2001 ANNUAL OPERATION MAINTENANCE AND MONITORING REPORT

2200 Bleecker Street

Utica, New York 3501

NYSDEC Site No. 622003

August 2002

Prepared for:
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1.0 EXECUTIVE SUMMARY

The annual Operation Maintenance and Monitoring (OMM) Report provides a yearly account of site activities, as well as specific data and work performed subsequent to the Remedial Action (RA) completed in December 1999 and approved by the New York State Department of Environmental Conservation (NYSDEC) on December 11, 2001. This report is prepared subsequent to the Final Engineering Report (FER), as-built drawings, and OMM manual for the site. The contents of the annual report are outlined in the OMM manual.

The subject property consists of a 77-acre lot in an industrial setting in Utica, New York. The Remedial Action Facility (RAF) is located in the mid-eastern portion of the subject property, and includes the soil containment cell and an operating facility. Utica Holding Company (UHC), a subsidiary of Danaher Corporation retains ownership of the property, with the exception of the former Chicago Pneumatic Tool Company (CP) manufacturing building structure and the land beneath the structure.

The operation and maintenance of the RAF and associated components require monthly visual inspection and documentation in accordance with the guidelines set forth in the OMM manual. The Intelligent System for Automatic Control and Communication (ISACC) provides around the clock monitoring of the leachate collection manhole and storage tank. This data is generally collected and evaluated bi-monthly.

The scheduled RAF site inspections were conducted throughout the 2001 calendar year, with limited maintenance activities necessary. The inspections included testing equipment, recording instrument information, and sampling and disposal of leachate. Five unscheduled maintenance events were initiated, based on identified conditions observed during monthly site inspections. The maintenance events did not interrupt the operation of the leachate collection system. The total leachate collected during 2001 was approximately 6,200 gallons.

The specific additional maintenance activities completed at the subject property during calendar year 2001 consisted of the following:

- Decommissioning of monitoring well MW-3;
- Decommissioning and removal of a 500 gallon gasoline, a 500 gallon diesel and a 275 gallon fuel oil aboveground storage tank (AST);
- Cleaned RAF Facility of pigeon droppings;
- Repaired seven identified borrows in the containment cell protective soil layer; and
- Replaced Pump No. 2 in Manhole No. 2 (MH-2).

Groundwater data was collected from the five on-site monitoring wells during semi-annual monitoring events in March and September of 2001. The groundwater analytical results from the 2001 semiannual events indicate the following:

- Select volatile organic compounds (VOCs) were detected in MW-17 during the March and September event.

- Low levels of select inorganic constituents were detected in the five on-site monitoring wells during the March sampling event and only in monitoring wells MW-6R and MW-18 during the September sampling event.

- No polychlorinated biphenyls (PCBs) were detected in groundwater samples collected from on-site monitoring wells during the 2001 sampling events.

The groundwater treatment system consists of a low profile air stripper, pumps, and appurtenance that were installed as part of the Surface Water Interim Remedial Measures (IRM). The IRM was constructed to address VOCs in the water at the Site and discharges under NYSDEC State Pollution Discharge Elimination System (SPDES) Permit No. NY0108537 at outfall location 03A. During calendar year 2001, the air stripper treated approximately 3,000,000 gallons of groundwater. The treatment system operated continuously during 2001, other than scheduled shutdowns for maintenance to include replacement of Pump No. 2 in MH-2.

2.0 PROPERTY INSPECTION & MAINTNENANCE

The subject property consisting of a 77-acre parcel receives monthly inspection and maintenance in conjunction with the required inspections of the RAF and associated components. UHC retains ownership of the property, which includes the buildings and the land, excluding the former CP manufacturing building (main building). The main building is presently owned by Coolidge Utica Properties, LLC, who leases the portions of the building to various tenants. This section excludes inspection and maintenance related to the RAF, monitoring wells, and the groundwater treatment system, which are discussed in Sections 3, 4 and 5, respectively.

Scheduled site visits and subsequent Site Inspection Reports – Form A (Appendix A) are performed and prepared to track site activities and monitor property drainage. These reports indicate required maintenance and provide a follow-up to assure the corrective action effectiveness.

2.1 PROPERTY ACTIVITIES

The majority of the site buildings are currently occupied by tenants that generally include manufacturing, storage, and printing businesses. The specific site activities related to the subject property operation and maintenance during the calendar year 2001 consisted of the following:

- Decommissioned, cleaned and removed a 500 gallon gasoline AST;
- Decommissioned, cleaned and removed a 500 gallon diesel AST; and
- Decommissioned, cleaned and removed a 275-gallon fuel oil AST.

2.2 PROPERTY DRAINAGE

The property is generally drained via existing drainage ditches located at the east and west portions of the property. The Unnamed Creek (former Area 1, See Figure 2-2), flows from the south through a wooded area and runs along the western perimeter of the property, and exits at the northwest corner of the property. The Unnamed Creek drainage contribution consists of roof leaders and non-contact cooling water conveyed via the northern and southwestern stormwater systems emanating from of the main building. Surface water runoff from the west parking lot and surface water runoff from the south agriculture area also contribute to the Unnamed Creek. The northern and southwestern stormwater systems are monitored at alternative SPDES sampling locations at Outfall 001 and Outfall 002, respectively. The Unnamed Creek floods occasionally, in the spring and fall, primarily due to restrictions in an off-site stormwater system.

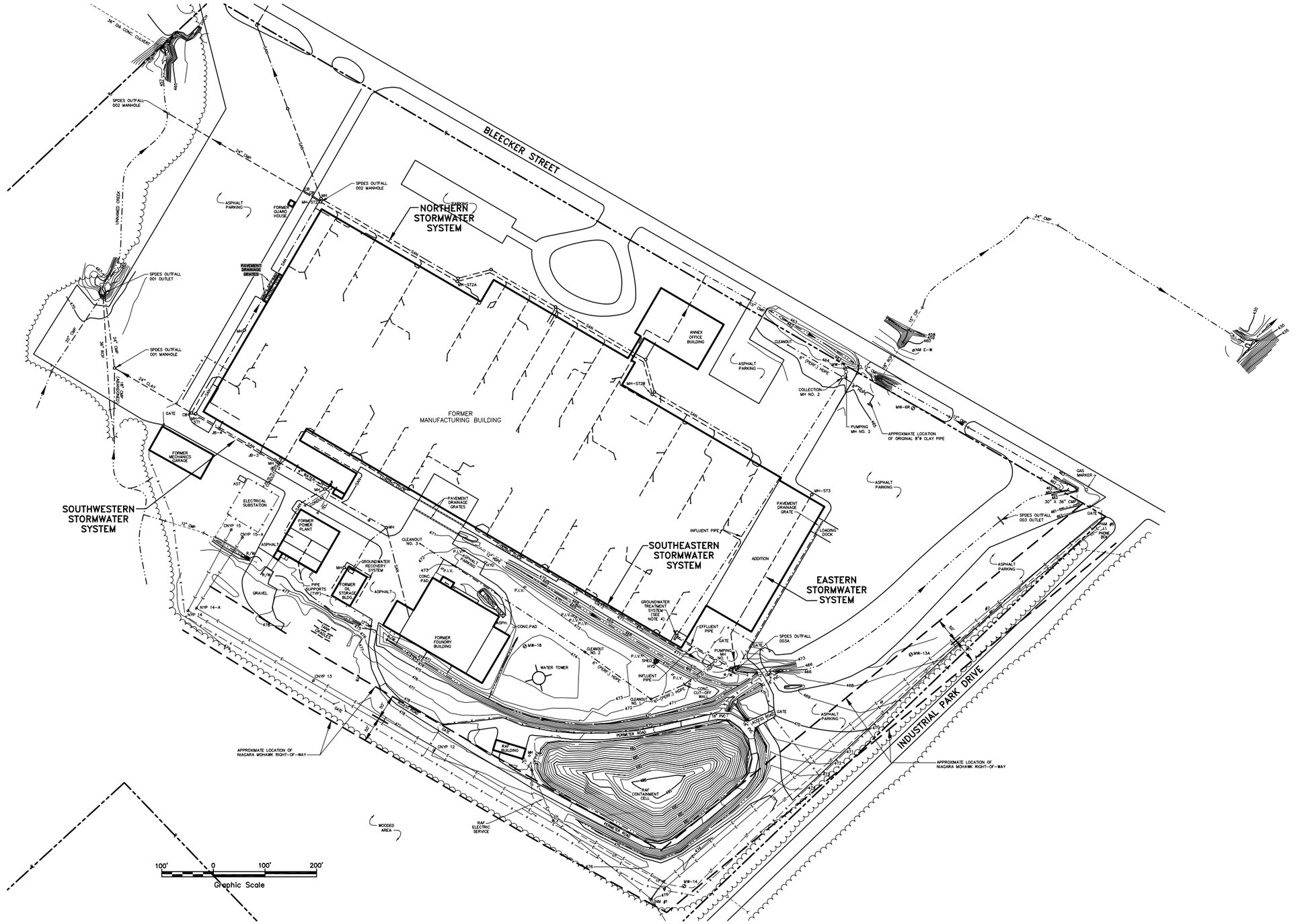
Two east-west oriented surface water drainage ditches (former Area 4 and Area 6), originate from the south portion of the property, behind the former manufacturing facility, converge and form one north-south ditch (former Area 14) along the eastern portion of the property. This drainage ditch joins a road ditch located parallel to Bleecker Street. Treated effluent from the groundwater treatment system is discharged to the east drainage ditch via SPDES Outfall 03A. The east drainage ditch also receives stormwater from the RAF, as well as surface water from the east parking lots. The SPDES Outfall 003 is located near the end of the east drainage ditch; prior to joining a drainage ditch parallel to Bleecker Street.

During 2001, the property ditches were inspected and observed to be well vegetated, and not prone to sedimentation; therefore, requiring no scheduled or unscheduled maintenance. Certain areas, along the aforementioned ditches, have been upgraded as part of the RA with fabric and riprap. These ditch areas, as well as existing culverts, were also inspected and did not require maintenance.

2.3 SUMMARY

The northern portion of the property remained active throughout 2001. Tenants occupy approximately 90% of the main building and continue to use the surrounding parking lots. One environmental action was performed in 2001, which included the dismantling and removal of three ASTs. The site drainage was inspected throughout 2001 and performed well; therefore, no maintenance was required.

2.4 FIGURES



LEGEND

- 470 — INDEX ELEVATION CONTOUR
- 469 — INTERMEDIATE ELEVATION CONTOUR
- MH — MANHOLE
- x — x — x — CHAIN LINK FENCE
- CNYP 12 — UTILITY POLE
- R/W — RETAINING WALL
- SURFACE DRAINAGE CULVERT
- DRAINAGE DITCH
- DRAINAGE PIPE
- SAN — SANITARY SEWER PIPE
- STORMWATER DRAIN PIPE
- TREE LINE
- UT — UT — TELEPHONE (UNDERGROUND)
- MW-14 — MONITORING WELL
- FIRE HYDRANT
- P.I.V. — VALVE
- DRAIN
- POWER LINE (ABOVE GROUND)
- POWER LINE (UNDERGROUND)

NOTES:

1. BASE MAP INFORMATION SHOWN ON THIS DRAWING IS BASED ON A LIMITED FIELD SURVEY PERFORMED BY BLASLAND, BOUCK & LEE, INC. (BBL), DATED 10/97, AS-BUILT SURVEY INFORMATION PERFORMED BY LAFAVE, WHITE & MCGIVERN, L.S., P.C., DATED 5/99, AND ON INFORMATION OBTAINED FROM PREVIOUS SITE PLANS WHICH MAY BE CONCEPTUAL OR ASSUMED.
2. ELEVATIONS SHOWN ARE IN FEET ABOVE SEA LEVEL (DATUM IS NGVD OF 1988).
3. CONTOUR INTERVAL EQUALS 1 FOOT.
4. THE GROUNDWATER TREATMENT SYSTEM CONSISTS OF AN AIR STRIPPER AND TWO PUMPING MANHOLES IMPLEMENTED AS AN INTERIM REMEDIAL MEASURE SYSTEM DESIGNED AND INSTALLED BY BBL IN 1995.

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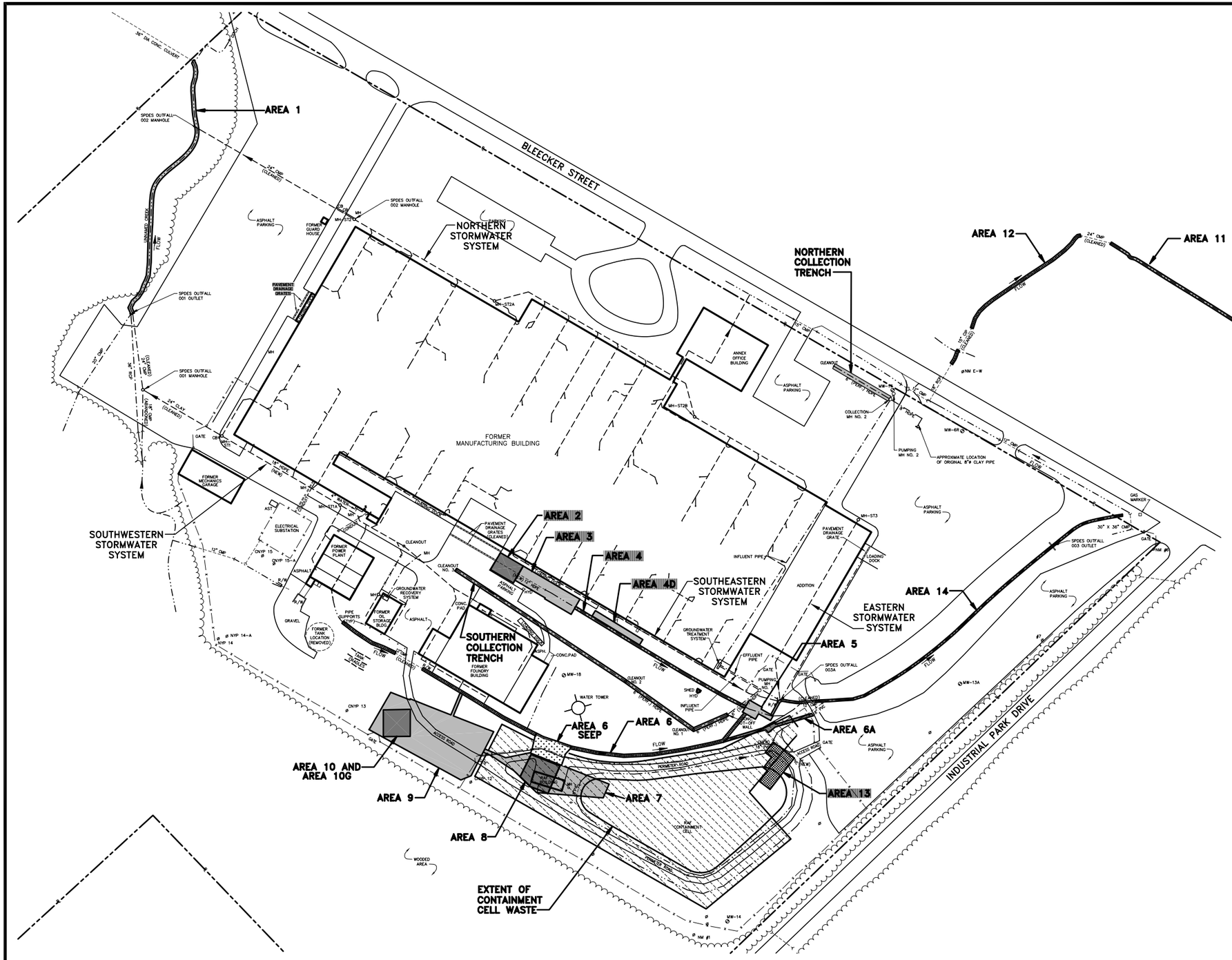
2000 ANNUAL OPERATION, MAINTENANCE, AND MONITORING REPORT
FORMER CHICAGO PNEUMATIC TOOL COMPANY
UTICA, NEW YORK

EXISTING SITE PLAN

PROJECT NO.: 074.40046.003
DATE: APRIL 2001
FIGURE NO.: 2-1



LEGEND

- MANHOLE
- CHAIN LINK FENCE
- UTILITY POLE
- RETAINING WALL
- DRAINAGE CULVERT
- DRAINAGE DITCH
- DRAINAGE PIPE
- STORMWATER DRAIN
- NEW STORMWATER DRAIN
- ABANDONED UNDERGROUND PIPE
- TREE LINE
- MONITORING WELL
- FIRE HYDRANT
- VALVE
- EXCAVATION AREA REQUIRING OFF-SITE DISPOSAL AS A TSCA-REGULATED MATERIAL PCB CONCENTRATION >50 ppm)
- EXCAVATION AREA REQUIRING PLACEMENT INTO THE SVE PORTION OF THE ON-SITE CONTAINMENT CELL (VOC CONCENTRATION >10 ppm, PCBs <50ppm)
- EXCAVATION AREA REQUIRING PLACEMENT INTO THE ON-SITE CONTAINMENT CELL (VOC CONCENTRATION <10 ppm, PCBs <50ppm)
- SELECT WASTE (TOPSOIL)
- EXCAVATION AREA REQUIRING OFF-SITE DISPOSAL (VOC CONCENTRATION >10 ppm)
- CULVERT THAT WAS CLEANED
- NEW CULVERT
- DRAIN

NOTES:

1. BASE MAP INFORMATION SHOWN ON THIS DRAWING IS BASED ON A LIMITED FIELD SURVEY PERFORMED BY BLASLAND, BOUCK & LEE, INC. (BBL), DATED 10/97, AS-BUILT SURVEY INFORMATION PERFORMED BY LAFAVE, WHITE & MCGIVERN, L.S., P.C., DATED 5/99, AND ON INFORMATION OBTAINED FROM PREVIOUS SITE PLANS WHICH MAY BE CONCEPTUAL OR ASSUMED.
2. ELEVATIONS SHOWN ARE IN FEET ABOVE SEA LEVEL (DATUM IS NGVD OF 1988).
3. CONTOUR INTERVAL EQUALS 1 FOOT.
4. ALL ORIGINAL DRAINS AND DRAIN PIPE LOCATIONS INSIDE AND OUTSIDE OF THE BUILDINGS WERE DIGITIZED FROM COPIES OF THE 1948 CONSTRUCTION DRAWINGS AND ARE APPROXIMATE.

X: CP-BASE.DWG
P: SECD2BC
4/26/01
SECOR/CP/CP-B13.DWG

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2000 ANNUAL OPERATION, MAINTENANCE, AND MONITORING REPORT

FORMER CHICAGO PNEUMATIC TOOL COMPANY
UTICA, NEW YORK

REMEDIAL ACTION AREAS

PROJECT NO.: 074.40046.003
DATE: APRIL 2001
FIGURE NO.: 2-2

3.0 REMEDIAL ACTION FACILITY

The RAF is situated in the mid-eastern portion of the 77-acre site property as presented on Figures 2-1 and 2-2. The RAF is contained within a fenced area encompassing approximately 3.8 acres; providing security for the unmanned facility. The operation and maintenance of the RAF was conducted by SECOR, in accordance with the guidelines set forth in the approved OMM manual. Scheduled site visits and subsequent Site Inspection Reports – Form A (Appendix A) consists of the following inspection components associated with the RAF:

- Cell Perimeter Components;
- Containment Cell;
- Leachate Collection Manhole;
- Building; and
- Leachate Storage System.

The groundwater monitoring wells (with the exception of MW-14) and the groundwater treatment system are located outside of the perimeter fence of the RAF and are reviewed in Sections 4 and 5, respectively.

3.1 OPERATION

The leachate collection system operated continuously during 2001. The RAF and associated components are generally scheduled for monthly visual inspection and documentation as set forth in the OMM. Operation is also monitored by telecommunication with the RAF auto dialer system. The Site Inspection Reports, included in Appendix A, provide documentation of the site inspection events and any adjustments made. The results of these inspections generally set forth the required maintenance.

The cell perimeter road and facility access road were maintained to ascertain facility maintenance. The immediate surface drain-ways were inspected to insure that inundation does not occur from runoff. All property ditches and culverts were accessed and viewed during the inspection. The RAF perimeter fence was also inspected to insure facility security. The facility overhead utilities were viewed and tested, as well.

Inspection of the containment cell involved viewing the cell from the perimeter road and traversing its surface. Components viewed were the four perimeter drains, the two passive gas vents, and the cell cleanout pipe. These were checks for functionality, which also included periodic screening of the passive gas vent for VOCs. The surface of the cell was inspected for stressed vegetation, burrows, erosion, and movement.

The leachate collection manhole operation involves electrical, pumping and alarm components. Each inspection required checking the panel and recording the two pumps running hours. This included testing each pump operation, as well as opening the manhole and visual inspection of its components.

The RAF building was viewed during the inspection for inconsistencies in the structural, security, electrical, and telephone systems, as well as assuring the heat and vent systems were functional. The ISACC, located in the RAF building, provides monitoring information of the leachate collection manhole and leachate storage tank. The ISACC system is generally accessed remotely bi-monthly for data collection and management. ISACC was accessed from the SECOR office by modem to download this information. In the event of an alarm condition, the ISACC system alerts designated SECOR personnel based on the guidelines set forth the OMM and the ISACC program logic. The Auto Dialer Alarm Incident and Testing Report Form E, included in Appendix B, provides documentation of alarm conditions and testing during the 2001 calendar year. (*Note that no alarm was received during 2001*.)

The leachate storage system, which is housed in the center portion of the RAF Building, was inspected and total flow readings recorded. The 5,000-gallon storage tank, containment system, and plumbing are viewed for leaks and any abnormalities. The tank is internally inspected, generally after leachate is removed, to assure the control of corrosion. The influent pipe is equipped with a flow totalizer, which is recorded during the inspection. This indicated that approximately 6,200 gallons were pumped during 2001. The collected leachate sampling and disposal are reviewed in later subsections.

3.2 MAINTENANCE

General maintenance of the RAF is set forth in the OMM, which provides inspection criteria, forms, guidance, and procedures to perform scheduled, and identified unscheduled maintenance requirements, as well as contingency plans. The OMM maintenance procedures and protocols are generally cross-referenced with and supported by the Final Engineering Report (FER).

Scheduled Maintenance

The scheduled maintenance activities associated with the RAF and site components that occurred during the 2001 calendar year consisted of the following:

- RAF site access (snow removal, road maintenance, and fence maintenance);
- RAF building (ISACC program diagnostic/communication response);
- Containment cell (vegetation management, topsoil replacement, seeding, and erosion control);
- Drainage ditches (vegetation and riprap management); and
- Truck pad sump (performed during leachate removal, Section 3.3).

Unscheduled Maintenance

The unscheduled maintenance activities associated with the RAF and site components that occurred during the 2001 calendar year consisted of the following:

- Cleaned pigeon droppings from RAF facility. Installed bird netting inside facility to stop pigeons from resided in facility;

- On May 23, 2001 and September 14, 2001, during monthly site inspection, five burrows were noted. The burrows were filled with soil material to surface grade. Another burrow was identified during the monthly site inspection on October 22, 2001. This burrow was also backfilled with soil material to surface. Later inspections indicated no burrowing activities for the reminder of 2001; and

- On December 17, 2001, the leachate tank level sensor was inoperable due to a corroded relay switch in the control panel. A tank level sensor was ordered and was installed in 2002. While the sensor was down, the tank level was manually measured bi-monthly to monitor the leachate level in the tank. Overfilling of the tank was not an operational concern as the tank is equipped with a contingency high-level float switch, which operates a permissive relay.

3.3 LEACHATE COLLECTION

The leachate generated from the containment cell is collected, conveyed, and stored on site. The leachate generated in the containment cell is drained, via gravity flow, to a perforated 6-inch, high-density polyethylene (HDPE) pipe located along the bottom of the containment cell, just above the liner. The leachate collection pipe passed through the west perimeter berm, discharging into the leachate collection manhole. The leachate collected in the manhole was transferred, via pumps, to the on-site leachate storage tank.

The onsite ISACC system provides real time data and remote location communication with the RAF. The operation of this unit, associated with the leachate collection system, is found in the OMM manual and the FER. One of the eight, programmed ISIACC channels, provides tracking of tank filling events (i.e., water level in the tank) as presented in Tables 3-1 and 3-2 and on Charts 3-1 and 3-2.

In general, there still is a discernable trend between gallons of leachate conveyed and the number of days between pumping cycles, however there was a slight, two gallons per day, increase in leachate generated between storage tank filling 8 and 9. Chart 3-3 demonstrates this steady decrease and slight increase in leachate production rate per tank filling. This is considered a deviation from previous tank fillings and will be monitored. Comparatively, Chart 3-4 summarizes the approximate total containment cell leachate production monitored during the 2000 and 2001 calendar years, recorded from the flow totalizer.

3.4 LEACHATE DISPOSAL

The leachate is stored in the on-site 5,000-gallon storage tank surrounded by a steel secondary containment. The leachate requires analytical analysis prior to bulk batch disposal. The scheduling of the sampling events and subsequent disposal is based on tank level data monitored by the ISACC system. The sampling and disposal of the leachate were performed in accordance with the guidance set forth in the OMM manual. . It was sampled from the 5,000-gallon storage tank, analyzed and disposed of via Permit No. GW-050, issued by the Oneida County Department of Water Quality and Water Pollution Control (OCDWC). The analytical results of

the leachate for storage tank fillings, numbers 8 and 9, indicate that the permit limits, set forth by the OCDWC were achieved.
The leachate disposal correspondence with OCDWC and analytical data packages are presented in Appendix C. The total leachate disposal for 2001 was 4464 gallons from storage tank filling event No. 8.

Note: 1. Tank No. 7 was included for review in the 2000 Annual Report.
2. Tank No. 9 was disposed of on February 27, 2002, which includes filling events in 2001.

3.5 SUMMARY

The RAF facility and associated components operated as planned through 2001. The monitoring and inspection continues, as necessary, to evaluate trends and the ongoing condition of the facility. The operation and maintenance performed during the 2001 calendar year were performed within the guidelines set forth in the OMM.

In addition to scheduled maintenance, three unscheduled maintenance conditions were recognized and corrected. Pigeon droppings were cleaned from the RAF facility and bird netting installed to retard pigeons from roosting in the RAF facility. Seven shallow burrows were noted in the containment cell protective soil layer and subsequently repaired. The leachate tank level sensor relay switch in the control panel was inoperable due to corrosion. The tank was manually measured bi-monthly until the level sensor was replaced.

The review of the data relating to the leachate generated and collected (6,200 gallons), indicates an overall downward tend in leachate generated to date. The leachate generated from the containment cell continues to meet the discharge requirement set forth in the OCDWC permit.

3.6 TABLES

TABLE 3-1
TANK FILLING NUMBER 8
2001 ANNUAL OPERATION, MAINTENANCE, and MONITORING REPORT
FORMER CHICAGO PNEUMATIC TOOL COMPANY
UTICA, NEW YORK
NYSDEC SITE NO. 622003

Date & Time	Reading	Number	Days	Gallons	GPD	GPM
2/2/2001 13:05	1156	0				
2/12/2001 19:05	1400	1	10.25	244	23.80	0.017
2/21/2001 0:01	1526	2	8.21	126	15.35	0.011
2/28/2001 12:01	1717	3	7.50	191	25.47	0.018
3/9/2001 9:02	1912	4	8.88	195	21.97	0.015
3/19/2001 17:05	2109	5	10.33	197	19.06	0.013
3/29/2001 12:06	2307	6	9.79	198	20.22	0.014
4/7/2001 4:06	2507	7	8.67	200	23.08	0.016
4/16/2001 7:07	2640	8	9.13	133	14.57	0.010
4/27/2001 5:05	2839	9	10.91	199	18.23	0.013
5/8/2001 1:08	3036	10	10.84	197	18.18	0.013
5/18/2001 1:11	3232	11	10.00	196	19.59	0.014
5/28/2001 20:12	3488	12	10.79	256	23.72	0.016
6/8/2001 13:15	3675	13	10.71	187	17.46	0.012
6/19/2001 6:17	3857	14	10.71	182	16.99	0.012
6/29/2001 7:17	4033	15	10.04	176	17.53	0.012
7/7/2001 19:17	4257	16	8.50	224	26.35	0.018
7/16/2001 23:19	4464	17	9.17	207	22.58	0.016
7/17/2001 9:19	130	18	0.42	Pump Out		
Average			9.16	194.59	20.25	0.014

Notes:
Date & Time = When pumping occurred
Reading = Number of gallons in tank after pumping
Number = Consecutive pumping event
Day = Day between pumping events
Gallon = Number of gallon pumped per event
GPD = Gallons per Day
GPM = Gallons per Minute

TABLE 3-2
TANK FILLING NUMBER 9
2001 ANNUAL OPERATION, MAINTENANCE, and MONITORING REPORT
FORMER CHICAGO PNEUMATIC TOOL COMPANY
UTICA, NEW YORK
NYSDEC SITE NO. 622003

Date & Time	Reading	Number	Days	Gallons	GPD	GPM
7/17/2001 13:19	130	0				
8/6/2001 0:22	277	1	19.46	147	7.55	0.005
8/9/2001 23:23	453	2	3.96	176	44.46	0.031
8/19/2001 0:25	651	3	9.04	198	21.90	0.015
8/27/2001 21:26	867	4	8.88	216	24.34	0.017
9/5/2001 20:26	1156	5	8.96	289	32.26	0.022
9/22/2001 5:27	1400	6	16.38	244	14.90	0.010
10/1/2001 3:29	1589	7	8.92	189	21.19	0.015
10/10/2001 8:32	1782	8	9.21	193	20.96	0.015
10/18/2001 21:33	1977	9	8.54	195	22.83	0.016
10/28/2001 1:35	2175	10	9.17	198	21.60	0.015
11/9/2001 7:38	2374	11	12.25	199	16.24	0.011
11/16/2001 12:41	2507	12	7.21	133	18.45	0.013
11/26/2001 10:42	2706	13	9.92	199	20.07	0.014
12/6/2001 7:45	2905	14	9.88	199	20.15	0.014
12/14/2001 23:45	3167	15	8.67	262	30.23	0.021
1/11/2002 13:30	3857	16	27.57	690	25.02	0.017
2/6/2002 0:00	4202	17	25.44	345	13.56	0.009
2/27/2002 9:00	4736	18	21.38	534	24.98	0.017
2/27/2002 11:15	0	19				
Average			12.49	255.89	22.26	0.015

Notes:
Date & Time = When pumping occurred
Reading = Number of gallons in tank after pumping
Number = Consecutive pumping event
Day = Day between pumping events
Gallon = Number of gallon pumped per event
GPD = Gallons per Day
GPM = Gallons per Minute

3.7 CHARTS

CHART 3-1
TANK FILLING NUMBER 8
2001 ANNUAL OPERATION, MAINTENANCE, and MONITORING REPORT
2200 BLEECKER STREET
UTICA, NEW YORK
NYSDEC SITE NO. 622003

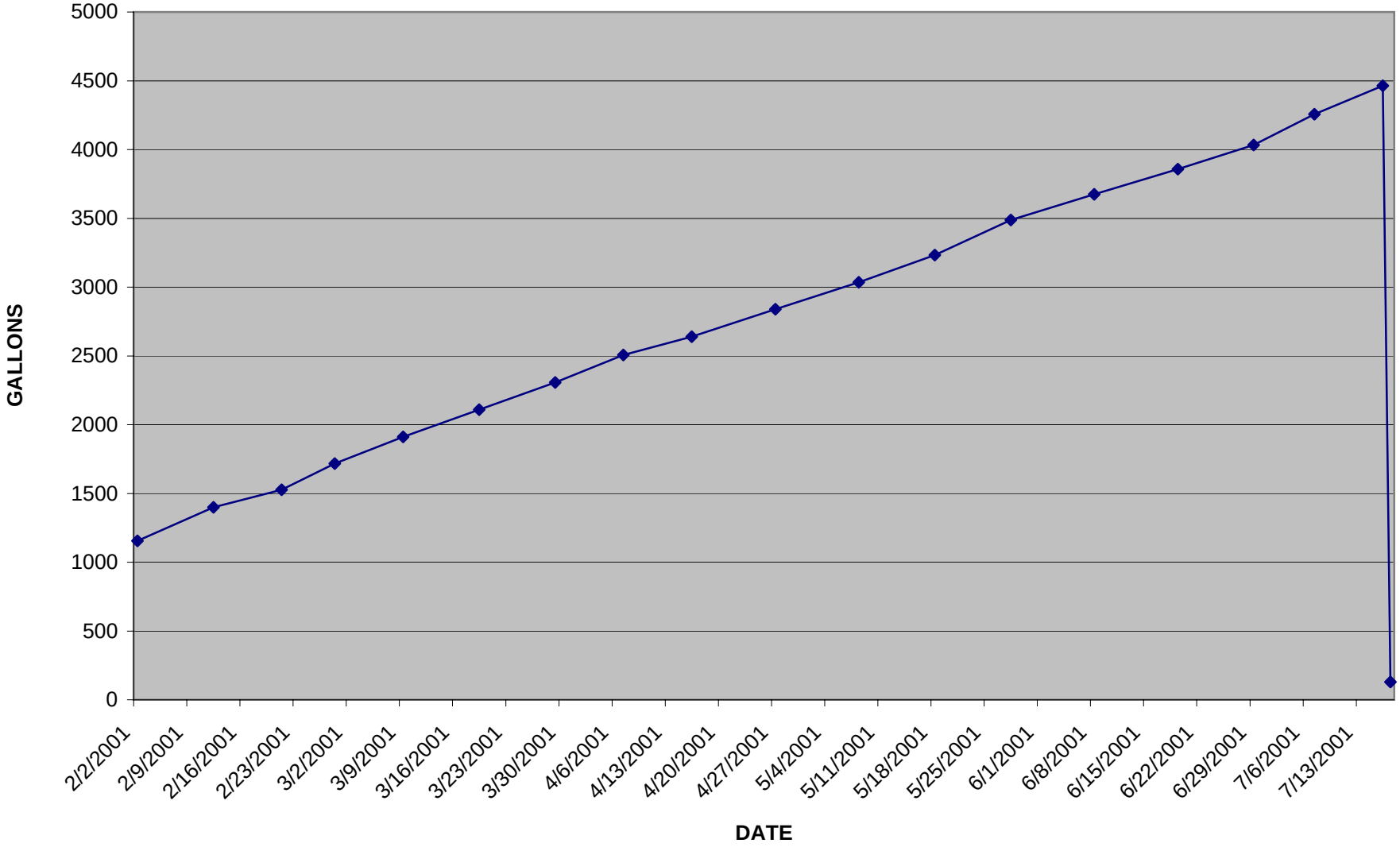


CHART 3-2
TANK FILLING NUMBER 9
2001 ANNUAL OPERATION, MAINTENANCE, and MONITORING REPORT
2200 BLEEKER STREET
UTICA, NEW YORK
NYSDEC SITE NO. 622003

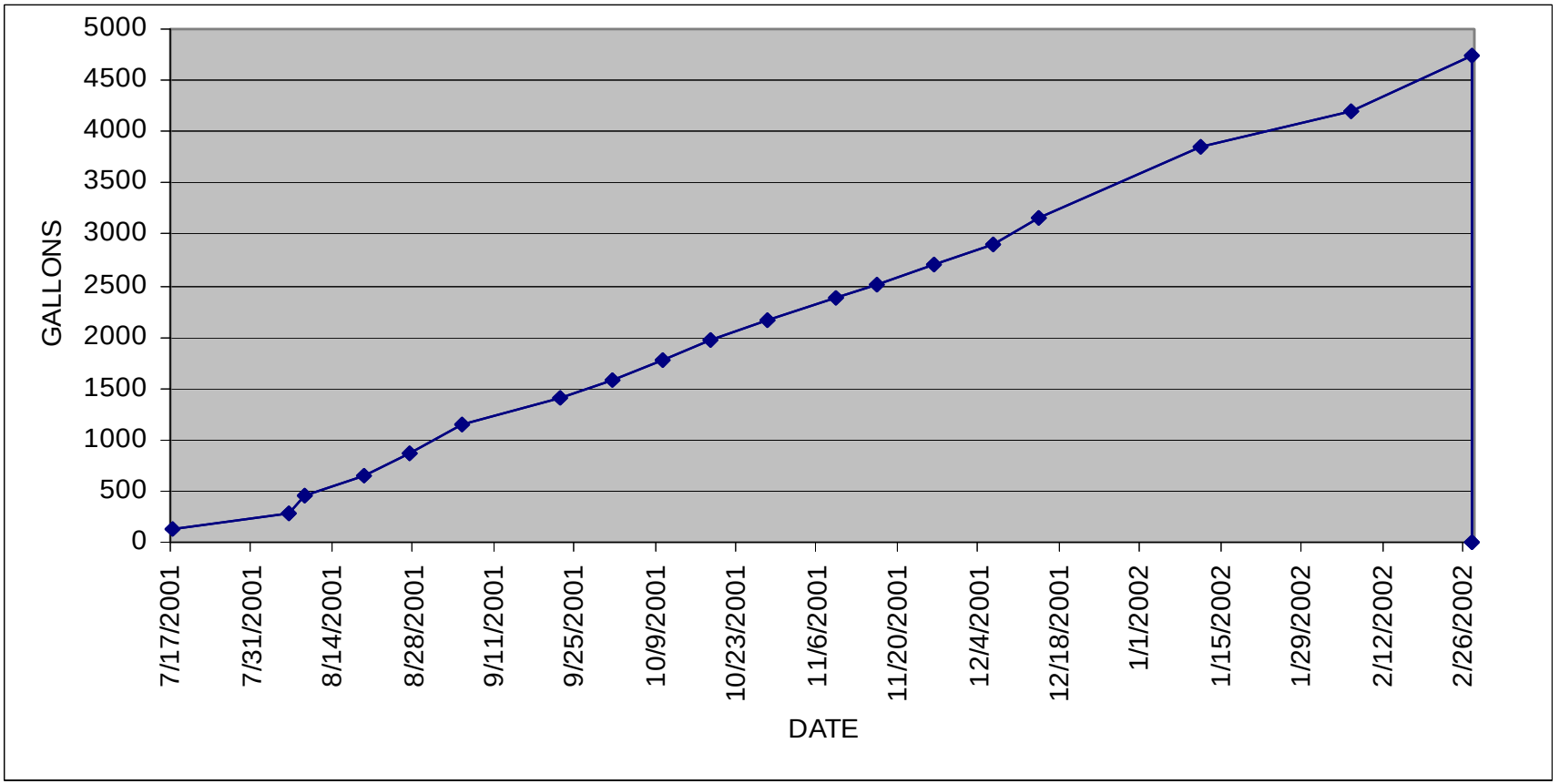


CHART 3-3
SUMMARY OF TANK FILLINGS
2001 ANNUAL OPERATION, MAINTENANCE, and MONITORING REPORT
FORMER CHICAGO PNEUMATIC TOOL COMPANY
UTICA, NEW YORK
NYSDEC SITE NO. 622003

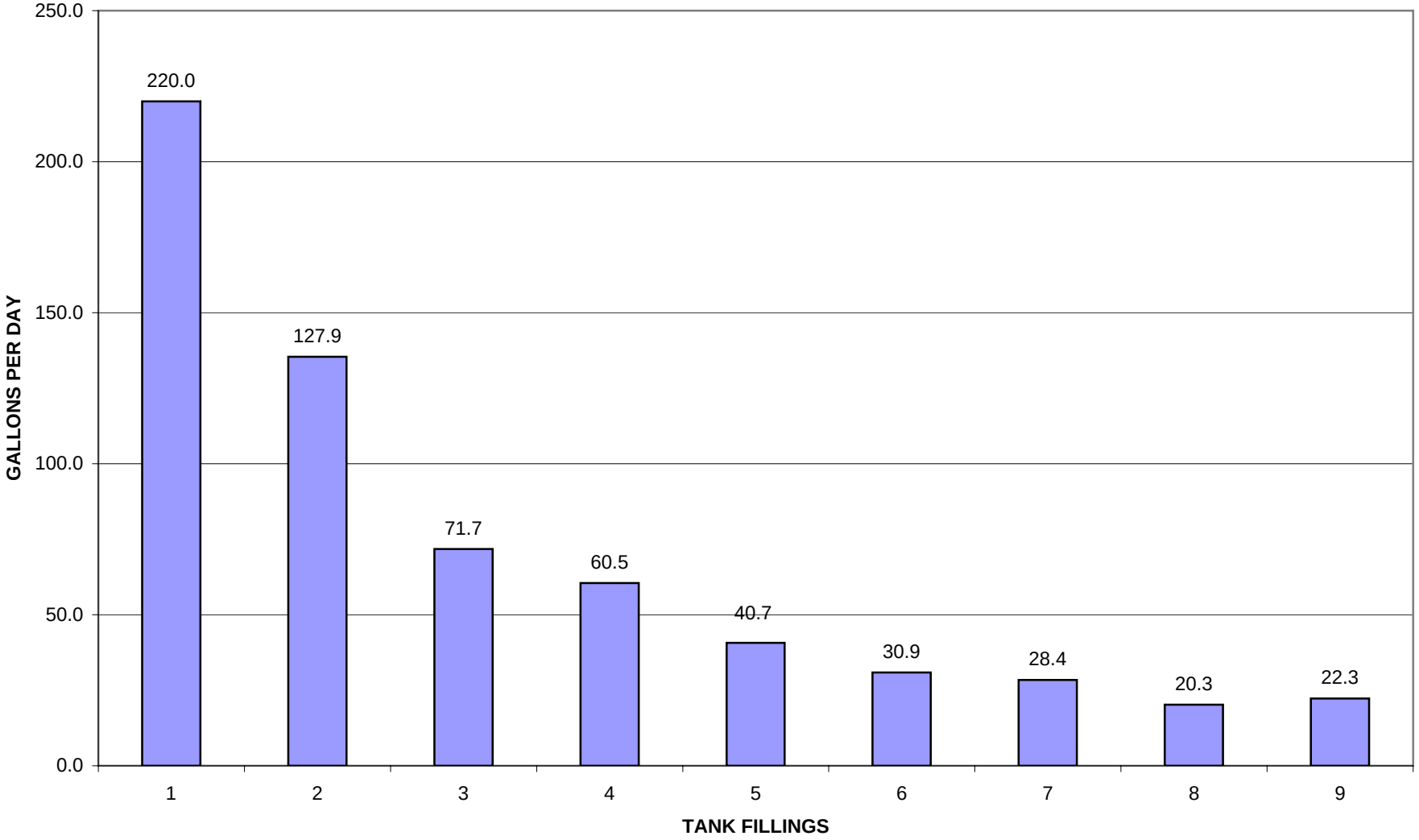
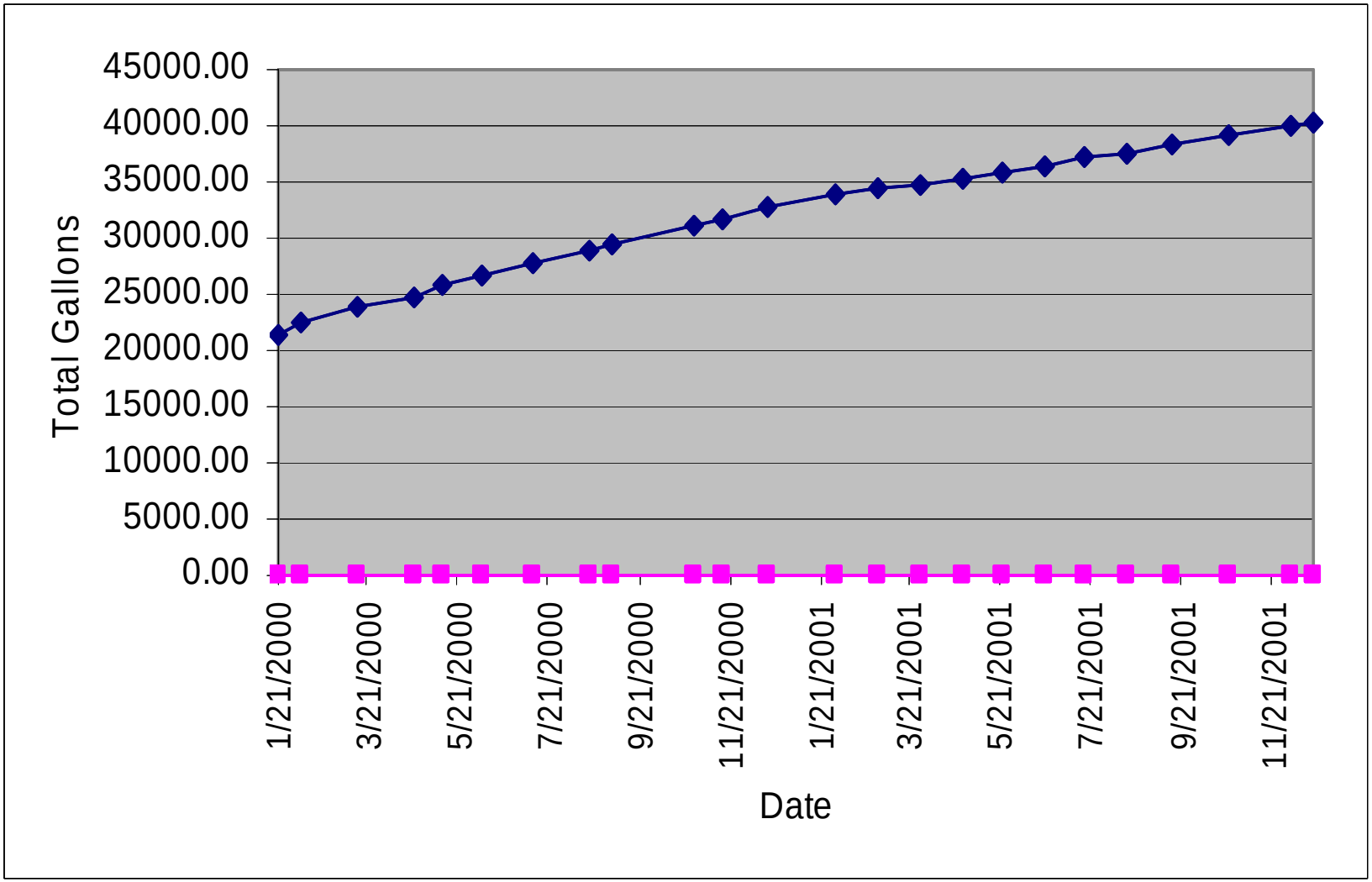


CHART 3-4
TOTAL LEACHATE PRODUCTION
2001 ANNUAL OPERATION, MAINTENANCE, AND MONITORING REPORT
FORMER CHICAGO PNEUMATIC TOOL COMPANY
UTICA, NEW YORK
NYSDEC SITE NO.622003



4.0 GROUNDWATER MONITORING

This section presents the results of the semi-annual groundwater monitoring events conducted in 2001, at the property. The site OMM manual details the procedures that were followed during groundwater monitoring. The FER details the procedures followed during the implementation of the RA that included well decommissioning and new well installation.

The monitoring well network consists of five monitoring wells designated as: MW-6R, MW-13A, MW-14, MW-17, and MW-18. The monitoring well locations were selected to provide groundwater quality data for site-specific RA areas.

The monitoring wells consist of 2-inch diameter polyvinyl chloride (PVC) riser and 10-foot lengths of 0.010-inch slotted screen. The well screens straddle the water table and are completed to intersect the overburden soils above the glacial till. Shallow groundwater flow directions are generally from south to the north across the site. The locations of the monitoring wells are shown on Figure 2-1 - Existing Site Plan. The detailed descriptions of the monitoring well locations, as well as hydraulic consideration, are as follows:

- MW-6R, located hydraulically downgradient at the eastern portion of the property;
- MW-13A, located hydraulically sidegradient (east) of RA Areas 5, 7, 8, 13, and 14 as well as the RAF;
- MW-14, located at the southeast corner of the property hydraulically up gradient of all areas and the RAF;
- MW-17, located hydraulically downgradient of the northern groundwater collection trench; and
- MW-18, located hydraulically downgradient of RA Areas 6, 7, 8, 9, and 10, as well as side gradient (west) of the RAF.

Onsite monitoring well MW-3 was decommissioned on September 14, 2001. The NYSDEC approved the decommissioning in a letter dated September 1, 2001. MW-3 was identified as damaged during the March 2001 sampling event and required decommissioning due to damage to the outer casing and surface seal.

4.1 GROUNDWATER LEVEL MEASUREMENT

As part of the groundwater monitoring program, water levels were measured from the aforementioned monitoring wells on March 29, 2001 and September 13, 2001. The cleanouts of the north/south groundwater collection trenches were measured during the 2001 events as well. The water levels were measured from a designated reference point at the top of the PVC well riser using the procedures outlined in the OMM manual. The water levels were taken

consecutively, on the same day, prior to sampling or other activities. Water level measurements were recorded on a dedicated field sheet (Water Level Field Log – Form C) and are provided in Appendix D. The water level measurements were converted to elevations based on as built survey information. The water levels for the two sampling events are shown in Table 4-1, Groundwater Level Measurements. Figure 4-1 illustrates the Overburden Groundwater Elevation Contour Map for March 29, 2001; Figure 4-2 illustrates the Overburden Groundwater Elevation Contour Map for September 13, 2001. A summary of water levels is provided in Table 4-2, Historic Groundwater Level Measurements.

4.2 GROUNDWATER SAMPLING

Groundwater samples were obtained during two groundwater sampling events conducted on March 29 and 30 and September 13 and 14, 2001, performed as part of the OMM. These two sampling events constitute the fifth and sixth event conducted as part of the post RA OMM requirements. Groundwater samples were collected from monitoring wells MW-6R, MW-13A, MW-14, MW-17, and MW-18. Upon inspection, monitoring well MW-3 was determined to be damaged and subsequently not gauged or sampled during the March 2001 or September 2001 sampling events.

Based on the guidance set forth in the OMM manual, the groundwater sampling events completed in 2001 were scheduled as semi-annual. The samples collected during the initial four sampling rounds were submitted for laboratory analysis for VOCs of concern, metals of concern, and PCBs, and compared to the New York State Groundwater Quality Standards. Based on the laboratory analytical results from the initial four groundwater sampling events, groundwater sampling will continue to occur on a semi-annual basis for an additional year. After the 2002 groundwater sampling events, the analytical parameter list for subsequent groundwater events may be modified to include only the parameters that were detected at concentrations above the New York State Groundwater Quality Standards.

To assure that the groundwater samples were representative of the shallow groundwater zone, a minimum of three static well volumes was purged from each well. Groundwater field parameters were obtained from each well prior to sampling, and included pH, conductivity, dissolved oxygen, turbidity, and temperature. The wells were observed to have moderate recharge capacity. Well purging was performed using a disposable Teflon bailer. The purged groundwater was containerized and transferred to the onsite leachate collection manhole, part of the RAF.

Groundwater samples were collected using a new disposable Teflon bailer per well. During the March and September 2001 groundwater sampling events, VOCs and PCBs were collected on the first day of each sampling event. Metal samples were collected 24 hours after the final well purge to obtain a sample with low turbidity units. Each grab sample was placed directly into laboratory-provided containers, labeled, logged onto a chain of custody document, and stored on ice in an insulated cooler pending delivery to the laboratory for analysis. Quality assurance/quality control (QA/QC) groundwater samples were collected at a frequency described below.

Trip Blanks

On events/days when aqueous VOC samples are shipped/delivered to the analytical laboratory, a trip blank was included. A trip blank is an aliquot of analyte-free water, sealed in a 40-mil glass vial with Teflon-lined septum cap prepared prior to initiation of fieldwork. The sealed vials were prepared by the laboratory and included with each shipment of the sample bottles for aqueous media to and from the laboratory and the site. The trip blank may determine if any cross-contamination has occurred among samples during shipment/delivery.

Duplicate Samples

Duplicate samples were collected and analyzed to evaluate the reproducibility of the sampling technique used. One duplicate sample (DUP-1) was collected for all parameters during each sampling event. Groundwater from a selected monitoring well was divided between the identified sample and the duplicate sample laboratory containers.

Matrix Spikes / Matrix Spike Duplicates

Matrix spikes and matrix spike duplicates were collected to measure the accuracy of organic analyte recovery from the sample matrices. For organic constituents and metals, one matrix spike and one matrix spike duplicate sample will be analyzed during each sampling event.

The March and September 2001 sampling events were submitted to Life Science Laboratories of East Syracuse, New York. Table 4-3, Groundwater Parameters, Methods, and Reporting Units, details the groundwater sample analytical requirements. The Monitoring Well Sampling form - Form D used during well sampling to record the groundwater field parameters and water levels, is provided in Appendix E.

4.3 GROUNDWATER ANALYTICAL RESULTS

The analytical results from the semi-annual groundwater sampling events, as compared to the NYSDEC Standards, are presented in the subsequent summary tables. The NYSDEC Standards are those set forth the Division of Water Technical and Operation Guidance Series (TOGS) Series (1.1.1), June 1998. Table 4-4, Groundwater Analytical Results, summarizes the groundwater analytical data from the two semi-annual sampling events and Table 4-5, Historic Groundwater Analytical Results, provides a historic summary of the groundwater analytical results from the previous four events. The original laboratory analytical data are provided in Appendix F.

The following table summarizes the most frequent and historically detected concentrations above the laboratory analytical reporting limits from groundwater samples collected from monitoring wells during the March 2001 sampling event.

March 2001 Sampling Event			
Sample ID	**Detected Constituents of Concern**		
	Volatile Organic Compounds	**Metals**	**Polychlorinated Biphenyl's**
MW-6R			
MW-13A			
MW-14			
MW-17	✳	✳	
MW-18		✳	

Sample ID	**Frequently Detected Constituents of Concern (ug/l)**					
	TCE	**cis-1,2-DCE**	**Chromium**	**Copper**	**Lead**	**Zinc**
MW-6R	<5	<5	<10	<10	<5	19
MW-13A	<5	<5	<10	<10	<5	10
MW-14	<5	<5	<10	<10	<5	15
MW-17	**24**	**9.2**	<10	<10	<5	**32**
MW-17 (duplicate)	**25**	**9.2**	<10	<10	<5	18
MW-18	<5	<5	<10	<10	<5	**21**
NYSDEC (TOGS)	***5***	***5***	***10***	***25***	***5***	***20***

The following table summarizes the most frequent and historically detected concentrations above the laboratory analytical reporting limits from groundwater samples collected from monitoring wells during the September 2001 sampling event.

September 2001 Sampling Event			
Sample ID	**Detected Constituents of Concern**		
	Volatile Organic Compounds	**Metals**	**Polychlorinated Biphenyl's**
MW-6R		✳	
MW-13A			
MW-14			
MW-17	✳		
MW-18		✳	

Sample ID	**Frequently Detected Constituents of Concern (ug/l)**					
	TCE	**cis-1,2-DCE**	**Chromium**	**Copper**	**Lead**	**Zinc**
MW-6R	<5	<5	**23**	**58**	**23**	**140**
MW-13A	<5	<5	<10	<10	<5	10
MW-14	<5	<5	<10	<10	<5	15
MW-17	**16**	**7.4**	<10	<10	<5	**32**
MW-17 (duplicate)	**16**	**7.4**	<10	<10	<5	18
MW-18	<5	<5	<10	<10	<5	**22**
NYSDEC (TOGS)	***5***	***5***	***10***	***25***	***5***	***20***

4.4 SUMMARY

An interpretation of the groundwater level measurements and groundwater analytical data are presented below.

Observations March 2001 Sampling Event

Water levels measured during the March 2001 sampling event indicated that the overburden groundwater flow gradient was to the north. The groundwater flow direction was influenced in the vicinity of the northern collection trench and the southern collection trench, where a depressed groundwater level was observed.

The groundwater chemical concentrations from the March 2001 groundwater sampling event are generally consistent with historical data and the baseline sampling results (i.e., previous four rounds of groundwater data). Discernable trends in concentrations of the constituents of concern have been observed at monitoring locations, as discussed below.

Monitoring Location	Observations March 2001
MW-6R	Limited detections of metals below or near the detection limit. VOCs and PCBs have never been detected.
MW-13A	Limited detections of metals below or near the detection limit. VOCs and PCBs have never been detected.
MW-14	Limited detections of metals below or near the detection limit. VOCs and PCBs have never been detected.
MW-17	TCE and cis-1, 2-DCE demonstrates a seasonal fluctuation, with the highest concentration in the first quarter. Overall, the trend is downward for both compounds. Limited detections of metals below or near the detection limit. PCBs have never been detected.
MW-18	Limited detections of metals below or near the detection limit. VOCs and PCBs have never been detected.

Observations September 2001 Sampling Event

Water levels collected during the September 2001 sampling event indicate that the overburden groundwater flow gradient was to the northeast. The groundwater flow direction was influenced in the vicinity of the northern collection trench and the southern collection trench, where a depressed groundwater level was observed.

The groundwater chemical concentrations from the September 2001 groundwater sampling event are generally consistent with historical data and the baseline sampling results (i.e., previous five rounds of groundwater data). Discernable trends in concentrations of the constituents of concern have been observed at on-site monitoring locations, as discussed below.

Monitoring Location	Observations September 2001
MW-6R	Elevated concentrations of metals were detected during the September 2001 event, which is a deviation form previous rounds where, limited detections of metals below or near the detection limit was the trend. VOCs and PCBs have never been detected, indicate a stable situation at / near the property boundary.
MW-13A	Limited detections of metals below or near the detection limit. VOCs and PCBs have never been detected.
MW-14	Limited detections of metals below or near the detection limit. VOCs and PCBs have never been detected.
MW-17	TCE and cis-1, 2-DCE demonstrates a seasonal fluctuation, with the highest concentrations in the first quarter. Overall, the trend is downward for both compounds. Limited detections of metals below or near the detection limit. PCBs have never been detected.
MW-18	Limited detections of metals below or near the detection limit. VOCs and PCBs have never been detected.

4.5 TABLES

TABLE 4-1
GROUNDWATER LEVEL MEASUREMENTS
2001 ANNUAL OPERATION, MAINTENANCE, and MONITORING REPORT
FORMER CHICAGO PNEUMATIC TOOL COMPANY
UTICA, NEW YORK
NYSDEC SITE NO. 622003

Monitoring Well ID	Completed Depth (T.I.C.) (feet)	Total Depth (T.I.C.) (feet)	Depth to Water (T.I.C.) (feet)	Surface Elevation (feet)	Riser Elevation (feet)	Water Elevation (feet)
Date Gauged: 3/29/01						
MW-3	10.50	10.50	3.69	474.78	474.55	470.86
MW-6R	7.51	7.45	6.11	462.69	462.46	456.35
MW-13A	11.07	11.10	8.30	467.30	469.23	460.93
MW-14	12.94	13.00	10.71	475.71	478.45	467.74
MW-17	11.32	11.34	2.56	463.89	466.02	463.46
MW-18	11.78	11.81	6.44	474.1	475.96	469.52
SCT CO-1	NA	NA	6.95	NA	472.30	465.35
SCT CO-2	NA	NA	7.21	NA	473.42	466.21
SCT CO-3	NA	NA	Dry	NA	471.21	Dry
NCT CO-1	NA	NA	9.35	NA	464.70	455.35
MH-2	NA	NA	7.32	NA	465.31	457.99

Monitoring Well ID	Completed Depth (T.I.C.) (feet)	Total Depth (T.I.C.) (feet)	Depth to Water (T.I.C.) (feet)	Surface Elevation (feet)	Riser Elevation (feet)	Water Elevation (feet)
Date Gauged: 9/13/01						
MW-6R	7.51	7.45	1.61	462.69	462.46	460.85
MW-13A	11.07	11.10	5.05	467.30	469.23	464.18
MW-14	12.94	13.00	7.55	475.71	478.45	470.90
MW-17	11.32	11.34	8.91	463.89	466.02	457.11
MW-18	11.78	11.81	6.40	474.1	475.96	469.56
SCT CO-1	NA	NA	5.64	NA	472.30	466.66
SCT CO-2	NA	NA	8.30	NA	473.42	465.12
SCT CO-3	NA	NA	7.25	NA	471.21	463.96
NCT CO-1	NA	NA	9.35	NA	464.70	455.35
MH-2	NA	NA	7.25	NA	465.31	458.06

Notes:
T.I.C. = Top of Inner Casing
SCT = Southern Collection Trench
NCT = Northern Collection Trench
CO = Clean Out
MH = Man Hole
NA = Not Applicable

TABLE 4-2
HISTORIC GROUNDWATER LEVEL MEASUREMENTS
2000 ANNUAL OPERATION, MAINTENANCE, and MONITORING REPORT
FORMER CHICAGO PNEUMATIC TOOL COMPANY
UTICA, NEW YORK
NYSDEC SITE NO. 622003

Well ID	MW-3	MW-6R	MW-13A	MW-14	MW-17	MW-18
Sample Date	Elevation (feet)					
3/26/1999	467.93	461.78	465.83	474.82	462.14	469.97
9/20/1999	467.60	461.14	464.36	470.78	460.70	467.83
3/14/2000	467.72	461.63	466.38	475.05	459.45	470.03
9/14/2000	467.42	461.15	464.98	473.72	457.37	468.83
9/13/2001	NA	460.85	464.18	470.9	457.11	469.56

TABLE 4-2
HISTORIC GROUNDWATER LEVEL MEASUREMENTS
2001 ANNUAL OPERATION, MAINTENANCE, and MONITORING REPORT
FORMER CHICAGO PNEUMATIC TOOL COMPANY
UTICA, NEW YORK
NYSDEC SITE NO. 622003

Well ID	MW-3	MW-6R	MW-13A	MW-14	MW-17	MW-18
Sample Date	Elevation (feet)					
3/26/1999	467.93	461.78	465.83	474.82	462.14	469.97
9/20/1999	467.60	461.14	464.36	470.78	460.70	467.83
3/14/2000	467.72	461.63	466.38	475.05	459.45	470.03
9/14/2000	467.42	461.15	464.98	473.72	457.37	468.83
3/29/2001	470.86	456.35	460.93	467.74	463.46	469.52
9/13/2001	NA	460.85	464.18	470.9	457.11	469.56

TABLE 4-3
GROUNDWATER PARAMETERS, METHODS, and REPORTING UNITS
2001 ANNUAL OPERATION, MAINTENANCE, and MONITORING REPORT
FORMER CHICAO PNEUMATIC TOOL COMPANY
UTICA, NEW YORK
NYSDEC SITE NO. 622003

Constituent	Reporting Limits (ppb)
VOCs of Concern [1]	
cis-1,2-Dichloroethene	5
trans-1,2-Dichloroethene	5
Trichloroethylene	5
Vinyl Chloride	2
Metals of Concern [2]	
Chromium	10
Copper	25
Lead	5
Zinc	20
PCBs [3]	
Aroclor 1016	1
Aroclor 1221	2
Aroclor 1232	1
Aroclor 1242	1
Aroclor 1248	1
Aroclor 1254	1
Aroclor 1260	1

Notes:
ppb = parts per billion, approximately equivalent to micrograms per liter (ug/L)
VOCs = Volatile Organic Componds
PCBs= Poly chlorinated biphenyls

[1] = Reporting limits for VOCs of concern are based on USEPA SW-846 Method 8260 CRQLs. Specific quantification are highly matrix dependent. The quantification limits shown are provided for guidance and may not always be achievable.

[2] = USEPA SW-846 6000/7000 Series Methods will be used for analysis of metals of concern. Reporting limits presented are based on RCRA TCL CRQLs. CQRLs shown for metals of concern are provided for guidance and may not always be achievable.

[3] = Reporting limits for PCBs are based on NYSDEC 1995 ASP contrct-required quantitation limits (CRQLs) and are for guidance purposes. Quantitation limits shown for PCBs are equal to those for each individual Aroclor listed.

TABLE 4-4
GROUNDWATER ANALYTICAL RESULTS
2001 ANNUAL OPERATION, MAINTENANCE, and MONITORING REPORT
FORMER CHICAGO PNEUMATIC TOOL COMPANY
UTICA, NEW YORK
NYSDEC SITE NO. 622003

Well ID	Detection Limit	NYSDEC Standards	MW-6R	MW-13A	MW-14	MW-17	MW-18	MW-17
Date Sampled			3/29/2001	3/29/2001	3/29/2001	3/29/2001	3/29/2001	3/29/2001
Result Type			Primary	Primary	Primary	Primary	Primary	Duplicate
Volatile Organic Compounds								
cis-1,2-Dichloroethene	5	5	<5	<5	<5	**8.9**	<5	**9.2**
trans-1,2-Dichloroethene	5	5	<5	<5	<5	<5	<5	<5
Trichloroethene	5	5	<5	<5	<5	**24**	<5	**25**
Vinyl Chloride	2	2	<2	<2	<2	<2	<2	<2
Inorganics								
Chromium	10	10	<10	<10	<10	<10	<10	<10
Copper	10	25	<10	<10	<10	10	<10	<10
Lead	5	5	<5	<5	<5	<5	<5	<5
Zinc	10	20	19	10	15	**32**	**21**	18
Polychlorinted Biphenyls								
Aroclor 1016	0.05	0.09	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Aroclor 1221	0.05	0.09	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Aroclor 1232	0.05	0.09	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Aroclor 1242	0.05	0.09	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Aroclor 1248	0.05	0.09	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Aroclor 1254	0.05	0.09	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Aroclor 1260	0.05	0.09	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

Well ID	Detection Limit	NYSDEC Standards	MW-6R	MW-13A	MW-14	MW-17	MW-18	MW-17
Date Sampled			9/13/2001	9/13/2001	9/13/2001	9/13/2001	9/13/2001	9/13/2001
Result Type			Primary	Primary	Primary	Primary	Primary	Duplicate
Volatile Organic Compounds								
cis-1,2-Dichloroethene	5	5	<5	<5	<5	**7.4**	<5	**7.4**
trans-1,2-Dichloroethene	5	5	<5	<5	<5	<5	<5	<5
Trichloroethene	5	5	<5	<5	<5	**16**	<5	**16**
Vinyl Chloride	5	2	<5	<5	<5	<5	<5	<5
Inorganics								
Chromium	10	10	**23**	<10	<10	<10	<10	NS
Copper	10	25	**58**	<10	<10	<10	<10	NS
Lead	5	5	**23**	<10	<10	<10	<10	NS
Zinc	10	20	**140**	<10	<10	<10	**22**	NS
Polychlorinted Biphenyls								
Aroclor 1016	0.1	0.09	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Aroclor 1221	0.1	0.09	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Aroclor 1232	0.1	0.09	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Aroclor 1242	0.1	0.09	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Aroclor 1248	0.1	0.09	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Aroclor 1254	0.1	0.09	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Aroclor 1260	0.1	0.09	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10

Notes:
Sample results and NYSDEC Standards reported in ug/L; approximately equivalent to parts per billion (ppb)
NYSDEC Standards = New York State Department of Environmental Conservation (NYSDEC) Division of Water Technic
Operational Guidance Series (TOGS)
NS = Not Sampled
Bolded detections exceed the NYSDEC Standards

TABLE 4-5
HISTORIC GROUNDWATER ANALYTICAL RESULTS
2001 ANNUAL OPERATION, MAINTENANCE, and OPERATION REPORT
FORMER CHICAGO PNEUMATIC TOOL COMPANY
UTICA, NEW YORK
NYSDEC SITE NO. 622003

Analytes	MW-3	MW-6R	MW-13A	MW-14	MW-17	MW-18	DUP-1	DUP Well
Volatile Organic Compounds								
cis-1,2-Dichloroethene								
Feb/March 1999	<5	<5	<5	<5	<5	<5	<5	MW-18
September 1999	<5	<5	<5	<5	7	<5	<5	MW-13A
March 2000	<5	<5	<5	<5	<5	<5	<5	MW-13A
September 2000	<5	<5	<5	<5	5.2	<5	5	MW-17
March 2001	NS	<5	<5	<5	8.9	<5	9.2	MW-17
September 2001	NS	<5	<5	<5	7.4	<5	7.4	MW-17
trans-1,2-Dichloroethene								
Feb/March 1999	<5	<5	<5	<5	<5	<5	<5	MW-18
September 1999	<5	<5	<5	<5	<5	<5	<5	MW-13A
March 2000	<5	<5	<5	<5	<5	<5	<5	MW-13A
September 2000	<5	<5	<5	<5	<5	<5	<5	MW-17
March 2001	NS	<5	<5	<5	<5	<5	<5	MW-17
September 2001	NS	<5	<5	<5	<5	<5	<5	MW-17
Trichloroethene								
Feb/March 1999	<5	<5	<5	<5	<5	<5	<5	MW-18
September 1999	<5	<5	<5	<5	25	<5	<5	MW-13A
March 2000	<5	<5	<5	<5	22	<5	<5	MW-13A
September 2000	<5	<5	<5	<5	22	<5	25	MW-17
March 2001	NS	<5	<5	<5	24	<5	25	MW-17
September 2001	NS	<5	<5	<5	16	<5	16	MW-17
Vinyl Chloride								
Feb/March 1999	<2	<2	<2	<2	<2	<2	<2	MW-18
September 1999	<2	<2	<2	<2	<2	<2	<2	MW-13A
March 2000	<5	<5	<5	<5	<5	<5	<5	MW-13A
September 2000	<5	<5	<5	<5	<5	<5	<5	MW-17
March 2001	NS	<2	<2	<2	<2	<2	<2	MW-17
September 2001	NS	<5	<5	<5	<5	<5	<5	MW-17
Metals								
Chromium								
Feb/March 1999	4.4	19.9	7.8 B	20.4	4	60.1	15	MW-18
September 1999	4.6 B	2.2 B	4.8 E	<10	21 B	19.4	6 B	MW-13A
March 2000	<10	<10	19	<10	<10	<10	<10	MW-13A
September 2000	<10	<10	<10	<10	<10	<10	<10	MW-17
March 2001	NS	<10	<10	<10	<10	<10	<10	MW-17
September 2001	NS	23	<10	<10	<10	<10	NS	MW-17
Copper								
Feb/March 1999	16.8	45	47.8	47.9	16 B	109	41.6	MW-18
September 1999	6.1 B	6.7 B	5.3 B	6 B	ND	29.1	7.6 B	MW-13A
March 2000	<10	<10	<10	<10	<10	<10	<10	MW-13A
September 2000	<10	<10	<10	<10	<10	<10	<10	MW-17
March 2001	NS	<10	<10	<10	<10	<10	<10	MW-17
September 2001	NS	58	<10	<10	<10	<10	NS	MW-17
Lead								
Feb/March 1999	5.5	7.4	9.2	7.9	2.4 B	35.6	5.4	MW-18
September 1999	4	3.6	2.28	<5	<5	9.3	4.3	MW-13A
March 2000	<5	<5	<5	<5	<5	<5	<5	MW-13A
September 2000	<5	<5	<5	<5	<5	<5	<5	MW-17
March 2001	NS	<5	<5	<5	<5	<5	<5	MW-17
September 2001	NS	23	<10	<10	<10	<10	NS	MW-17
Zinc								
Feb/March 1999	15.1	49.5	38.1	36	14.6 B	172	36.6	MW-18
September 1999	16.1 B	26.5	10.7 B	6.5 B	7.1 B	51.2	13.8 B	MW-13A
March 2000	13	26	29	28	13	16	24	MW-13A
September 2000	38	47	47	42	57	58	58	MW-17
March 2001	NS	19	10	15	32	21	18	MW-17
September 2001	NS	140	<10	<10	<10	22	NS	MW-17

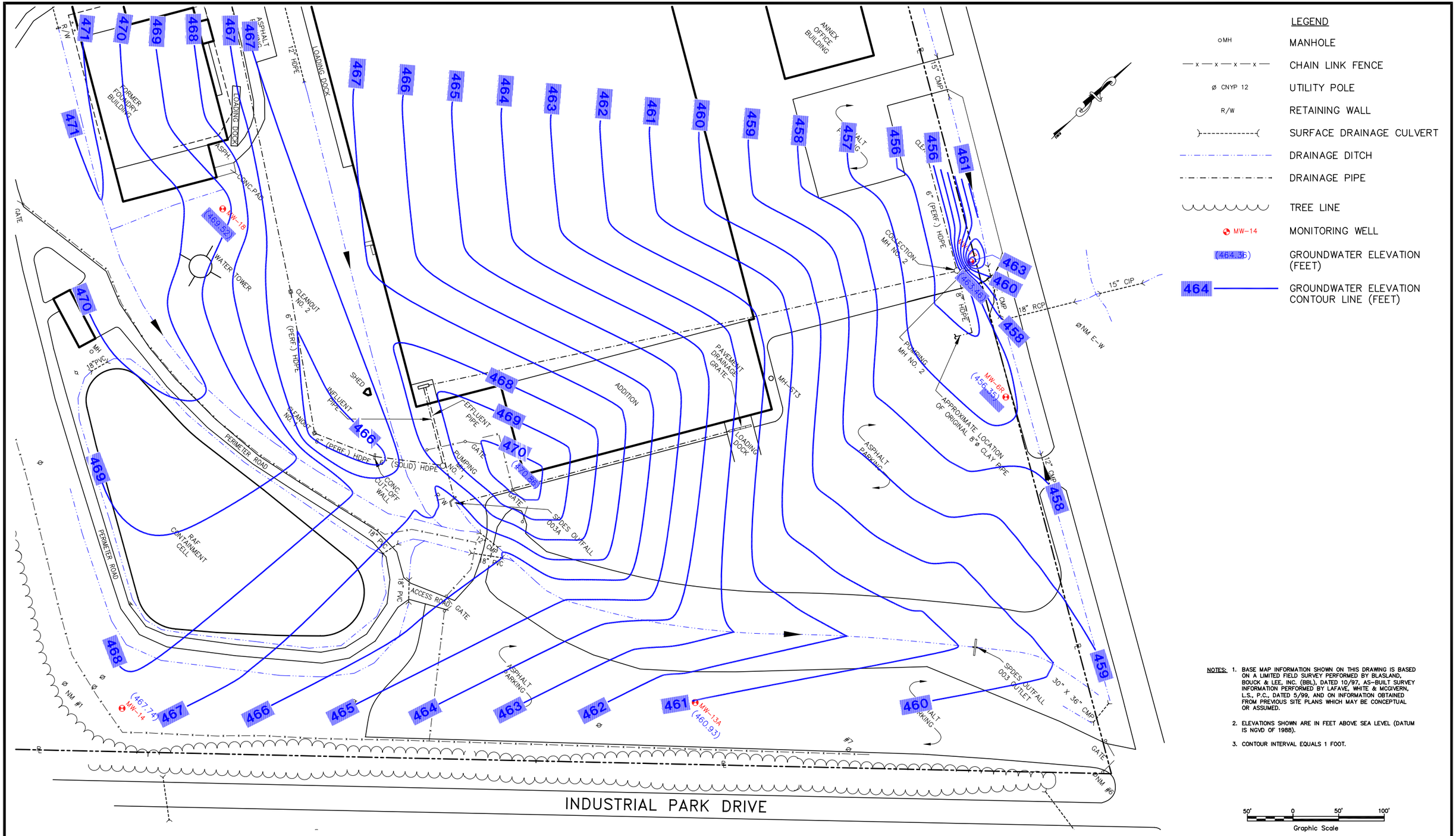
TABLE 4-5
HISTORIC GROUNDWATER ANALYTICAL RESULTS
2001 ANNUAL OPERATION, MAINTENANCE, and OPERATION REPORT
FORMER CHICAGO PNEUMATIC TOOL COMPANY
UTICA, NEW YORK
NYSDEC SITE NO. 622003

Analytes		MW-3	MW-6R	MW-13A	MW-14	MW-17	MW-18	DUP-1	DUP Well
Polychlorinated Biphenyls									
Aroclor 1016									
	Feb/March 1999	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	MW-18
	September 1999	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	MW-13A
	March 2000	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	MW-13A
	September 2000	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	MW-17
	March 2001	NS	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	MW-17
	September 2001	NS	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	MW-17
Aroclor 1221									
	Feb/March 1999	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	MW-18
	September 1999	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	MW-13A
	March 2000	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	MW-13A
	September 2000	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	MW-17
	March 2001	NS	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	MW-17
	September 2001	NS	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	MW-17
Aroclor 1232									
	Feb/March 1999	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	MW-18
	September 1999	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	MW-13A
	March 2000	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	MW-13A
	September 2000	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	MW-17
	March 2001	NS	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	MW-17
	September 2001	NS	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	MW-17
Aroclor 1242									
	Feb/March 1999	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	MW-18
	September 1999	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	MW-13A
	March 2000	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	MW-13A
	September 2000	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	MW-17
	March 2001	NS	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	MW-17
	September 2001	NS	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	MW-17
Aroclor 1248									
	Feb/March 1999	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	MW-18
	September 1999	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	MW-13A
	March 2000	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	MW-13A
	September 2000	0.46	1.2	<0.05	0.62	<0.05	0.15	0.19	MW-17
	March 2001	NS	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	MW-17
	September 2001	NS	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	MW-17
Aroclor 1254									
	Feb/March 1999	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	MW-18
	September 1999	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	MW-13A
	March 2000	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	MW-13A
	September 2000	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	MW-17
	March 2001	NS	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	MW-17
	September 2001	NS	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	MW-17
Aroclor 1260									
	Feb/March 1999	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	MW-18
	September 1999	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	MW-13A
	March 2000	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	MW-13A
	September 2000	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	MW-17
	March 2001	NS	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	MW-17
	September 2001	NS	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	MW-17

Notes:
All results reported in micrograms per liter (ug/L); equivalent to parts per billion (ppb).

B = The reported value was obtained from a reading that was less than the Contract Required Detection Limit (CRDL), but greater than of equal to the Instrument Detection Limit (IDL).
E = The reported value is estimated due to the presence of interference(s).
ND = None Detect
NS = No Sample

4.6 FIGURES



NOTES:
1. BASE MAP INFORMATION SHOWN ON THIS DRAWING IS BASED ON A LIMITED FIELD SURVEY PERFORMED BY BLASLAND, BOUCK & LEE, INC. (BBL), DATED 10/97, AS-BUILT SURVEY INFORMATION PERFORMED BY LAFAVE, WHITE & MCGIVERN, L.S., P.C., DATED 5/99, AND ON INFORMATION OBTAINED FROM PREVIOUS SITE PLANS WHICH MAY BE CONCEPTUAL OR ASSUMED.
2. ELEVATIONS SHOWN ARE IN FEET ABOVE SEA LEVEL (DATUM IS NGVD OF 1988).
3. CONTOUR INTERVAL EQUALS 1 FOOT.

50' 0 50' 100'
Graphic Scale

SECOR
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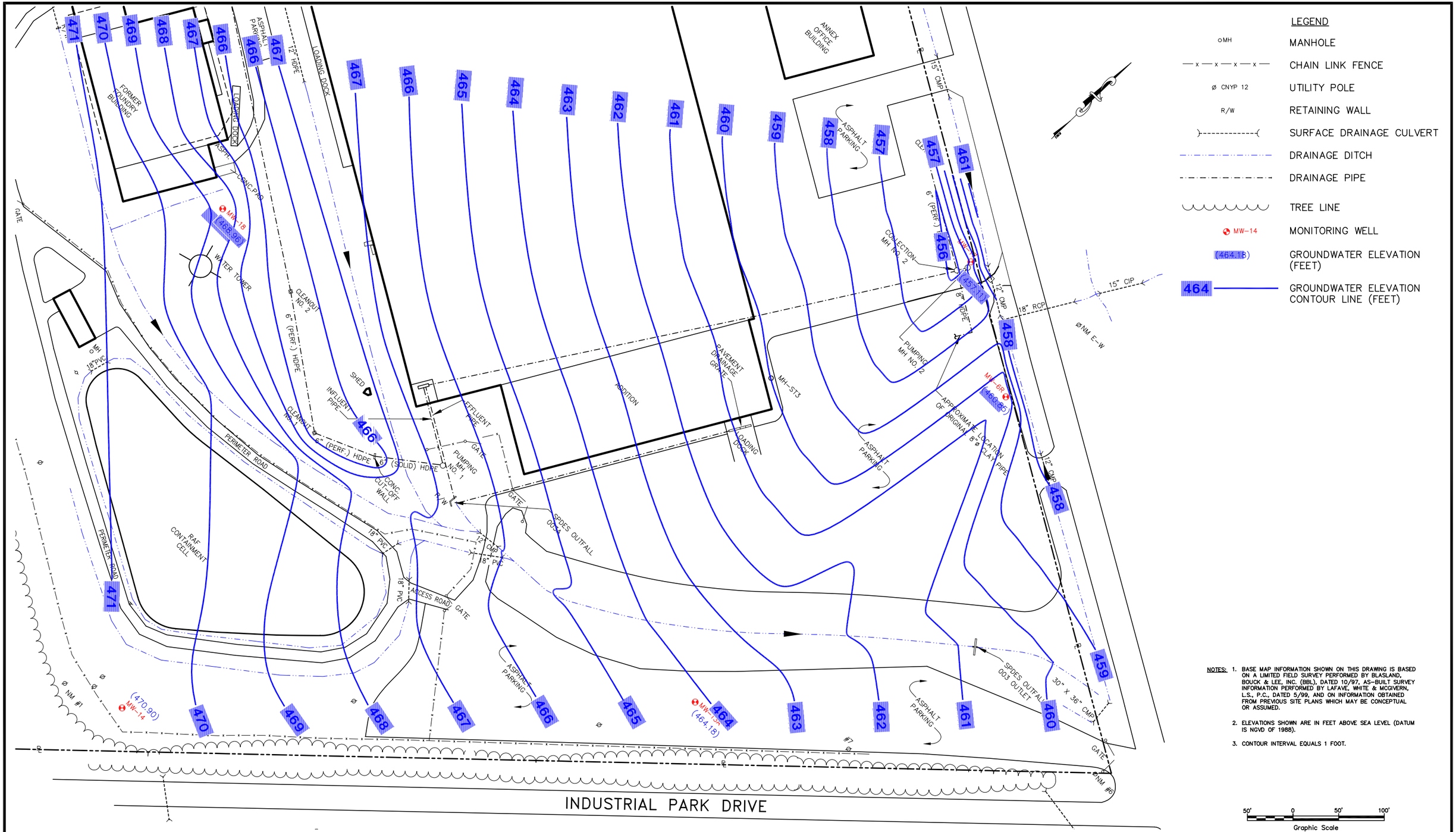
120 EAST WASHINGTON STREET
SYRACUSE, NEW YORK 13202
315-475-9204

2001 ANNUAL OPERATION, MAINTENANCE, AND MONITORING REPORT

2200 BLEECKER STREET
UTICA, NEW YORK

OVERBURDEN GROUNDWATER ELEVATION CONTOUR MAP MARCH 29, 2001

PROJECT NO.: 074.40046.003
DATE: SEPT. 2001
FIGURE NO.: 4-1



NOTES:
1. BASE MAP INFORMATION SHOWN ON THIS DRAWING IS BASED ON A LIMITED FIELD SURVEY PERFORMED BY BLASLAND, BOUCK & LEE, INC. (BBL), DATED 10/97, AS-BUILT SURVEY INFORMATION PERFORMED BY LAFAVE, WHITE & MCGIVERN, L.S., P.C., DATED 5/99, AND ON INFORMATION OBTAINED FROM PREVIOUS SITE PLANS WHICH MAY BE CONCEPTUAL OR ASSUMED.
2. ELEVATIONS SHOWN ARE IN FEET ABOVE SEA LEVEL (DATUM IS NGVD OF 1988).
3. CONTOUR INTERVAL EQUALS 1 FOOT.

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2001 ANNUAL OPERATION, MAINTENANCE, AND MONITORING REPORT

2200 BLEECKER STREET
UTICA, NEW YORK

OVERBURDEN GROUNDWATER ELEVATION CONTOUR MAP SEPTEMBER 13 & 14, 2001

PROJECT NO.: 074.40046.003
DATE: OCT. 2001
FIGURE NO.: 4-2

5.0 GROUNDWATER TREATMENT SYSTEM

5.1 INTRODUCTION

This section documents the O&M of the Groundwater Treatment System, originally constructed as a Interim Remedial Measure (IRM) to address VOCs in surface and groundwater. The system was permanently converted to capture and treat groundwater as part of the RA. Presently, the groundwater treatment system consists of a low profile air stripper unit, located in the southeast corner of the main building, the northern collection trench (NCT) and southern collection trench (SCT), and two manholes designated pumping manhole No. 1 (MH-1) and pumping manhole No. 2 (MH-2). The system was placed in full operation in March 1995 and continued operation thru 2001. The surface components of the collection trenches, to included manholes and clean out, are inspected during the site visit and condition recorded on the Site Inspection Report - Form A (Appendix A). Internal inspection and monitoring occurs during the semi-annual groundwater monitoring.

The treatment process involves removal of VOCs from influent water using a low profile air stripper. The low profile air stripper treats influent pumped from MH-1 and MH-2. (See Figure 2-1). MH-1 is currently connected to the SCT. MH-2 was constructed at the northern extent of the property to collect effluent water from an existing clay pipe and is connected to the NCT, as well. Groundwater is directed to the manhole where it is then pumped to the air stripper. The collection trenches were constructed as part of the RA at prescribed locations on property to collect groundwater.

The treated water from the low-profile air stripper discharges by gravity through an effluent pipe to SPDES Outfall 03A located at the upstream end the east drainage ditch (former Area 14). The east drainage ditch is monitored as SPDES Outfall 003, prior to discharging off site at the northern property boundary.

The operation and maintenance of the air stripper is not provided in the RA OMM Manual. A separate O&M Manual, dated April 1995, was prepared to address these components.

5.2 OPERATION

The manhole pumps and low profile air stripper were online and operating 24 hours per day, seven days per week throughout 2001, with the following exceptions:

- January 22, 2001 (Replaced Pump No. 2 in PMH-2);
- May 2, 2001 (Acid cleaning);
- May 4 through May 10, 2001 (Electrical maintenance);
- May 22 through May 25, 2001 (Electrical maintenance); and
- October 31, 2001 (Acid cleaning).

Generally the air stripper was not operating during these dates for maintenance, based on information provided by CP. UHC does not conduct O&M of the groundwater treatment system.

The total volume of water pumped to the air stripper is measured by flow meters that provide instantaneous and totalizing flow readings. These flow meters are located at the air stripper in the influent pipe from MH-1, MH-2, and the treatment area floor sump pump. During 2001, a total of approximately 3,000,000 gallons of water was pumped and treated.

The effluent from the air stripper, SPDES Outfall 03A, requires sampling, analytical analysis, and flow measurement to document compliance with the NYSDEC Division of Water SPDES permit at the following frequencies:

- Continuous monitoring of flow; and
- Weekly sampling and analysis for 1,2-cis-DCE, 1,2-trans-DCE, TCE, and VC.

Samples are collected for the SPDES Outfall 03A, from a sampling port located in the effluent pipe prior to flowing into the east drainage ditch. The analytical results from the weekly sampling have previously been submitted to the NYSDEC, Division of Water in the form of monthly Discharge Monitoring Reports (DMRs).

An auto dialer monitors the groundwater treatment system. Two alarms were received and documented on May 4 and May 22, 2001; the alarms were attributed to electrical issues. As the effluent water is sampled weekly, the system is inspected and any necessary adjustments made during these visits.

5.3 MAINTENANCE

Only one mechanical failure and equipment replacement occurred during 2001. The air stripper was offline during the following days:

- January 22, 2001 (replaced Pump No.2 in Pumping Manhole No. 2);
- May 2, 2001 (Acid cleaning);
- May 4 through May 10, 2001 (Electrical maintenance);
- May 22 through May 25, 2001 (Electrical maintenance); and
- October 31, 2001 (Acid cleaning).

The groundwater treatment system was shut down and the stripper internally inspected and cleaned with a nitric acid solution. This cleaning process regained the air stripper efficiency by removing mineral scaling.

5.4 SUMMARY

The groundwater treatment system has been in operation for approximately 7 years. The air stripper, pumps, and appurtenances operations have been consistent and continuous and within compliance of the SPDES permit. The system was shut down occasionally for maintenance, which included replacement of pump No. 2 in MH-2. Maintenance includes system checks and acid cleaning of the internal air stripper components. The treatment system flow totalizer indicates that approximately 3,000,000 gallons of groundwater was processed during 2001, based on O&M information provided by CP.

APPENDIX A

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Site Inspection Reports – Form A

INCLUDED IN PRINTED COPY SUBMITTAL TO NYSDEC

APPENDIX B

SECOR International Incorporated

Auto Dialer Alarm Incident and Testing Report – Form E

INCLUDED IN PRINTED COPY SUBMITTAL TO NYSDEC

APPENDIX C

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Leachate Disposal Correspondence and Analytical Data

INCLUDED IN PRINTED COPY SUBMITTAL TO NYSDEC

APPENDIX D

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Water Level Field Logs - Form C

INCLUDED IN PRINTED COPY SUBMITTAL TO NYSDEC

APPENDIX E

SECOR International Incorporated

Groundwater Sampling - Form D

INCLUDED IN PRINTED COPY SUBMITTAL TO NYSDEC

APPENDIX F

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Groundwater Analytical Data