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May 24, 2002

Reference No. 3978

Mr. Jeff Gore
UNITED STATES ENVIRONMENTAL
PROTECTION AGENCY
77 West Jackson
Chicago, Illinois 60604

Ms. Eileen Kramer
WISCONSIN DEPARTMENT OF
NATURAL RESOURCES
1300 W. Clairemont, Box 4001
Eau Claire, Wisconsin 54702

Dear Mr. Gore and Ms. Kramer:

Re: 2001 Annual Monitoring Report
Wausau Water Supply NPL Site

On behalf of the Wausau Water Supply PRP Group, CRA submits the 2001 Annual Monitoring Report for the Wausau Water Supply NPL Site. This Report has been prepared as required by the Groundwater Monitoring Plan for the Wausau Water Supply NPL Site.

Please call me at 651-639-0913 if you have any questions or comments.

Sincerely,

CONESTOGA-ROVERS & ASSOCIATES

Jason Twaddle

JT/jla/21
Enc.

c.c.: Dave Erickson; City of Wausau
Wally Mattson; Marathon Electric
Jim Cherwinka: Wausau Chemical
Chuck Ahrens; CRA (w/o enc.)

2001 ANNUAL MONITORING REPORT

WAUSAU WATER SUPPLY NPL SITE
WAUSAU, WISCONSIN

2001 ANNUAL MONITORING REPORT

WAUSAU WATER SUPPLY NPL SITE
WAUSAU, WISCONSIN

Prepared by:
Conestoga-Rovers & Associates

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MAY 2002
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1.0 INTRODUCTION

Conestoga-Rovers & Associates (CRA) has prepared this 2001 Annual Monitoring Report (Report) for the Wausau Water Supply NPL Site (Site) in Wausau, Wisconsin, on behalf of the Wausau Potential Responsible Party (PRP) Group. This Report presents the results of groundwater and extraction well monitoring at the Site during 2001. This Report also presents operational data for the remediation systems.

1.1 HISTORY

The Wausau PRP Group initiated remedial action at the Site in the early 1990s in accordance with the September 29, 1990, Record of Decision (ROD) and the Consent Decree (CD) entered with the court on January 24, 1991. The final remedial action at the Site consisted of two soil vapor extraction (SVE) systems to address the source areas and groundwater extraction and treatment utilizing existing municipal production wells and an extraction well. Figure 1.1 provides the Site location and Figure 1.2 provides a Site plan.

Source area remediation was accomplished by the installation of SVE Systems at Marathon Electric (West Bank) and Wausau Chemical (East Bank) in January 1994. The SVE system at Marathon Electric operated until April 1996, when the West Bank source remediation was approved as complete. The East Bank SVE system was modified in 1996 and continued to operate. In January 2001 the East Bank system was shut down while evaluation for final closure occurred. Off-gas treatment was provided by vapor phase carbon.

Groundwater remediation is provided through two existing municipal production wells (CW3 and CW6) and one extraction well installed at Marathon Electric (EW1). Air strippers at the Wausau water treatment plant treat water from the municipal supply wells. Water from EW1 is also treated by air stripping (over rip rap on the river bank) before being discharged to the Wisconsin River.

The pumping rates for the three extraction wells were originally defined in the CD. In the Groundwater Flow Model report (CRA, May 1993), CRA established a range of pumping rates that would maintain capture of the groundwater plume. Then, in an August 4, 1995, letter, the United States Environmental Protection Agency (USEPA) approved the optimum pumping configuration range from that report for the three extraction wells. Those pumping rates are:

- CW3: 65 hours per week at 1,200 gallons per minute (gpm) to 100 hours per week at 1,100 gpm.
- CW6: 85 hours to 100 hours per week at 1,400 gpm.
- EW1: 800 to 900 gpm continuously.

Additional groundwater remediation was provided by an extraction system operated by Wausau Chemical between 1985 and 1996 as an interim remediation measure. The extraction system at Wausau Chemical consisted of a series of shallow wells at the south end of the Wausau Chemical property. Groundwater was treated by air stripping. This system was not part of the ROD or the CD and operation ceased in 1996.

Historically, groundwater monitoring was conducted according to the Monitoring Program Plan (CRA, 1994). The Monitoring Program Plan consisted of a complex system of monthly, quarterly, semiannual, and annual monitoring. In June 2000, the Groundwater Monitoring Plan replaced the Monitoring Program Plan as the approved groundwater-monitoring program. The Groundwater Monitoring Plan consists of annual monitoring well sampling and quarterly sampling of EW1.

The Groundwater Monitoring Plan requires an annual report on the activities occurring the previous calendar year. This Report fulfills that requirement.

1.2 BACKGROUND

Groundwater monitoring at this Site is a combination of hydraulic and water quality monitoring designed to verify that the groundwater extraction wells are containing the contaminant plume and that groundwater quality is improving because of source remediation and VOC removal from the aquifer.

Groundwater remediation at a site like Wausau is a long-term process that cannot be readily measured on a short-term basis using water quality data alone. Because of the time necessary to achieve groundwater remediation, containment of contaminated groundwater is the primary measurable and achievable short-term objective.

Actual remediation of the groundwater is a slower process that is more difficult to measure using field data on a short-term basis. Accordingly, water quality data is measured periodically on a long-term basis to show the downward trend of VOC concentrations in groundwater. Significant VOC reductions are measured over a period of years.

For the purpose of evaluation, groundwater monitoring at Wausau has been divided into two areas, the East Bank and the West Bank of the Wisconsin River, corresponding to the two original source areas. The river forms a natural hydraulic division of the Site. There are three active groundwater extraction wells designed to contain and remove VOC contaminated groundwater. Two of the extraction wells are on the West Bank, CW6 and EW1, and one is on the East Bank, CW3 (Figure 1.2).

1.3 SITE GEOLOGY

The Site is underlain by glacial outwash and alluvial sediments, which have filled in the preglacial stream valley in which the Wisconsin River now follows. This alluvial aquifer ranges from 0 to 160 feet thick and has an irregular base and lateral boundaries. The relatively impermeable bedrock that underlies the aquifer and forms its lateral boundaries within the preglacial valley defines the boundaries of the aquifer. Five production wells in the Site area provide drinking water for the City of Wausau. These wells are screened in the glacial outwash and alluvial sand and gravel deposits that underlie and are adjacent to the Wisconsin River.

1.4 GROUNDWATER CLEANUP STANDARDS

The Groundwater Monitoring Plan was developed to monitor compliance with cleanup standards for the groundwater at the Site. The groundwater cleanup standards for the Site are the USEPA maximum drinking water contaminant levels (MCLs). The MCLs for the primary VOC contaminants of concern at the Site are:

- Trichloroethylene (TCE) 5 μg/L
- Tetrachloroethylene (PCE) 5 μg/L
- cis-1,2-Dichloroethylene (DCE) 70 μg/L

2.0 2001 MONITORING RESULTS

Groundwater monitoring, which included water level measurements and water sampling, was conducted in October in accordance with the Groundwater Monitoring Plan. Additional water level measurements were taken in November on the West Bank

2.1 WATER LEVEL MONITORING

Table 2.1 presents the groundwater elevation data collected on October 16, and November 7, 2001. Water table contours based on the October 16, 2001, measurements are presented on Figure 2.1. EW1 was not operating on October 16; therefore, water levels in the West Bank monitoring wells were measured again on November 7, 2001, to measure the effect of pumping EW1. Water table contours based on the November 7, 2001, measurements are presented on Figure 2.2.

The East Bank and West Bank contours are consistent with flow patterns observed in previous years. The flow patterns are controlled by the operation of EW1 and the City production wells. Under natural conditions, groundwater would flow toward and discharge to the Wisconsin River and its tributary, Bos Creek. Under existing conditions however, groundwater flows toward EW1 and the production wells. The operation of EW1 has created groundwater flow divides between the west and east City well fields and has isolated the former landfill source of contaminated groundwater from the production wells.

2.2 GROUNDWATER SAMPLING

Annual groundwater samples were collected in October according to the Groundwater Monitoring Plan. Monitoring well samples were analyzed by EPA Method 8260 for the Site specific VOC list presented in Table 2.2. In addition, two well samples (C4S and W53A) were analyzed by EPA Method 8270 for bis(2-ethylhexyl) phthalate as required.

Groundwater sampling was conducted according to the Quality Assurance Project Plan (QAPP), February 1994, as amended by a June 11, 1999, letter to the USEPA. All samples were analyzed by Severn Trent Laboratories (STL) in North Canton, Ohio. Laboratory results are being submitted electronically in the Region V Electronic Data Deliverable (EDD) format for inclusion in the Region V EPA database. Copies of Data Quality Validation memorandums for the 2001 data are included in Appendix A

2.3 EXTRACTION WELL EW1 SAMPLING

The monitoring program for EW1 was designed to measure long term water quality improvement in the groundwater and to measure the treatment of the groundwater extracted by EW1. This data is also used to measure the contaminant levels discharged to the Wisconsin River from the EW1 treatment system. The discharge should meet the substance of the requirements of the Wisconsin Pollutant Discharge Elimination System (WPDES).

Influent and Effluent samples were collected from EW1 quarterly in January, July, and October according to the Groundwater Monitoring Plan. Both the influent and effluent samples were analyzed by EPA Method 8260 for the Site specific VOCs (Table 2.2). Quarterly samples were not collected in April because EW1 was shut down for most of the second quarter of 2001 for maintenance as discussed in Section 3.1.

All samples were analyzed by Severn Trent Laboratories (STL) in North Canton, Ohio. Laboratory results are being submitted electronically in the Region V EDD format for inclusion in the Region V EPA database. Copies of the Data Quality Validation memorandums for the 2001 data are included in Appendix A.

3.0 OPERATION AND MAINTENANCE

Operation and maintenance activities reported in this section cover EW1, the city production wells, the groundwater monitoring wells and, the East Bank SVE system.

3.1 EXTRACTION WELL (EW1)

The extraction well (EW1) on the West Bank at Marathon Electric underwent significant maintenance and repairs in 2001 that caused the pump to be shut down for an extended period of time. During the second half of 2000 and early 2001, EW1 pumping rates declined, such that optimum pumping rates were not being maintained.

To improve the pumping rates, Marathon Electric scheduled a contractor to clean the well screen. Initially the well screen was cleaned by sonic blasting. However, the maximum flow rate achieved after restarting the pump was not much greater than it had been before sonic blasting. The well screen was then acid cleaned, also without resulting in a significantly higher flow rate. While the pump was shut off to clean the well screen, Marathon Electric had additional maintenance completed. That maintenance included replacing the drive shaft and other pump parts and replacing the pipe that draws water from the well.

The pump was shut off for most of the period from March 26, to June 12, 2001, to complete the sonic blasting and acid cleaning procedures and the other maintenance items. Because the pump still did not appear to be operating at optimum capacity, the pump was shut down for four more days later in June to test the flow meter for accuracy. The contractor testing the flow meter found that the meter was operating properly.

After the pump was restarted in June, it continued to operate at less than optimum capacity until October. On October 3, the system was shut down briefly to clean the flow meter and discharge screen, with little effect on flow rate. Then on October 12, the system was unintentionally shut down when an electrical problem at the facility caused the pump to shut off. The fact the pump was off went undetected for several days. The pump was restarted on October 25.

Since then, the pump has operated much more efficiently. During the last two months of 2001, the average flow rates were over 900 gallons per minute. The cause of the improved pumping rates is unknown. However, a valid assumption is that the pump inlet had been partially blocked by sediment, possibly sediment created by cleaning the

well screen, and the action of turning the pump off and on caused that material to dislodge from the pump inlet.

Since October, procedures have been put in place so that the pump will be restarted in a more timely manner if it shuts down in the future. An alarm system has been repaired that sounds when the pump shuts off. In addition, personnel in the Engineering Laboratory, the area of the facility that supplies power to the pump, have been instructed to notify the plant's Environmental Engineer about future power failures.

Table 3.1 summarizes EW1 operational data for 2001, including the number of gallons pumped and flow rate. A total of 308,186,000 gallons of water were extracted and treated during the year, which calculates to an average flow rate of 596 gallons per minute over the entire year. However, the flow rate averaged 810 gallons per minute while EW1 was operating. Total down time for 2001 was approximately 91 days.

3.2 CITY PRODUCTION WELLS

The City of Wausau also completed some maintenance on their production wells in 2001. CW3 was shut down for maintenance for approximately a month, from January 3 to February 8. CW7, not part of the remediation system, was shut down from March 28 to June 11 for maintenance.

The number of hours and the number of gallons pumped for each well is presented in Table 3.2. While only CW3 and CW6 are part of the remediation system, data for all five City wells is presented on the table, as has been done historically.

3.3 EAST BANK SVE SYSTEM

The East Bank SVE system (at Wausau Chemical) was shut off on January 10, 2001, because of inefficient removal rates. In November 2001 soil samples were collected from two "hot spots" identified by the closure soil-sampling event in November 1996. Details of the results and a discussion of that soil sample event are reported in a separate letter report.

The letter reported concentrations of chlorinated VOCs from the two "hot spots" of approximately 1 mg/kg, more than an order of magnitude lower in 2001 than they were in 1996. Based on the soil sample results, a statistical analysis, and continued decrease in the groundwater VOC concentrations (as reported in Section 4.2 of this report), the letter

report recommended permanent closure of the East Bank source area remediation system. Final action on that recommendation is pending.

3.4 MONITORING WELL MAINTENANCE

Several monitoring wells were repaired in 2001. In August, repairs such as replacing flush mounts and outer casings and installing protective bollards were completed. In addition, three monitoring wells were abandoned. In October the repaired bladder pumps were reinstalled in selected monitoring wells and new identification tags were placed on wells.

The following wells were repaired as indicated:

East Bank

- E22 — flush mount replaced
- E28A — flush mount replaced
- FVD5 — three protective bollards installed
- GM6D — two protective bollards installed
- WC4/WC4A — four protective bollards installed
- WC4A — outer casing replaced
- WC5/WC5A — four protective bollards installed, cement replaced around outer casing

West Bank

- WW6 — two protective bollards installed
- C2S — two protective bollards installed, outer casing replaced, annulus space backfilled with bentonite
- C3S — outer casing replaced, annulus space backfilled with bentonite
- C4S — outer casing replaced
- W50 — outer casing replaced, annulus space backfilled with bentonite
- W53 — flush mount replaced
- W53A — flush mount replaced
- W54 — flush mount replaced, annulus space backfilled with bentonite
- WSWS — outer casing replaced

At wells where outer casings were replaced, the original intent was just to replace the cement pads that held the protective casings in place. However, field personnel discovered that the reason these outer casing were loose was that the outer casings were set less than one foot into the ground. Therefore the outer casing was replaced with a longer casing (seven feet) that could be set deeper and more firmly into the ground and a new cement pad was poured around the casing.

During the repair work, field personnel found four wells (listed above) that were missing backfill in the annulus space between the well casing and the side of the borehole. Granular bentonite was placed in the annulus space to fill this void.

The bladder pumps that were removed from the eleven monitoring wells in 2000 were repaired and reinstalled during the annual monitoring event in October 2001. Bladder pumps were installed in the following monitoring wells: IWD, MW10A, C2S, MW1A, R2D, R4D, W52, W53A, W54, W55, WSWD. Most of these wells are over 100 feet deep and the bladder pumps make it easier to sample them.

Also, new labels were affixed to the monitoring wells during the October annual monitoring event. Well names were stamped onto stainless steel plates that were attached to the outside of the outer well casing with hose clamps. Flush mount wells were labeled by writing the well name onto the inner well cap with a permanent marker.

Three monitoring wells, FVD7, IWS, and IWD, were abandoned in August 2001. These three wells were recommended for abandonment in the Groundwater Monitoring Plan because they are no longer part of the monitoring program. They were not abandoned in 2000 with the rest of the wells abandoned at that time because field personnel could not locate FVD7 and could not access IWS and IWD (on the island) because of high river levels.

STS of Schofield, Wisconsin, abandoned the three monitoring wells and did the repair work completed in August 2001. Abandonment logs are included in Appendix B.

4.0 EVALUATION OF GROUNDWATER DATA

The objectives of groundwater monitoring at the Wausau Site are to monitor the containment of the contaminant plume and the long-term improvement in groundwater quality.

Table 4.1 presents the laboratory results for monitoring well samples collected during 2001. The data indicate that, in general, the plume size continues to decrease. Total chlorinated VOC data, included in Table 4.1 and presented on Figure 4.1, illustrates the plume configuration based on the October 2001 data.

4.1 WEST BANK

The primary VOC found on the West Bank is trichloroethene (TCE). The degradation product cis-1,2-dichloroethene (C12DCE) was detected at a few locations with relatively low concentrations. Vinyl chloride was detected in one well on the West Bank.

Most of the monitoring wells on the West Bank had lower total CVOC concentrations in 2001 than in 2000. The only three wells that had slightly higher concentrations all had total CVOC concentrations less than 3 μg/l.

The total CVOC concentration in City production well CW6 decreased from 14 μg/l to 12μg/l. More importantly the total CVOC concentration in W55 decreased from 11μg/l to 6.4μg/l, reducing the plume concentrations within the radius of influence of CW6 (Figure 4.1). Based on the consistent decrease in contaminant concentrations in this area of the West Bank plume, the West Bank plume may separate into two plumes within a few years, one associated with CW6 and the other associated EW1.

The highest concentrations of total CVOCs are on the north side of EW1's radius of influence. As discussed in the 2000 Annual Monitoring Report, the high concentration of total CVOCs in R3D is probably due to a slug of VOCs that began near the flow divide between EW1 and CW6, and thus were initially moving very slowly towards EW1. An analysis of total CVOC concentrations for R2D and R3D supports this conclusion. Historical data for these two wells is shown below:

	Total CVOCs (µg/l)	
Year	*R2D*	*R3D*
1993	3635	4
1994	2130	11
1995	152	5
1996	1600	2
1997	720	5
1998	320	580
1999	110	1200
2000	45	1800
2001	17	1500

As the data shows, the total CVOC concentration at R2D, which is near the flow divide between EW1 and CW6, has decreased each year since 1993 (1995 appears to be an anomaly). Conversely, the total CVOC concentrations at R3D didn't begin increasing until 1998, supporting the hypothesis of very slow initial contaminant movement, but has increased dramatically since then. This data emphasizes the effectiveness of EW1 in capturing the contaminant plume.

If these trends continue, as we should expect they will, total CVOC concentrations in the monitoring wells between R3D and EW1 should begin to increase in the next few years as concentrations decrease in R3D (see Figure 4.1). The dramatic decrease in contaminant concentrations at R2D also supports the hypothesis that the West Bank plume may separate into two plumes sometime in the next few years, one associated with each extraction well.

The semi-volatile bis(2-ethylhexyl)phthalate was not detected in either of the two wells (W53A and C4S) that were analyzed for bis(2-ethylhexyl)phthalate.

4.2 EAST BANK

Tetrachloroethene and it's degradation products, TCE, C12DCE, and vinyl chloride are the primary contaminants on the East Bank, with C12DCE generally at higher concentrations. The substantial presence of C12DCE and vinyl chloride indicate that natural attenuation of the plume is occurring on the East Bank.

Most of the monitoring wells on the East Bank had lower total CVOC concentrations in 2001 than in 2000. While the overall size of the East Bank plume only decreased slightly,

total CVOC concentrations within the plume continued to decrease significantly. The only four wells with total CVOC concentrations over 15μg/l in 2000 (WC5A, E24A, E23A, and E37A) decreased from a range of 50 μg/l – 78 μg/l in 2000 to a range of 10 μg/l – 27 μg/l in 2001.

In 2001, the only well on the East Bank with total CVOC concentration greater than 27 μg/l was E22A, with a concentration of 74 μg/l. The total CVOC concentration at E22A increased from 14 μg/l in 2000, probably because of migration from WC5A towards the City production well CW3 (see Figure 4.1).

The data indicate that CW3 continues to effectively capture the East Bank plume. The data also supports the conclusion that there is negligible or no leaching from the soil to the groundwater at the East Bank source area. This conclusion was detailed in the March 8, 2002, letter report from CRA to the USEPA requesting permanent closure of the East Bank source area remediation system.

The concentrations of benzene, toluene, ethylbenzene, and xylenes (BTEX) at monitoring well FVD5 were consistent with historical data.

4.3 EW1

The influent and effluent laboratory results for EW1 are presented in Table 4.2. TCE was the primary VOC detected. C12DCE and chloroform were detected in samples from each sampling event, but their concentrations were generally less than 1 μg/L.

Influent concentrations of TCE decreased from 18 μg/ l in January to 16 μg/l in October. The effluent concentrations indicate that the EW1 treatment system removes approximately 50 percent of the VOCs in the extracted groundwater.

The results of the effluent samples were compared to surface water discharge limits for discharge to the Wisconsin River as calculated by the WDNR before EW1 was constructed. Those discharge limits were presented in the Remedial Action Plan, Groundwater Extraction, Treatment, and Discharge System, Marathon Electric Manufacturing Co., Wausau, Wisconsin. None of the discharge limits were exceeded during 2001. Results of quarterly EW1 influent and effluent sampling are also reported quarterly for the purpose of the WPDES.

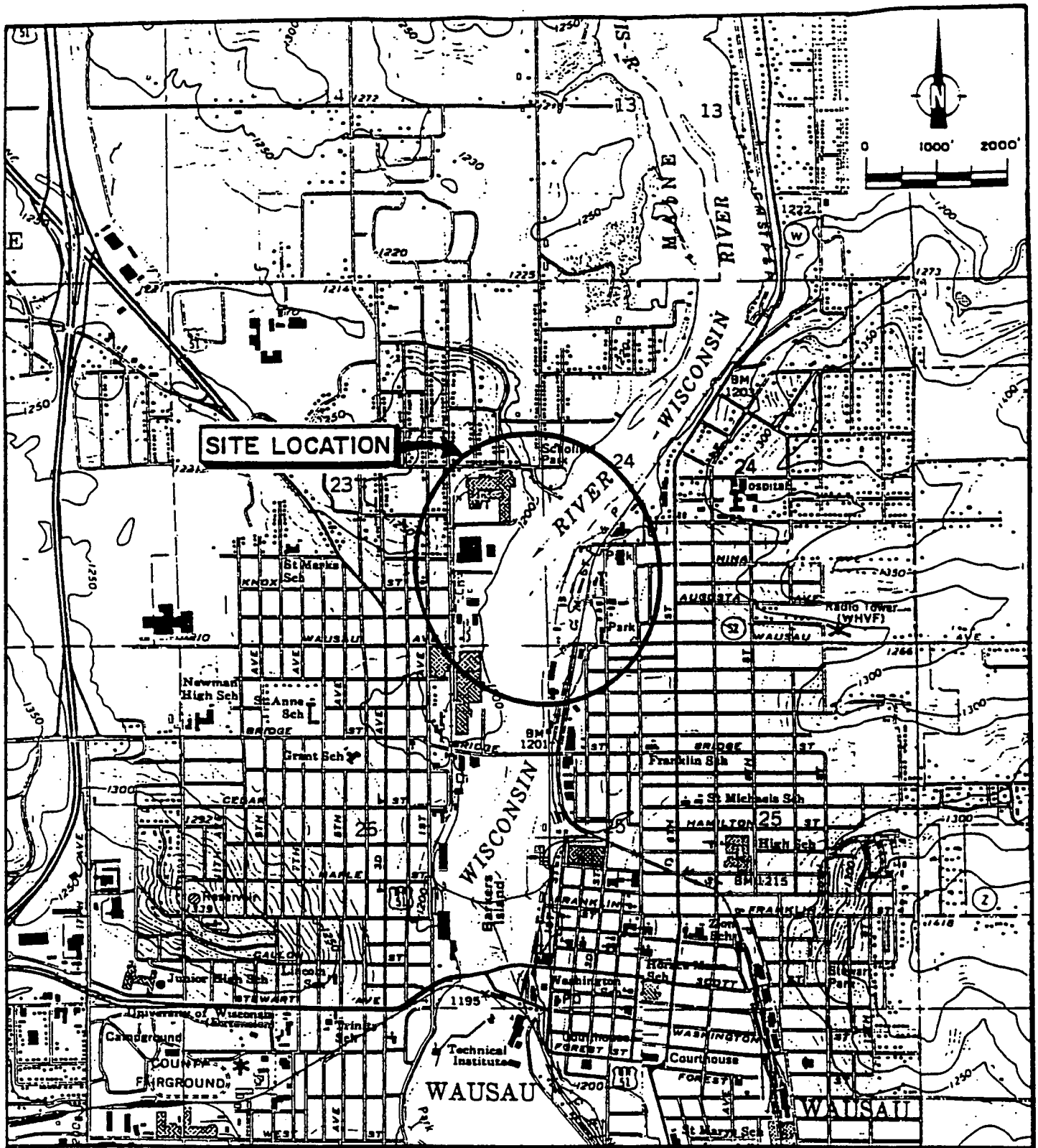
4.4 HYDRAULIC CAPTURE

Horizontal and vertical capture of the contaminant plume is demonstrated on Figures 2.1 and 2.2. The water table contours indicate that groundwater flow in the contaminated portions of the Site is toward the three extraction wells - CW3, CW6, and EW1, which is supported by the analytical data as discussed in Sections 4.1 and 4.2. At nested well locations, the water table elevations for shallow and deep wells are similar, indicating horizontal flow and hydraulic containment of the shallow and deeper portions of the aquifer. Although EW1 was not operating for nearly three months during 2001, the plume configuration presented on Figure 4.1 indicates that hydraulic containment of the contaminants has been maintained.

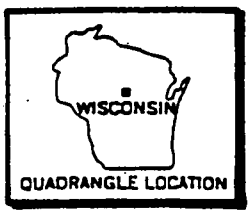
5.0 CONCLUSIONS AND RECOMMENDATIONS

- The Marathon Electric extraction well (EW1) and the two City production wells (CW3 and CW6) continue to capture the CVOC plume as evidenced by analysis of the hydraulic data and the chemical data.
- The East Bank CVOC plume shrank slightly in size, while the concentrations within the plume decreased significantly. The highest CVOC concentration within the plume (74 μg/l) migrated away from the original source area and towards CW3.
- In support of permanent closure of the East Bank soil remediation system, there is little or no continued contribution of contaminants to the groundwater from the East Bank source area soils.
- The East Bank SVE system was shut off on January 10, 2001. "Hot spot" soil samples were collected in November 2001. A separate letter report recommends permanent closure of the East Bank source area remediation system.
- Total CVOC concentrations on the West Bank continued to decrease as the plume generally continued to shrink. The high concentration slug of CVOCs documented in previous reports continued to move towards EW1. There is evidence that the West Bank plume may separate into two separate plumes sometime in the next few years, one associated with EW1 and a secondary plume associated with CW6.
- The shut down of EW1 for repairs for nearly 3 months in 2001 did not appear to have an adverse effect on capture of the West Bank Plume.
- EW1 was shut down for 91 days during 2001 for maintenance and repairs to the pump and well. The well screen was cleaned by sonic blasting and then acid cleaning in order to improve the pumping rate. Eventually the pumping rate improved after an unintentional 13-day shut down in October. The pump inlet probably became unblocked during the off and on cycle causing the pumping rate to improve.
- EW1 removed a total of 308,186,000 gallons of water in 2001 at a pumping rate of 596 gallons per minute averaged over the entire year. The pumping rate was approximately 810 gallons per minute while EW1 was operational.
- The EW1 treatment system removed approximately 50% of the VOCs from the extracted groundwater. The effluent concentrations from the treatment system were well below the discharge limits.
- The City production wells operated as scheduled except for approximately one month in January when CW3 was shut down for maintenance.
- Significant monitoring well maintenance was completed in 2001 to provide additional protection for those monitoring wells. New labels were also placed on all monitoring wells.

- Monitoring in 2001 should continue as described in the Groundwater Monitoring Plan with slight modifications (WC2 and W51A were eliminated because of abandonment as described in the 2000 Annual Monitoring Report).



SOURCE: U.S.G.S. WAUSAU WEST QUADRANGLE MAP.

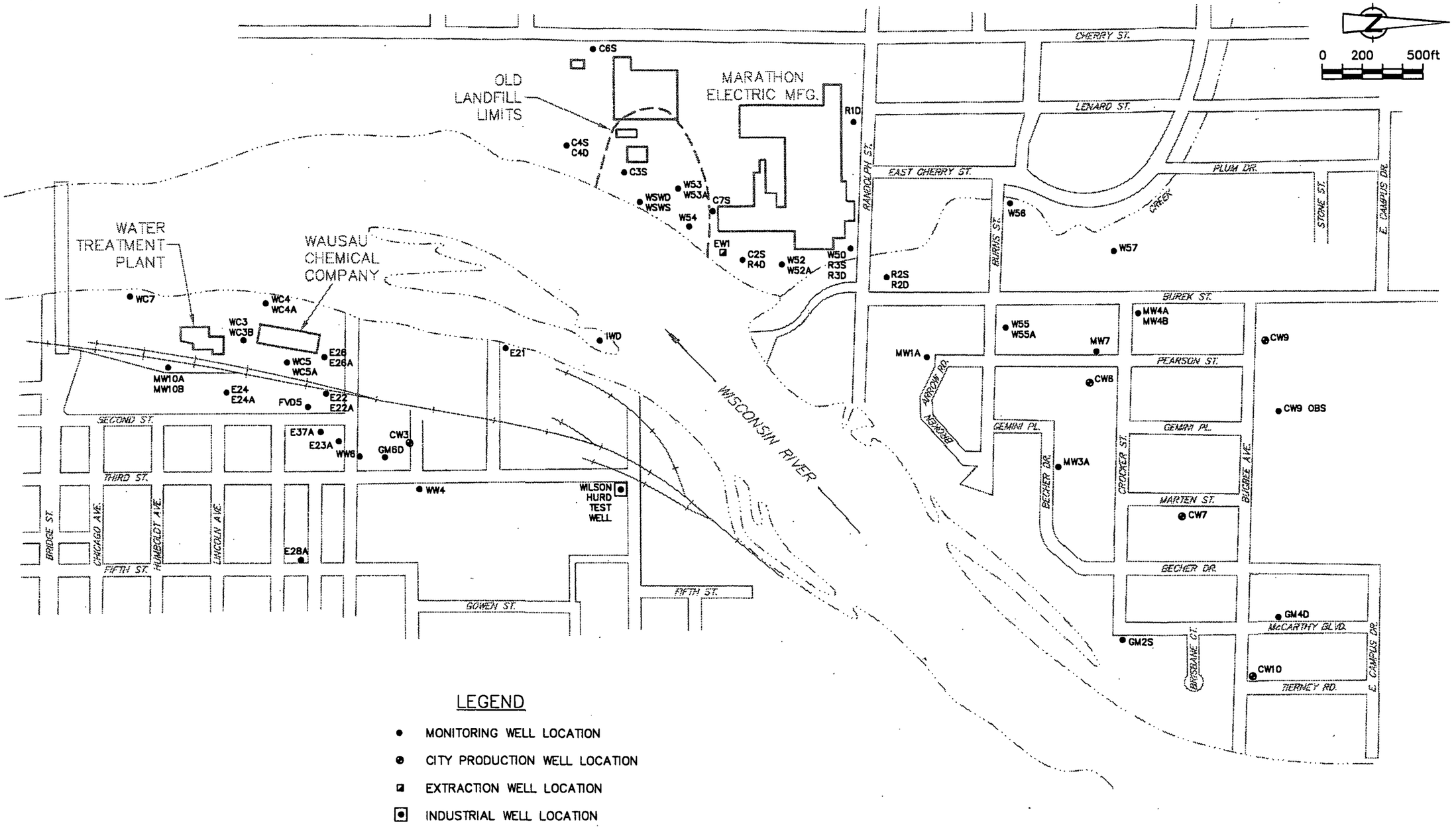


CRA

figure 1.1

SITE LOCATION
WAUSAU WATER SUPPLY NPL SITE
Wausau, Wisconsin

03978-00(020)GN-SP APR 24/2002



LEGEND

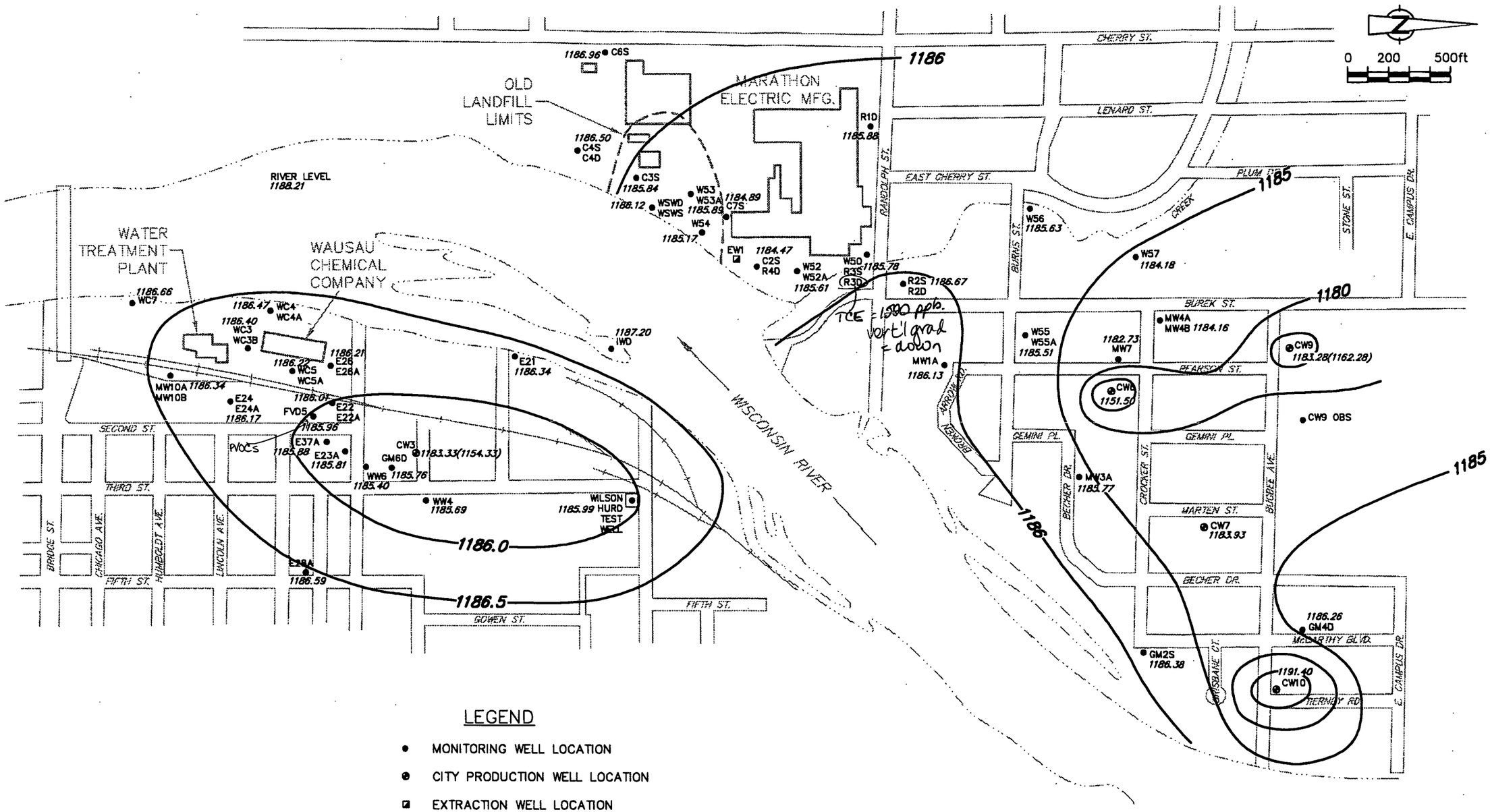
- MONITORING WELL LOCATION
- CITY PRODUCTION WELL LOCATION
- EXTRACTION WELL LOCATION
- INDUSTRIAL WELL LOCATION

SOURCE: RMT INC. FIGURE 1, 5/14/87.

figure 1.2

SITE PLAN
WAUSAU WATER SUPPLY NPL SITE
Wausau, Wisconsin

CRA



LEGEND

- MONITORING WELL LOCATION
- CITY PRODUCTION WELL LOCATION
- EXTRACTION WELL LOCATION
- INDUSTRIAL WELL LOCATION
- 1186.27 GROUNDWATER ELEVATION IN FEET AMSL
- GROUNDWATER CONTOUR

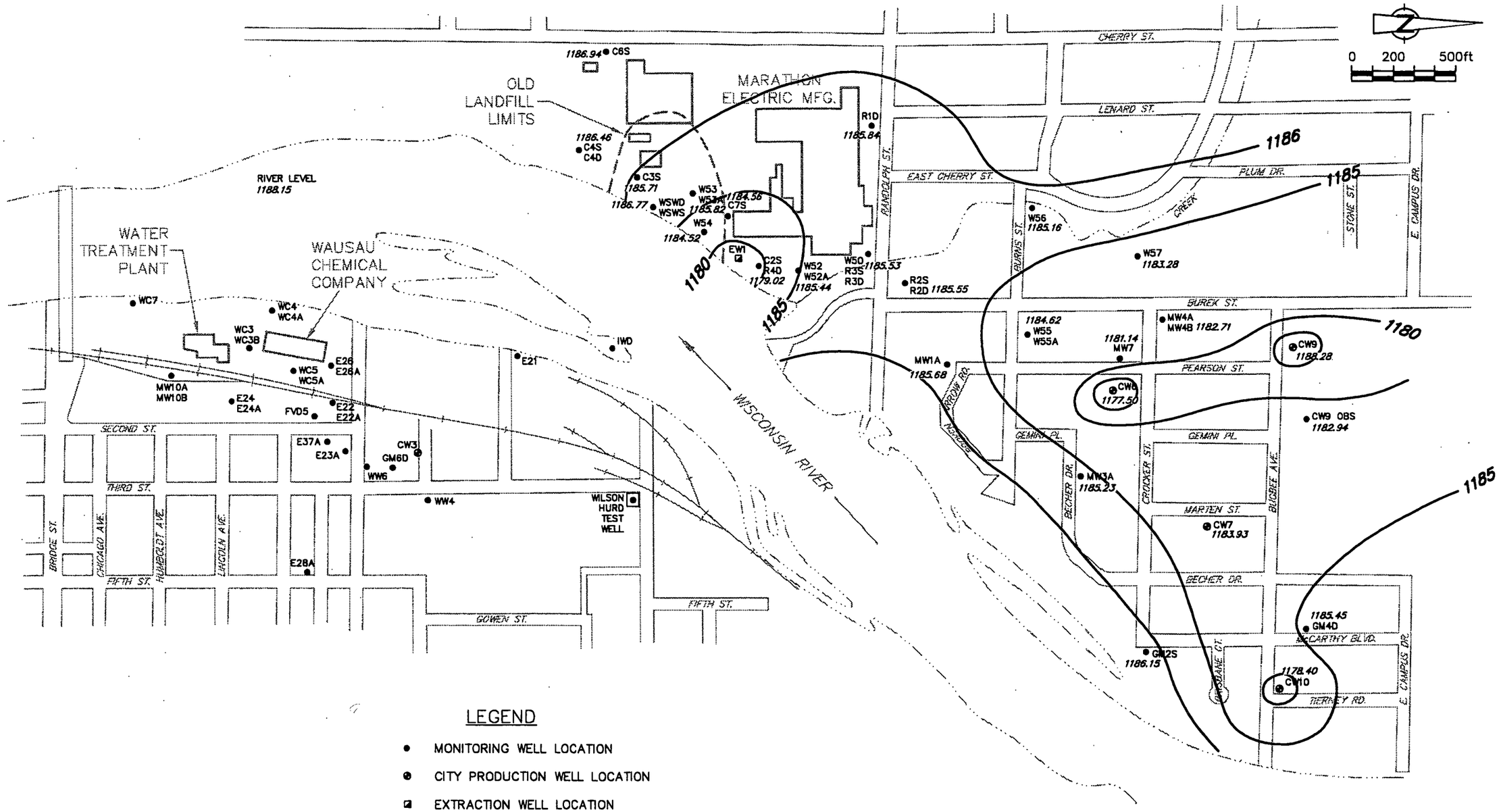
SOURCE: RMT INC. FIGURE 1, 5/14/87.

figure 2.1

WATER TABLE CONTOURS (10/16/01)
WAUSAU WATER SUPPLY NPL SITE
Wausau, Wisconsin

CRA

03978-00(020)GN-SP002 APR 29/2002



LEGEND

- MONITORING WELL LOCATION
- CITY PRODUCTION WELL LOCATION
- EXTRACTION WELL LOCATION
- INDUSTRIAL WELL LOCATION
- *1186.27* GROUNDWATER ELEVATION IN FEET AMSL
- GROUNDWATER CONTOUR

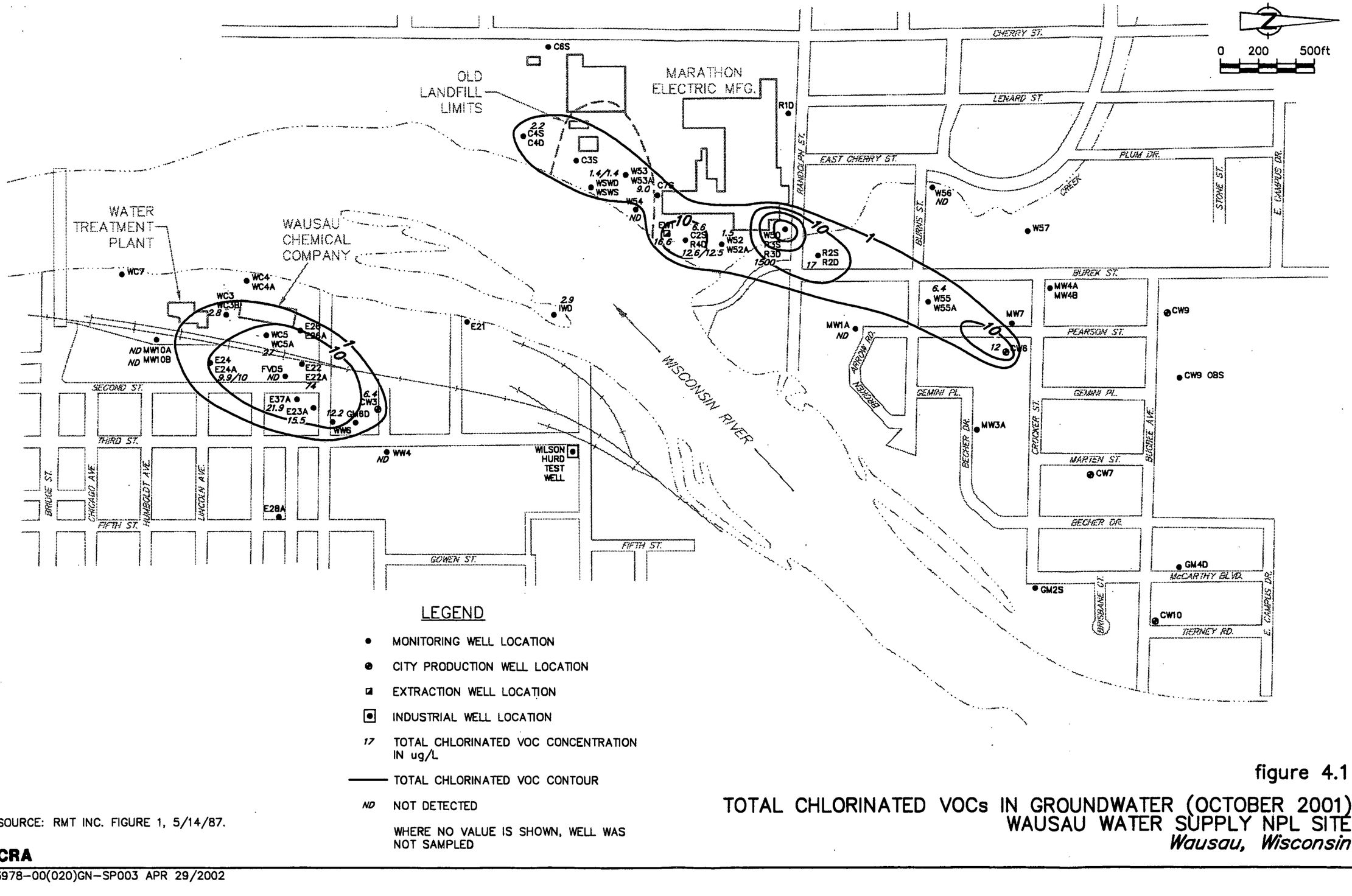
SOURCE: RMT INC. FIGURE 1, 5/14/87.

figure 2.2

WATER TABLE CONTOURS (11/7/01)
WAUSAU WATER SUPPLY NPL SITE
Wausau, Wisconsin

CRA

03978-00(020)GN-SP004 APR 29/2002



SOURCE: RMT INC. FIGURE 1, 5/14/87.

figure 4.1

TOTAL CHLORINATED VOCs IN GROUNDWATER (OCTOBER 2001)
WAUSAU WATER SUPPLY NPL SITE
Wausau, Wisconsin

CRA

03978-00(020)GN-SP003 APR 29/2002

TABLE 2.1

GROUNDWATER ELEVATIONS - 2001
WAUSAU WATER SUPPLY NPL SITE

Location	*Top of Casing Elevation (Ft. AMSL)*	*October 16, 2001*	*November 7, 2001*
East Bank			
CW3	1202.33	1183.33	1155.33
E21	1197.66	1186.34	
E22	1195.57	1186.01	
E22A	1195.98	1185.98	
E23A	1197.72	1185.81	
E24	1210.11	1180.19	
E24A	1211.17	1186.17	
E26	1199.11	1186.21	
E26A	1199.22	1186.18	
E28A	1211.73	1186.59	
E37A	1197.92	1185.88	
FVD5	1198.94	1185.96	
GM6D	1198.70	1185.76	
W. HURD	1199.78	1185.99	
IWD	1192.10	1187.20	
MW10A	1210.77	1186.34	
MW10B	1210.48	1186.32	
WC3	1198.36	1186.40	
WC3B	1198.15	1186.39	
WC4	1196.82	1186.47	
WC4A	1196.65	1186.49	
WC5	1196.73	1186.22	
WC5A	1196.75	1186.22	
WC7	1197.02	1186.66	
WW4	1202.38	1185.69	
WW6	1200.64	1185.40	
River		1188.21	1188.15

? 28 ft diff.

TABLE 2.1

GROUNDWATER ELEVATIONS - 2001
WAUSAU WATER SUPPLY NPL SITE

Location	*Top of Casing Elevation (Ft. AMSL)*	*October 16, 2001*	*November 7, 2001*
West Bank			
EW1	N/A	NM	
CW6	1220.50	1151.50	1177.50
CW7	1223.93	1183.93	1183.93
CW9	1226.28	1183.28	1188.28
CW9 OBS	1224.29	NM	1182.94
CW10	1224.40	1191.40	1178.40 ? big diff ?
C2S	1219.12	1184.47	1183.74
C3S	1220.44	1185.84	1185.71
C4S	1216.83	1186.50	1186.46
C4D	1216.23	1186.48	1186.40
C6S	1221.71	1186.96	1186.94
C7S	1220.98	1184.89	1184.56
GM2S	1211.78	1186.38	1186.15
GM4D	1216.38	1186.26	1185.45
MW1A	1215.83	1186.13	1185.68
MW3A	1223.29	1185.77	1185.23
MW4A	1215.26	1183.42	1182.68
MW4B	1215.64	1184.16	1182.71
MW7	1218.67	1182.73	1181.14
R1D	1222.36	1185.88	1185.84
R2S	1209.84	1186.67	1186.41
R2D	1209.56	1186.09	1185.55
R3S	1215.30	1186.34	1186.34
R3D	1215.53	1185.90	1185.31
R4D	1218.97	1185.22	1179.03
W50	1215.66	1185.78	1185.53
W52	1219.17	1185.83	1184.77
W52A	1219.06	1185.61	1185.44
W53	1216.80	1185.37	1184.87
W53A	1217.02	1185.89	1185.82
W54	1216.31	1185.17	1184.52

TABLE 2.1

GROUNDWATER ELEVATIONS - 2001
WAUSAU WATER SUPPLY NPL SITE

Location	*Top of Casing Elevation (Ft. AMSL)*	*October 16, 2001*	*November 7, 2001*
W55	1217.17	1185.36	1184.62
W55A	1217.45	1185.51	1185.16
W56	1200.13	1185.63	1185.16
W57	1205.31	1184.18	1183.28
WSWS	1192.83	1187.27	1186.77
WSWD	1192.98	1186.12	1187.43

TABLE 2.2

SITE SPECIFIC VOC LIST
WAUSAU WATER SUPPLY NPL SITE

Acetone
Benzene
Carbon tetrachloride
Chloroform
1,1-Dichloroethene
cis-1,2-Dichloroethene
Ethylbenzene
Methylene chloride
Tetrachloroethene
Toluene
1,1,2-Trichloroethane
Trichloroethene
Vinyl chloride
Xylenes

Note:

This list of analytes applies to samples collected after May 2000.

TABLE 3.1

EXTRACTION WELL (EW1) PUMPING RATES
MARATHON ELECTRIC
WAUSAU WATER SUPPLY NPL SITE

Date	*Time*	*Elapsed Time (minutes)*	*Meter Reading*	*Total Flow (gallons)*	*Flow Rate*[1] *(gpm)*
01/08/01	9:30 AM		684,589,000		
03/19/01	10:00 AM	100,830	756,520,000	71,931,000	713
07/03/01	9:30 AM	152,610	783,791,000	27,271,000	179 [2]
07/31/01	8:45 AM	40,275	815,596,000	31,805,000	790
09/04/01	8:00 AM	50,355	854,973,000	39,377,000	782
10/03/01	11:00 AM	41,940	885,000,000	30,027,000	716 [3]
10/08/01	1:30 PM	7,350	890,721,000	5,721,000	778
11/06/01	12:35 PM	41,705	915,820,000	25,099,000	602 [4]
12/12/01	12:15 PM	51,820	965,680,000	49,860,000	962
01/02/02	9:10 AM	30,055	992,775,000	27,095,000	902
2001 Total		516,940		**308,186,000**	596
Totals for operational time		380,140		308,186,000	**810** [5]

Notes:

[1] The number of gallons pumped and the average flow rate shown are for the period preceeding the date.

[2] EW1 was shut off from March 26 until June 12 for cleaning and repairs. It was shut off for 4 more days for additional work later in June.

[3] EW1 was shut off briefly on October 3 to clean the flow meter.

[4] EW1 was not running from October 12 to October 25 when the pump shut down during a power failure at the facility.

[5] Value represents the average flow rate in 2001 when EW1 was operating.

TABLE 3.2

CITY WELL PUMPING DATA - 2001
WAUSAU WATER SUPPLY NPL SITE

Month	*Well No. 3 (gallons[1] /hour[2])*	*Well No. 6 (gallons[1] /hour[2])*	*Well No. 7 (gallons[1] /hour[2])*	*Well No. 9 (gallons[1] /hour[2])*	*Well No. 10 (gallons[1] /hour[2])*
January[3]	3.107/26.7	57.958/707.5	56.066/540.6	20.905/308.7	25.871/157.2
February	17.063/211.3	40.959/452.8	52.426/490.9	17.698/246.9	22.827/133.8
March[4]	23.438/275.9	41.236/462.6	38.131/354.0	28.561/404.0	16.382/106.6
April	20.753/266.2	41.962/447.0	0/0	45.313/603.2	38.526/244.5
May	23.565/309.2	35.070/431.7	0/0	45.376/644.4	33.038/215.6
June	24.458/327.5	32.832/389.0	39.640/345.9	31.526/445.8	20.840/140.9
July	24.351/306.0	35.270/433.6	49.896/425.3	32.380/463.2	53.369/353.5
August	23.280/307.7	37.656/430.9	36.339/317.2	23.845/343.3	54.847/303.0
September	26.403/384.8	31.067/335.9	39.429/338.6	27.402/365.7	33.546/184.2
October	22.507/315.9	40.000/422.6	28.174/240.8	34.826/466.0	30.327/169.1
November	21.132/308.6	35.142/407.1	24.783/233.8	34.087/482.6	25.046/142.2
December	25.129/353.5	36.175/382.3	45.432/417.9	18.661/251.0	26.969/140.4

Notes:

[1] Gallons indicates millions of gallons pumped per month.

[2] Hours indicates total hours pumped per month.

[3] Well No. 3 was down for maintenance from January 3 to February 8.

[4] Well No. 7 was down for maintenance form March 28 to June 11.

TABLE 4.1

MONITORING WELL ANALYTICAL RESULTS - 2001
WAUSAU WATER SUPPLY NPL SITE

Location	Date	DUP	Bis(2-ethylhexyl)phthalate ug/L	Acetone ug/L	Benzene ug/L	Ethylbenzene ug/L	Toluene ug/L	Xylenes, Total ug/L	Carbon tetrachloride ug/L	Chloroform ug/L	1,1-Dichloroethene ug/L	Methylene chloride ug/L	1,1,2-Trichloroethane ug/L	Tetrachloroethene ug/L	Trichloroethene ug/L	cis-1,2-Dichloroethene ug/L	Vinyl chloride ug/L	Total CVOCs
1000/200				1000/200	5/.5	700/140	1000/200	10,000/1000	5/.5	6/.6	7/.7	5/.5	5/.5	5/.5	5/.5	70/7	0.2/.02	
East Bank																		
CW3	10/16/01			< 10	< 1	< 1	< 1	< 1	< 1	0.17 J	< 1	< 1	< 1	3.1	2.3	1	< 1	6.4
E22A	10/16/01			1.5 J	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 1 U	< 2.5	15	2.2 J	59	0.47 J	74
E23A	10/16/01			0.85 J	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1 U	< 1	3.5	0.96 J	12	0.31 J	15.5
E24A	10/16/01			< 10	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	6.2	1.1	2.6	0.22 J	9.9
E24A	10/16/01	D		< 10	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	6.1	1.2	2.7	0.24 J	10
E37A	10/16/01			< 10	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	2.4	0.97 J	13	6.5	21.9
EVD5	10/16/01			9.6 J	110	230	45	970	< 17	< 17	< 17	< 17	< 17	< 17	< 17	< 8.3	< 17	ND
IWD	10/18/01			< 10	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1 U	< 1	< 1	2.9	< 0.5	< 1	2.9
MW10A	10/16/01			< 10 U	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1 U	< 1	< 1	0.28 J	< 0.5	0.38 J	ND
MW10B	10/16/01			< 10	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	0.27 J	0.17 J	< 0.5	< 1	ND
WC3B	10/16/01		~1030-40	< 10	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	1.5	1.3	2.8
WC5A	10/16/01		~1150	< 10	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	22	2.1	2.9	0.31 J	27
WW4	10/16/01			< 10	< 1	< 1	< 1	< 1	< 1	0.28 J	< 1	< 1	< 1	< 1	< 1	< 0.5	< 1	ND
WW6	10/16/01			1.1 J	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	0.37 J	0.33 J	9.7	2.5	12.2

O = PAL

O = ES

TABLE 4.1

MONITORING WELL ANALYTICAL RESULTS - 2001
WAUSAU WATER SUPPLY NPL SITE

Location	Date	DUP	Bis(2-ethylhexyl)phthalate ug/L	Acetone ug/L	Benzene ug/L	Ethylbenzene ug/L	Toluene ug/L	Xylenes, Total ug/L	Carbon tetrachloride ug/L	Chloroform ug/L	1,1-Dichloroethene ug/L	Methylene chloride ug/L	1,1,2-Trichloroethane ug/L	Tetrachloroethene ug/L	Trichloroethene ug/L	cis-1,2-Dichloroethene ug/L	Vinyl chloride ug/L	Total CVOCs
				1000/200	5/1.5						7/.7	5/1.5	5/5	5/1.5	5/1.5	70/7	0.2/0.02	
West Bank																		
C2S	10/16/01			< 10	< 1	< 1	< 1	< 1	< 1	0.15 J	< 1	< 1 U	< 1	< 1	6.6	< 0.5	< 1	6.6
C4S	10/17/01		< 10	< 10	1.2	< 1	< 1	< 1	< 1	< 1	< 1	< 1 U	< 1	< 1	< 1	0.25 J	2.2	2.2
CW6	10/16/01			< 10	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	12	< 0.5	< 1	12
MW1A	10/18/01			< 10 U	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 0.5	< 1	ND
R2D	10/18/01			< 10 U	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1 U	< 1	< 1	17	0.48 J	< 1	17
R3D	10/17/01			< 500	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	1500	13 J	< 50	1500
R4D	10/16/01			< 10	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	12	0.55	< 1	12.55
R4D	10/16/01	D		< 10	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1 U	< 1	< 1	12	0.52	< 1	12.52
W52	10/18/01			< 10 U	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	1.5	< 0.5	< 1	1.5
W53A	10/16/01		< 10	< 10	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	4.9	4.1	< 1	9
W54	10/16/01			< 10	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1 U	< 1	< 1	< 1	< 0.5	< 1	ND
W55	10/18/01			< 10 U	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	6.4	< 0.5	< 1	6.4
W56	10/17/01			< 10	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1 U	< 1	< 1	0.67 J	< 0.5	< 1	ND
WSWD	10/18/01			< 10	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1 U	< 1	< 1	1.4	< 0.5	< 1	1.4
WSWD	10/18/01	D		< 10	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1 U	< 1	< 1	1.4	0.25 J	< 1	1.4

ind of PCE dgn

Notes:
D - Duplicate Sample
U - Estimated detection limit.
J - Estimated value.
Total CVOCs - Total chlorinated VOCs (does not include estimated values).

TABLE 4.2

EW1 ANALYTICAL RESULTS - 2001
WAUSAU WATER SUPPLY NPL SITE

Location	*Date*		Acetone ug/L	Benzene ug/L	Ethylbenzene ug/L	Toluene ug/L	Xylenes, Total ug/L	Carbon tetrachloride ug/L	Chloroform ug/L	1,1-Dichloroethene ug/L	Methylene chloride ug/L	1,1,2-Trichloroethan ug/L	Tetrachloroethene ug/L	Trichloroethene ug/L	cis-1,2-Dichloroethene ug/L	Vinyl chloride ug/L
Effluent	1/8/01		< 10	< 1	< 1	< 1	< 1	< 1	2	< 1	< 1	< 1	< 1	9.4	0.43 J	< 1
Effluent	7/3/01		< 10 U	< 1	< 1	< 1	< 1	< 1	< 1 U	< 1	< 1	< 1	< 1	10	0.49 J	< 1
Effluent	10/3/01		< 10 U	< 1	< 1	< 1	< 1	< 1	1.1	< 1	< 1	< 1	< 1	8.1	0.38 J	< 1
Influent	1/8/01	—	< 10	< 1	< 1	< 1	< 1	< 1	0.66 J	< 1	< 1	< 1	< 1	18	0.66	< 1
Influent	7/3/01		< 10	< 1	< 1	< 1	< 1	< 1	< 1 U	< 1	< 1	< 1	< 1	17	0.68	< 1
Influent	10/3/01		< 10	< 1	< 1	< 1	< 1	< 1	0.52 J	< 1	< 1	< 1	< 1	16	0.59	< 1

Notes:
U - Estimated detection limit.
J - Estimated value.

APPENDIX A

2001 DATA QUALITY VALIDATION MEMORANDUMS

CONESTOGA-ROVERS & ASSOCIATES
1801 Old Highway 8 NW, Suite #114
St. Paul, Minnesota 55112

TELEPHONE: (651) 639-0913
FACSIMILE: (651) 639-0928

MEMORANDUM

TO: Jason Twaddle

REF. NO.: 3978

FROM: Ruth L. Mickle

DATE: January 11, 2001

C.C.: Analytical Data File

RE: **Data Quality Assessment and Validation for Groundwater Samples Collected during the October 24-26, 2000 Sampling Event at the Wausau Superfund Site in Wausau, Wisconsin (COC 2873, 2874)**

The following details a data quality assessment and validation for groundwater samples collected in October 24-26, 2000, at the Wausau Superfund Site in Wausau, Wisconsin. The samples identified in Table 1 were analyzed for select volatile organic compounds (VOC) and/or bis(2-ethylhexyl)phthalate.[1] The analyses were performed by Severn Trent Laboratories (STL) in North Canton, Ohio. The quality assurance criteria were established in the associated quality assurance project plan (QAPP).[2]

Holding Time Periods

The holding time periods are as follows:

VOC	- 14 days from collection to completion of analysis
bis(2-Ethylhexyl)phthalate	- 7 days from collection to extraction; 40 days from extraction to completion of analysis

Based on sample collection dates from the chain-of-custody forms and analytical reports provided by STL, the analyses were performed within the specified holding time periods.

Method Blank Samples

Contamination of the samples contributed by laboratory conditions or procedures was monitored by the concurrent preparation and analysis of method blank samples. All of the method blank samples yielded detections of target analytes. Table 2 presents the sample data that should be qualified based on method blank detections. The associated sample data should be qualified as noted in Table 3.

---

[1] Methods were derived from "Test Methods for Evaluating Solid Waste, Physical/Chemical methods", SW 846, 3rd edit, 1986 and updates
VOC -SW 8260B
Bis(2-ethylhexyl)phthalate-SW8270C

[2] Application of quality assurance criteria was consistent with "National Functional Guidelines for Organic Data Review," October 1999 and "National Functional Guidelines for Inorganic Data Review," February 1994.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Results

To assess the long-term accuracy and precision of the analytical method on various matrices, MS/MSD recoveries and relative percent difference (RPD) values of the recoveries were determined for the analyses. The MS/MSD and RPD results for the project-related samples were within acceptance criteria.

Surrogate Compound Percent Recoveries (Surrogate Recoveries)

Individual sample performance for organic analyses was monitored by surrogate recoveries. The surrogate percent recoveries for the analyses were within acceptance criteria.

Laboratory Control Sample (LCS) Recoveries

Overall performance of the analyses was monitored by means of LCS. The LCS recoveries were within acceptance criteria.

Field Quality Assurance/Quality Control (QA/QC)

The field QA/QC samples associated with the October sampling event consisted of a trip blank sample, rinsate blank samples, and field duplicate sample sets.

To evaluate the possibility of contamination arising from sample transport, the environment and/or shipping, a trip blank was submitted to the laboratory for VOC analysis. Three VOCs (acetone, methylene chloride, chloroform) were detected in the trip blank. Since most of the associated sample data was previously qualified as nondetect, most of the associated sample data did not require qualification based on trip blank results. However, the associated chloroform data for samples W-001025-DN-09, W-001025-DN-13, W-001026-DN-26, W-001026-DN-30 should be qualified as nondetect (1U) based on trip blank results.

As a check on cleanliness of sampling equipment, rinsate blank samples were collected as authentic samples for labeling and submission to the laboratory. The rinsate blank samples were identified as W-001024-DN-01, W-001024-DN-20. The rinsate blank samples yielded VOC detections. However, since the associated sample data was previously qualified as nondetect or did not require qualification, no qualification based on rinsate blank data was required.

Overall precision for the sampling events was monitored using the field duplicate sample sets: W-001024-DN-03/ W-001024-DN-04, W-001025-DN-16/ W-001025-DN-17. Based on RPD data from the field duplicate sample sets, the overall level of precision was found to be acceptable.

Overall Assessment

The data were found to exhibit acceptable levels of accuracy and precision pertaining to the above criteria, and may be used with the qualifications noted.

RLM/kjs/33

TABLE 1

SAMPLE IDENTIFICATION NUMBERS
WAUSAU SUPERFUND SITE
OCTOBER 2000 SAMPLING EVENT

W-001024-DN-01	W-001025-DN-16
W-001024-DN-02	W-001025-DN-17
W-001024-DN-03	W-001025-DN-18
W-001024-DN-04	W-001025-DN-19
W-001024-DN-05	W-001025-DN-20
W-001024-DN-06	W-001026-DN-21
W-001024-DN-07	W-001026-DN-22
W-001024-DN-08	W-001026-DN-23
W-001025-DN-09	W-001026-DN-24
W-001025-DN-10	W-001026-DN-25
W-001025-DN-11	W-001026-DN-26
W-001025-DN-12	W-001026-DN-27
W-001025-DN-13	W-001026-DN-28
W-001025-DN-14	W-001026-DN-29
W-001025-DN-15	W-001026-DN-30

TABLE 2

SAMPLE RESULTS QUALIFIED BASED ON METHOD BLANK DATA WAUSAU SUPERFUND SITE OCTOBER 2000 SAMPLING EVENT

Analysis	*Analyte*	*Blank Id*	*Blank Conc. (ug/L)*	*Associated Sample(s)*	*Qualifier* [1]
VOC	Methylene Chloride	312340	0.36	W-001025-DN-10	2U
				W-001025-DN-15	1.7U
				W-001026-DN-21	83U
VOC	Acetone	312340	0.94	W-001024-DN-03	10U
				W-001025-DN-09	10U
				W-001025-DN-10	20U
				W-001025-DN-11	10U
				W-001025-DN-12	10U
				W-001025-DN-13	10U
				W-001025-DN-14	10U
				W-001025-DN-15	17U
				W-001025-DN-16	10U
				W-001025-DN-17	10U
				W-001025-DN-19	10U
				W-001026-DN-21	830U
				W-001026-DN-22	10U
				W-001026-DN-23	10U
				W-001026-DN-24	10U
				W-001026-DN-25	10U
				W-001026-DN-26	10U
				W-001026-DN-27	10U

TABLE 2

SAMPLE RESULTS QUALIFIED BASED ON METHOD BLANK DATA WAUSAU SUPERFUND SITE OCTOBER 2000 SAMPLING EVENT

Analysis	*Analyte*	*Blank Id*	*Blank Conc. (ug/L)*	*Associated Sample(s)*	*Qualifier* [1]
VOC	Methylene Chloride	312333	1.1	W-001024-DN-02	1.7U
				W-001024-DN-05	1.7U
				W-001024-DN-07	8.3U
				W-001024-DN-08	2U
VOC	Acetone	312333	1.1	W-001024-DN-02	17U
				W-001024-DN-04	10U
				W-001024-DN-05	17U
				W-001024-DN-06	10U
				W-001024-DN-07	83U
				W-001024-DN-08	20U
				W-001025-DN-18	10U
VOC	Methylene Chloride	313315	0.26	W-001026-DN-28	1.2U
VOC	Acetone	313315	1.3	W-001026-DN-28	12U
				W-001026-DN-29	10U
				W-001026-DN-30	10U

Notes:

[1]Sample results should be qualified as:

U- The analyte is non-detect with the associated value being the quantitation limit.

CONESTOGA-ROVERS & ASSOCIATES

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MEMORANDUM

TO: Jason Twaddle

REF. NO.: 3978-10

FROM: Ruth Mickle

DATE: August 27, 2001

C.C.: Analytical Data File

RE: **Data Quality Assessment and Validation**
July 3, 2001, Sampling Event
Wausau Superfund Site - Wausau, Wisconsin (COC 32715)

The following details a data quality assessment and validation for water samples collected on July 3, 2001, at the Wausau Superfund Site in Wausau, Wisconsin. The samples identified as W010703MT-414 and W010703MT-415 were analyzed for volatile organic compounds (VOC).[1] The analyses were performed by Severn Trent Laboratories (STL) in North Canton, Ohio. The quality assurance criteria were established in the Quality Assurance Project Plan (QAPP).[2]

Holding Time Periods and Sample Preservation

The holding time period for the VOC analysis is 14 days from sample collection to analysis. On the basis of sample collection dates on the chain-of-custody form and the analytical report provided by STL, the analyses were completed within the specified holding time periods.

Method Blank Samples

Contamination of the samples contributed by laboratory conditions or procedures was monitored by the concurrent preparation and analysis of a method blank sample. The method blank sample yielded several detections. The associated sample data presented in Table 1 should be qualified as nondetect (U).

Surrogate Compound Percent Recoveries (Surrogate Recoveries)

Individual sample performance for VOC analyses was monitored by surrogate recoveries. The surrogate recoveries were within acceptance criteria, indicating that individual sample performance was adequate.

1 VOC Method 8260B was derived from "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW 846, 3rd edition, November 1986 and updates.

2 Application of relevant quality assurance criteria was consistent with "National Functional Guidelines for Organic Data Review", October 1999.

Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD)

Overall performance for the analyses was monitored by means of a LCS/LCSD. The percent recoveries were within acceptance criteria.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Results

To assess the long-term accuracy and precision of the analytical method on various matrices, matrix spike percent recoveries and relative percent difference (RPD) of the spike recoveries were determined for the analyses. The percent recovery and RPD data were within acceptance criteria.

Field Quality Assurance/Quality Control (QA/QC) Samples

The field QA/QC associated with the sampling event consisted of one trip blank sample.

To evaluate the possibility of contamination arising from sample transport, the environment, and/or shipping, a trip blank sample was submitted to the laboratory for VOC analysis. The trip blank sample yielded several detections. However, since the associated samples were reportedly nondetect for these parameters, no data qualification was required based on trip blank results.

Overall Assessment

The data were found to exhibit acceptable levels of accuracy and precision pertaining to the above criteria, and may be used with the qualifications noted.

RLM/jla/36
Enc.

TABLE 1

OUTLYING METHOD BLANK RESULTS
WAUSAU SUPERFUND SITE
JULY 3, 2001 SAMPLING EVENT

Blank Batch ID	*Parameter*	*Blank Conc (ug/l)*	*Assoc Samples*	*Qualifier*[1]
1191124	Chloroform	0.73	W010703MT-414	1U
			W010703MT-415	1U
1191124	Acetone	1.1	W010703MT-415	10U
1191124	2-Butanone	1.2	W010703MT-415	10U

Notes:

[1] Sample result should be qualified as:

U - The analyte was analyze for, but not detected above the reported sample quantitation limit.

CONESTOGA-ROVERS & ASSOCIATES

1801 Old Highway 8 NW, Suite #114
St. Paul, Minnesota 55112
Telephone: (651) 639-0913 Fax: (651) 639-0923
www.CRAworld.com

MEMORANDUM

TO: Jason Twaddle

MN FILE COPY

REF. NO.: 3978-10

FROM: Grant Anderson

DATE: October 30, 2001

C.C.: Analytical Data File

RE: **Data Quality Assessment and Validation**
October 3, 2001, Sampling Event
Wausau Superfund Site - Wausau, Wisconsin (COC 75698)

The following details a data quality assessment and validation for water samples collected on October 3, 2001, at the Wausau Superfund Site in Wausau, Wisconsin. The samples identified as W011003-416 and W101003-417 were analyzed for volatile organic compounds (VOC).[1] The analyses were performed by Severn Trent Laboratories (STL) in North Canton, Ohio. The quality assurance criteria were established in the Quality Assurance Project Plan (QAPP).[2]

Holding Time Periods and Sample Preservation

The holding time period for VOC analysis is 14 days from sample collection to analysis. On the basis of sample collection dates on the chain-of-custody form and the analytical report provided by STL, the analyses were completed within the specified holding time period.

Method Blank Samples

Contamination of the samples contributed by laboratory conditions or procedures was monitored by the concurrent preparation and analysis of a method blank sample. The method blank sample yielded a detectable concentration for acetone. As a result, the acetone result for sample W101003-417 should be qualified as nondetect (10U).

Surrogate Compound Percent Recoveries (Surrogate Recoveries)

Individual sample performance for VOC analyses was monitored by surrogate recoveries. The surrogate recoveries were within acceptance criteria, indicating that individual sample performance was adequate.

1 VOC Method 8260B was derived from "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW 846, 3rd edition, November 1986 and updates.

2 Application of relevant quality assurance criteria was consistent with "National Functional Guidelines for Organic Data Review", October 1999.

Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD)

Overall performance for the analyses was monitored by means of a LCS/LCSD. The percent recoveries were within acceptance criteria.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Results

To assess the long-term accuracy and precision of the analytical method on various matrices, matrix spike percent recoveries and relative percent difference (RPD) of the spike recoveries were determined for the analyses. The percent recovery and RPD data for project-related samples were within acceptance criteria.

Field Quality Assurance/Quality Control (QA/QC) Samples

There were no field QA/QC samples associated with this sampling event.

Overall Assessment

The data were found to exhibit acceptable levels of accuracy and precision pertaining to the above criteria, and may be used with the qualifications noted above.

GDA/jla/37
Enc.

CONESTOGA-ROVERS & ASSOCIATES

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St. Paul, Minnesota 55112
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www.CRAworld.com

MEMORANDUM

TO: Jason Twaddle

REF. NO.: 3978

FROM: Ruth Mickle

DATE: November 30, 2001

C.C.: Analytical Data File

RE: **Data Quality Assessment and Validation**
October 16-18, 2001, Sampling Event
Wausau Superfund Site - Wausau, Wisconsin (COC 3773, 3774, 3775)

The following details a data quality assessment and validation for water samples collected October 16-18, 2001, at the Wausau Superfund Site in Wausau, Wisconsin. The samples identified in Table 1 were analyzed for Site list volatile organic compounds (VOC). In addition, samples W-011016-DN-16 and W-011017-DN-24 were analyzed for bis(2-Ethylhexyl)phthalate.[1] The analyses were performed by Severn Trent Laboratories (STL) in North Canton, Ohio. The quality assurance criteria were established in the Quality Assurance Project Plan (QAPP).[2]

Holding Time Periods

The holding time periods for the analyses are as follows:

VOC	-	14 days from sample collection to analysis.
Bis(2-Ethylhexyl)phthalate	-	7 days from sample collection to extraction; 40 days from extraction to analysis

On the basis of sample collection dates on the chain-of-custody forms and the analytical reports provided by STL, the analyses were completed within the specified holding time periods.

Method Blank Samples

Contamination of the samples contributed by laboratory conditions or procedures was monitored by the concurrent preparation and analysis of a method blank sample. Two VOC method blank samples yielded acetone detections. The associated sample data presented in Table 2 should be qualified as nondetect (U).

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1 VOC Method 8260B and bis(2-Ethylhexyl)phthalate method 8270C were derived from "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW 846, 3rd edition, November 1986 and updates.

2 Application of relevant quality assurance criteria was consistent with "National Functional Guidelines for Organic Data Review", October 1999.

Surrogate Compound Percent Recoveries (Surrogate Recoveries)

Individual sample performance for the analyses was monitored by surrogate recoveries. The surrogate recoveries were within acceptance criteria, indicating that individual sample performance was adequate.

Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD)

Overall performance for the analyses was monitored by means of a LCS/LCSD. The percent recoveries were within acceptance criteria.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Results

To assess the long-term accuracy and precision of the analytical method on various matrices, matrix spike percent recoveries and relative percent difference (RPD) of the spike recoveries were determined for the analyses. The percent recovery and RPD data were within acceptance criteria.

Field Quality Assurance/Quality Control (QA/QC) Samples

The field QA/QC associated with the sampling event consisted of two trip blank samples, three rinsate blanks and three field duplicate sets.

To evaluate the possibility of contamination arising from sample transport, the environment, and/or shipping, trip blank samples were submitted to the laboratory for VOC analysis. One trip blank sample yielded one detection. The second trip blank yielded two detections. Since the majority of associated sample data was previously qualified or reported nondetect for a given parameter, sample qualification was limited to that identified in Table 3.

As a check for cleanliness of sampling equipment, rinsate blanks were collected as authentic samples for labeling and submission to the lab. The rinsate samples were identified as W-011016-DN-02, W-011016-DN-14 and W-011018-DN-30. The rinsate blank samples yielded detections of several target analytes. However, since the associated sample data were previously qualified or reported as nondetect for a given parameter, no data qualification was required.

Overall precision for the sampling event was monitored using field duplicate samples: W-011016-DN-04, W-011016-DN-05, W-011016-DN-17, W-011016-DN-18, W-011018-DN-25, and W-011018-DN-26. The relative percent difference (RPD) values for positive parameter results were found to be acceptable, indicating an adequate level of precision was achieved.

Overall Assessment

The data were found to exhibit acceptable levels of accuracy and precision pertaining to the above criteria, and may be used with the qualifications noted.

RLM/jla/39
Enc.

TABLE 1

SAMPLE IDENTIFICATION NUMBERS
WAUSAU SUPERFUND SITE
OCTOBER 16-18, 2001 SAMPLING EVENT

W-011016-DN-01
W-011016-DN-02
W-011016-DN-03
W-011016-DN-04
W-011016-DN-05
W-011016-DN-06
W-011016-DN-07
W-011016-DN-08
W-011016-DN-09
W-011016-DN-10
W-011016-DN-11
W-011016-DN-12
W-011016-DN-13
W-011016-DN-14
W-011016-DN-15
W-011016-DN-16
W-011016-DN-17
W-011016-DN-18
W-011016-DN-19
W-011016-DN-20
W-011016-DN-21
W-011017-DN-22
W-011017-DN-23
W-011017-DN-24
W-011018-DN-25
W-011018-DN-26
W-011018-DN-27
W-011018-DN-28
W-011018-DN-29
W-011018-DN-30
W-011018-DN-31
W-011018-DN-32

TABLE 2

OUTLYING METHOD BLANK RESULTS
WAUSAU SUPERFUND SITE
OCTOBER 16-18, 2001 SAMPLING EVENT

Blank Batch ID	*Parameter*	*Blank Conc (µg/L)*	*Assoc Samples*	*Qualifier* [1]
1298270	Acetone	0.83	W-011016-DN-03	10U
1304169	Acetone	1.1	W-011018-DN-28	10U
			W-011018-DN-29	10U
			W-011018-DN-31	10U
			W-011018-DN-32	10U

Notes:

[1] Sample result should be qualified as:

U -The analyte was analyze for, but not detected above the reported sample quantitation limit.

TABLE 3

RESULTS QUALIFIED BASED ON TRIP BLANK DATA
WAUSAU SUPERFUND SITE
OCTOBER 16-18, 2001 SAMPLING EVENT

Blank ID	*Parameter*	*Blank Conc (ug/l)*	*Assoc Samples*	*Qualifier* [1]
Trip Blank 10/17&18	Methylene Chloride	1.6	W-011017-DN-22	1U
			W-011017-DN-24	1U
			W-011018-DN-25	1U
			W-011018-DN-26	1U
			W-011018-DN-27	1U
			W-011018-DN-32	1U
Trip Blank 10/16	Methylene Chloride	0.58	W-011016-DN-03	1U
			W-011016-DN-07	1U
			W-011016-DN-10	1U
			W-011016-DN-15	1U
			W-011016-DN-18	1U
			W-011016-DN-19	1U

Notes:

[1] Sample result should be qualified as:

U -The analyte was analyze for, but not detected above the reported sample quantitation limit.

APPENDIX B

MONITORING WELL ABANDONMENT FORMS

State of Wisconsin
Department of Natural Resources

WELL/DRILLHOLE/BOREHOLE ABANDONMENT

Form 3300-5B Rev. 3-94

All abandonment work shall be performed in accordance with the provisions of Chapters NR 111, NR 112 or 141, Wisconsin. Admin. Code, whichever is applicable. Also, see instructions on back.

(1) GENERAL INFORMATION

Well/Drillhole/Borehole Location: NW ¼ of SW ¼ of Sec. 24; T. 29 N; R. 7 ☒E ☐W
County: Marathon
(If Applicable) Gov't Lot ____ Grid Number ____
Grid Location ____ ft. ☐ N. ☐ S. ____ ft. ☐ E. ☐ W.
Civil Town Name: Wausau
Street Address of Well: City of Wausau Parks and Recreation
City, Village: Wausau, Wisconsin

(2) FACILITY NAME

Original Well Owner (If Known): City of Wausau
Present Well Owner: City of Wausau
Street or Route: c/o Dave Erickson - Wausau Water Works
City, State, Zip Code: Wausau, Wisconsin
Facility Well No. and/or Name (If Applicable) IWM
WI Unique Well No.:
Reason for Abandonment: Taken off monitoring list.
Date of Abandonment: 8-22-2001

WELL/DRILLHOLE/BOREHOLE INFORMATION

(3) Original Well/Drillhole/Borehole Construction Completed On (Date) 7-29-88

☒ Monitoring Well
☐ Water Well
☐ Drillhole
☐ Borehole

Construction Report Available? ☒ Yes ☐ No

Construction Type
☒ Drilled ☐ Driven (Sandpoint) ☐ Dug
☐ Other (Specify)

Formation Type:
☒ Unconsolidated Formation ☐ Bedrock

Total Well Depth (ft.) 78.0 Casing Diameter (in.) 2.0
(From groundsurface) Casing Depth (ft) 74.7

Lower Drillhole Diameter (in.) 5

Was Well Annular Space Grouted? ☒ Yes ☐ No ☐ Unknown.
If Yes, To What Depth? 59 Feet

(4) Depth to water (Feet) 2.8

Pump & Piping Removed?	☐ Yes	☐ No	☒ Not Applicable
Liner(s) Removed?	☐ Yes	☐ No	☒ Not Applicable
Screen Removed?	☐ Yes	☒ No	☐ Not Applicable
Casing Left in Place?	☒ Yes	☐ No	☐ Not Applicable

If No, Explain Removed PVC at 6' below ground surface (unthreaded PVC).

Was Casing Cut Off Below Surface?	☒ Yes	☐ No
Did Sealing Material Rise to Surface?	☒ Yes	☐ No
Did Material Settle After 24 Hours?	☐ Yes	☒ No
If Yes, Was Hole Retopped?	☐ Yes	☒ No

(5) Required Method of Placing Sealing Material
☐ Conductor Pipe - Gravity ☐ Conductor Pipe - Pumped
☐ Dump Bailer ☒ Other (Explain) Gravity

(6) Sealing Materials
☐ Neat Cement Grout
☐ Sand-Cement (Concrete) Grout
☐ Concrete
☐ Clay-Sand Slurry
☐ Bentonite-Sand Slurry
☒ Chipped Bentonite

For monitoring wells and monitoring well boreholes only
☐ Bentonite Pellets
☐ Granular Bentonite
☐ Bentonite-Cement Grout

(7) Material Used to Fill Well/Drillhole	From (Ft.)	To (Ft.)	No. Yards, Sacks, Sealant or Volume	Mix Ratio or Mud Weight
3/8" Bentonite Chips	0	74.7	3 50# bags	

(8) Comments

(9) Name of Person or Firm Doing Sealing Work
STS Consultants, Ltd.

Signature of Person Doing Work: Jerry C Puest
Date Signed: 10/3/2001

Street or Route: **3909 Concord Ave.**
Telephone Number: **(715) 355-4304**

City, State, Zip Code: **Schofield, Wisconsin 54476**

(10) FOR DNR OR COUNTY USE ONLY

Date Received/Inspected	Distribution
Reviewer/Inspector	☐ Complying Work ☐ Noncomplying Work
Follow-up Necessary	

DNR/COUNTY

State of Wisconsin
Department of Natural Resources

WELL/DRILLHOLE/BOREHOLE ABANDONMENT
Form 3300-5B Rev. 3-94

All abandonment work shall be performed in accordance with the provisions of Chapters NR 111, NR 112 or 141, Wisconsin. Admin. Code, whichever is applicable. Also, see instructions on back.

(1) GENERAL INFORMATION

- Well/Drillhole/Borehole Location — County: Marathon
- NW ¼ of SW ¼ of Sec. 24; T. 29 N; R. 7 ☒ E ☐ W
- (If Applicable) Gov't Lot ___ Grid Number ___
- Grid Location: ___ ft. ☐ N. ☐ S., ___ ft. ☐ E. ☐ W.
- Civil Town Name: Wausau
- Street Address of Well: 2102 No. 2nd Street
- City, Village: Wausau, Wisconsin

(2) FACILITY NAME

- Original Well Owner (If Known): Wausau Energy
- Present Well Owner: PPP, Inc.
- Street or Route: 2102 N. 2nd Street
- City, State, Zip Code: Wausau, Wisconsin
- Facility Well No. and/or Name (If Applicable): IWS
- WI Unique Well No.:
- Reason for Abandonment: No longer needed
- Date of Abandonment: 8-22-2001

WELL/DRILLHOLE/BOREHOLE INFORMATION

(3) Original Well/Drillhole/Borehole Construction Completed On (Date) 7-28-88

☒ Monitoring Well
☐ Water Well
☐ Drillhole
☐ Borehole

Construction Report Available? ☒ Yes ☐ No

Construction Type
☒ Drilled ☐ Driven (Sandpoint) ☐ Dug
☐ Other (Specify)

Formation Type:
☒ Unconsolidated Formation ☐ Bedrock

Total Well Depth (ft.) 15.0 (From groundsurface)
Casing Diameter (in.) 2.0
Casing Depth (ft) 13.3

Lower Drillhole Diameter (in.) 5

Was Well Annular Space Grouted? ☒ Yes ☐ No ☐ Unknown
If Yes, To What Depth? 1.5 Feet

(4) Depth to water (Feet) 2.5

Pump & Piping Removed?	☐ Yes	☐ No	☒ Not Applicable
Liner(s) Removed?	☐ Yes	☐ No	☒ Not Applicable
Screen Removed?	☐ Yes	☒ No	☐ Not Applicable
Casing Left in Place?	☒ Yes	☐ No	☐ Not Applicable

If No, Explain Removed PVC at 32" below ground surface.

Was Casing Cut Off Below Surface?	☒ Yes	☐ No
Did Sealing Material Rise to Surface?	☒ Yes	☐ No
Did Material Settle After 24 Hours?	☐ Yes	☒ No
If Yes, Was Hole Retopped?	☐ Yes	☒ No

(5) Required Method of Placing Sealing Material
☐ Conductor Pipe - Gravity ☐ Conductor Pipe - Pumped
☐ Dump Bailer ☒ Other (Explain) Gravity

(6) Sealing Materials
☐ Neat Cement Grout
☐ Sand-Cement (Concrete) Grout
☐ Concrete
☐ Clay-Sand Slurry
☐ Bentonite-Sand Slurry
☒ Chipped Bentonite

For monitoring wells and monitoring well boreholes only
☐ Bentonite Pellets
☐ Granular Bentonite
☐ Bentonite-Cement Grout

(7) Material Used to Fill Well/Drillhole	From (Ft.)	To (Ft.)	No. Yards, Sacks, Sealant or Volume	Mix Ratio or Mud Weight
3/8" Bentonite Chips	0	13.3	1 50# bag	

(8) Comments

(9) Name of Person or Firm Doing Sealing Work
STS Consultants, Ltd.

Signature of Person Doing Work: Jerry C Pruetz
Date Signed: 10/3/2001

Street or Route: **3909 Concord Ave.**
Telephone Number: **(715) 355-4304**

City, State, Zip Code: **Schofield, Wisconsin 54476**

(10) FOR DNR OR COUNTY USE ONLY
- Date Received/Inspected
- District/County
- Reviewer/Inspector
- ☐ Complying Work
- ☐ Noncomplying Work
- Follow-up Necessary

DNR/COUNTY

State of Wisconsin
Department of Natural Resources

WELL/DRILLHOLE/BOREHOLE ABANDONMENT

Form 3300-5B Rev. 3-94

All abandonment work shall be performed in accordance with the provisions of Chapters NR 111, NR 112 or 141, Wisconsin. Admin. Code, whichever is applicable. Also, see instructions on back.

(1) GENERAL INFORMATION

Well/Drillhole/Borehole Location: NW ¼ of NW ¼ of Sec. 25; T. 29 N; R. 7 ☒E ☐W
County: Marathon
(If Applicable) Gov't Lot: Grid Number:
Grid Location: ft. ☐ N. ☐ S., ft. ☐ E. ☐ W.
Civil Town Name: Wausau
Street Address of Well: City of Wausau Parks and Recreation
City, Village: Wausau, Wisconsin

(2) FACILITY NAME

Original Well Owner (If Known): City of Wausau
Present Well Owner: City of Wausau
Street or Route: c/o Dave Erickson - Wausau Water Works
City, State, Zip Code: Wausau, Wisconsin
Facility Well No. and/or Name (If Applicable): FVD-7
WI Unique Well No.:
Reason for Abandonment: Taken off monitoring list.
Date of Abandonment: 8-23-2001

WELL/DRILLHOLE/BOREHOLE INFORMATION

(3) Original Well/Drillhole/Borehole Construction Completed On (Date) 2-18-86

☒ Monitoring Well
☐ Water Well
☐ Drillhole
☐ Borehole

Construction Report Available? ☒ Yes ☐ No

Construction Type
☒ Drilled ☐ Driven (Sandpoint) ☐ Dug
☐ Other (Specify)

Formation Type:
☒ Unconsolidated Formation ☐ Bedrock

Total Well Depth (ft.) 18.5 Casing Diameter (in.) 2.0
(From groundsurface) Casing Depth (ft) 18.5

Lower Drillhole Diameter (in.) 8

Was Well Annular Space Grouted? ☐ Yes ☒ No ☐ Unknown
If Yes, To What Depth? ___ Feet

(4) Depth to water (Feet)

Pump & Piping Removed?	☐ Yes	☐ No	☒ Not Applicable
Liner(s) Removed?	☐ Yes	☐ No	☒ Not Applicable
Screen Removed?	☐ Yes	☒ No	☐ Not Applicable
Casing Left in Place?	☒ Yes	☐ No	☐ Not Applicable

If No, Explain Cut PVC at 32" below ground surface.

Was Casing Cut Off Below Surface?	☒ Yes	☐ No
Did Sealing Material Rise to Surface?	☒ Yes	☐ No
Did Material Settle After 24 Hours?	☐ Yes	☒ No
If Yes, Was Hole Retopped?	☐ Yes	☒ No

(5) Required Method of Placing Sealing Material
☐ Conductor Pipe - Gravity ☐ Conductor Pipe - Pumped
☐ Dump Bailer ☒ Other (Explain) Gravity

(6) Sealing Materials — For monitoring wells and monitoring well boreholes only
☐ Neat Cement Grout
☐ Sand-Cement (Concrete) Grout
☐ Concrete
☐ Clay-Sand Slurry
☐ Bentonite-Sand Slurry
☒ Chipped Bentonite
☐ Bentonite Pellets
☐ Granular Bentonite
☐ Bentonite-Cement Grout

(7) Material Used to Fill Well/Drillhole	From (Ft.)	To (Ft.)	No. Yards, Sacks, Sealant or Volume	Mix Ratio or Mud Weight
3/8" Bentonite Chips	0	18.5	1 50# bag	

(8) Comments

(9) Name of Person or Firm Doing Sealing Work
STS Consultants, Ltd.

Signature of Person Doing Work: Jerry C Pust
Date Signed: 10/3/2001

Street or Route: **3909 Concord Ave.**
Telephone Number: **(715) 355-4304**

City, State, Zip Code: **Schofield, Wisconsin 54476**

(10) FOR DNR OR COUNTY USE ONLY

Date Received/Inspected:
Initials/County:
Reviewer/Inspector:
☐ Complying Work
☐ Noncomplying Work
Follow-up Necessary

DNR/COUNTY