NA	NA	25 U
Alkalinity, Total	mg/L	50 =	36 =	49 =	370 =	468 =	442 =	NA
Chloride	mg/L	1.01 =	5.73 =	6.2 =	42 =	64 =	47 =	NA
Hardness (As CaCO3)	mg/L	89.4 =	66 =	140 =	NA	548 =	544 =	NA
Nitrogen, Ammonia (As N)	mg/L	NA	NA	NA	0.28 =	NA	NA	NA
Nitrogen, Nitrite	mg/L	NA	NA	NA	NA	NA	NA	NA
Nitrogen, Nitrate (As N)	mg/L	0.1 U	38 =	2.3 =	4.4 J	2.84 =	4.42 =	NA
Nitrogen, Nitrate-Nitrite	mg/L	NA	NA	NA	NA	NA	NA	NA
Sulfide	mg/L	1 U	1 U	3.3 =	NA	1 U	1 U	NA
Sulfate	mg/L	58.3 =	105 =	10 =	16 =	12.5 =	11 =	NA
Total Organic Carbon	mg/L	1.97 =	5.57 =	4.2 =	1.2 J	2.18 =	1 U	NA
Pentachlorophenol	ug/L	0.5 U	0.1 U	0.51 =	1 U	0.6 U	0.11 U	NA
Naphthalene	ug/L	10 U	5 U	0.24 U	NA	12 U	6.1 R	NA
Benzene	ug/L	0.15 U	0.1 U	0.44 U	0.1 U	0.1 U	0.1 U	NA
Ethylbenzene	ug/L	1 U	1 U	0.5 U	1 U	1 U	1 U	NA
M,P-Xylene (Sum Of Isomers)	ug/L	1 U	2 U	NA	1 U	1 U	2 U	NA
O-Xylene	ug/L	1 U	1 U	NA	1 U	1 U	1 U	NA
Toluene	ug/L	1 U	1 U	0.4 U	1 U	1 U	0.46 J	NA
Xylenes (Total)	ug/L	1 U	1 U	1.2 U	1 U	1 U	NA	NA

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Penta Wood Products Site LTRA
Groundwater Sampling Results
1997 Thru 2001

Field Site Identifier:		PENTA	PENTA	PENTA	PENTA	PENTA	PENTA	PENTA
Field Sample Location:		MW-03	MW-04	MW-04	MW-05	MW-05	MW-05	MW-05
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
Sample Collection Date:		09/13/2001	10/09/1997	04/04/2000	10/10/1997	10/10/1997	04/07/2000	04/26/2001
Field Sample Identification:		01CB28-44	98ZR01-30	00CB09-04	98ZR01-09	98ZR01-10	00CB09-05	01CB08-05
Laboratory Sample Identification:		913103-001	26300*20	200402511	26300*9	26300*10	200405120	210423416
Parameter	**Units**							
Carbon Dioxide	ug/L	NA	83000 J	1130 =	504000 =	513000 =	103590 =	NA
Methane	ug/L	10 U	139 =	0.811 =	10 U	10 U	0.936 =	0.4 J
Arsenic	ug/L	0.35 J	2 U	2.1 U	3.8 =	4.6 =	4.9 =	5.6 =
Arsenic, Dissolved	ug/L	0.29 U	2 UJ	5 U	3.2 J	4.3 J	5.4 =	NA
Copper	ug/L	2.2 U	2.4 J	5 U	48.5 J	4835 J	142.8 =	74 =
Copper, Dissolved	ug/L	2.2 U	2 UJ	NA	24 J	26.2 J	NA	NA
Iron	ug/L	2400 =	NA	1040 =	NA	NA	17500 =	20400 =
Iron, Dissolved	ug/L	930 =	35.9 J	50 U	4860 =	5070 =	3370 =	NA
Manganese	ug/L	31 =	55.9 =	NA	12900 =	15500 =	NA	11200 =
Manganese, Dissolved	ug/L	31 =	NA	47 =	NA	NA	3350 =	NA
Zinc	ug/L	3.7 U	4.5 J	10 U	3.7 J	2.7 J	10 U	25 U
Zinc, Dissolved	ug/L	3.7 U	2 UJ	NA	2 U	2 UJ	NA	NA
Alkalinity, Total	mg/L	440 =	94 =	120 =	370 =	370 =	308 =	352 =
Chloride	mg/L	58 =	7.3 =	9.59 =	50 =	50 =	49.2 =	42 =
Hardness (As CaCO3)	mg/L	480 =	NA	119 =	NA	NA	330 =	349 =
Nitrogen, Ammonia (As N)	mg/L	NA	0.42 =	NA	0.1 U	0.1 U	NA	NA
Nitrogen, Nitrite	mg/L	NA	NA	NA	NA	NA	NA	NA
Nitrogen, Nitrate (As N)	mg/L	4 =	0.1 UJ	0.1 U	0.1 UJ	0.1 UJ	0.1 U	0.13 U
Nitrogen, Nitrate-Nitrite	mg/L	NA	NA	NA	NA	NA	NA	NA
Sulfide	mg/L	2.7 =	NA	1 U	NA	NA	1 U	1.52 =
Sulfate	mg/L	14 =	6.3 =	10.8 =	15 =	16 =	34.3 =	28 =
Total Organic Carbon	mg/L	1.1 =	12.3 J	2.4 =	115 J	160 J	74.1 =	43 =
Pentachlorophenol	ug/L	0.093 J	1 U	0.5 U	28000 =	31000 =	20600 =	20600 =
Naphthalene	ug/L	0.26 U	NA	10 U	NA	NA	76 U	38 =
Benzene	ug/L	0.44 U	2 J	0.1 U	0.1 U	0.1 U	0.33 =	0.22 =
Ethylbenzene	ug/L	0.5 U	3 J	1 U	3 =	2 =	3.6 =	0.84 J
M,P-Xylene (Sum Of Isomers)	ug/L	NA	2 J	1 U	12 =	10 =	8.3 =	4.5 =
O-Xylene	ug/L	NA	1 J	1 U	9 =	8 =	6.9 =	3.6 =
Toluene	ug/L	0.4 U	1 J	1 U	5 =	4 =	3 =	1.8 =
Xylenes (Total)	ug/L	1.2 U	3 J	1 U	21 =	18 =	15 =	8.1 =

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Penta Wood Products Site LTRA
Groundwater Sampling Results
1997 Thru 2001

Field Site Identifier:		PENTA	PENTA	PENTA	PENTA	PENTA	PENTA	PENTA
Field Sample Location:		MW-05	MW-05	MW-06S	MW-06S	MW-06S	MW-06S	MW-06S
Sample Interval:		N/A	N/A	N/A	N/A	N/A	N/A	N/A
Matrix:		Water	Water	Water	WQ	Water	Water	Water
Sample Collection Date:		04/26/2001	09/13/2001	10/09/1997	04/07/2000	04/26/2001	04/26/2001	09/12/2001
Field Sample Identification:		01CB08-06	01CB28-46	98ZR01-11	00CB09-06	01CB08-11	01CB08-12	01CB28-34
Laboratory Sample Identification:		210423417	913103-006	26300*5	200405113	210423404	210423405	913080-001
Parameter	**Units**							
Carbon Dioxide	ug/L	NA	NA	184000 J	NA	NA	NA	NA
Methane	ug/L	NA	10 U	10 U	NA	0.12 U	NA	10 U
Arsenic	ug/L	NA	8.2 =	5.1 =	NA	15 =	NA	7.4 =
Arsenic, Dissolved	ug/L	3.9 =	3.7 =	2 UJ	NA	NA	0.26 J	0.58 J
Copper	ug/L	NA	100 =	473 =	NA	202 =	NA	190 =
Copper, Dissolved	ug/L	25 U	5.1 J	2 UJ	NA	NA	25 U	3.1 J
Iron	ug/L	NA	26000 =	NA	NA	82800 =	NA	42000 =
Iron, Dissolved	ug/L	7630 =	4100 =	20 U	NA	NA	25 U	35 U
Manganese	ug/L	NA	8500 =	4720 =	NA	1950 =	NA	1900 =
Manganese, Dissolved	ug/L	11300 =	8500 =	NA	NA	NA	347 =	800 =
Zinc	ug/L	NA	4.2 J	258 J	NA	131 =	NA	110 =
Zinc, Dissolved	ug/L	25 U	6.2 J	2.2 J	NA	NA	25 U	5 J
Alkalinity, Total	mg/L	NA	270 =	62 =	NA	148 =	NA	160 =
Chloride	mg/L	NA	29 =	72 =	NA	14 =	NA	12 =
Hardness (As CaCO3)	mg/L	NA	240 =	NA	NA	285 =	NA	290 =
Nitrogen, Ammonia (As N)	mg/L	NA	NA	0.1 U	NA	NA	NA	NA
Nitrogen, Nitrite	mg/L	NA	NA	NA	NA	NA	NA	NA
Nitrogen, Nitrate (As N)	mg/L	NA	0.17 J	4.5 J	NA	0.87 =	NA	1.1 =
Nitrogen, Nitrate-Nitrite	mg/L	NA	NA	NA	NA	NA	NA	NA
Sulfide	mg/L	NA	6.7 =	NA	NA	1 U	NA	1.1 =
Sulfate	mg/L	NA	22 =	0.9 =	NA	12 =	NA	16 =
Total Organic Carbon	mg/L	NA	27 =	1.6 J	NA	5.29 =	NA	6.3 =
Pentachlorophenol	ug/L	NA	6300 =	1 U	NA	2.5 =	NA	1.1 =
Naphthalene	ug/L	NA	23 =	NA	NA	5.4 U	NA	0.24 U
Benzene	ug/L	NA	0.44 U	0.1 U	0.1 U	0.1 U	NA	0.44 U
Ethylbenzene	ug/L	NA	0.54 J	1 U	1 U	1 U	NA	0.5 U
M,P-Xylene (Sum Of Isomers)	ug/L	NA	NA	1 U	1 U	2 U	NA	NA
O-Xylene	ug/L	NA	NA	1 U	1 U	1 U	NA	NA
Toluene	ug/L	NA	0.78 J	1 U	1 U	1 U	NA	0.4 U
Xylenes (Total)	ug/L	NA	4.3 =	1 U	1 U	1 U	NA	1.2 U

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Penta Wood Products Site LTRA
Groundwater Sampling Results
1997 Thru 2001

Field Site Identifier:		PENTA	PENTA	PENTA	PENTA	PENTA	PENTA	PENTA
Field Sample Location:		MW-07	MW-07	MW-07	MW-07	MW-07	MW-07	MW-07
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, Dup
Sample Collection Date:		10/14/1997	04/04/2000	04/04/2000	04/25/2001	04/25/2001	09/11/2001	09/11/2001
Field Sample Identification:		98ZR01-12	00CB09-07	00CB09-20	01CB07-87	01CB07-88	01CB28-22	01CB28-23
Laboratory Sample Identification:		26308*20	200402505	200402507	210422708	210422709	913080-026	913080-027
Parameter	**Units**							
Carbon Dioxide	ug/L	325000 =	45950 =	50090 =	NA	NA	NA	NA
Methane	ug/L	10 UJ	4.041 =	4.211 =	4.65 =	NA	12 =	10 U
Arsenic	ug/L	2 U	2.1 U	2.1 U	1 U	NA	0.4 J	0.47 J
Arsenic, Dissolved	ug/L	2 U	5 U	5 U	NA	1 U	0.29 U	0.29 U
Copper	ug/L	2 UJ	5 U	5 U	25 U	NA	2.2 U	2.2 U
Copper, Dissolved	ug/L	6.2 J	NA	NA	NA	25 U	2.2 U	2.2 U
Iron	ug/L	NA	505 =	456 =	352 =	NA	560 =	560 =
Iron, Dissolved	ug/L	622 J	359 J	357 J	NA	154 =	230 =	230 =
Manganese	ug/L	13.4 =	NA	NA	5.4 J	NA	6.4 =	5.7 =
Manganese, Dissolved	ug/L	NA	26.2 =	26.5 =	NA	6.6 J	4.4 =	4.6 =
Zinc	ug/L	3.5 =	47.5 =	10 U	25 U	NA	3.7 U	4.8 J
Zinc, Dissolved	ug/L	11.4 =	NA	NA	NA	25 U	5.2 J	3.9 J
Alkalinity, Total	mg/L	350 =	384 =	330 =	352 =	NA	340 =	350 =
Chloride	mg/L	7.6 =	4.82 =	4.72 =	8.36 =	NA	23 =	24 =
Hardness (As CaCO3)	mg/L	NA	398 =	393 =	388 =	NA	410 =	400 =
Nitrogen, Ammonia (As N)	mg/L	0.1 U	NA	NA	NA	NA	NA	NA
Nitrogen, Nitrite	mg/L	NA	NA	NA	NA	NA	NA	NA
Nitrogen, Nitrate (As N)	mg/L	4.9 J	2.72 =	2.67 =	3.63 =	NA	3 =	3 =
Nitrogen, Nitrate-Nitrite	mg/L	NA	NA	NA	NA	NA	NA	NA
Sulfide	mg/L	NA	1 U	1 U	1 U	NA	0.8 U	1.3 =
Sulfate	mg/L	6 =	6.06 =	4.23 =	6.54 J	NA	10 =	10 =
Total Organic Carbon	mg/L	1.6 J	2 =	2.69 =	2.8 =	NA	2 =	1.8 =
Pentachlorophenol	ug/L	1 U	0.5 U	0.5 U	0.1 U	NA	0.083 J	0.13 J
Naphthalene	ug/L	NA	10 U	10 U	5.2 R	NA	0.24 U	0.24 U
Benzene	ug/L	0.1 U	0.1 U	0.1 U	0.1 U	NA	0.44 U	0.44 U
Ethylbenzene	ug/L	1 U	1 U	1 U	1 U	NA	0.5 U	0.5 U
M,P-Xylene (Sum Of Isomers)	ug/L	1 U	1 U	1 U	2 U	NA	NA	NA
O-Xylene	ug/L	1 U	1 U	1 U	1 U	NA	NA	NA
Toluene	ug/L	1 U	1 U	1 U	1 U	NA	0.4 U	0.4 U
Xylenes (Total)	ug/L	1 U	1 U	1 U	NA	NA	1.2 U	1.2 U

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Penta Wood Products Site LTRA
Groundwater Sampling Results
1997 Thru 2001

Field Site Identifier:		PENTA	PENTA	PENTA	PENTA	PENTA	PENTA	PENTA
Field Sample Location:		MW-08	MW-08	MW-08	MW-08	MW-08	MW-08	MW-08
Sample Interval:		N/A	N/A	N/A	N/A	N/A	N/A	N/A
Matrix:		Water	Water	Water	Water	Water, Dup	Water, Dup	Water
Sample Collection Date:		10/14/1997	04/05/2000	04/25/2001	04/25/2001	04/25/2001	04/25/2001	09/11/2001
Field Sample Identification:		98ZR01-13	00CB09-08	01CB07-93	01CB07-94	01CB07-95	01CB07-96	01CB28-18
Laboratory Sample Identification:		26308*19	200403807	210422715	210422716	210422717	210422718	913080-035
Parameter	**Units**							
Carbon Dioxide	ug/L	154000 =	2500 =	NA	NA	NA	NA	NA
Methane	ug/L	36.5 J	7.194 =	11.6 =	NA	12 =	NA	10 U
Arsenic	ug/L	2 U	2.1 U	0.99 J	NA	0.97 J	NA	1.2 =
Arsenic, Dissolved	ug/L	2 U	2.1 U	NA	0.75 J	NA	0.57 J	1 =
Copper	ug/L	2 J	5 U	25 U	NA	25 U	NA	2.2 U
Copper, Dissolved	ug/L	2 U	NA	NA	25 U	NA	25 U	2.2 U
Iron	ug/L	NA	1040 =	829 =	NA	711 =	NA	350 =
Iron, Dissolved	ug/L	148 J	50 U	NA	25 U	NA	25 U	70 J
Manganese	ug/L	17.8 =	NA	32 =	NA	25 =	NA	19 =
Manganese, Dissolved	ug/L	NA	5.3 =	NA	27 =	NA	22 =	18 =
Zinc	ug/L	7.4 =	473 =	25 U	NA	25 U	NA	3.7 U
Zinc, Dissolved	ug/L	4.6 =	NA	NA	25 U	NA	25 U	4.3 J
Alkalinity, Total	mg/L	170 =	122 =	154 =	NA	160 =	NA	150 =
Chloride	mg/L	4.2 =	6.26 =	3.25 =	NA	3.19 =	NA	3.8 =
Hardness (As CaCO3)	mg/L	NA	147 =	181 =	NA	182 =	NA	170 =
Nitrogen, Ammonia (As N)	mg/L	1.1 =	NA	NA	NA	NA	NA	NA
Nitrogen, Nitrite	mg/L	NA	NA	NA	NA	NA	NA	NA
Nitrogen, Nitrate (As N)	mg/L	1.4 J	3.55 =	1.52 =	NA	1.5 =	NA	1.5 =
Nitrogen, Nitrate-Nitrite	mg/L	NA	NA	NA	NA	NA	NA	NA
Sulfide	mg/L	NA	1 U	1 U	NA	1 U	NA	0.93 U
Sulfate	mg/L	4.5 =	6.5 =	7.47 J	NA	6.76 J	NA	7.6 U
Total Organic Carbon	mg/L	2.3 J	2.22 =	1.46 =	NA	1.35 =	NA	1 J
Pentachlorophenol	ug/L	1 U	0.5 U	0.2 =	NA	0.1 U	NA	0.062 J
Naphthalene	ug/L	NA	10 U	5 U	NA	5.2 U	NA	0.24 U
Benzene	ug/L	0.1 U	0.15 U	0.1 U	NA	0.1 U	NA	0.44 U
Ethylbenzene	ug/L	1 U	1 U	1 U	NA	1 U	NA	0.5 U
M,P-Xylene (Sum Of Isomers)	ug/L	1 U	1 U	2 U	NA	2 U	NA	NA
O-Xylene	ug/L	1 U	1 U	1 U	NA	1 U	NA	NA
Toluene	ug/L	1 U	1 U	1 U	NA	1 U	NA	0.4 U
Xylenes (Total)	ug/L	1 U	1 U	1 U	NA	1 U	NA	1.2 U

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Penta Wood Products Site LTRA
Groundwater Sampling Results
1997 Thru 2001

Field Site Identifier:		PENTA	PENTA	PENTA	PENTA	PENTA	PENTA	PENTA
Field Sample Location:		MW-09	MW-09	MW-09	MW-09	MW-09	MW-10	MW-10
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:		10/08/1997	04/05/2000	04/23/2001	04/24/2001	09/12/2001	10/15/1997	04/06/2000
Field Sample Identification:		98ZR01-14	00CB09-09	01CB07-46	01CB07-47	01CB28-36	98ZR01-15	00CB09-10
Laboratory Sample Identification:		26300*2	200403803	210419501	210419504	913080-004	26308*23	200405118
Parameter	**Units**							
Carbon Dioxide	ug/L	243000 =	120330 =	NA	NA	NA	332000 =	69370 =
Methane	ug/L	10 U	0.396 =	0.12 U	NA	10 U	13.5 J	3.067 =
Arsenic	ug/L	2 U	2.1 U	0.38 J	NA	0.43 J	2 U	2.1 U
Arsenic, Dissolved	ug/L	NA	3.9 =	NA	0.28 J	0.34 J	1.4 J	5 =
Copper	ug/L	4.2 J	6.8 =	25 U	NA	6.1 J	9.1 J	12 =
Copper, Dissolved	ug/L	NA	NA	NA	25 U	2.2 U	2.8 J	NA
Iron	ug/L	NA	757 =	470 =	NA	300 =	NA	3530 =
Iron, Dissolved	ug/L	20 U	50 U	NA	25 U	110 =	2190 J	115.9 J
Manganese	ug/L	19.7 =	NA	46 =	NA	27 =	2510 =	NA
Manganese, Dissolved	ug/L	NA	21.7 =	NA	34 =	16 =	NA	1590 =
Zinc	ug/L	5.6 J	10 U	25 U	NA	11 J	4.4 =	10 U
Zinc, Dissolved	ug/L	NA	NA	NA	25 U	6.6 J	9.2 =	NA
Alkalinity, Total	mg/L	60 =	58 =	60 =	NA	62 =	340 =	440 =
Chloride	mg/L	45 =	3.15 =	3.22 =	NA	6.5 =	35 =	55.9 =
Hardness (As CaCO3)	mg/L	NA	55.4 =	59 =	NA	64 =	NA	447 =
Nitrogen, Ammonia (As N)	mg/L	0.14 =	NA	NA	NA	NA	0.1 U	NA
Nitrogen, Nitrite	mg/L	NA	NA	NA	NA	NA	NA	NA
Nitrogen, Nitrate (As N)	mg/L	4.2 J	1.97 =	2.46 =	NA	3.3 =	4.9 J	1.72 =
Nitrogen, Nitrate-Nitrite	mg/L	NA	NA	NA	NA	NA	NA	NA
Sulfide	mg/L	NA	1 U	1 U	NA	1.3 =	NA	1 U
Sulfate	mg/L	3.4 =	8.46 =	27 =	NA	6.8 U	13 =	13.8 =
Total Organic Carbon	mg/L	6.5 J	5.46 =	9.94 =	NA	5.1 =	20 J	31.8 =
Pentachlorophenol	ug/L	1 U	0.6 =	0.12 =	NA	0.76 =	8200 =	9530 J
Naphthalene	ug/L	NA	10 U	5.3 U	NA	0.24 U	NA	60 =
Benzene	ug/L	0.1 U	0.15 U	0.1 U	NA	0.44 U	0.2 J	0.35 =
Ethylbenzene	ug/L	1 U	1 U	1 U	NA	0.5 U	2 =	4.4 =
M,P-Xylene (Sum Of Isomers)	ug/L	1 U	1 U	2 U	NA	NA	10 =	20 =
O-Xylene	ug/L	1 U	1 U	1 U	NA	NA	7 =	14 =
Toluene	ug/L	1 U	1 U	1 U	NA	0.4 U	3 =	6.4 =
Xylenes (Total)	ug/L	1 U	1 U	1 U	NA	1.2 U	17 =	34 =

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Penta Wood Products Site LTRA
Groundwater Sampling Results
1997 Thru 2001

Field Site Identifier:		PENTA	PENTA	PENTA	PENTA	PENTA	PENTA	PENTA
Field Sample Location:		MW-10	MW-10	MW-10	MW-10S	MW-10S	MW-10S	MW-10S
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:		04/26/2001	04/26/2001	09/12/2001	10/15/1997	04/07/2000	12/05/2000	04/25/2001
Field Sample Identification:		01CB07-97	01CB07-98	01CB28-32	98ZR01-16	00CB09-18	01CB01-44	01CB07-85
Laboratory Sample Identification:		210423401	210423402	913080-007	26308*27	200405109	201202302	210422711
Parameter	**Units**							
Carbon Dioxide	ug/L	NA	NA	NA	233000 =	114570 =	NA	NA
Methane	ug/L	2.9 =	NA	10 U	10 UJ	1.567 =	0.57 =	0.55 J
Arsenic	ug/L	3.1 =	NA	4.5 =	2 U	5.3 =	9.36 =	18 =
Arsenic, Dissolved	ug/L	NA	2.4 =	3.9 =	2 U	2.1 U	0.74 J	NA
Copper	ug/L	98 =	NA	40 =	28.5 J	199.2 =	160 =	409 =
Copper, Dissolved	ug/L	NA	5.9 J	3.9 J	10.9 J	NA	13 J	NA
Iron	ug/L	25200 =	NA	20000 =	NA	32800 =	11000 =	131000 =
Iron, Dissolved	ug/L	NA	5650 =	2400 =	45.4 J	50 U	610 =	NA
Manganese	ug/L	2560 =	NA	3300 =	10700 =	NA	7100 =	7990 =
Manganese, Dissolved	ug/L	NA	2380 =	3200 =	NA	10100 =	6900 =	NA
Zinc	ug/L	44 =	NA	13 =	11.6 =	73 =	35 =	216 =
Zinc, Dissolved	ug/L	NA	25 U	9.5 J	8.4 =	NA	25 U	NA
Alkalinity, Total	mg/L	472 =	NA	540 J	260 =	218 =	31 =	142 =
Chloride	mg/L	48 =	NA	61 =	38 =	53 =	15 =	11 =
Hardness (As CaCO3)	mg/L	505 =	NA	630 =	NA	359 =	570 =	425 =
Nitrogen, Ammonia (As N)	mg/L	NA	NA	NA	0.1 U	NA	NA	NA
Nitrogen, Nitrite	mg/L	NA	NA	NA	NA	NA	NA	NA
Nitrogen, Nitrate (As N)	mg/L	0.18 =	NA	0.13 J	0.1 UJ	0.1 U	1 =	1.49 =
Nitrogen, Nitrate-Nitrite	mg/L	NA	NA	NA	NA	NA	NA	NA
Sulfide	mg/L	1.25 =	NA	1.1 =	NA	1 U	1 U	1.15 =
Sulfate	mg/L	22 =	NA	23 =	23 =	138 =	11 =	8.64 J
Total Organic Carbon	mg/L	26 =	NA	64 =	49.7 J	249 =	300 =	503 =
Pentachlorophenol	ug/L	22800 =	NA	21000 =	30000 =	56100 J	3810 B	49000 =
Naphthalene	ug/L	5.2 U	NA	130 =	NA	512 =	152 =	306 =
Benzene	ug/L	0.4 =	NA	0.44 U	0.4 J	0.1 U	0.1 U	1 R
Ethylbenzene	ug/L	3.3 =	NA	6.3 =	0.9 J	6.5 =	5.9 =	3.5 R
M,P-Xylene (Sum Of Isomers)	ug/L	16 =	NA	NA	4 =	36 =	NA	200 U
O-Xylene	ug/L	11 =	NA	NA	4 =	28 =	NA	NA
Toluene	ug/L	5.3 =	NA	10 =	1 =	4.2 =	2.9 =	NA
Xylenes (Total)	ug/L	27 =	NA	55 =	8 =	64 =	70 =	NA

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Penta Wood Products Site LTRA
Groundwater Sampling Results
1997 Thru 2001

Field Site Identifier:		PENTA	PENTA	PENTA	PENTA	PENTA	PENTA	PENTA
Field Sample Location:		MW-10S	MW-10S	MW-11	MW-11	MW-11	MW-11	MW-11
Sample Interval:		N/A	N/A	N/A	N/A	N/A	N/A	N/A
Matrix:		Water	Water	Water	Water	Water, Dup	Water, Dup	Water
Sample Collection Date:		04/25/2001	09/12/2001	10/15/1997	04/04/2000	04/24/2001	04/24/2001	04/24/2001
Field Sample Identification:		01CB07-86	01CB28-33	98ZR01-17	00CB09-11	01CB07-74	01CB07-75	01CB07-76
Laboratory Sample Identification:		210422712	913080-008	26308*14	200402509	210420914	210420915	210420916
Parameter	**Units**							
Carbon Dioxide	ug/L	NA	NA	164000 =	4150 =	NA	NA	NA
Methane	ug/L	NA	10 U	10 UJ	0.138 =	0.1 U	NA	0.11 U
Arsenic	ug/L	NA	5.1 =	2 U	2.1 U	1.4 =	NA	1.4 =
Arsenic, Dissolved	ug/L	2.3 =	0.29 U	2 U	5 U	NA	1.2 =	NA
Copper	ug/L	NA	170 =	4.2 J	5.6 =	25 U	NA	25 U
Copper, Dissolved	ug/L	46 =	3.2 J	2 U	NA	NA	25 U	NA
Iron	ug/L	NA	35000 =	NA	351 =	58 =	NA	151 =
Iron, Dissolved	ug/L	11300 =	48 J	10 UJ	50 U	NA	25 U	NA
Manganese	ug/L	NA	8600 =	2 U	NA	15 U	NA	15 U
Manganese, Dissolved	ug/L	6030 =	7600 =	NA	2 U	NA	15 U	NA
Zinc	ug/L	NA	100 =	10.3 =	16.4 =	25 J	NA	126 =
Zinc, Dissolved	ug/L	45 =	3.7 U	5.3 =	NA	NA	20 J	NA
Alkalinity, Total	mg/L	NA	270 J	190 =	220 =	185 =	NA	225 =
Chloride	mg/L	NA	10 =	7.5 =	6.98 =	6.16 =	NA	6.25 =
Hardness (As CaCO3)	mg/L	NA	260 =	NA	238 =	231 =	NA	231 =
Nitrogen, Ammonia (As N)	mg/L	NA	NA	0.1 U	NA	NA	NA	NA
Nitrogen, Nitrite	mg/L	NA	NA	NA	NA	NA	NA	NA
Nitrogen, Nitrate (As N)	mg/L	NA	4.7 =	5 J	3.09 =	3.59 =	NA	3.74 =
Nitrogen, Nitrate-Nitrite	mg/L	NA	NA	NA	NA	NA	NA	NA
Sulfide	mg/L	NA	1.3 =	NA	1 U	1 U	NA	1 U
Sulfate	mg/L	NA	13 =	12 =	9.41 =	4.57 J	NA	3.48 J
Total Organic Carbon	mg/L	NA	19 =	1.3 J	10.1 =	7.9 =	NA	4.67 =
Pentachlorophenol	ug/L	NA	82000 =	1 U	0.6 U	0.1 U	NA	0.11 U
Naphthalene	ug/L	NA	75 =	NA	11 U	5.3 U	NA	5.4 R
Benzene	ug/L	NA	0.44 U	0.3 J	0.1 U	0.1 U	NA	0.1 U
Ethylbenzene	ug/L	NA	0.94 J	1 U	1 U	1 U	NA	1 U
M,P-Xylene (Sum Of Isomers)	ug/L	NA	NA	0.4 J	1 U	2 U	NA	2 U
O-Xylene	ug/L	NA	NA	0.2 J	1 U	1 U	NA	1 U
Toluene	ug/L	NA	0.41 J	0.2 J	1 U	1 U	NA	1 U
Xylenes (Total)	ug/L	NA	15 =	0.5 J	1 U	NA	NA	NA

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Penta Wood Products Site LTRA
Groundwater Sampling Results
1997 Thru 2001

Field Site Identifier:		PENTA	PENTA	PENTA	PENTA	PENTA	PENTA	PENTA
Field Sample Location:		MW-11	MW-11	MW-12	MW-12	MW-12	MW-12	MW-12
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
Sample Collection Date:		04/24/2001	09/10/2001	10/15/1997	04/06/2000	04/06/2000	04/26/2001	04/26/2001
Field Sample Identification:		01CB07-77	01CB28-12	98ZR01-18	00CB09-12	00CB09-21	01CB08-03	01CB08-04
Laboratory Sample Identification:		210420917	913080-013	26308*28	200405103	200405116	210423413	210423414
Parameter	**Units**							
Carbon Dioxide	ug/L	NA	NA	460000 =	63440 =	16970 =	NA	NA
Methane	ug/L	NA	10 U	10 UJ	1.553 =	0.116 =	0.99 =	NA
Arsenic	ug/L	NA	1.4 =	2 U	2.1 U	2.1 U	1 J	NA
Arsenic, Dissolved	ug/L	1.3 =	1.1 =	2 U	5.8 =	2.7 =	NA	0.91 J
Copper	ug/L	NA	2.9 J	6.1 J	9.4 =	7.3 =	25 U	NA
Copper, Dissolved	ug/L	25 U	2.2 U	5 J	NA	NA	NA	25 U
Iron	ug/L	NA	66 J	NA	222 =	216 =	151 =	NA
Iron, Dissolved	ug/L	25 U	35 U	267 J	112.8 J	50 U	NA	131 =
Manganese	ug/L	NA	1.9 =	1660 =	NA	NA	1540 =	NA
Manganese, Dissolved	ug/L	15 U	0.45 J	NA	1590 =	2 U	NA	1570 =
Zinc	ug/L	NA	9.1 J	16.3 =	10 U	10 U	25 U	NA
Zinc, Dissolved	ug/L	25 U	3.7 U	10.6 =	NA	NA	NA	25 U
Alkalinity, Total	mg/L	NA	190 =	490 =	500 =	528 =	564 =	NA
Chloride	mg/L	NA	8 =	50 =	54.5 =	74.2 =	48 =	NA
Hardness (As CaCO3)	mg/L	NA	220 =	NA	559 =	557 =	556 =	NA
Nitrogen, Ammonia (As N)	mg/L	NA	NA	0.1 U	NA	NA	NA	NA
Nitrogen, Nitrite	mg/L	NA	NA	NA	NA	NA	NA	NA
Nitrogen, Nitrate (As N)	mg/L	NA	3.1 =	0.1 UJ	0.483 =	0.515 =	0.43 =	NA
Nitrogen, Nitrate-Nitrite	mg/L	NA	NA	NA	NA	NA	NA	NA
Sulfide	mg/L	NA	1.3 =	NA	1 U	1 U	NA	NA
Sulfate	mg/L	NA	7.4 U	15 =	11.9 =	11.7 =	16 =	NA
Total Organic Carbon	mg/L	NA	4.2 =	21.7 J	24.9 =	27.2 =	23 =	NA
Pentachlorophenol	ug/L	NA	0.091 J	13000 =	10300 J	10600 J	1500 =	NA
Naphthalene	ug/L	NA	0.24 U	NA	47 =	45 =	44 =	NA
Benzene	ug/L	NA	0.44 U	1 J	0.28 =	0.3 =	0.34 =	NA
Ethylbenzene	ug/L	NA	0.5 U	2 =	2.8 =	2.8 =	2.5 =	NA
M,P-Xylene (Sum Of Isomers)	ug/L	NA	NA	8 =	13 =	13 =	12 =	NA
O-Xylene	ug/L	NA	NA	7 =	9.6 =	9.8 =	9.7 =	NA
Toluene	ug/L	NA	0.4 U	3 =	3.6 =	3.7 =	4.1 =	NA
Xylenes (Total)	ug/L	NA	1.2 U	14 =	22 =	23 =	22 =	NA

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Penta Wood Products Site LTRA
Groundwater Sampling Results
1997 Thru 2001

Field Site Identifier:		PENTA	PENTA	PENTA	PENTA	PENTA	PENTA	PENTA
Field Sample Location:		MW-12	MW-13	MW-13	MW-13	MW-13	MW-13	MW-13
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:		09/13/2001	10/08/1997	04/05/2000	12/05/2000	01/10/2001	04/23/2001	04/23/2001
Field Sample Identification:		01CB28-45	98ZR01-19	00CB09-13	01CB01-52	01CB01-64	01CB07-44	01CB07-45
Laboratory Sample Identification:		913103-005	26300*3	200403805	201202701	210109501	210419508	210419509
Parameter	**Units**							
Carbon Dioxide	ug/L	NA	361000 =	258040 =	NA	NA	NA	NA
Methane	ug/L	10 U	10 U	0.291 =	0.58 U	NA	0.12 U	NA
Arsenic	ug/L	1.1 =	NA	27 =	1 U	NA	14 =	NA
Arsenic, Dissolved	ug/L	0.95 U	2 UJ	3.8 =	NA	NA	NA	0.24 J
Copper	ug/L	5 J	NA	429 =	92 =	NA	140 =	NA
Copper, Dissolved	ug/L	6.8 J	3.32 J	NA	25 U	NA	NA	25 U
Iron	ug/L	770 =	NA	158000 =	26000 =	NA	56300 =	NA
Iron, Dissolved	ug/L	740 =	6.7 U	50 U	230 =	NA	NA	25 U
Manganese	ug/L	1300 =	NA	NA	870 =	NA	1300 =	NA
Manganese, Dissolved	ug/L	1400 =	27.3 =	111.8 =	66 =	NA	NA	110 =
Zinc	ug/L	9.3 J	NA	257 =	52 =	NA	89 =	NA
Zinc, Dissolved	ug/L	12 =	2.7 J	NA	25 U	NA	NA	25 U
Alkalinity, Total	mg/L	490 =	70 =	82000 =	72 =	NA	70 =	NA
Chloride	mg/L	47 =	2.7 =	4.37 =	4.2 =	NA	3.52 =	NA
Hardness (As CaCO3)	mg/L	470 =	NA	247 =	140 =	NA	146 =	NA
Nitrogen, Ammonia (As N)	mg/L	NA	0.1 U	NA	NA	NA	NA	NA
Nitrogen, Nitrite	mg/L	NA	NA	NA	NA	NA	NA	NA
Nitrogen, Nitrate (As N)	mg/L	0.53 U	1.4 J	0.1 U	0.45 =	NA	1.77 =	NA
Nitrogen, Nitrate-Nitrite	mg/L	NA	NA	NA	NA	NA	NA	NA
Sulfide	mg/L	1.3 =	NA	1 U	1 U	NA	8.48 =	NA
Sulfate	mg/L	16 =	1.4 =	431 =	8.2 J	NA	35 =	NA
Total Organic Carbon	mg/L	25 =	17.9 J	8.68 =	7.9 =	NA	18 =	NA
Pentachlorophenol	ug/L	18000 =	0.7 J	0.8 =	114 B	0.312 =	0.18 =	NA
Naphthalene	ug/L	40 =	NA	10 U	5.5 U	NA	5.3 U	NA
Benzene	ug/L	0.44 U	0.1 U	0.15 U	0.1 U	NA	0.1 U	NA
Ethylbenzene	ug/L	2.3 U	1 U	1 U	1 U	NA	1 U	NA
M,P-Xylene (Sum Of Isomers)	ug/L	NA	1 U	1 U	NA	NA	2 U	NA
O-Xylene	ug/L	NA	1 U	1 U	NA	NA	1 U	NA
Toluene	ug/L	3.2 U	1 U	1 U	1 U	NA	1 U	NA
Xylenes (Total)	ug/L	20 =	1 U	1 U	1 U	NA	1 U	NA

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Penta Wood Products Site LTRA
Groundwater Sampling Results
1997 Thru 2001

Field Site Identifier:		PENTA	PENTA	PENTA	PENTA	PENTA	PENTA	PENTA
Field Sample Location:		MW-13	MW-13	MW-14	MW-14	MW-14	MW-15	MW-15
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:		06/19/2001	09/10/2001	10/09/1997	04/06/2000	06/19/2001	10/16/1997	04/04/2000
Field Sample Identification:		01CB08-69	01CB28-13	98ZR01-20	00CB09-14	01CB08-70	98ZR01-21	00CB09-15
Laboratory Sample Identification:		210613201	913080-014	26300*6	200405101	210613202	26308*21	200402503
Parameter	**Units**							
Carbon Dioxide	ug/L	NA	NA	104000 J	1720 =	NA	165000 =	6772 =
Methane	ug/L	0.12 U	10 U	10 U	0.159 =	0.11 U	10 UJ	0.339 =
Arsenic	ug/L	9.1 =	3.9 =	2 U	2.1 U	2 =	2 U	2.1 U
Arsenic, Dissolved	ug/L	1.1 =	0.54 J	2 UJ	2.6 =	1.4 =	2 U	5 U
Copper	ug/L	68 =	49 =	2 J	5 U	5.4 J	3.5 J	7.1 =
Copper, Dissolved	ug/L	6.1 J	2.8 J	2 UJ	NA	25 U	2 U	NA
Iron	ug/L	32800 =	14000 =	NA	50 U	1070 =	NA	652 =
Iron, Dissolved	ug/L	141 =	52 J	20 U	50 U	25 U	8.2 J	50 U
Manganese	ug/L	848 =	510 =	4 J	NA	57 =	62.2 =	NA
Manganese, Dissolved	ug/L	26 =	27 =	NA	2 U	4.4 J	NA	2 U
Zinc	ug/L	45 =	37 =	4 J	10 U	25 U	13.9 =	13.9 =
Zinc, Dissolved	ug/L	25 U	4.7 J	2 UJ	NA	25 U	2 U	NA
Alkalinity, Total	mg/L	68 =	75 =	120 =	112 =	104 =	190 =	340 =
Chloride	mg/L	5.73 =	5.4 =	8 =	15.7 =	12 =	6.5 =	12.3 =
Hardness (As CaCO3)	mg/L	112 =	100 =	NA	140 =	124 =	NA	263 =
Nitrogen, Ammonia (As N)	mg/L	NA	NA	0.1 U	NA	NA	0.1 U	NA
Nitrogen, Nitrite	mg/L	NA	NA	NA	NA	NA	NA	NA
Nitrogen, Nitrate (As N)	mg/L	2.87 =	2.5 =	1.6 J	2.16 =	2.06 =	4.1 J	3.52 =
Nitrogen, Nitrate-Nitrite	mg/L	NA	NA	NA	NA	NA	NA	NA
Sulfide	mg/L	NA	0.93 U	NA	1 U	1 U	NA	1 U
Sulfate	mg/L	11 =	7.5 U	2.4 =	4.12 =	3.48 J	6.3 =	10 =
Total Organic Carbon	mg/L	13 =	9.5 =	1 UJ	1.5 U	6.41 =	1.2 J	2.05 =
Pentachlorophenol	ug/L	0.11 U	0.69 =	1 U	0.5 U	0.96 =	1 U	0.5 U
Naphthalene	ug/L	5.3 U	0.24 U	NA	11 U	239 =	NA	11 U
Benzene	ug/L	0.12 =	0.44 U	0.1 UJ	0.1 U	0.1 U	0.1 U	0.1 U
Ethylbenzene	ug/L	1 U	0.5 U	1 UJ	1 U	1 U	1 U	1 U
M,P-Xylene (Sum Of Isomers)	ug/L	2 U	NA	1 UJ	1 U	2 U	1 U	1 U
O-Xylene	ug/L	1 U	NA	1 UJ	1 U	1 U	1 U	1 U
Toluene	ug/L	1 U	0.4 U	1 UJ	1 U	1 U	1 U	1 U
Xylenes (Total)	ug/L	1 U	1.2 U	1 UJ	1 U	1 U	1 U	1 U

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Penta Wood Products Site LTRA
Groundwater Sampling Results
1997 Thru 2001

Field Site Identifier:		PENTA	PENTA	PENTA	PENTA	PENTA	PENTA	PENTA
Field Sample Location:		MW-15	MW-15	MW-15	MW-15	MW-15	MW-16	MW-16
Sample Interval:		N/A	N/A	N/A	N/A	N/A	N/A	N/A
Matrix:		Water	Water	Water, Dup	Water, Dup	Water	Water	Water
Sample Collection Date:		04/25/2001	04/25/2001	04/25/2001	04/25/2001	09/12/2001	10/14/1997	04/06/2000
Field Sample Identification:		01CB07-70	01CB07-71	01CB07-72	01CB07-73	01CB28-35	98ZR01-22	00CB09-16
Laboratory Sample Identification:		210422701	210422702	210422703	210422704	913080-002	26308*18	200405114
Parameter	**Units**							
Carbon Dioxide	ug/L	NA	NA	NA	NA	NA	150000 =	61230 =
Methane	ug/L	0.1 U	NA	0.12 U	NA	10 U	10 UJ	1.068 =
Arsenic	ug/L	0.5 J	NA	0.56 J	NA	0.95 U	17.1 =	5.4 =
Arsenic, Dissolved	ug/L	NA	0.31 J	NA	0.42 J	0.95 U	2 U	2.1 U
Copper	ug/L	25 U	NA	25 U	NA	5.7 J	438 J	34.6 =
Copper, Dissolved	ug/L	NA	25 U	NA	25 U	2.9 J	2.7 J	NA
Iron	ug/L	58 =	NA	174 =	NA	63 J	NA	11800 =
Iron, Dissolved	ug/L	NA	25 U	NA	25 U	35 U	15.3 J	50 U
Manganese	ug/L	4.8 J	NA	4.1 J	NA	2.7 =	10300 =	NA
Manganese, Dissolved	ug/L	NA	15 U	NA	15 U	0.31 J	NA	1690 =
Zinc	ug/L	50 =	NA	25 U	NA	36 =	210 =	14.1 =
Zinc, Dissolved	ug/L	NA	15 J	NA	16 J	35 =	1.9 J	NA
Alkalinity, Total	mg/L	240 =	NA	246 =	NA	240 =	170 =	48 =
Chloride	mg/L	15 =	NA	16 =	NA	17 =	6.1 =	6.45 =
Hardness (As CaCO3)	mg/L	276 =	NA	276 =	NA	270 =	NA	97.2 =
Nitrogen, Ammonia (As N)	mg/L	NA	NA	NA	NA	NA	0.1 U	NA
Nitrogen, Nitrite	mg/L	NA	NA	NA	NA	NA	NA	NA
Nitrogen, Nitrate (As N)	mg/L	3.97 =	NA	3.92 =	NA	3.7 =	2.6 J	3.86 =
Nitrogen, Nitrate-Nitrite	mg/L	NA	NA	NA	NA	NA	NA	NA
Sulfide	mg/L	1 U	NA	1 U	NA	0.8 U	NA	1 U
Sulfate	mg/L	2.61 J	NA	4.05 J	NA	4.5 U	8.1 =	24.1 =
Total Organic Carbon	mg/L	5.24 =	NA	3.7 =	NA	4.5 =	3 J	2.5 =
Pentachlorophenol	ug/L	0.11 U	NA	0.11 U	NA	0.077 J	1 U	0.5 U
Naphthalene	ug/L	5.3 U	NA	5.6 R	NA	0.24 U	NA	10 U
Benzene	ug/L	0.1 U	NA	0.1 U	NA	0.44 U	0.1 U	0.1 U
Ethylbenzene	ug/L	1 U	NA	1 U	NA	0.5 U	1 U	1 U
M,P-Xylene (Sum Of Isomers)	ug/L	2 U	NA	2 U	NA	NA	1 U	1 U
O-Xylene	ug/L	1 U	NA	1 U	NA	NA	1 U	1 U
Toluene	ug/L	1 U	NA	1 U	NA	0.4 U	1 U	1 U
Xylenes (Total)	ug/L	1 U	NA	NA	NA	1.2 U	1 U	1 U

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Penta Wood Products Site LTRA
Groundwater Sampling Results
1997 Thru 2001

Field Site Identifier:		PENTA	PENTA	PENTA	PENTA	PENTA	PENTA	PENTA
Field Sample Location:		MW-16	MW-16	MW-16	MW-17	MW-17	MW-17	MW-17
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:		04/23/2001	04/23/2001	09/10/2001	10/15/1997	10/28/1997	04/06/2000	04/26/2001
Field Sample Identification:		01CB07-58	01CB07-59	01CB28-16	98ZR01-23	98ZR01-71	00CB09-17	01CB08-01
Laboratory Sample Identification:		210419510	210419511	913080-019	26308*15	26341*8	200405107	210423411
Parameter	**Units**							
Carbon Dioxide	ug/L	NA	NA	NA	160000 =	NA	3900 =	NA
Methane	ug/L	0.12 U	NA	10 U	10 UJ	NA	0.127 =	0.12 U
Arsenic	ug/L	6.5 =	NA	1.8 =	2 U	NA	2.1 U	0.6 J
Arsenic, Dissolved	ug/L	NA	1 U	0.29 U	2 U	NA	2.5 =	NA
Copper	ug/L	62 =	NA	23 U	2.3 J	NA	5 U	25 U
Copper, Dissolved	ug/L	NA	25 U	2.2 U	2 U	NA	NA	NA
Iron	ug/L	22300 =	NA	5500 =	NA	NA	50 U	33 =
Iron, Dissolved	ug/L	NA	26 =	35 U	10 UJ	NA	50 U	NA
Manganese	ug/L	1460 =	NA	520 =	2 U	NA	NA	15 U
Manganese, Dissolved	ug/L	NA	9.4 J	0.82 J	NA	NA	2 U	NA
Zinc	ug/L	136 =	NA	19 =	2.5 =	NA	10 U	12 J
Zinc, Dissolved	ug/L	NA	23 J	4.5 J	17.6 =	NA	NA	NA
Alkalinity, Total	mg/L	90 =	NA	79 =	180 =	NA	206 =	202 =
Chloride	mg/L	3.57 =	NA	1.8 =	4.8 =	NA	4.89 =	4.12 =
Hardness (As CaCO3)	mg/L	164 =	NA	120 =	NA	NA	232 =	228 =
Nitrogen, Ammonia (As N)	mg/L	NA	NA	NA	0.14 =	NA	NA	NA
Nitrogen, Nitrite	mg/L	NA	NA	NA	NA	NA	NA	NA
Nitrogen, Nitrate (As N)	mg/L	8.69 =	NA	5.8 =	4.1 J	NA	4.21 =	4.98 =
Nitrogen, Nitrate-Nitrite	mg/L	NA	NA	NA	NA	NA	NA	NA
Sulfide	mg/L	8.56 =	NA	0.8 U	NA	NA	1 U	1 U
Sulfate	mg/L	29 =	NA	11 =	10 =	NA	3 U	6.82 J
Total Organic Carbon	mg/L	4.4 =	NA	0.34 U	0.7 J	NA	1.5 U	1.57 =
Pentachlorophenol	ug/L	0.11 U	NA	0.17 =	1 U	5 =	0.5 U	0.72 =
Naphthalene	ug/L	5.6 U	NA	0.24 U	NA	NA	11 U	54 =
Benzene	ug/L	0.1 U	NA	0.44 U	0.1 U	NA	0.1 U	0.1 U
Ethylbenzene	ug/L	1 U	NA	0.5 U	1 U	NA	1 U	1 U
M,P-Xylene (Sum Of Isomers)	ug/L	2 U	NA	NA	0.4 J	NA	1 U	2 U
O-Xylene	ug/L	1 U	NA	NA	0.2 J	NA	1 U	1 U
Toluene	ug/L	1 U	NA	0.4 U	1 U	NA	1 U	1 U
Xylenes (Total)	ug/L	1 U	NA	1.2 U	0.6 J	NA	1 U	1 U

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Penta Wood Products Site LTRA
Groundwater Sampling Results
1997 Thru 2001

Field Site Identifier:		PENTA	PENTA	PENTA	PENTA	PENTA	PENTA	PENTA
Field Sample Location:		MW-17	MW-17	MW-18	MW-18	MW-19	MW-19	MW-19
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:		04/26/2001	09/11/2001	10/10/1997	06/19/2001	10/16/1997	04/07/2000	04/26/2001
Field Sample Identification:		01CB08-02	01CB28-24	98ZR01-25	01CB08-71	98ZR01-44	00CB09-19	01CB08-15
Laboratory Sample Identification:		210423412	913080-028	26300*11	210613203	26308*25	200405111	210423409
Parameter	**Units**							
Carbon Dioxide	ug/L	NA	NA	432000 =	NA	159000 =	114670 =	NA
Methane	ug/L	NA	10 U	10 U	0.13 U	10 UJ	0.272 =	0.5 =
Arsenic	ug/L	NA	0.94 =	8.9 =	4.9 =	2 U	3.4 =	2.2 =
Arsenic, Dissolved	ug/L	0.69 J	1 =	8.2 J	5 =	2 U	3.7 =	NA
Copper	ug/L	NA	2.2 U	62.5 =	43 =	38 J	96.8 =	38 =
Copper, Dissolved	ug/L	25 U	2.2 U	43.5 J	21 J	3.4 J	NA	NA
Iron	ug/L	NA	330 =	NA	15200 =	NA	28300 =	10000 =
Iron, Dissolved	ug/L	25 U	310 =	32000 =	13700 =	10 UJ	50 U	NA
Manganese	ug/L	NA	0.27 U	10600 =	6540 =	2690 =	NA	1840 =
Manganese, Dissolved	ug/L	15 U	0.27 U	NA	6650 =	NA	2 U	NA
Zinc	ug/L	NA	3.7 U	5.3 J	25 U	46 =	48.4 =	27 =
Zinc, Dissolved	ug/L	25 U	3.7 U	2.6 J	25 U	2 U	NA	NA
Alkalinity, Total	mg/L	NA	180 =	260 =	168 =	180 =	182 =	236 =
Chloride	mg/L	NA	4.8 =	49 =	19 =	47 =	37.4 =	39 =
Hardness (As CaCO3)	mg/L	NA	210 =	NA	182 =	NA	345 =	323 =
Nitrogen, Ammonia (As N)	mg/L	NA	NA	0.14 =	NA	0.28 =	NA	NA
Nitrogen, Nitrite	mg/L	NA	NA	NA	NA	NA	NA	NA
Nitrogen, Nitrate (As N)	mg/L	NA	4.4 =	0.1 UJ	0.13 U	3.8 J	6.97 =	3.37 =
Nitrogen, Nitrate-Nitrite	mg/L	NA	NA	NA	NA	NA	NA	NA
Sulfide	mg/L	NA	1.1 =	NA	1.7 =	NA	1 U	1 U
Sulfate	mg/L	NA	9.3 U	11 =	33 J	19 =	90 =	47 =
Total Organic Carbon	mg/L	NA	1 J	154 J	6.63 =	32.8 J	54.2 =	33 =
Pentachlorophenol	ug/L	NA	0.059 U	27000 =	27400 =	19000 =	11000 J	25600 =
Naphthalene	ug/L	NA	0.29 U	NA	5 U	NA	22 =	325 =
Benzene	ug/L	NA	0.44 U	0.1 U	1.1 =	0.2 J	0.1 U	1 R
Ethylbenzene	ug/L	NA	0.5 U	2 =	14 =	1 U	1.3 =	100 U
M,P-Xylene (Sum Of Isomers)	ug/L	NA	NA	11 =	11 J	1 U	5.4 =	4.3 R
O-Xylene	ug/L	NA	NA	8 =	9.3 J	0.2 J	6.7 =	NA
Toluene	ug/L	NA	0.4 U	16 =	10 U	1 U	0.6 J	NA
Xylenes (Total)	ug/L	NA	1.2 U	19 =	20 =	0.2 J	12 =	NA

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Penta Wood Products Site LTRA
Groundwater Sampling Results
1997 Thru 2001

Field Site Identifier:		PENTA	PENTA	PENTA	PENTA	PENTA	PENTA	PENTA
Field Sample Location:		MW-19	MW-19	MW-20	MW-20	MW-20	MW-20	MW-21
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:		04/26/2001	09/12/2001	10/15/1997	04/26/2001	04/26/2001	09/12/2001	02/09/1998
Field Sample Identification:		01CB08-16	01CB28-38	98ZR01-45	01CB08-08	01CB08-09	01CB28-37	98ZR01-88
Laboratory Sample Identification:		210423410	913080-010	26308*26	210423407	210423408	913080-005	DA*26693*12
Parameter	**Units**							
Carbon Dioxide	ug/L	NA	NA	NA	NA	NA	NA	182000 =
Methane	ug/L	NA	16 =	10 UJ	2.73 =	NA	10 U	11 J
Arsenic	ug/L	NA	1.7 J	NA	8.2 =	NA	3.6 =	3 J
Arsenic, Dissolved	ug/L	1 U	0.29 U	NA	NA	1.1 =	1.5 =	NA
Copper	ug/L	NA	44 =	NA	196 =	NA	81 =	70.1 =
Copper, Dissolved	ug/L	25 U	6.4 J	NA	NA	14 J	15 U	NA
Iron	ug/L	NA	5600 =	NA	33200 =	NA	7900 =	NA
Iron, Dissolved	ug/L	25 U	71 J	NA	NA	841 =	35 U	NA
Manganese	ug/L	NA	2100 =	NA	3120 =	NA	3200 =	1210 =
Manganese, Dissolved	ug/L	1790 =	1800 =	NA	NA	2250 =	2800 =	NA
Zinc	ug/L	NA	53 J	NA	126 =	NA	36 =	113 =
Zinc, Dissolved	ug/L	25 U	5.8 J	NA	NA	23 J	12 U	NA
Alkalinity, Total	mg/L	NA	320 J	NA	198 =	NA	260 J	176 =
Chloride	mg/L	NA	19 =	NA	24 =	NA	16 =	70.6 =
Hardness (As CaCO3)	mg/L	NA	270 =	NA	301 =	NA	250 =	NA
Nitrogen, Ammonia (As N)	mg/L	NA	NA	NA	NA	NA	NA	0.083 U
Nitrogen, Nitrite	mg/L	NA	NA	NA	NA	NA	NA	NA
Nitrogen, Nitrate (As N)	mg/L	NA	1.3 =	NA	0.13 U	NA	0.15 J	NA
Nitrogen, Nitrate-Nitrite	mg/L	NA	NA	NA	NA	NA	NA	4.23 J
Sulfide	mg/L	NA	1.7 =	NA	1 U	NA	3.3 =	NA
Sulfate	mg/L	NA	9.7 U	NA	67 =	NA	24 =	9.1 =
Total Organic Carbon	mg/L	NA	34 =	NA	478 =	NA	65 =	0.47 U
Pentachlorophenol	ug/L	NA	400000 =	29000 =	36600 =	NA	83000 =	1 U
Naphthalene	ug/L	NA	240 =	NA	9970 =	NA	890 =	NA
Benzene	ug/L	NA	0.44 U	0.1 U	10 U	NA	0.44 U	0.1 UJ
Ethylbenzene	ug/L	NA	1.9 U	1 U	100 U	NA	3.4 U	1 UJ
M,P-Xylene (Sum Of Isomers)	ug/L	NA	NA	1 U	15 R	NA	NA	NA
O-Xylene	ug/L	NA	NA	0.1 J	NA	NA	NA	NA
Toluene	ug/L	NA	1.7 U	1 U	NA	NA	4.1 U	1 UJ
Xylenes (Total)	ug/L	NA	28 =	0.1 J	NA	NA	37 =	1 UJ

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Penta Wood Products Site LTRA
Groundwater Sampling Results
1997 Thru 2001

Field Site Identifier:		PENTA	PENTA	PENTA	PENTA	PENTA	PENTA	PENTA
Field Sample Location:		MW-21	MW-21	MW-21	MW-22	MW-22	MW-23	MW-23
Sample Interval:		N/A	N/A	N/A	N/A	N/A	N/A	N/A
Matrix:		Water	Water, Dup	Water, Dup	Water	Water	Water	Water
Sample Collection Date:		02/09/1998	02/09/1998	02/09/1998	02/09/1998	02/09/1998	02/26/1998	02/26/1998
Field Sample Identification:		98ZR01-89	98ZR01-98	98ZR01-99	98ZR01-90	98ZR01-91	98ZR01-92	98ZR01-93
Laboratory Sample Identification:		DA*26693*13	DA*26693*10	DA*26693*11	DA*26693*6	DA*26693*7	DA*26782*1	DA*26782*2
Parameter	**Units**							
Carbon Dioxide	ug/L	NA	192000 =	NA	197000 =	NA	109000 J	NA
Methane	ug/L	NA	10 J	NA	13 J	NA	57 J	NA
Arsenic	ug/L	NA	3.1 J	NA	4 =	NA	2 U	NA
Arsenic, Dissolved	ug/L	2 U	NA	2 U	NA	2 U	NA	2 U
Copper	ug/L	NA	83.9 =	NA	255 =	NA	17.6 J	NA
Copper, Dissolved	ug/L	9.5 U	NA	9.5 U	NA	9.5 U	NA	14.2 J
Iron	ug/L	NA	NA	NA	NA	NA	NA	NA
Iron, Dissolved	ug/L	5.5 U	NA	7.3 J	NA	5.5 U	NA	5.5 U
Manganese	ug/L	NA	1380 =	NA	3700 =	NA	128 =	NA
Manganese, Dissolved	ug/L	NA	NA	NA	NA	NA	NA	NA
Zinc	ug/L	NA	98.9 =	NA	121 =	NA	43.6 =	NA
Zinc, Dissolved	ug/L	32.6 =	NA	33.8 =	NA	12.6 =	NA	6.6 =
Alkalinity, Total	mg/L	NA	196 =	NA	186 =	NA	120 J	NA
Chloride	mg/L	NA	67.3 =	NA	56.3 =	NA	8.7 J	NA
Hardness (As CaCO3)	mg/L	NA	NA	NA	NA	NA	NA	NA
Nitrogen, Ammonia (As N)	mg/L	NA	3.08 J	NA	0.84 J	NA	0.1 UJ	NA
Nitrogen, Nitrite	mg/L	NA	NA	NA	NA	NA	NA	NA
Nitrogen, Nitrate (As N)	mg/L	NA	NA	NA	NA	NA	NA	NA
Nitrogen, Nitrate-Nitrite	mg/L	NA	4.17 J	NA	6.52 J	NA	1.47 J	NA
Sulfide	mg/L	NA	NA	NA	NA	NA	NA	NA
Sulfate	mg/L	NA	8.9 =	NA	17.9 =	NA	7.6 J	NA
Total Organic Carbon	mg/L	NA	0.47 U	NA	0.47 U	NA	0.47 UJ	NA
Pentachlorophenol	ug/L	NA	1 U	NA	1 U	NA	1 UJ	NA
Naphthalene	ug/L	NA	NA	NA	NA	NA	NA	NA
Benzene	ug/L	NA	0.1 UJ	NA	0.1 UJ	NA	2 J	NA
Ethylbenzene	ug/L	NA	1 UJ	NA	1 UJ	NA	1 UJ	NA
M,P-Xylene (Sum Of Isomers)	ug/L	NA	NA	NA	NA	NA	NA	NA
O-Xylene	ug/L	NA	NA	NA	NA	NA	NA	NA
Toluene	ug/L	NA	1 UJ	NA	1 UJ	NA	77 J	NA
Xylenes (Total)	ug/L	NA	1 UJ	NA	1 UJ	NA	2 J	NA

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Penta Wood Products Site LTRA
Groundwater Sampling Results
1997 Thru 2001

Field Site Identifier:		PENTA	PENTA	PENTA	PENTA	PENTA	PENTA	PENTA
Field Sample Location:		MW-23	MW-24	MW-24	MW-24	MW-24	MW-24	MW-25
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:		09/11/2001	02/08/1998	02/08/1998	12/06/2000	04/24/2001	04/24/2001	02/09/1998
Field Sample Identification:		01CB28-20	98ZR01-94	98ZR01-95	01CB01-55	01CB07-68	01CB07-69	98ZR01-96
Laboratory Sample Identification:		913080-023	DA*26693*1	DA*26693*2	201206501	210420905	210420906	DA*26693*8
Parameter	**Units**							
Carbon Dioxide	ug/L	NA	277000 =	NA	NA	NA	NA	460000 =
Methane	ug/L	10 U	10 UJ	NA	0.53 U	0.1 U	NA	17 J
Arsenic	ug/L	1.2 =	4.3 =	NA	1.6 =	2.4 =	NA	6.6 =
Arsenic, Dissolved	ug/L	0.62 J	NA	2 U	0.29 J	NA	0.29 J	NA
Copper	ug/L	6.3 J	53 =	NA	27 =	30 =	NA	462 =
Copper, Dissolved	ug/L	2.2 U	NA	9.5 U	25 U	NA	5.2 J	NA
Iron	ug/L	630 =	NA	NA	6500 =	7310 =	NA	NA
Iron, Dissolved	ug/L	35 U	NA	5.5 U	25 U	NA	25 U	NA
Manganese	ug/L	140 =	1030 =	NA	530 =	508 =	NA	4480 =
Manganese, Dissolved	ug/L	29 =	NA	NA	15 U	NA	2.4 J	NA
Zinc	ug/L	37 =	50.7 =	NA	11 J	23 J	NA	321 =
Zinc, Dissolved	ug/L	4.7 J	NA	23 =	25 U	NA	11 J	NA
Alkalinity, Total	mg/L	110 =	253 =	NA	180 =	256 =	NA	455 =
Chloride	mg/L	10 =	18.7 =	NA	21 =	36 =	NA	15.6 =
Hardness (As CaCO3)	mg/L	140 =	NA	NA	310 =	348 =	NA	NA
Nitrogen, Ammonia (As N)	mg/L	NA	0.083 U	NA	NA	NA	NA	0.84 J
Nitrogen, Nitrite	mg/L	NA	NA	NA	NA	NA	NA	NA
Nitrogen, Nitrate (As N)	mg/L	0.13 U	NA	NA	2.3 =	3.64 =	NA	NA
Nitrogen, Nitrate-Nitrite	mg/L	NA	3.93 J	NA	NA	NA	NA	3.96 J
Sulfide	mg/L	1.3 =	NA	NA	1 U	1 U	NA	NA
Sulfate	mg/L	8.2 U	5.2 =	NA	7.1 J	12 =	NA	9.9 =
Total Organic Carbon	mg/L	5.6 =	1.8 =	NA	5.5 =	3.36 =	NA	0.47 U
Pentachlorophenol	ug/L	0.49 =	4 =	NA	123 B	0.11 =	NA	1 U
Naphthalene	ug/L	0.24 U	NA	NA	5.9 U	5.3 R	NA	NA
Benzene	ug/L	0.44 U	3 J	NA	0.1 U	0.1 U	NA	0.1 UJ
Ethylbenzene	ug/L	0.5 U	2 J	NA	1 U	1 U	NA	1 UJ
M,P-Xylene (Sum Of Isomers)	ug/L	NA	NA	NA	NA	2 U	NA	NA
O-Xylene	ug/L	NA	NA	NA	NA	1 U	NA	NA
Toluene	ug/L	0.4 U	3 J	NA	0.29 J	1 U	NA	1 UJ
Xylenes (Total)	ug/L	1.2 U	5 J	NA	1 U	NA	NA	1 UJ

QUALIFIER KEY: "U" - Analyte not found at the listed detection limit; "J" - Estimated Result; "B" - Analyte detected in Blank; "=" - Analyte found; "R" - Rejected; "NA" - Not Analyzed

Penta Wood Products Site LTRA
Groundwater Sampling Results
1997 Thru 2001

Field Site Identifier:		PENTA	PENTA	PENTA	PENTA	PENTA	PENTA	PENTA
Field Sample Location:		MW-25	MW-26	MW-26	MW-26	MW-26	MW-26	MW-26
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
Sample Collection Date:		02/09/1998	12/06/2000	12/06/2000	01/10/2001	01/10/2001	04/24/2001	04/24/2001
Field Sample Identification:		98ZR01-97	01CB01-53	01CB01-54	01CB01-60	01CB01-61	01CB07-66	01CB07-67
Laboratory Sample Identification:		DA*26693*9	201205801	201205802	210107204	210107201	210420907	210420910
Parameter	**Units**							
Carbon Dioxide	ug/L	NA	NA	NA	NA	NA	NA	NA
Methane	ug/L	NA	0.65 U	0.7 U	NA	NA	0.1 U	NA
Arsenic	ug/L	NA	2.8 =	4 =	NA	NA	3 =	NA
Arsenic, Dissolved	ug/L	2 U	1.1 =	1.1 =	NA	NA	NA	0.24 J
Copper	ug/L	NA	27 =	25 J	NA	NA	13 J	NA
Copper, Dissolved	ug/L	9.5 U	21 J	25 U	NA	NA	NA	25 U
Iron	ug/L	NA	16000 =	16000 =	NA	NA	6980 =	NA
Iron, Dissolved	ug/L	30.2 J	25 U	25 U	NA	NA	NA	36 =
Manganese	ug/L	NA	300 =	290 =	NA	NA	132 =	NA
Manganese, Dissolved	ug/L	NA	94 =	89 =	NA	NA	NA	15 U
Zinc	ug/L	NA	35 =	33 =	NA	NA	24 J	NA
Zinc, Dissolved	ug/L	16.4 =	17 J	25 U	NA	NA	NA	19700 =
Alkalinity, Total	mg/L	NA	230 =	270 =	NA	NA	240 =	NA
Chloride	mg/L	NA	29 =	28 =	NA	NA	22 =	NA
Hardness (As CaCO3)	mg/L	NA	350 =	330 =	NA	NA	294 =	NA
Nitrogen, Ammonia (As N)	mg/L	NA	NA	NA	NA	NA	NA	NA
Nitrogen, Nitrite	mg/L	NA	NA	NA	NA	NA	NA	NA
Nitrogen, Nitrate (As N)	mg/L	NA	2.8 =	2.8 =	NA	NA	5 =	NA
Nitrogen, Nitrate-Nitrite	mg/L	NA	NA	NA	NA	NA	NA	NA
Sulfide	mg/L	NA	1 U	1 U	NA	NA	1 U	NA
Sulfate	mg/L	NA	540 J	770 J	NA	NA	10 J	NA
Total Organic Carbon	mg/L	NA	8 =	6.1 =	NA	NA	2.79 =	NA
Pentachlorophenol	ug/L	NA	118 B	115 B	0.1 U	0.16 =	0.1 U	NA
Naphthalene	ug/L	NA	5 U	5 U	NA	NA	5.4 U	NA
Benzene	ug/L	NA	0.1 U	0.1 U	NA	NA	0.1 U	NA
Ethylbenzene	ug/L	NA	1 U	1 U	NA	NA	1 U	NA
M,P-Xylene (Sum Of Isomers)	ug/L	NA	NA	NA	NA	NA	2 U	NA
O-Xylene	ug/L	NA	NA	NA	NA	NA	1 U	NA
Toluene	ug/L	NA	1 U	1 U	NA	NA	1 U	NA
Xylenes (Total)	ug/L	NA	1 U	1 U	NA	NA	1 U	NA

QUALIFIER KEY: "U" - Analyte not found at the listed detection limit; "J" - Estimated Result; "B" - Analyte detected in Blank; "=" - Analyte found; "R" - Rejected; "NA" - Not Analyzed

Penta Wood Products Site LTRA
Groundwater Sampling Results
1997 Thru 2001

Field Site Identifier:		PENTA	PENTA	PENTA	PENTA
Field Sample Location:		MW-26	MW-26	MW-26	MW-26FIL
Sample Interval:		N/A	N/A	N/A	N/A
Matrix:		Water	Water	Water, Dup	Water
Sample Collection Date:		06/18/2001	09/10/2001	09/10/2001	01/10/2001
Field Sample Identification:		01CB08-67	01CB28-10	01CB28-11	01CB01-62W
Laboratory Sample Identification:		210611202	913080-016	913080-017	210107202
Parameter	**Units**				
Carbon Dioxide	ug/L	NA	NA	NA	NA
Methane	ug/L	0.1 U	10 U	10 U	NA
Arsenic	ug/L	3.6 =	1.5 =	1.6 =	NA
Arsenic, Dissolved	ug/L	1.1 =	0.8 J	0.75 J	NA
Copper	ug/L	18 J	10 U	13 =	NA
Copper, Dissolved	ug/L	25 U	4 J	2.9 J	NA
Iron	ug/L	9140 =	2300 =	2500 =	NA
Iron, Dissolved	ug/L	25 U	100 J	55 J	NA
Manganese	ug/L	232 =	94 =	96 =	NA
Manganese, Dissolved	ug/L	15 U	4 U	1.5 U	NA
Zinc	ug/L	28 =	24 =	24 =	NA
Zinc, Dissolved	ug/L	25 U	3.8 J	3.7 U	NA
Alkalinity, Total	mg/L	230 =	260 =	260 =	NA
Chloride	mg/L	27 =	30 =	29 =	NA
Hardness (As CaCO3)	mg/L	326 =	300 =	310 =	NA
Nitrogen, Ammonia (As N)	mg/L	NA	NA	NA	NA
Nitrogen, Nitrite	mg/L	NA	NA	NA	NA
Nitrogen, Nitrate (As N)	mg/L	30 =	3.2 =	3.2 =	NA
Nitrogen, Nitrate-Nitrite	mg/L	NA	NA	NA	NA
Sulfide	mg/L	1 U	1.1 =	1.2 =	NA
Sulfate	mg/L	13 =	12 =	12 =	NA
Total Organic Carbon	mg/L	6.67 =	0.34 U	2.7 =	NA
Pentachlorophenol	ug/L	1 =	0.16 J	0.16 J	1.6 =
Naphthalene	ug/L	5 U	0.24 U	0.24 U	NA
Benzene	ug/L	0.1 U	0.44 U	0.44 U	NA
Ethylbenzene	ug/L	1 U	0.5 U	0.5 U	NA
M,P-Xylene (Sum Of Isomers)	ug/L	2 U	NA	NA	NA
O-Xylene	ug/L	1 U	NA	NA	NA
Toluene	ug/L	1 U	0.4 U	0.4 U	NA
Xylenes (Total)	ug/L	1 U	1.2 U	1.2 U	NA

QUALIFIER KEY: "U" - Analyte not found at the listed detection limit; "J" - Estimated Result; "B" - Analyte detected in Blank; "=" - Analyte found; "R" - Rejected; "NA" - Not Analyzed

Attachment 2

Groundwater Contour Maps

Oil Measurements

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WATER LEVEL MEASUREMENTS
SEMI-CONFINED GROUNDWATER CONTOURS
CH2M HILL - SEPTEMBER 2001
PENTA WOOD PRODUCTS

CH2MHILL

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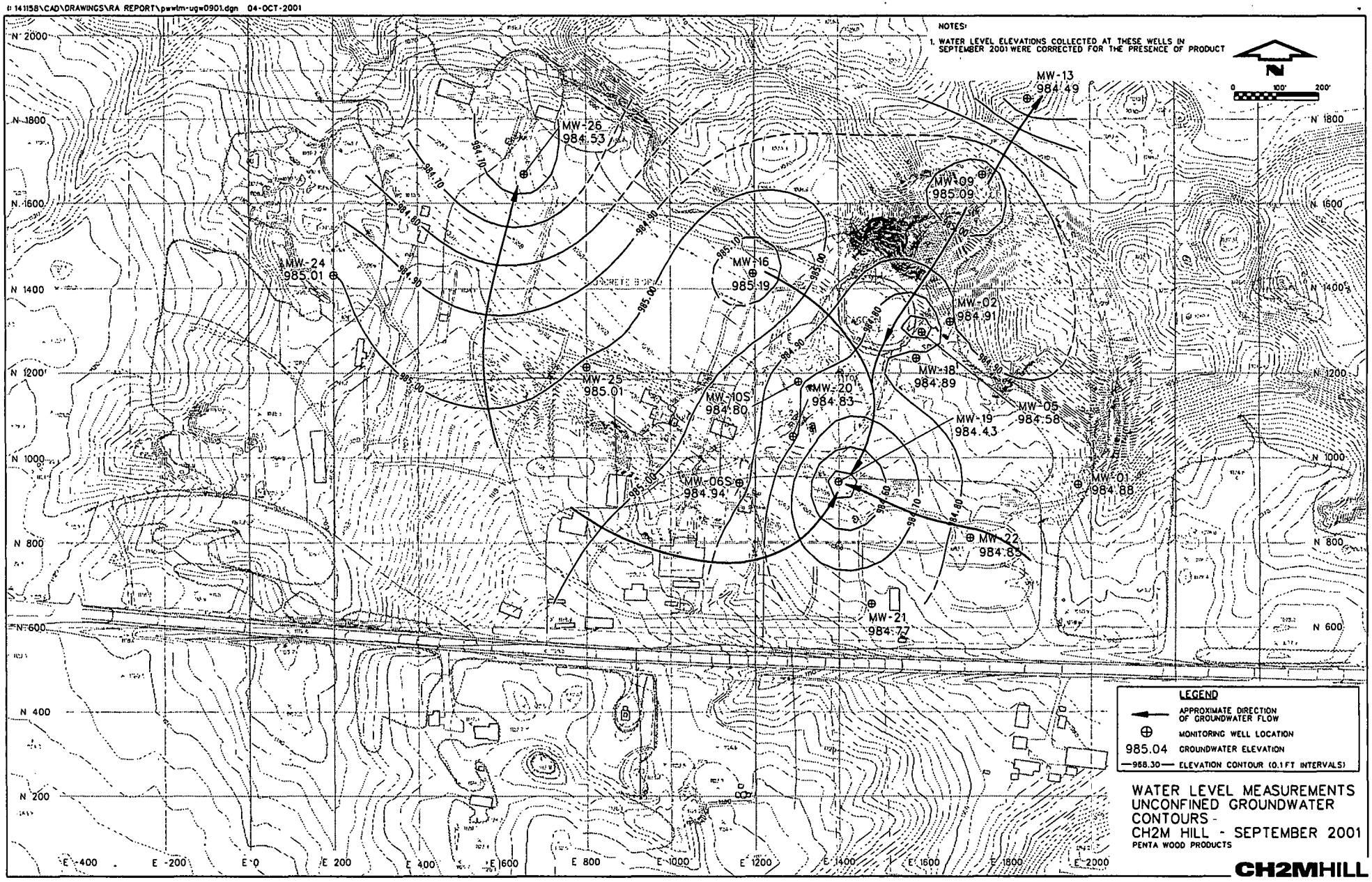


WATER LEVEL MEASUREMENTS UNCONFINED GROUNDWATER CONTOURS - CH2M HILL - SEPTEMBER 2001

PENTA WOOD PRODUCTS

CH2MHILL

Attachment 2
Groundwater Elevation Measurements - September 2001
Pentawood Products Site

Groundwater Elevation Measurements - September 2001

	Depth to Groundwater (ft)	Groundwater Elevation (ft msl)
MW-01	87.44	984.88
MW-02	79.94	984.91
MW-03	144.82	984.68
MW-04	103.81	984
MW-05	87.15	984.58
MW-06S	123.69	984.94
MW-07	111.81	984.58
MW-08	106.61	984.67
MW-09	35.62	985.09
MW-10	105.4	984.34
MW-11	101.47	984.11
MW-12	97.54	984.45
MW-13	21.61	984.49
MW-14	94.52	983.98
MW-15	142.62	984.6
MW-16	96.73	985.19
MW-17	99.94	984.56
MW-21	110.93	984.77
MW-22	99.85	984.85
MW-23	33.47	984.1
MW-24	99.09	985.01
MW-25	110.23	985.01
MW-26	102.54	984.53

LNAPL Thickness Measurements - September 2001

	LNAPL Thickness (ft)
MW-06	0.01
MW-10S	0.01
MW-18	0.27
MW-19	0.51
MW-20	0.11

Attachment 3

Natural Attenuation Data

Pentawood Products Site
Natural Attenuation Trend Data
Anuual Groundwater Sampling

Well	Sample Date	Temp. (C)	Specific Cond. (umhos)	DO (mg/L)	DO (%)	pH	ORP (mV)	Nitrate (mg/L)	Dissolved Manganese (mg/L)	Dissolved Iron (mg/L)	Sulfate (mg/L)	Methane (mg/L)	PCP (ug/L)	Chloride (mg/L)	Comment
MW-01	10/09/1997	8.46	475	11.23	96.2	7.32	171.0	6.5	NT	<0.02	6.3	<0.01	2.0	18.0	
MW-01	04/05/2000	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	04/24/2001	8.69	431	9.83	84.6	7.08	168.7	6.5	<0.015	<0.025	13.0	<0.00011	<0.1	24.0	
MW-01	09/11/2001	10.18	370	10.63	NR	7.00	235.8	2.6	0.00079	<0.035	<8.2	<0.010	0.5	10	
MW-02	10/09/1997	9.49	143	8.82	77.2	6.42	274.1	1.1	NT	<0.02	17.0	<0.01	<1	3.5	Silty brown
MW-02	04/05/2000	9.47	111	9.59	81.4	6.85	305.8	<0.1	0.003	<0.05	58.3	0.0003	<0.5	1.0	
MW-02	09/12/2001	12.00	172	11.50	99.8	7.62	96.9	2.3	0.057	<0.035	10	<0.010	0.51	6.2	
MW-03	10/08/1997	10.34	696	3.52	31.5	6.91	38.4	4.4	0.011	0.26	16.0	<0.01	<1	42.0	
MW-03	04/04/2000	Parameters not recorded.						2.8	0.010	0.50	12.5	0.0016	<0.6	64.0	
MW-03	04/25/2001	10.27	1039	3.77	33.8	6.83	169.1	4.4	0.008	0.14	11.0	NT	<0.11	47.0	
MW-03	09/13/2001	11.53	1118	16.44	NR	6.93	99.0	4	0.031	0.93	14	<0.010	0.093	58	
MW-04	10/09/1997	9.61	228	1.09	8.0	8.41	-137.9	<0.1	NT	0.04	6.3	0.1390	<1	7.3	Clear
MW-04	04/04/2000	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	4.86	15.0	<0.01	28,000	50.0	Orangish color
MW-05	04/07/2000	8.76	737	4.81	39.3	6.03	119.4	<0.1	3.350	3.37	34.3	0.0009	20,600	49.2	
MW-05	04/26/2001	12.29	1018	3.71	36.0	6.40	-39.7	<0.13	11.300	7.63	28.0	NT	20,600	42.0	Sheen noted on purge water
MW-05	09/13/2001	11.45	698	10.19	97.0	6.80	-68.6	0.17	8.5	4.1	22	<0.010	6300	29	
MW-06 S	10/09/1997	11.26	792	5.25	48.0	6.21	232.1	4.5	NT	0.02	0.9	<0.01	<1	72.0	Clear
MW-06 S	04/07/2000	Well sampled for VOCs only.													Well dry; only VOCs sampled
MW-06 S	04/26/2001	12.03	453	2.78	26.7	5.92	142.2	0.9	0.347	<0.025	12.0	NT	3	14.0	
MW-06S	09/12/2001	Not collected due to product in the well.						1.1	0.8	<0.035	16	<0.010	1.1	12	
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	7.6	
MW-07	04/04/2000	9.87	693	5.82	51.5	7.01	156.1	2.7	0.026	0.36	6.1	0.0040	<0.5	4.8	
MW-07	04/25/2001	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	09/11/2001	11.04	824	8.36	74.5	6.27	208	3	0.0044	0.23	10	0.012	0.083	23	

Pentawood Products Site
Natural Attenuation Trend Data
Anuual Groundwater Sampling

Well	Sample Date	Temp. (C)	Specific Cond. (umhos)	DO (mg/L)	DO (%)	pH	ORP (mV)	Nitrate (mg/L)	Dissolved Manganese (mg/L)	Dissolved Iron (mg/L)	Sulfate (mg/L)	Methane (mg/L)	PCP (ug/L)	Chloride (mg/L)	Comment
MW-08	10/14/1997	9.73	363	4.28	37.2	7.93	12.2	1.4	NT	0.15	4.5	0.0365	<1	4.2	
MW-08	04/05/2000	10.07	295	3.78	33.5	6.91	252.3	3.5	0.005	<0.05	6.5	0.0072	<0.5	6.3	
MW-08	04/26/2001	11.08	358	5.50	52.3	7.94	151.3	1.5	0.027	<0.025	7.5	0.0116	0.2	3.3	
MW-08	09/11/2001	10.49	386	4.08	NR	7.77	29.3	1.5	0.018	0.07	<7.6	<0.010	0.062	3.8	
MW-09	10/08/1997	10.59	171	6.30	54.9	5.63	217.6	4.2	NT	<0.0001	3.4	<0.01	<1	45.0	Clear
MW-09	04/05/2000	9.65	153	6.36	44.7	5.78	321.7	2.0	0.022	<0.05	8.5	0.0004	0.6	3.2	
MW-09	04/23/2001	9.62	172	5.21	43.1	5.72	162.7	2.5	0.034	<0.025	27.0	<0.00012	0.1	3.2	
MW-09	09/12/2001	11.23	206	5.75	NR	5.54	309.8	3.3	0.016	0.11	<6.8	<0.010	0.76	6.5	
MW-10	10/15/1997	10.88	803	0.38	3.4	6.83	-33.2	4.9	NT	0.00	13.0	0.0135	3400.0	35.0	Slight brown
MW-10	04/06/2000	10.76	988	0.47	4.2	6.82	27.4	1.7	1.590	0.12	13.8	0.0031	9530.0	55.9	
MW-10	04/26/2001	12.31	1029	4.52	42.8	6.89	-103.5	0.2	2.380	5.65	22.0	NT	22800.0	48.0	
MW-10	09/12/2001	11.18	1188	6.55	63.1	6.89	-71.1	0.13	3.2	2.4	23	<0.010	21000	61	
MW-10S	10/15/1997	13.18	339	10.49	100	7.55	135.6	<0.1	NT	0.00	23.0	<0.01	12000.0	38.0	Oil, bubbles, gray, slow recharge
MW-10S	04/07/2000	9.41	599	5.02	42	6.37	331.6	<100	10.100	<0.05	138.0	0.0016	56100.0	53.0	
MW-10S	04/25/2001	Not collected due to product in the well.						1.5	6.030	11.30	8.6	0.0006	49000.0	11.0	
MW-10S	09/12/2001	Not collected due to product in the well.						4.7	7.6	0.048	13	<0.010	82000	10	
MW-11	10/15/1997	13.98	398	4.86	47.2	7.94	144.3	3.4	NT	<0.0001	12.0	<0.01	<1	7.5	Clear
MW-11	04/04/2000	13.24	427	6.57	61.9	7.80	215.5	3.1	<0.002	<0.05	9.4	0.0001	<0.6	7.0	
MW-11	04/04/2001	12.98	337	6.98	67.6	7.86	138.5	3.7	<0.015	<0.025	3.5	<0.00011	<0.11	6.3	
MW-11	09/10/2001	13.13	414	9.09	NR	7.77	100.0	3.1	0.00045	<0.035	<7.4	<0.010	0.091	8	
MW-12	10/15/1997	10.16	1044	2.86	25.0	6.93	41.2	<0.1	NT	0.00	15.0	<0.01	5000.0	48.0	Bubbles, brown
MW-12	04/06/2000	10.10	1097	0.63	5.6	6.89	169.9	0.5	1.590	0.11	11.9	0.0016	10300.0	54.5	
MW-12	04/06/2001	Parameters not recorded.						0.4	1.570	0.13	16.0	0.0480	1500.0	48.0	
MW-12	09/13/2001	11.02	1142	3.95	36.7	6.84	22.2	<0.53	1.4	0.74	16	<0.010	18000	47	
MW-13	10/08/1997	12.79	185	6.00	54.1	6.19	206.7	•1.3	0.000	0.00	1.4	<0.01	0.7	2.7	Brown, silty
MW-13	04/05/2000	9.67	189	8.29	51.5	5.49	296.7	<100	0.112	<0.05	431.0	0.0003	0.8	4.4	
MW-13	04/23/2001	9.08	140	3.44	26.8	5.59	207.9	1.8	0.110	<0.025	35.0	<0.00012	0.2	3.5	
MW-13	09/10/2001	10.69	203	NR	NR	5.54	196.0	2.5	0.027	0.052	<7.5	<0.010	0.69	5.4	DO probe not reading corrrectly.

Pentawood Products Site
Natural Attenuation Trend Data
Anuual Groundwater Sampling

Well	Sample Date	Temp. (C)	Specific Cond. (umhos)	DO (mg/L)	DO (%)	pH	ORP (mV)	Nitrate (mg/L)	Dissolved Manganese (mg/L)	Dissolved Iron (mg/L)	Sulfate (mg/L)	Methane (mg/L)	PCP (ug/L)	Chloride (mg/L)	Comment
MW-14	10/09/1997	9.32	252	6.43	56.2	8.09	108.9	1.6	NT	<0.0001	2.4	<0.01	<1	8.0	Clear
MW-14	04/06/2000	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	
MW-15	10/16/1997	9.29	409	4.49	39.1	8.22	149.8	4.1	NT	0.00	6.3	<0.01	<1	6.5	Slight gray, silty
MW-15	04/04/2000	8.08	483	10.72	85.1	7.69	284.1	3.5	<0.002	<0.05	10.0	0.0003	<0.5	12.3	
MW-15	04/25/2001	11.79	675	8.73	81.3	7.73	179.4	4.0	<0.015	<0.025	2.6	<0.0001	<0.11	15.0	
MW-15	09/12/2001	9.74	548	9.80	NR	8.00	153.3	3.7	0.00031	<0.035	<4.5	<0.010	0.077	17	
MW-16	10/14/1997	9.86	409	8.57	74.8	6.82	99.4	3.2	NT	0.00	8.1	<0.01	<1	6.1	Silty, brown
MW-16	04/06/2000	9.77	169	8.16	70.0	6.63	310.9	3.9	1.690	<0.05	24.1	<0.001068	<0.5	6.5	
MW-16	04/26/2001	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	09/10/2001	Parameters not recorded.						5.8	0.00082	<0.035	11	<0.010	0.17	1.8	
MW-17	10/15/1997	9.26	399	4.53	39.0	7.89	147.2	4.1	NT	<0.0001	10.0	<0.01	<1	4.8	Clear
MW-17	04/06/2000	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	04/26/2001	10.38	412	9.64	85.7	7.77	58.6	5.0	<0.015	<0.025	6.8	NT	0.7	4.1	Clear
MW-17	09/11/2001	11.44	457	6.96	62.9	7.49	262	4.4	<0.00027	0.31	<9.3	<0.010	<0.059	4.8	
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	49.0	Brownish, bubbles
MW-19	10/16/1997	8.43	662	12.11	103.4	8.23	133.6	3.8	NT	<0.0001	19.0	<0.01	8900	47.0	Oil, bubbles, slow recharge
MW-19	04/07/2000	7.80	650	5.02	40.3	6.75	323.2	7.0	<0.002	<0.05	90.0	0.0003	11000	37.4	
MW-19	04/07/2001	Not collected due to product in the well.						3.4	1.790	<0.025	47.0	NT	25600	39.0	
MW-19	09/12/2001	Not collected due to product in the well.						1.3	1.8	0.071	<9.7	0.016	400000	19	
MW-20	10/15/1997	Dry. Could not collect parameter sample.						NT	NT	NT	NT	<0.01	11000	NT	Oil, well went dry
MW-20	04/26/2001	Parameters not recorded.						<0.13	2.250	0.84	67.00	NT	36600	24.00	
MW-20	09/12/2001	Not collected due to product in the well.						0.15	2.8	<0.035	24	<0.010	83000	16	
MW-21	02/09/1998	8.50	559	8.35	NT	7.05	177.5	NT	NT	<0.1	9.1	0.0110	<1	71.0	Turbidity 422 NTU
MW-22	02/09/1998	8.70	558	7.50	NT	6.86	119.5	NT	NT	<0.1	18.0	0.0130	<1	56.0	Turbidity 1348 NTU

Pentawood Products Site
Natural Attenuation Trend Data
Anuual Groundwater Sampling

Well	Sample Date	Temp. (C)	Specific Cond. (umhos)	DO (mg/L)	DO (%)	pH	ORP (mV)	Nitrate (mg/L)	Dissolved Manganese (mg/L)	Dissolved Iron (mg/L)	Sulfate (mg/L)	Methane (mg/L)	PCP (ug/L)	Chloride (mg/L)	Comment
MW-23	02/27/1998	9.63	270	13.68	122.3	7.93	159.0	NT	NT	<0.1	7.6	0.0566	<1	8.7	Turbidity 58.6 NTU
MW-23	09/11/2001	11.57	322	3.21	28.8	7.46	112.6	<0.13	0.029	<0.035	<8.2	<0.010	0.49	10	
MW-24	02/08/1998	13.80	524	5.35	NT	6.62	80.0	NT	NT	<0.1	5.2	<0.01	<1	19.0	Turbidity 368 NTU
MW-24	04/24/2001	15.30	634	3.67	34.9	6.28	209.2	3.6	0.0	<0.025	12.0	<0.0001	0.1	36.0	Very brown, silty
MW-25	02/09/1998	8.69	808	8.16	NT	6.95	55.0	NT	NT	<0.1	9.9	0.0170	1.0	16.0	Turbidity 1250 NTU
MW-26	04/24/2001	11.24	646	7.73	71.8	7.05	190.2	5.0	<0.015	0.04	10.0	<0.0001	<0.1	22.0	
MW-26	09/10/2001	Parameters not recorded.						3.2	<0.004	0.1	12	<0.010	0.16	30	
PW-01	10/23/1997	11.10	550	5.00	NT	8.92	185.0	7.7	NT	0.00	10.0	0.0195	5.0	48.0	
PZ-03	02/09/1998	7.50	212	11.02	NT	6.91	164.0	NT	NT	NT	NT	NT	<1	NT	Turbidity 1343 NTU

NR - Parameter not Recorded.

NT - Parameter not tested.

Attachment 4

Residential Well Memorandum

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

CH2MHILL

October 31, 2001

Tony Rutter
US EPA Region V
77 W. Jackson Blvd (SR-6J)

Chicago, IL 60604-3590

Subject: Residential Well Samples

Dear Tony:

Attached are the BTEX and napthalene analytical results for the residential well sampling that took place on September 11, 2001, and the pentachlorophenol (PCP) analytical results for the residential well resampling that took place on September 28, 2001. Residential wells RW-01, RW-02, RW-03, and RW-04 were collected and analyzed for BTEX, napthalene and pentachlorophenol on September 11, but the PCP results were compromised due to national events that delayed sample shipment. All residential wells were resampled on September 28 for PCP. All sample results were found to be non-detect for PCP, napthalene and BTEX. The BTEX, and napthalene field blanks were nondetect, and the PCP field blank associated with the September 28 resampling event was nondetect.

EnChem Laboratory in Madison, Wisconsin performed the September 11 sample analyses, and PEL Laboratories of Tampa, Florida performed the September 28 analyses. The sample descriptions are as follows:

LTRA Residential Well Information
Pentawood 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	FG508
RW02	Bud & LaVonne Brethorst	8627 Daniels 70	(715) 349-5237	FG506
RW03	Nelson	Cabin on Engstrom property	Cabin (715) 349-8070	JB 251

			Home in Eau Claire (715) 832-7607	
RW04	Vayne Engstrom	8526 Daniels 70	(715) 349-5212	AN547

The full data packages will be sent the USEPA Region V for validation once the individual who will be validating is identified. If you have any questions or comments please give me a call at 414.272.1052 ext. 386.

Sincerely,

CH2M HILL

Paul Arps
Project Chemist

c: Regina Bayer/MKE
Bill Andrae/MKE

Bill Ellis (formerly Skold)
8713 Daniels 70
(715) 349-5840
WI Well # FG508

1

HERBICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.: 01CB28-53

Lab Name: PEL Laboratories, Inc. Contract: Pentawood

Lab Code: PEL Case No. SAS No: SDG No.: 2109162

Matrix: WATER Lab Sample ID: 210916201 Lab File ID: 16201.D

Sample wt/vol: 1000 Units: ML Date Received: 09/29/01

Concentrated Extract Volume: 10 Date Extracted: 09/29/01

Level:(low/med) LOW Date Analyzed: 09/30/01 Time: 0251

PercentSolids: 0 decanted: Dilution Factor: 1

Extraction: SEPF Station ID: PWP-RW01-0928 Method: 8151

GPC Cleanup: (Y/N) N pH:

Column: XTI-5 & RTX-1701 ID: 0.53 (mm)

CONCENTRATION UNITS: ug/L

CAS NO.	*ANALYTE*	*RESULT*	*Q*
87-86-5	Pentachlorophenol	0.1	U

Higher value of the two columns reported as result

Bud & LaVonne Brethorst
8627 Daniels 70
(715) 349-5237
WI Well ID# F6506

1

HERBICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.: 01CB28-54

Lab Name: PEL Laboratories, Inc. Contract: Pentawood

Lab Code: PEL Case No. SAS No: SDG No.: 2109162

Matrix: WATER Lab Sample ID: 210916202 Lab File ID: 16202.D

Sample wt/vol: 990 Units: ML Date Received: 09/29/01

Concentrated Extract Volume: 10 Date Extracted: 09/29/01

Level:(low/med) LOW Date Analyzed: 09/30/01 Time: 0332

PercentSolids: 0 decanted: Dilution Factor: 1

Extraction: SEPF Station ID: PWP-RW02-0928 Method: 8151

GPC Cleanup: (Y/N) N pH:

Column: XTI-5 & RTX-1701 ID: 0.53 (mm)

CONCENTRATION UNITS: ug/L

CAS NO.	ANALYTE	RESULT	Q
87-86-5	Pentachlorophenol	0.1	U

Higher value of the two columns reported as result

Bud + LaVonne Brethorst
8627 Daniels 70
(715) 349-5237
WI Well # FG605

1

HERBICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.: 01CB28-55

Lab Name: PEL Laboratories, Inc. Contract: Pentawood

Lab Code: PEL Case No. SAS No: SDG No.: 2109162

Matrix: WATER Lab Sample ID 210916203 Lab File ID 16203.D

Sample wt/vol: 995 Units: ML Date Received: 09/29/01

Concentrated Extract Volume: 10 Date Extracted: 09/29/01

Level:(low/med) LOW Date Analyzed: 09/30/01 Time: 0414

PercentSolids: 0 decanted: Dilution Factor: 1

Extraction: SEPF Station ID PWP-RW02-0928 Method: 8151

GPC Cleanup: (Y/N) N pH:

Column: XTI-5 & RTX-1701 ID: 0.53 (mm)

CONCENTRATION UNITS: ug/L

CAS NO.	*ANALYTE*	*RESULT*	*Q*
87-86-5	Pentachlorophenol	0.1	U

Higher value of the two columns reported as result

Nelson
Cabin on Engshom Property
(715) 349-8070
WI Well # JB251

1

HERBICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.: 01CB28-56

Lab Name: PEL Laboratories, Inc. Contract: Pentawood

Lab Code: PEL Case No. SAS No: SDG No.: 2109162

Matrix: WATER Lab Sample ID: 210916204 Lab File ID: 16204.D

Sample wt/vol: 960 Units: ML Date Received: 09/29/01

Concentrated Extract Volume: 10 Date Extracted: 09/29/01

Level:(low/med) LOW Date Analyzed: 09/30/01 Time: 0455

PercentSolids: 0 decanted: Dilution Factor: 1

Extraction: SEPF Station ID: PWP-RW03-0928 Method: 8151

GPC Cleanup: (Y/N) N pH:

Column: XTI-5 & RTX-1701 ID: 0.53 (mm)

CONCENTRATION UNITS: ug/L

CAS NO.	*ANALYTE*	*RESULT*	*Q*
87-86-5	Pentachlorophenol	0.1	U

Higher value of the two columns reported as result

Vayne Engstrom
8520 Daniels 70
(715) 349 - 5212
WI Well # AN547

1

HERBICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.: 01CB28-57

Lab Name: PEL Laboratories, Inc. Contract: Pentawood

Lab Code: PEL Case No. SAS No: SDG No.: 2109162

Matrix: WATER Lab Sample ID: 210916205 Lab File ID: 16205.D

Sample wt/vol: 980 Units: ML Date Received: 09/29/01

Concentrated Extract Volume: 10 Date Extracted: 09/29/01

Level:(low/med) LOW Date Analyzed: 09/30/01 Time: 0537

PercentSolids: 0 decanted: Dilution Factor: 1

Extraction: SEPF Station ID: PWP-RW04-0928 Method: 8151

GPC Cleanup: (Y/N) N pH:

Column: XTI-5 & RTX-1701 ID: 0.53 (mm)

CONCENTRATION UNITS: *ug/L*

CAS NO.	*ANALYTE*	*RESULT*	*Q*
87-86-5	Pentachlorophenol	0.1	U

Higher value of the two columns reported as result

Field Blank

1

HERBICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.: 01CB28-58

Lab Name: PEL Laboratories, Inc. Contract: Pentawood

Lab Code: PEL Case No. SAS No: SDG No.: 2109162

Matrix: WATER Lab Sample ID 210916206 Lab File ID 16206.D

Sample wt/vol: 925 Units: ML Date Received: 09/29/01

Concentrated Extract Volume: 10 Date Extracted: 09/29/01

Level:(low/med) LOW Date Analyzed: 09/30/01 Time: 0618

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID PWP-FB092801 Method: 8151

GPC Cleanup : (Y/N) N pH:

Column: XTI-5 & RTX-1701 ID: 0.53 (mm)

CONCENTRATION UNITS: *ug/L*

CAS NO.	*ANALYTE*	*RESULT*	*Q*
87-86-5	Pentachlorophenol	0.11	U

Higher value of the two columns reported as result

RW-03

Nelson
Cabin on Engstrom Property
(715) 349-8070
WI Well # JB251

- Analytical Report -

Project Name PENTAWOOD
Project Number 01CB28
Field ID : 01CB28-25
Lab Sample Number 913080-030
Lab Project Number 913080

Submitter : CH2M HILL, INC - MILWAUKEE
Report Date : 10/31/01
Collection Date : 9/11/01
Matrix Type : GROUNDWATER
WI DNR LAB ID : 113172950

Semivolatile Organic Results

SPECIAL SEMI-VOLATILE LIST **Prep Method:SW846 3510** **Prep Date:9/18/01**

Analyte	Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Analysis Method
Naphthalene	< 0.28	0.28	0.89		ug/L		9/20/01	SW846 8270C

Volatile Organic Results

BTEX LIST **Prep Method:SW846 5030B**

Analyte	Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Analysis Method
Benzene	< 0.44	0.44	1.4		ug/L		9/25/01	SW846 8260B
Ethylbenzene	< 0.50	0.50	1.6		ug/L		9/25/01	SW846 8260B
Toluene	< 0.40	0.40	1.3		ug/L		9/25/01	SW846 8260B
Xylene, total	< 1.2	1.2	3.8		ug/L		9/25/01	SW846 8260B

RW-04
Vayne Engstrom
8526 Daniels 70
(715) 349-5212
WI Well # AN547

- Analytical Report -

Project Name PENTAWOOD
Project Number 01CB28
Field ID : 01CB28-26
Lab Sample Number 913080-031
Lab Project Number 913080

Submitter : CH2M HILL, INC - MILWAUKEE
Report Date : 10/31/01
Collection Date : 9/11/01
Matrix Type : GROUNDWATER
WI DNR LAB ID : 113172950

Semivolatile Organic Results

SPECIAL SEMI-VOLATILE LIST **Prep Method:SW846 3510** **Prep Date:9/18/01**

Analyte	Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Analysis Method
Naphthalene	< 0.25	0.25	0.80		ug/L		9/20/01	SW846 8270C

Volatile Organic Results

BTEX LIST **Prep Method:SW846 5030B**

Analyte	Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Analysis Method
Benzene	< 0.44	0.44	1.4		ug/L		9/25/01	SW846 8260B
Ethylbenzene	< 0.50	0.50	1.6		ug/L		9/25/01	SW846 8260B
Toluene	< 0.40	0.40	1.3		ug/L		9/25/01	SW846 8260B
Xylene, total	< 1.2	1.2	3.8		ug/L		9/25/01	SW846 8260B

RW-01
Bill Ellis (formerly Stel
8713 Daniels 70
(715) 349-5840
WI Well # F6508

- Analytical Report -

Project Name PENTAWOOD
Project Number 01CB28
Field ID : 01CB28-27
Lab Sample Number 913080-032
Lab Project Number 913080

Submitter : CH2M HILL, INC - MILWAUKEE
Report Date : 10/31/01
Collection Date : 9/11/01
Matrix Type : GROUNDWATER
WI DNR LAB ID : 113172950

Semivolatile Organic Results

SPECIAL SEMI-VOLATILE LIST **Prep Method:SW846 3510** **Prep Date:9/18/01**

Analyte	Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Analysis Method
Naphthalene	< 0.26	0.26	0.83		ug/L		9/20/01	SW846 8270C

Volatile Organic Results

BTEX LIST **Prep Method:SW846 5030B**

Analyte	Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Analysis Method
Benzene	< 0.44	0.44	1.4		ug/L		9/25/01	SW846 8260B
Ethylbenzene	< 0.50	0.50	1.6		ug/L		9/25/01	SW846 8260B
Toluene	< 0.40	0.40	1.3		ug/L		9/25/01	SW846 8260B
Xylene, total	< 1.2	1.2	3.8		ug/L		9/25/01	SW846 8260B

RW-02
Bud & LaVonne Brethorst
8627 Daniels 70
(715) 349-5237
WI Well ID# F6506

- Analytical Report -

Project Name PENTAWOOD
Project Number 01CB28
Field ID : 01CB28-28
Lab Sample Number 913080-033
Lab Project Number 913080

Submitter : CH2M HILL, INC - MILWAUKEE
Report Date : 10/31/01
Collection Date : 9/11/01
Matrix Type : GROUNDWATER
WI DNR LAB ID : 113172950

Semivolatile Organic Results

SPECIAL SEMI-VOLATILE LIST **Prep Method:SW846 3510** **Prep Date:9/18/01**

Analyte	Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Analysis Method
Naphthalene	< 0.25	0.25	0.80		ug/L		9/20/01	SW846-8270C

Volatile Organic Results

BTEX LIST **Prep Method:SW846 5030B**

Analyte	Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Analysis Method
Benzene	< 0.44	0.44	1.4		ug/L		9/25/01	SW846 8260B
Ethylbenzene	< 0.50	0.50	1.6		ug/L		9/25/01	SW846 8260B
Toluene	< 0.40	0.40	1.3		ug/L		9/25/01	SW846 8260B
Xylene, total	< 1.2	1.2	3.8		ug/L		9/25/01	SW846 8260B

Attachment 5

Extraction Well Operation

Treatment System PCP Results

Table 1

Summary of Influent and Effluent PCP Concentrations

PentaWood GW Treatment System

Date	PCP Concentration (ug/L)		Flow Rate (gpm)	Product Recovery Well System Status	Well Operating Status								Operations Comment	Performance Observations
	Influent (taken before oil adsorbing bag filter)	GAC 2 Effluent			EW-02	EW-03	EW-04	EW-05	EW-06	EW-07	EW-10	EW-11		
09/27/2000	12,800	8.1	120	On	On	On	On	On	On	On	On	On		
10/02/2000	12,200	6.0	110	On	On	On	On	On	On	On	On	On	Start Up Period	
10/12/2000		4.1	110	On	On	On	On	On	On	On	On	On	Start Up Period	
10/19/2000	9,700	6.7	110	On	On	On	On	On	On	On	On	On	Start Up Period	
10/22/2000		5.8	110	On	On	On	On	On	On	On	On	On	Start Up Period	
11/01/2000	29,800	5.0	70	On	On	On	Off	Off	On	On	Off	Off		
11/06/2000		4.8	70	On	On	On	Off	Off	On	On	Off	Off	System shutdown from 11/10/2000 until 11/17/2001	
11/21/2000		4.6	110	On	On	On	On	On	On	On	Off	Off	Clay media bed exchanged on 11/16/2000	
11/28/2000		14.0	110	On	On	On	On	On	On	On	Off	Off		
12/05/2000	1,320	180.0	110	On	On	On	On	On	On	On	Off	Off		Breakthrough?
12/11/2000		4.8	70	On	On	On	On	Off	Off	On	Off	Off		
12/18/2000	9,390	6.8	70	On	On	On	On	Off	Off	On	Off	Off		
12/18/2000													System shut down	
01/08/2001													Clay media and carbon (both vessels) were changed during week of January 8, 2001.	
02/02/2001													System re-started	
02/02/2001		0.1	60	On	On	On	On	On	On	On	Off	Off		
02/03/2001		1.6	60	On	On	On	On	On	On	On	Off	Off		
02/05/2001		1.9	60	On	On	On	On	On	On	On	Off	Off		
02/06/2001		2.5	60	On	On	On	On	On	On	On	Off	Off		
02/07/2001		2.3	60	On	On	On	On	On	On	On	Off	Off		
02/08/2001		2.3	60	On	On	On	On	On	On	On	Off	Off		
02/08/2001													System shut down because of rapid buildup of excessive fouling in the organo-clay that was causing excessive head loss. Also had significant problems with the oil adsorbing (oily material which had to come from the GW extraction wells).	
03/16/2001													Decision made to not run the product pumps any longer to feed the GW treatment system	
03/16/2001					On	On	On	On	On	On	Off	Off	System re-started	
03/16/2001	9,710	2.3	60		On	On	On	On	On	On	Off	Off		
03/19/2001		2.0	60		On	On	On	On	On	On	Off	Off		
03/20/2001	10,000	2.3	60		On	On	On	On	On	On	Off	Off		
03/22/2001		3.1	65		On	On	On	On	On	On	Off	Off		
03/23/2001	9,050	2.1	103		On	On	On	On	On	On	Off	Off		
03/26/2001	10,900	18.0	120		On	On	On	On	On	On	On	Off	Well No. 10 Started	Significant degradation of performance begins quickly with higher flows
03/27/2001	11,500	28.0	120		On	On	On	On	On	On	On	Off		
03/29/2001	11,700	178.0	120		On	On	On	On	On	On	On	Off		Breakthrough?
04/02/2001	9,190	3.2	119		On	On	On	On	On	On	On	Off	Oil bag filters changed	
04/04/2001	10,200	2.3	119		On	On	On	On	On	On	On	Off		
04/10/2001		4.7	117		On	On	On	On	On	On	On	Off		
04/17/2001		0.8	38		On	On	On	On	Off	On	Off	Off	Well No. 10 Stopped on April 11, 2001	
04/24/2001	14,100	1.3	40		On	On	On	On	Off	On	Off	Off		
05/02/2001		0.6	38		Off	On	On	Off	Off	On	Off	On		

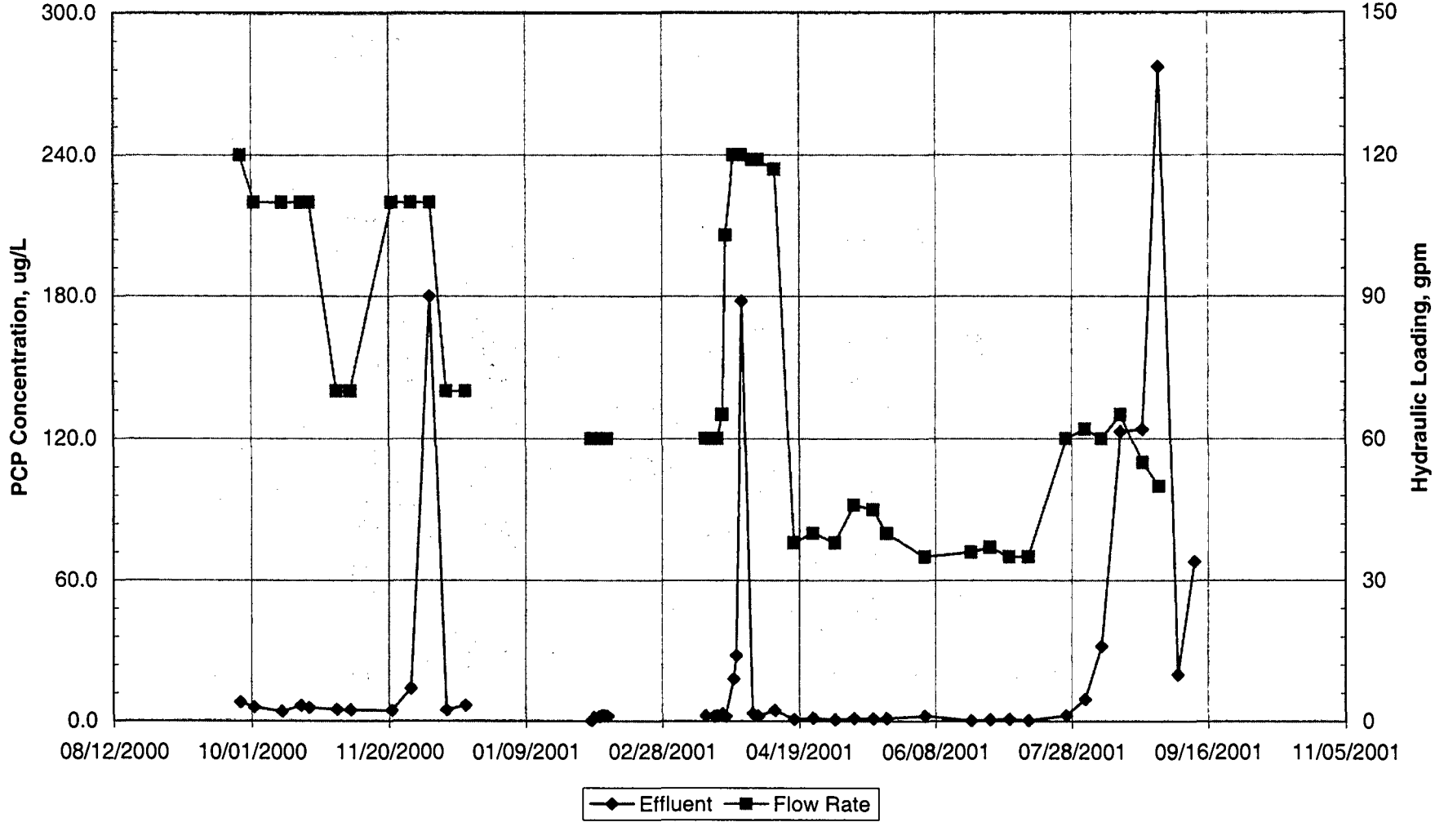
Table 1

Summary of Influent and Effluent PCP Concentrations

PentaWood GW Treatment System

Date	PCP Concentration (ug/L)		Flow Rate (gpm)	Product Recovery Well System Status	Well Operating Status								Operations Comment	Performance Observations
	Influent (taken before oil adsorbing bag filter)	GAC 2 Effluent			EW-02	EW-03	EW-04	EW-05	EW-06	EW-07	EW-10	EW-11		
05/09/2001		1.2	46		On	On	On	Off	Off	On	Off	On		
05/16/2001		1.1	45		On	On	On	Off	Off	On	Off	On		
05/21/2001	7,210	1.2	40		Off	On	On	Off	Off	On	Off	On		
06/04/2001		2.2	35		On	Off	On	Off	Off	On	Off	On		
06/21/2001		0.2	36		On	Off	On	Off	Off	On	Off	On	System down 6/10 to 6/15	
06/28/2001	8,860	0.7	37		On	Off	On	Off	Off	On	Off	On		
07/05/2001		0.9	35		On	Off	On	Off	Off	On	Off	On		
07/12/2001		0.3	35		On	Off	On	Off	Off	On	Off	On	Clay media was changed on July 24, 2001	
07/26/2001		2.5	60		On	On	On	Off	On	On	Off	On		
08/02/2001		9.4	62		On	On	On	Off	On	On	Off	On		
08/08/2001	9,910	32.0	60		On	On	On	Off	On	On	Off	On		
08/15/2001		123.0	65		On	On	On	Off	On	On	Off	On	Jar testing conducted this week with EW-10 and COW periodically operating.	
08/23/2001		124.0	55		On	On	On	Off	On	On	Off	On		
08/29/2001	5,170	277.0	50		On	On	On	Off	On	On	Off	On		
09/05/2001		20.0			On	Off	On	Off	Off	On	Off	On		
09/11/2001	6,200	68.0			On	Off	On	Off	Off	On	Off	On		
09/27/2001													System shut down	

Comparison of Effluent PCP Concentrations With System Hydraulic Loading



Comparison of Influent and Effluent PCP Concentrations