

2002 ANNUAL OPERATION, MAINTENANCE AND MONITORING REPORT

**2200 Bleecker Street
Utica, New York 13501
NYSDEC Site No. 622003**

March 2003

Prepared for:

Utica Holding Company c/o
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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 subsequently approved by the New York State Department of Environmental Conservation, Region 6 (NYSDEC), on December 11, 2001. This report is prepared in reference to the Final Engineering Report (FER), as-built drawings and OMM manual for the property. The contents of the annual report are outlined in the OMM manual.

The overall property consists of 77-acres in an industrial setting in Utica, New York. Utica Holding Company (UHC), a subsidiary of Danaher Corporation retains ownership of the subject property, with the exception of the former Chicago Pneumatic Tool Company (CP) main manufacturing building structure and the land beneath the structure. 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.

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 ISACC system is tested annually.

The scheduled RAF property inspections were conducted throughout the 2002 calendar year, and included some limited maintenance activities. This included a September 19, 2002 annual inspection by Phil Waite, P.E., NYSDEC. The inspections included testing equipment, recording instrument information and system calibration. Sampling and disposal of leachate were also conducted. Eight unscheduled maintenance events were initiated, based on identified conditions observed during monthly property inspections. The maintenance events did not interrupt the operation of the leachate collection system. The total leachate collected during 2002 was approximately 9,400 gallons.

The specific additional maintenance and upgrade activities completed at the subject property during calendar year 2002 consisted of the following:

- Installation of Pumping Manhole No. 2 to improve the operation of the northern collection trench;
- Installation of SPDES Outfall 001 Manhole with a V-notch weir to facilitate collection of effluent samples and flow measurements representative of actual discharge conditions;
- Installation of a V-notch weir in SPDES Outfall 002 Manhole to facilitate collection of effluent samples and flow measurements representative of actual discharge conditions;

- Installation of a monitoring port at SPDES Outfall 003 to facilitate flow measurement collection data representative of actual discharge conditions;
- Elimination of persistent and damaging vermin from the Containment Cell;
- Restoration of cap and vegetative cover on the Containment Cell;
- Installation sheet metal barrier panels and bird netting to prevent pigeon roosting in the leachate collection tank and transfer portion of the RAF building; and
- Upgrading of Area 4 and Area 6 upstream ditches to facilitate stormwater control.

Groundwater data was collected from four of the five productive on-site monitoring wells during semi-annual monitoring events in March and September of 2002. Groundwater was not present in MW-17 during either sampling event. The groundwater analytical results from the 2002 semiannual events indicate the following:

- Vinyl chloride, a volatile organic compound (VOC), was detected at a concentration of 2.6 micrograms per liter (ug/L) in MW-18 during the September event.
- Low levels of select inorganic constituents were detected in the four on-site monitoring wells during the March and/or September sampling events.
- No polychlorinated biphenyls (PCBs) were detected in groundwater samples collected from the on-site monitoring wells during the 2002 sampling events.

The groundwater treatment system consists of a low profile air stripper, pumps, and appurtenance, installed in 1995 as part of the Surface Water Interim Remedial Measures (IRM). The IRM was constructed to address VOCs in the water at the Property and discharges under NYSDEC State Pollution Discharge Elimination System (SPDES) Permit No. NY0108537 as Outfall 03A. During calendar year 2002, the air stripper treated approximately 3,000,000 gallons of groundwater. The treatment system operated continuously during 2002, with the following exceptions:

- May 2, October 17 and 18, system shut down for acid cleaning;
- March 5 through March 14, during installation of the new Pumping Manhole No. 2; and
- June 1 and 2, system down due to power and telephone interruption caused by rainstorm.

Based on the monitoring and testing results as outlined above, additional corrective actions are not warranted at this time. The OMM will continue as set forth.

2.0 PROPERTY INSPECTION & MAINTNENANCE

The overall property consists of a 77-acre parcel (see **Figure 2-1**) located in an industrial setting. UHC retains ownership of the property, which includes the ancillary buildings and the land, excluding the former CP main manufacturing building (see **Figure 2-2**). The main building is presently owned by Coolidge Utica Properties, LLC, who leases the portions of the building to various tenants. The property receives monthly inspection and maintenance in conjunction with the required inspections of the RAF and associated components. This section includes inspection and maintenance of the property only. The RAF, monitoring wells, and groundwater treatment system are discussed later in **Section 3.0**, **Section 4.0**, and **Section 5.0**, respectively.

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

2.1 PROPERTY ACTIVITIES

The majority of the property buildings are currently occupied by tenants that generally include trucking, fabric manufacturing, storage, and printing businesses. No specific changes in or unusual property activities related to the subject property operation and maintenance requirements, were noted during the calendar year 2002.

2.2 PROPERTY DRAINAGE AND OUTFALLS

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 2-3**), 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 primarily consists of roof leaders 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 southwestern and northern stormwater systems are monitored from manholes identified as SPDES 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 piping 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 building, converge and form one north-south ditch (former Area 14) along the eastern portion of the property. This east 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 roof leaders connected to the southeastern stormwater system and the RAF surface drainage, as well as surface water from the east parking lots. The SPDES Outfall 003 is located near the north end of the east drainage ditch; prior to joining a drainage ditch parallel to Bleecker Street.

During 2002, the property ditches were inspected and observed to be well vegetated, and overall, not generally prone to sedimentation, with one exception, requiring the following unscheduled maintenance activity:

- Area 4 and Area 6 upstream ditches were upgraded with additional HDPE culvert, fabric, and riprap to continue to assure stormwater control.

Other unscheduled maintenance activities were conducted to continue to assure compliance at SPDES Outfalls 001, 002, and 003, as follows.

- SPDES Outfall 001 Manhole was installed to facilitate collection of effluent samples and flow measurements representative of actual discharge conditions, as required under the SPDES permit. Soil excavated during the installation of SPDES Outfall 001 Manhole was field screened for VOCs utilizing a Photoionization Detector (PID). Field screening activities identified the presence of VOCs in the soil, and as such, chemical characterization was performed on the soil/fill material, according to the site-specific constituents of concern established by the NYSDEC. The analytical results indicated that metals of concern; specifically copper, lead, and zinc were detected in an approximately 15 cubic yards of segregated volume of soil at concentrations greater than the site-specific cleanup objectives. The soil/fill material was manifested as a hazardous waste and disposed of at High Acres Landfill in Fairport, New York. An As-Built SPDES Outfall 001 Manhole Plan and Section is included as **Figure 2-4**. Additional details pertaining to the installation of SPDES Outfall 001 Manhole are discussed in SECOR's May 17, 2002, *Corrective Action Summary Report Outfall 001 and 002* submitted to Chad Kehoe and Philip Waite, P.E., NYSDEC.
- Installation of a sharp edge, 120-degree V-notch weirs at the effluent portions of both SPDES Outfalls 001 and 002. **Figure 2-4 and Figure 2-5** provide plans and section detail of the upgrades to Outfalls 001 and 002, respectively; and
- Installation of a monitoring port at SPDES Outfall 003 to facilitate flow measurement collection data representative of actual discharge conditions. An As-Built SPDES Outfall 003 Plan and Section is included as **Figure 2-6**.

2.3 SUMMARY

The northern portion of the property remained active throughout 2002. While the south remains wooded and inactive. Tenants occupy approximately 90% of the main building and continue to use the surrounding parking lots. With the exception of the maintenance and upgrade activities conducted at the drainages and outfalls described above, no other unscheduled maintenance activities were required or conducted at the property.

2.4 FIGURES

- 2-1 Aerial Property Plan
- 2-2 Facility Plan
- 2-3 Remedial Action Areas
- 2-4 As-Built SPDES Outfall 001 Manhole Plan and Section
- 2-5 As-Built SPDES Outfall 002 Manhole Plan and Section
- 2-6 As-Built SPDES Outfall 003 Plan and Section



- LEGEND**
- APPROXIMATE PROPERTY LINE
 - - - CHAIN LINK FENCE
 - - - SURFACE DRAINAGE CULVERT
 - DRAINAGE DITCH
 - - - DRAINAGE PIPE
 - ~~~~~ TREE LINE

- NOTES:**
1. BASE MAP INFORMATION SHOWN ON THIS DRAWING IS BASED ON A LIMITED FIELD SURVEY PERFORMED BY BLASLAND, BOUCK & LEE, INC. (BBLI), DATED 10/97, AS-BUILT SURVEY INFORMATION PERFORMED BY LAFAYE, WHITE & MCGIVERN, L.S., P.C., DATED 5/99, AND ON INFORMATION OBTAINED FROM PREVIOUS SITE PLANS WHICH MAY BE CONCEPTUAL OR ASSUMED.
 2. PROPERTY LINE INFORMATION TAKEN FROM HERKIMER COUNTY TAX MAPS AND IS APPROXIMATE.
 3. AIR PHOTO DATED 5/31/90.



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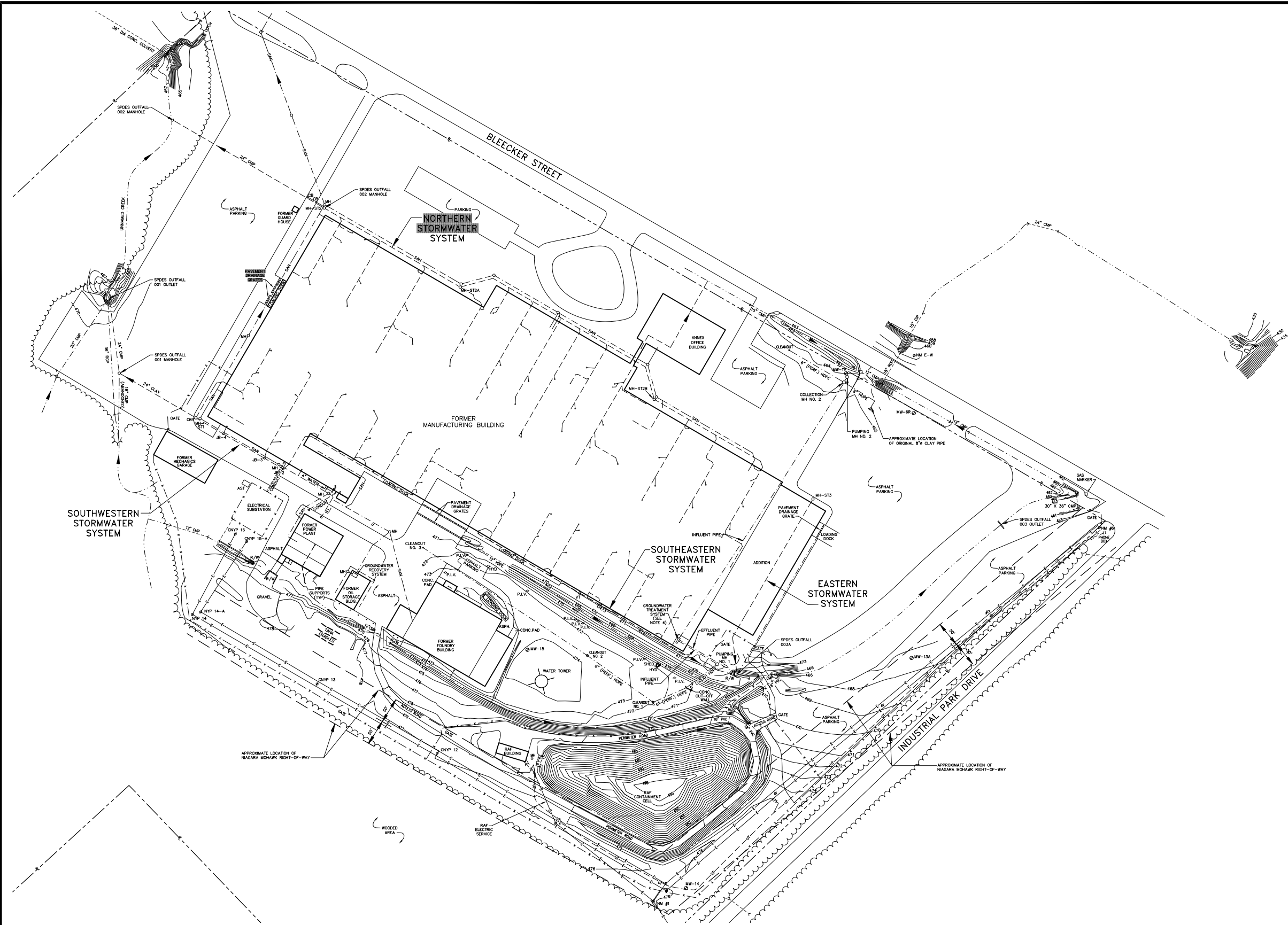
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315-475-9204

2002 ANNUAL
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2200 BLEECKER STREET
UTICA, NEW YORK

AERIAL PROPERTY MAP

PROJECT NO.:
740T.45154.00.0003
DATE:
MARCH 2003
FIGURE NO.:
2-1



- 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 LAFAYE, 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 IN 1995.

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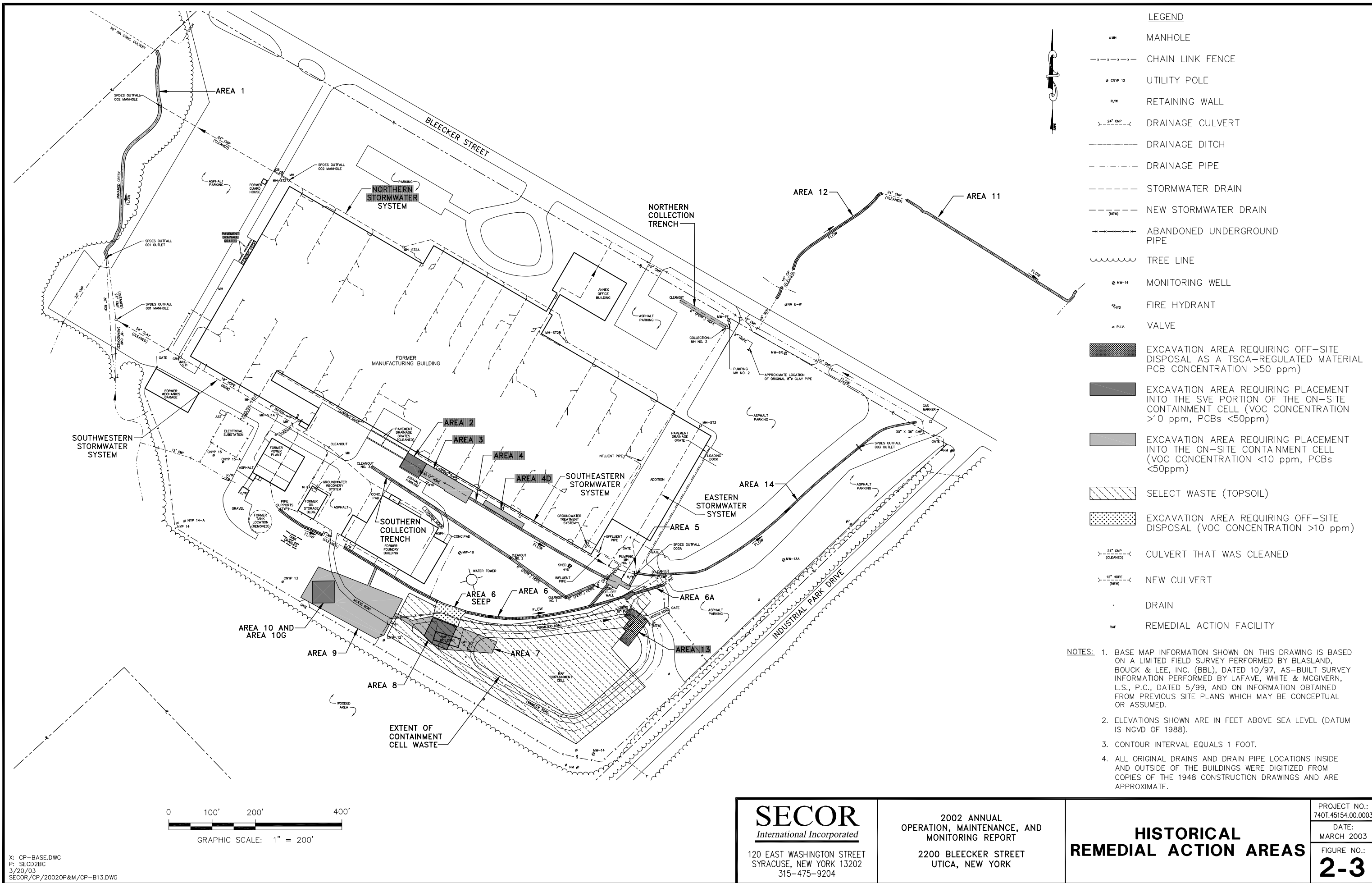
2200 BLEECKER STREET
UTICA, NEW YORK

FACILITY PLAN

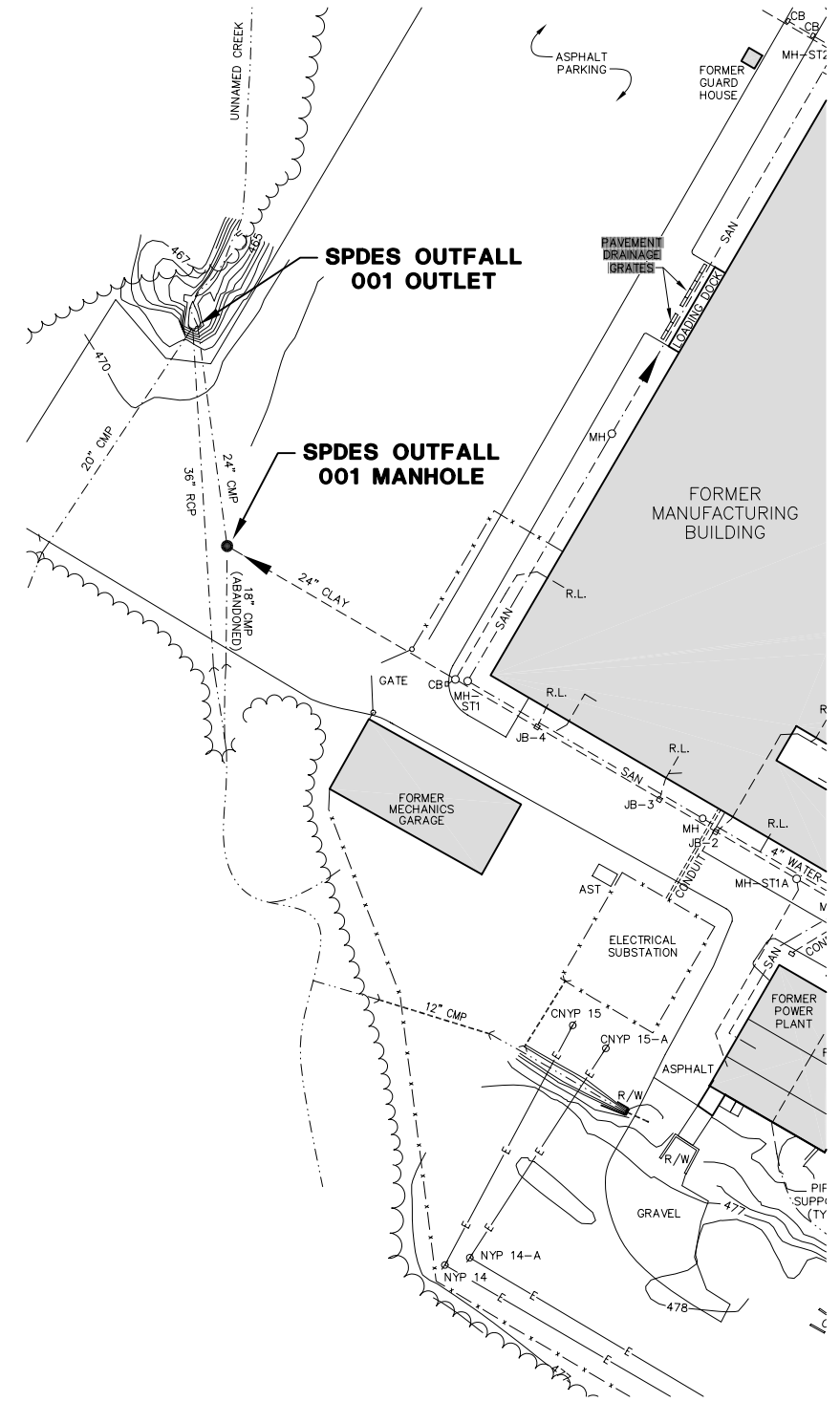
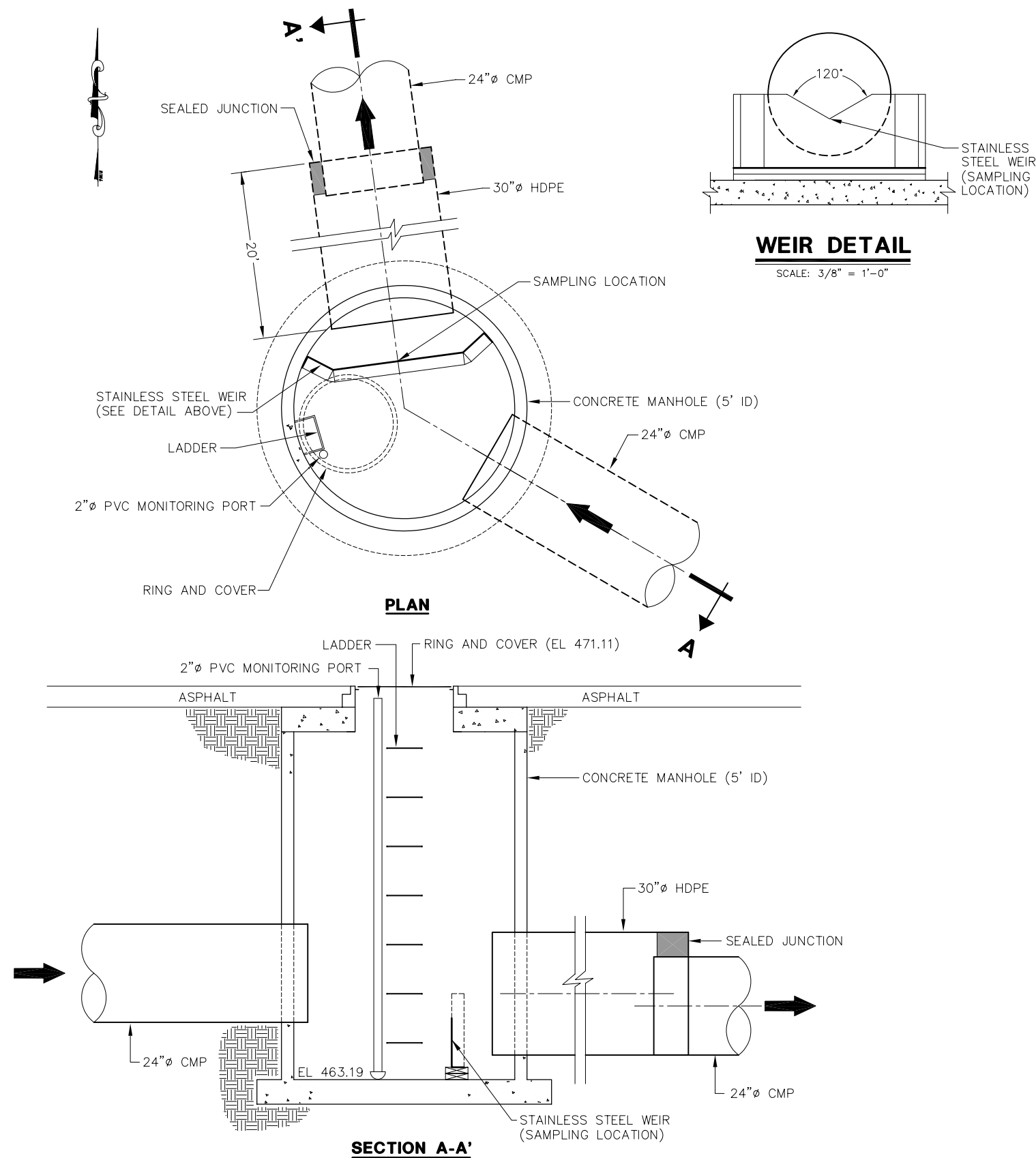
PROJECT NO.:
740T.45154.00.0003

DATE:
MARCH 2003

FIGURE NO.:
2-2



X: CP-BASE.DWG
P: SECD2BC
3/20/03
SECOR/CP/2002OP&M/CP-B13.DWG



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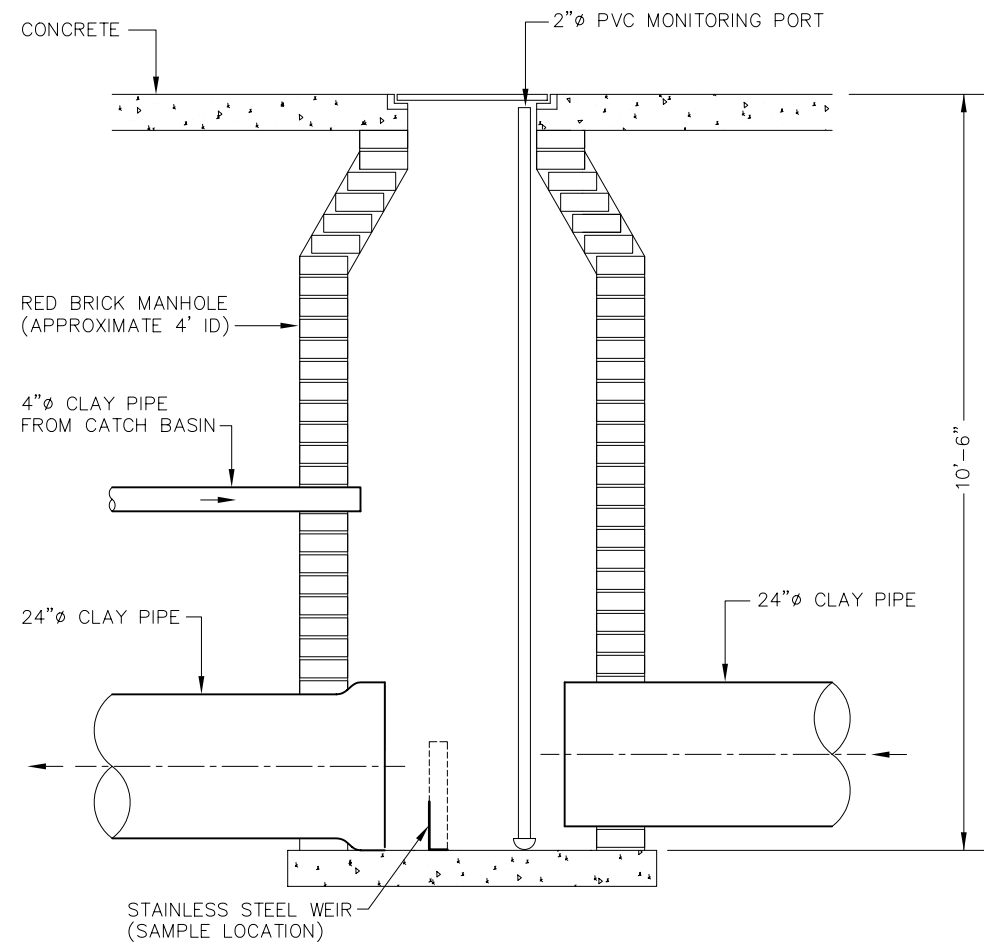
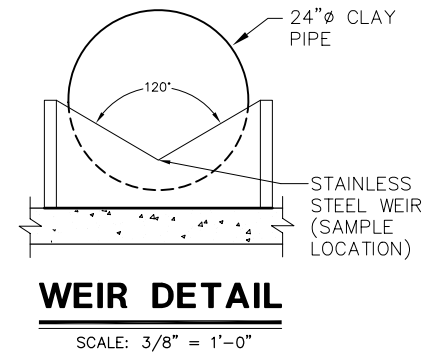
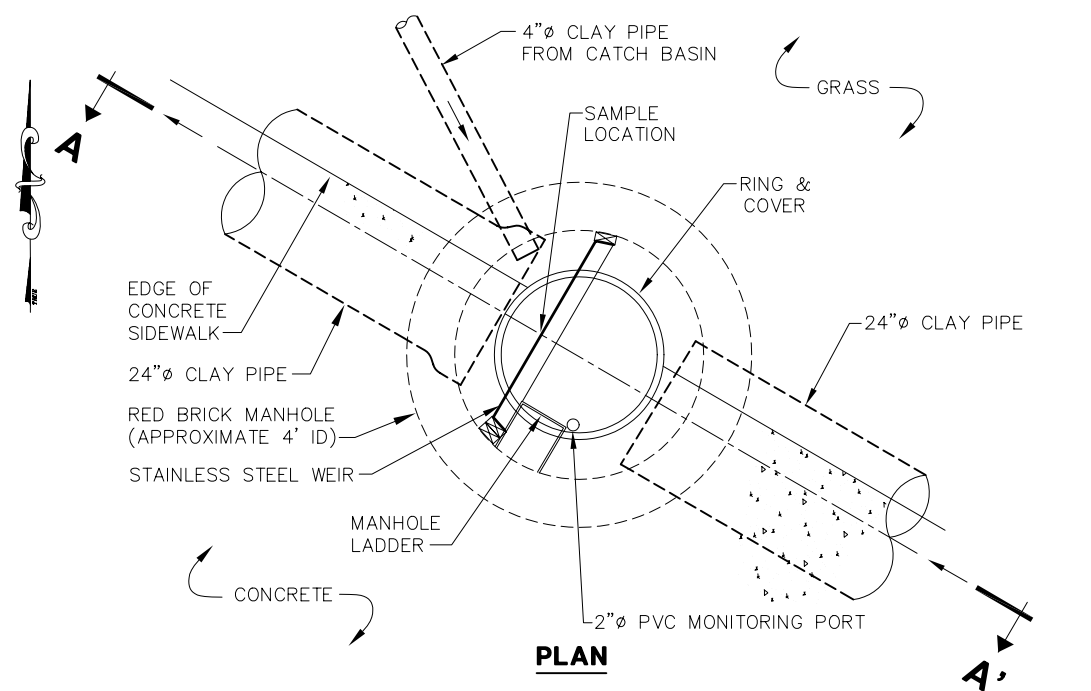
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**AS-BUILT SPDES
OUTFALL 001 MANHOLE
PLAN AND SECTION**

PROJECT NO.:
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DATE:
MARCH 2003

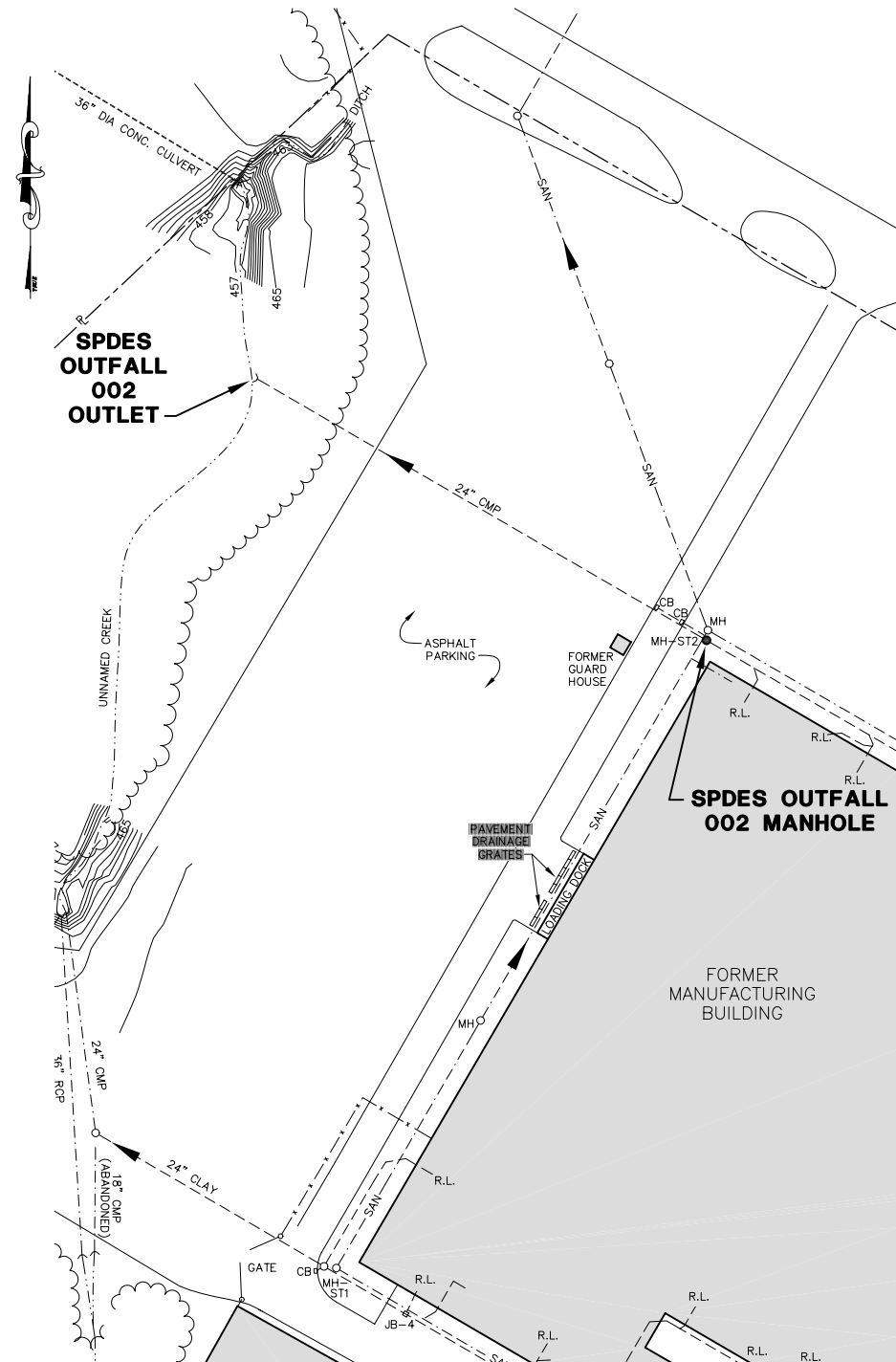
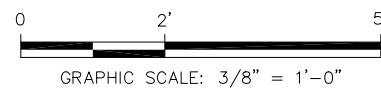
FIGURE NO.:
2-4



SECTION A-A'

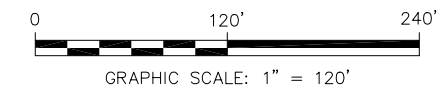
SPDES OUTFALL 002 MANHOLE PLAN AND SECTION

SCALE: 3/8" = 1'-0"



MANHOLE LOCATION PLAN

SCALE: 1" = 120'



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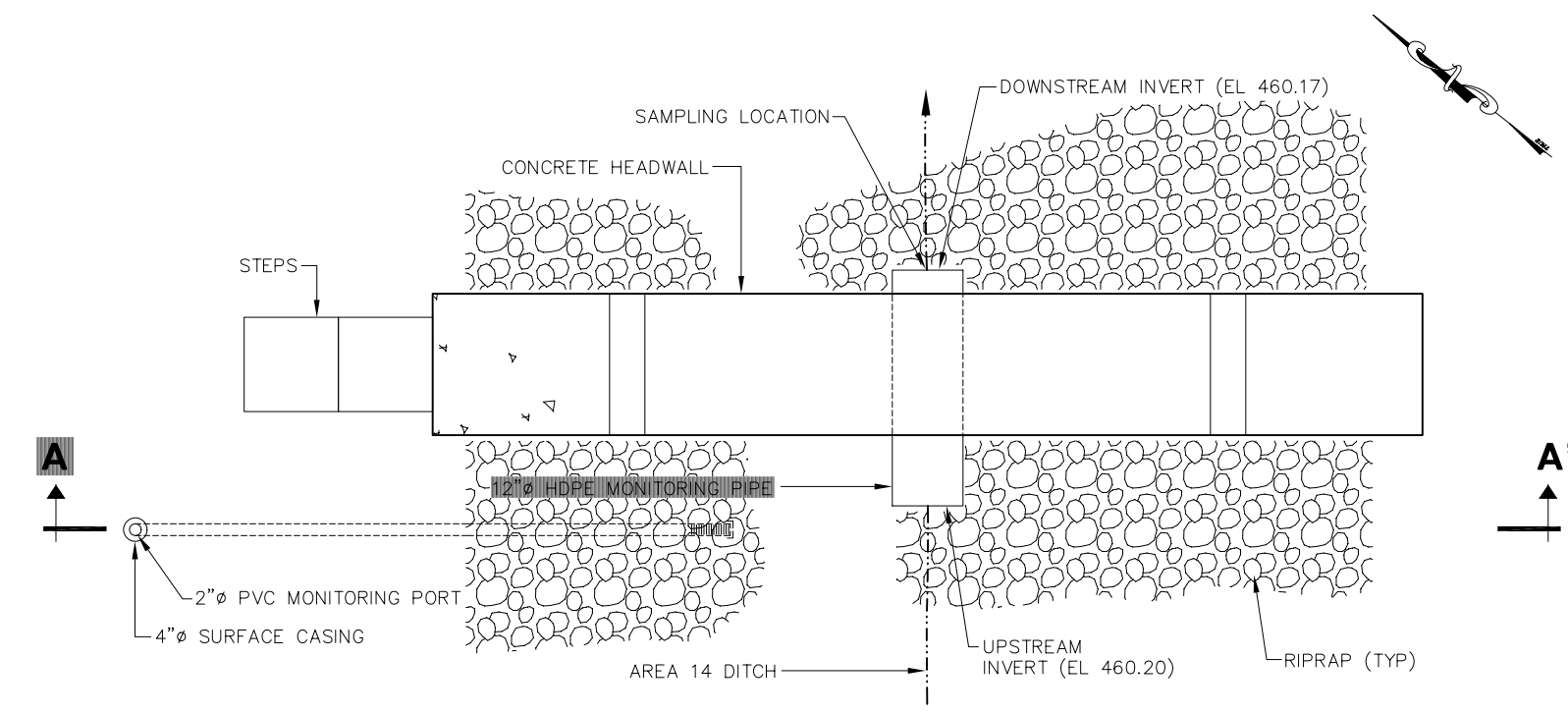
2200 BLEECKER STREET
UTICA, NEW YORK

**AS-BUILT SPDES
OUTFALL 002 MANHOLE
PLAN AND SECTION**

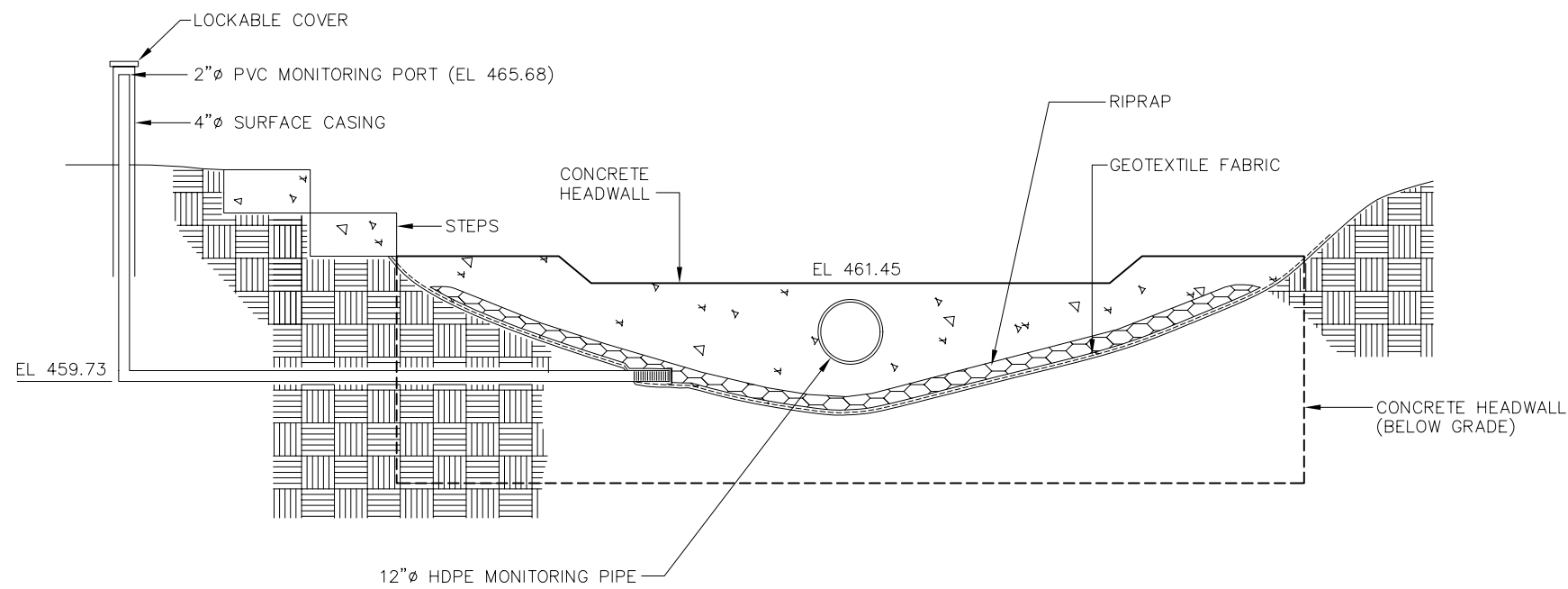
PROJECT NO.:
740T.45154.00.0003

DATE:
MARCH 2003

FIGURE NO.:
2-5



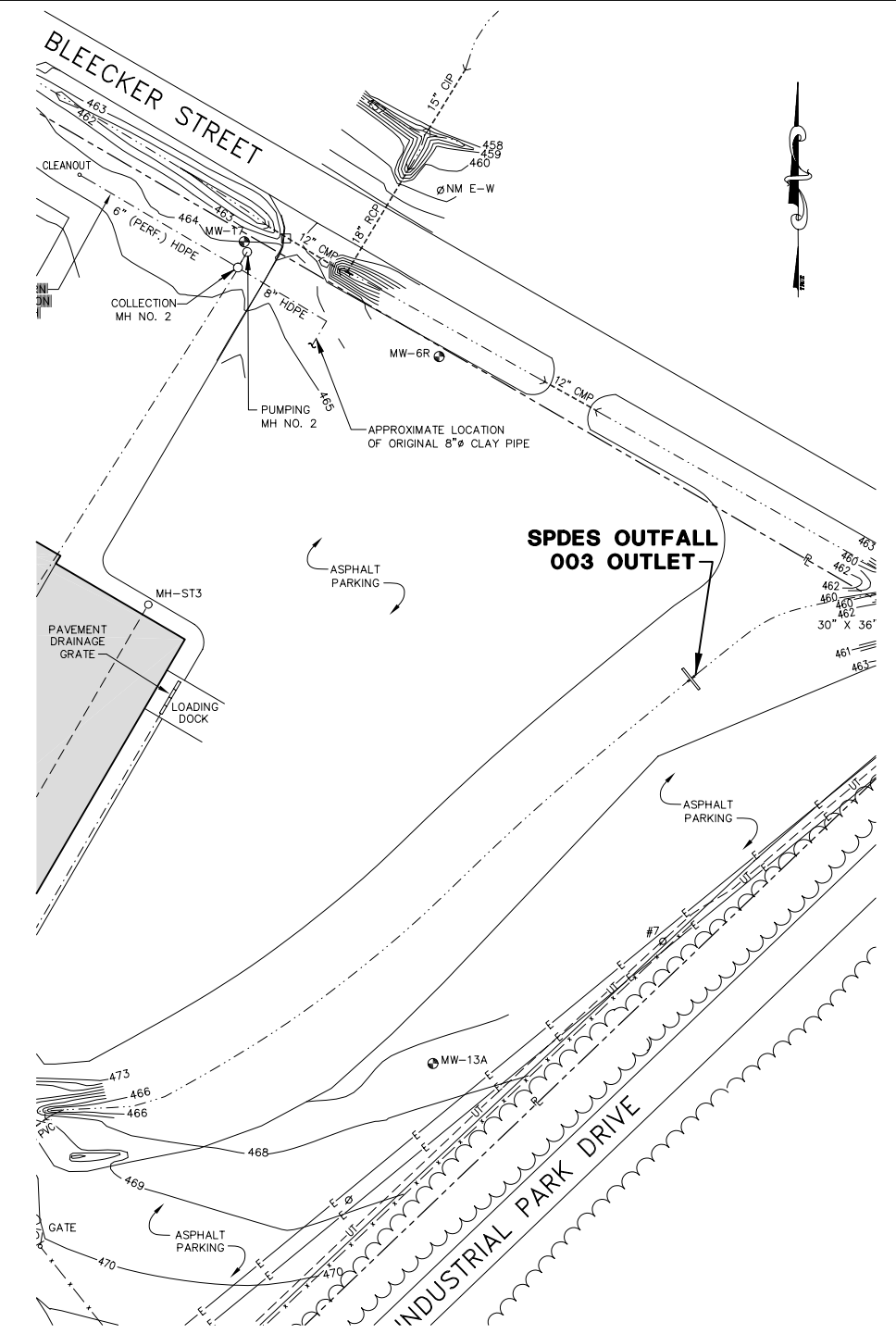
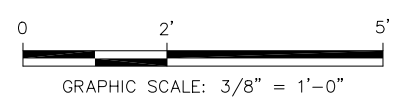
PLAN



SECTION A-A'

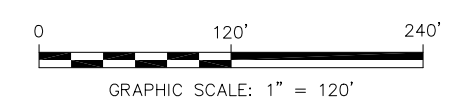
SPDES OUTFALL 003 OUTLET PLAN AND SECTION

SCALE: 3/8" = 1'-0"



OUTLET LOCATION PLAN

SCALE: 1" = 120'



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2200 BLECKER STREET
UTICA, NEW YORK

AS-BUILT
SPDES OUTFALL 003
PLAN AND SECTION

PROJECT NO.:
740T.45154.00.0003
DATE:
MARCH 2003
FIGURE NO.:
2-6

3.0 REMEDIAL ACTION FACILITY

The RAF is situated in the mid-eastern portion of the 77-acre property, as presented on **Figure 2-2**, and 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 **Section 4.0** and **Section 5.0**, respectively.

3.1 OPERATION

The leachate collection system operated continuously during 2002. The RAF and associated components are 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 maintenance, if required.

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 or erosion does not occur from runoff. All property ditches and culverts were accessed and viewed during the inspection, for the same. 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. As this is a lead/lag pumping system, lead duties are occasionally changed between pump #1 and pump #2 during inspections.

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 continuous 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 specific information. In the event of an alarm condition, the ISACC system alerts designated SECOR personnel based on the guidelines set forth in the OMM and the ISACC program logic. The Auto Dialer Alarm Incident and Testing Report, Form E, included in **Appendix B**, provides documentation of all alarm conditions and testing during the 2002 calendar year. Although a total system check was performed, as required, no alarm was received during 2002.

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 are manually recorded during the inspections. This indicated that approximately 9,400 gallons were pumped during 2002. 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 2002 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, mowing, seeding, and erosion control);
- Drainage ditches (vegetation and riprap management); and
- Truck pad sump (performed during leachate removal, **Section 3.4**).

Unscheduled Maintenance

Unscheduled maintenance activities associated with the RAF and site components that occurred during the 2002 calendar year consist of the following:

- Elimination of persistent and damaging vermin from the Containment Cell;
- Placement and grading of top soil;
- Restoration of vegetative cover and cap on the Containment Cell; and
- Installation sheet metal barrier panels and bird netting to prevent pigeon roosting in the leachate collection tank portion of the RAF building.

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 permanent automatic pumps, to the on-site leachate storage tank.

Leachate production is monitored by two means; measuring the filling of the tanks and through a flow totalizer. The on-site 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 ISACC channels provides tracking of tank filling events (i.e., water level in the tank) as presented in **Table 3-1** and **Table 3-2**, and on **Chart 3-1** and **Chart 3-2**.

An overall trend between gallons of leachate conveyed and the number of days between pumping cycles has historically been observed. **Chart 3-3** demonstrates the overall decrease in leachate production rate per tank filling. **Chart 3-4** summarizes the approximate total containment cell leachate production monitored during the 1999 through 2002 calendar years, recorded from the flow totalizer the second monitoring method.

3.4 LEACHATE DISPOSAL

The leachate is stored in the on-site 5,000-gallon storage tank within 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 2002 was 9,400 gallons from storage tank filling events Nos. 9 and 10. Note that Tank No. 9 was disposed on February 27, 2002, which includes filling events in 2001.

3.5 SUMMARY

The RAF facility and associated components operated as planned through 2002. The monitoring and inspection continues, as necessary, to evaluate trends and the ongoing condition of the facility. The operation and maintenance performed during the 2002 calendar year were performed within the guidelines set forth in the OMM.

In addition to scheduled maintenance, unscheduled maintenance conditions were recognized and corrected as follows:

- Persistent and damaging vermin were eliminated from the Containment Cell;
- The cap and vegetative cover on the Containment Cell was restored; and
- Sheet metal barrier panels and bird netting were installed in the leachate collection tank portion of the RAF building to prevent pigeon roosting.

The review of the data relating to the leachate generated and collected (9,400 gallons), indicates an overall downward trend in leachate generated to date. The leachate generated and batch discharged from the containment cell continues to meet the requirements set forth in the OCDWC permit.

3.6 TABLES

- 3-1 Tank Filling Number 9 Summary
- 3-2 Tank Filling Number 10 Summary

TABLE 3-1
TANK FILLING NUMBER 9 SUMMARY
2002 ANNUAL OPERATION, MAINTENANCE, AND MONITORING REPORT
2200 BLEEKER STREET, 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

TABLE 3-2
TANK FILLING NUMBER 10 SUMMARY
2002 ANNUAL OPERATION, MAINTENANCE, AND MONITORING REPORT
2200 BLEEKER STREET, UTICA, NEW YORK
NYSDEC SITE NO. 622003

Date & Time	Reading	Number	Days	Gallons	GPD	GPM
2/27/2002 11:15	47	0				
4/30/2002 5:13	757	1	61.75	710	11.50	0.008
5/11/2002 3:15	980	2	10.92	223	20.43	0.014
5/21/2002 23:18	1,156	3	10.84	176	16.24	0.011
6/2/2002 22:23	1277	4	11.96	121	10.12	0.007
6/16/2002 10:25	1463	5	13.50	186	13.78	0.010
6/29/2002 23:28	1653	6	13.54	190	14.03	0.010
7/10/2002 12:29	1847	7	10.54	194	18.40	0.013
7/23/2002 12:33	2043	8	13.00	196	15.07	0.010
8/4/2002 0:37	2109	9	11.50	66	5.74	0.004
8/21/2002 0:39	2440	10	17.00	331	19.47	0.014
9/1/2002 0:40	2640	11	11.00	200	18.18	0.013
9/11/2002 12:41	2839	12	10.50	199	18.95	0.013
9/20/2002 0:46	3232	13	8.50	393	46.21	0.032
10/6/2002 0:48	3424	14	16.00	192	12.00	0.008
10/16/2002 12:54	3613	15	10.50	189	17.99	0.012
10/26/2002 13:00	3797	16	10.00	184	18.39	0.013
11/5/2002 1:02	3975	17	9.50	178	18.73	0.013
11/15/2002 14:00	4147	18	10.54	172	16.32	0.011
11/26/2002 14:01	4363	19	11.00	216	19.64	0.014
12/7/2002 14:01	4561	20	11.00	198	18.00	0.012
12/19/2002 14:04	4736	21	12.00	175	14.58	0.010
12/30/2002 15:00	130	22				
Average			14.32	227.78	17.31	0.012

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

- 3-1 Tank Filling Number 9 Summary
- 3-2 Tank Filling Number 10 Summary
- 3-3 Summary of Average Flow Rate Per Tank
- 3-4 Leachate Production Over Time

CHART 3-1
TANK FILLING NO. 9 SUMMARY
2002 ANNUAL OPERATION, MAINTENANCE, AND MONITORING REPORT
2200 BLEEKER STREET, UTICA, NEW YORK
NYSDEC SITE NO. 622003

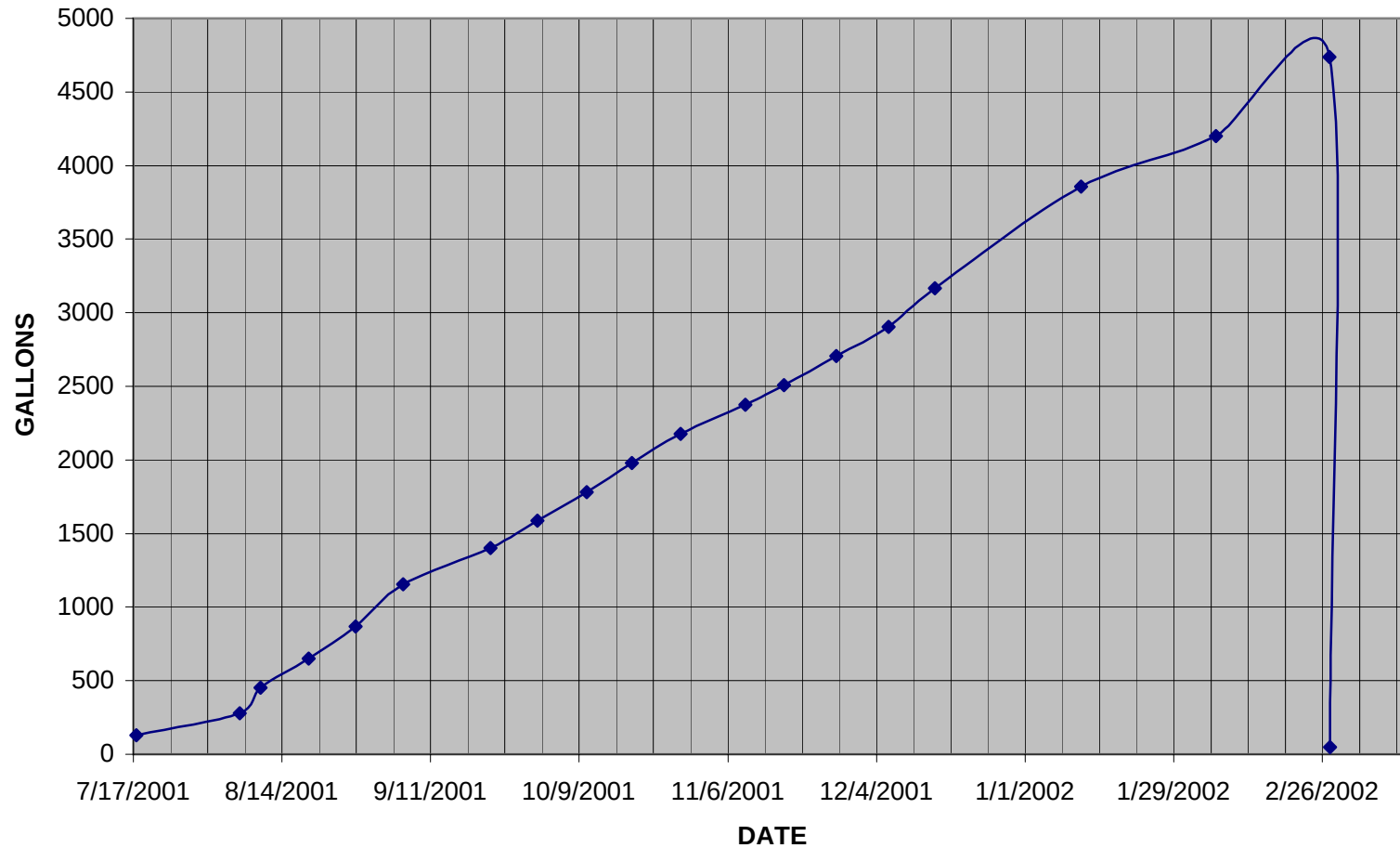


CHART 3-2
TANK FILLING NO. 10 SUMMARY
2002 ANNUAL OPERATION, MAINTENANCE, AND MONITORING REPORT
2200 BLEEKER STREET, UTICA, NEW YORK
NYSDEC SITE NO. 622003

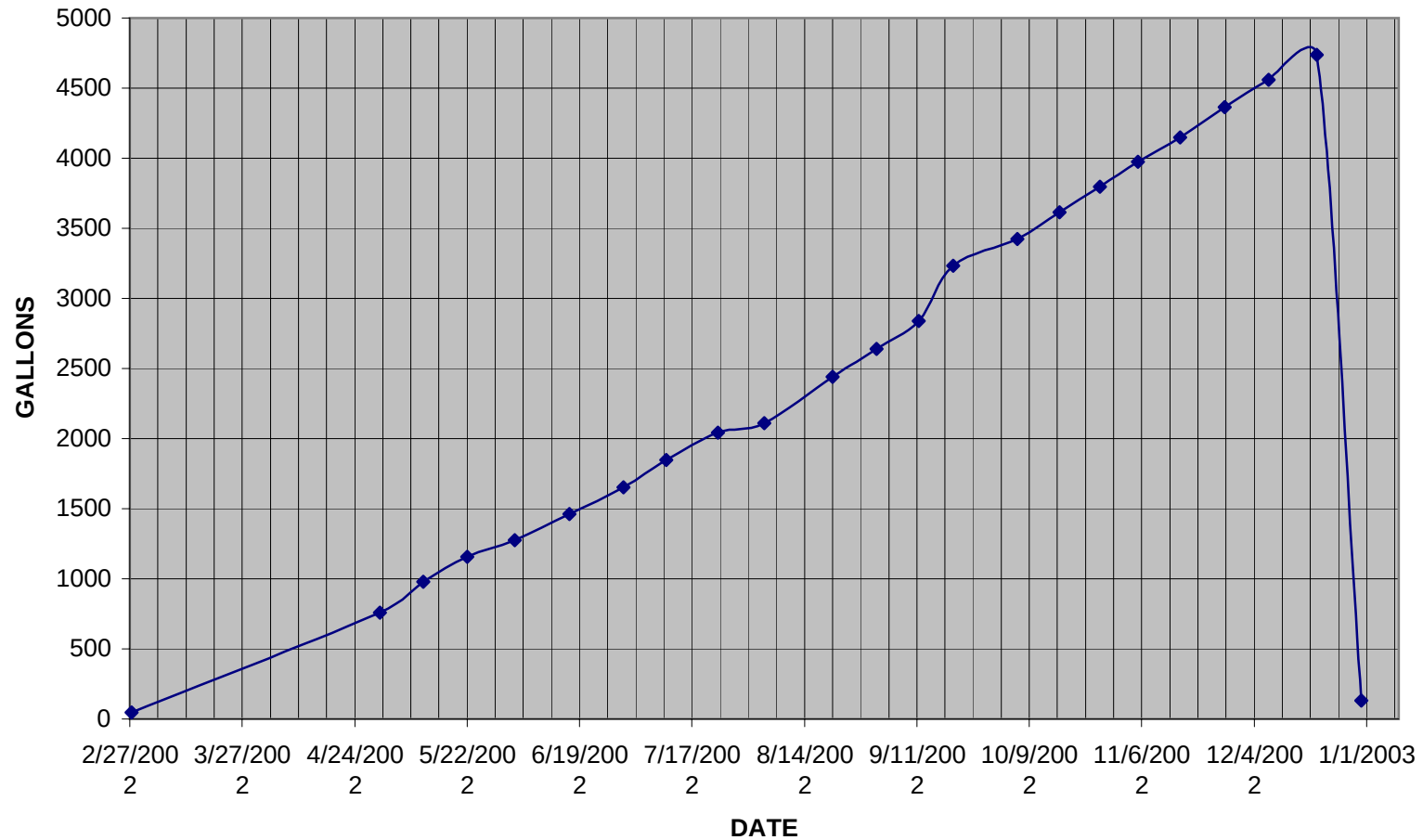


CHART 3-3
SUMMARY OF AVERAGE FLOW RATE PER TANK
2002 ANNUAL OPERATION, MAINTENANCE, AND MONITORING REPORT
2200 BLEEKER STREET, UTICA, NEW YORK
NYSDEC SITE NO. 622003

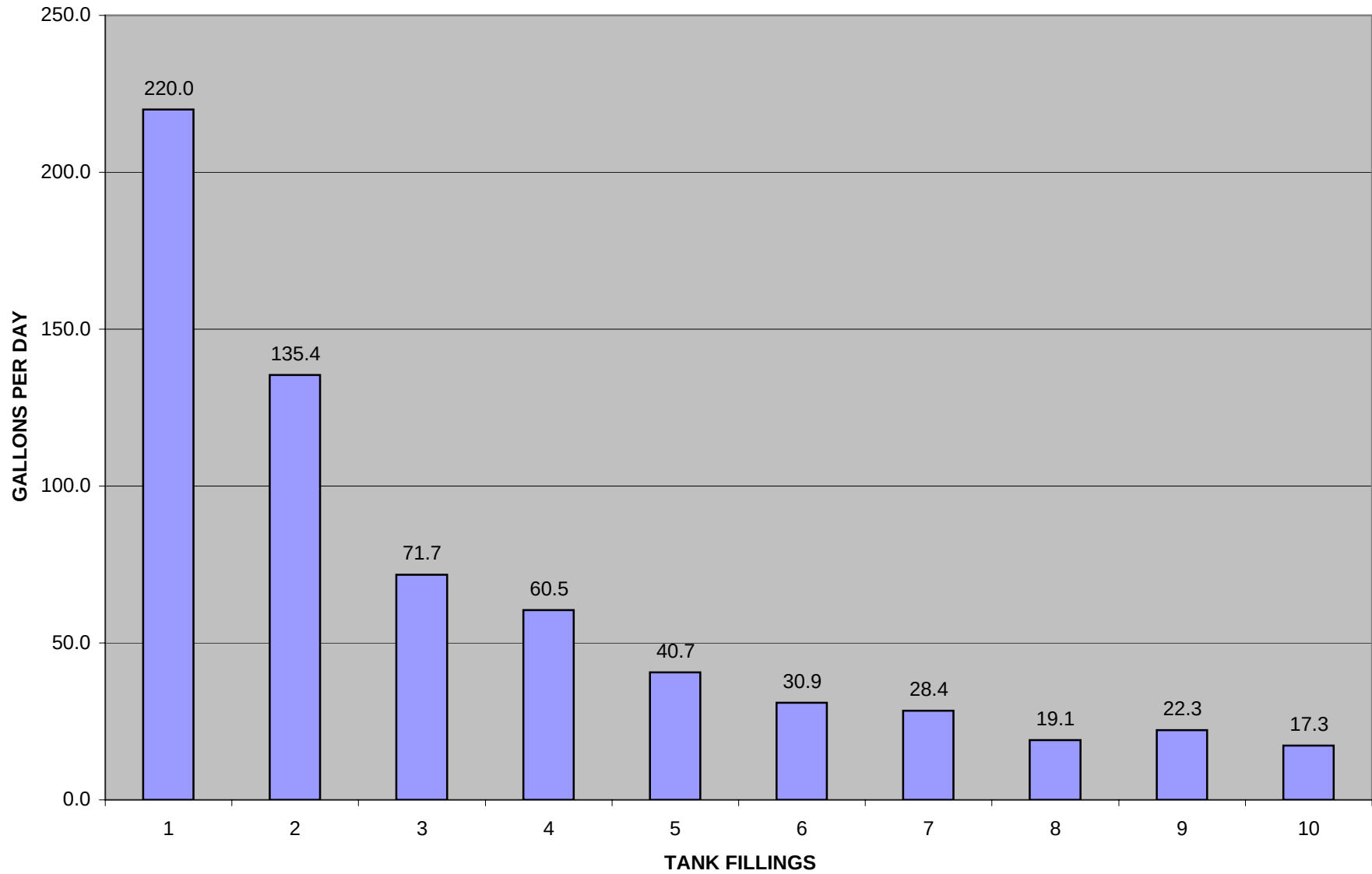
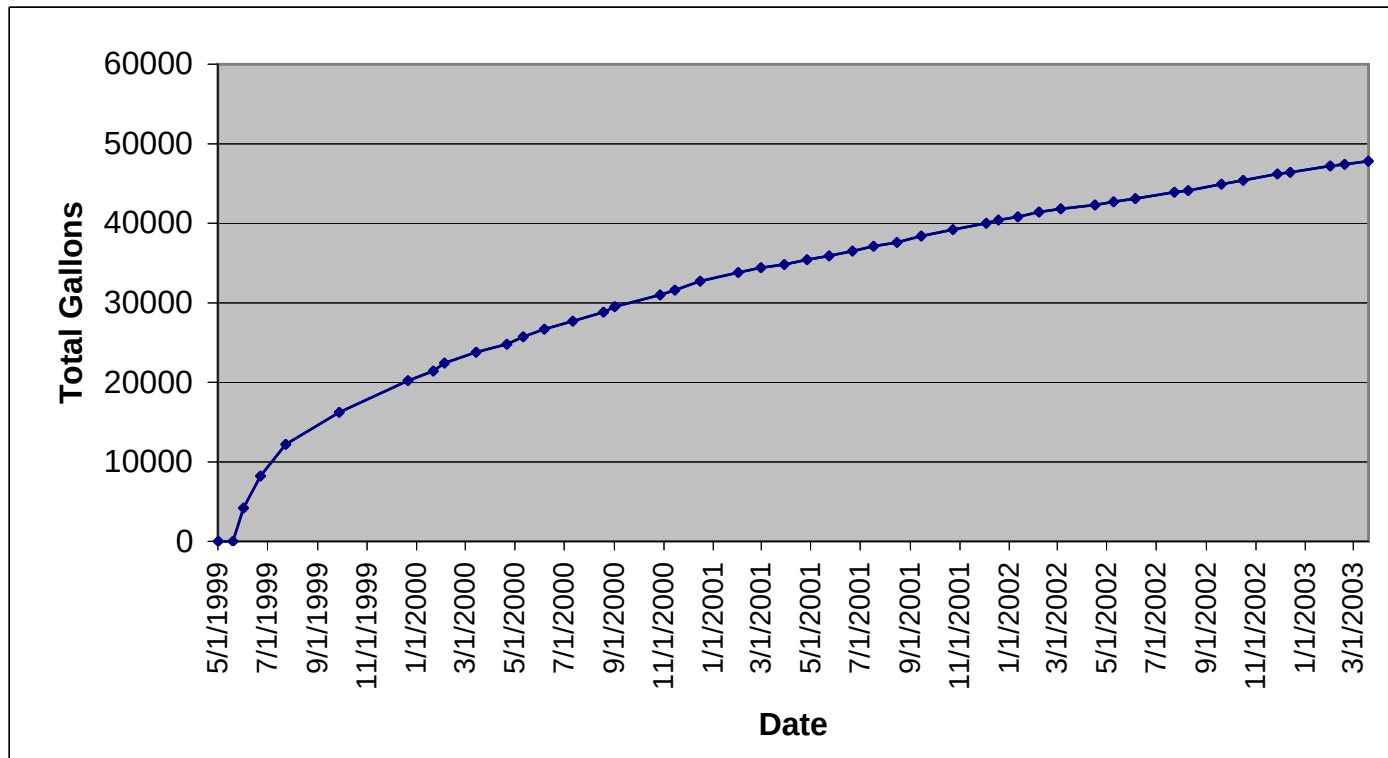


CHART 3-4
LEACHATE PRODUCTION OVER TIME
2002 ANNUAL OPERATION, MAINTENANCE, AND MONITORING REPORT
2200 BLEEKER STREET, UTICA, NEW YORK
NYSDEC SITE NO. 622003



4.0 GROUNDWATER MONITORING

This section presents the results of the semi-annual groundwater monitoring events conducted in 2002, at the property. The property 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.

4.1 MONITORING WELL CONSTRUCTION

The monitoring well network consisted 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 property. The locations of the monitoring wells are shown on **Figure 2-2 - Facility 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.

4.2 GROUNDWATER LEVEL MEASUREMENT

As part of the groundwater monitoring program, water levels were measured from the aforementioned monitoring wells on March 27, 2002 and September 19, 2002. The cleanouts of the north/south groundwater collection trenches were measured during the 2002 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. Note that MW-17 was found dry during both sampling events. Installation of Pumping Manhole No. 2 (**Section 5.0**) effectively lowered the water table at MW-17 to an elevation lower than the total depth of MW-17. As such, groundwater sampling of MW-17 was not conducted during the 2002 semi-annual groundwater monitoring events. **Figure 4-1** illustrates the Overburden Groundwater Elevation Contour Map for March 27, 2002; **Figure 4-2** illustrates the Overburden Groundwater Elevation Contour Map for September 19, 2002. 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 27 and 28 and September 19 and 20, 2002, performed as part of the OMM. These two sampling events constitute the seventh and eighth event conducted as part of the post RA OMM requirements. Groundwater samples were collected from monitoring wells MW-6R, MW-13A, MW-14, and MW-18. As discussed in **Section 4.2**, MW-17 is no longer capable of producing groundwater, and as such, a sample could not be collected.

Based on the guidance set forth in the OMM manual, the groundwater sampling events completed in 2002 were scheduled as semi-annual. The samples collected during the eight total 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 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. Any changes will be offered to and accepted by NYSDEC.

To assure that the groundwater samples were representative of the shallow groundwater zone, a minimum of three static well volumes were purged from each well. Groundwater field parameters were obtained from each well prior to sampling, and included water level, 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 on-site leachate collection manhole, part of the RAF.

Groundwater samples were collected using a new disposable Teflon bailer per well. During the March and September 2002 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 property. 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 for each sampling event.

The March and September 2002 sampling events were submitted to Life Science Laboratories of East Syracuse, New York. **Table 4-3**, Groundwater Parameters, Methods, and Practical Quantification Limits, details the groundwater sample analytical requirements. The Groundwater Sampling Logs - Form D used during well sampling to record the groundwater field parameters and water levels, are provided in **Appendix E**.

4.4 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 1999 through 2002. The original laboratory analytical data for 2002 are provided in **Appendix F**.

The following table summarizes detected concentrations above the laboratory analytical reporting limits from groundwater samples collected from monitoring wells during the March 2002 sampling event.

March 2002 Sampling Event			
Sample ID	Detected Constituents of Concern		
	Volatile Organic Compounds	Metals	Polychlorinated Biphenyl's
MW-6R		*	
MW-13A		*	
MW-14			
MW-18		*	

The following table summarizes detected concentrations above the laboratory analytical reporting limits from groundwater samples collected from monitoring wells during the September 2002 sampling event.

September 2002 Sampling Event			
Sample ID	Detected Constituents of Concern		
	Volatile Organic Compounds	Metals	Polychlorinated Biphenyl's
MW-6R		*	
MW-13A		*	
MW-14		*	
MW-18	*		

4.5 SUMMARY

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

Observations March 2002 Sampling Event

Water levels measured during the March 2002 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 2002 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 monitoring locations, as discussed on the following page.

Monitoring Location	March 2002 Observations
MW-6R	Diminished concentrations of certain metals were detected during this sampling event as compared with historically identified concentrations at this location. VOCs and PCBs have never realistically been detected at this location, and indicate a stable situation near the northeast property boundary.
MW-13A	Limited detections of metals that are below TOGS limits. VOCs and PCBs have never been detected.
MW-14	Metals, VOCs and PCBs were not detected. (VOCs and PCBs have never been detected.)
MW-17	Well dry due to increased efficiency of groundwater collection system.
MW-18	No metal detected. VOCs and PCBs have never been detected.

Observations September 2002 Sampling Event

Water levels measured during the September 2002 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 2002 groundwater sampling event are generally consistent with historical data and the baseline sampling results (i.e., previous six 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	September 2002 Observations
MW-6R	Diminished concentrations of certain metals were detected during this sampling event as compared with historically identified concentrations at this location. VOCs and PCBs have never realistically been detected at this location, and indicate a stable situation near the northeast property boundary.
MW-13A	Elevated concentrations of chromium and zinc were detected during this sampling event as compared with historically identified concentrations at this location. VOCs and PCBs have never been detected at this location.
MW-14	Limited detections of zinc at the detection limit. VOCs and PCBs have never realistically been detected.
MW-17	Well dry due to increased efficiency of groundwater collection system.
MW-18	No detections of metals above the detection limit. Vinyl chloride, a VOC was detected at a concentration exceeding its detection level. This is the first identification of a VOC at this location. PCBs have never been detected.

4.5 TABLES

- 4-1 Groundwater Level Measurements
- 4-2 Historic Groundwater Level Measurements
- 4-3 Groundwater Parameters, Methods, and Practical Quantification Limits
- 4-4 Groundwater Analytical Results
- 4-5 Historic Groundwater Analytical Results

TABLE 4-1
GROUNDWATER LEVEL MEASUREMENTS
2002 ANNUAL OPERATION, MAINTENANCE, AND MONITORING REPORT
2200 BLEEKER STREET, 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: 3/27/02

MW-6R	7.51	7.45	1.50	462.69	462.46	460.96
MW-13A	11.07	11.02	2.34	467.30	469.23	466.89
MW-14	12.94	12.91	3.26	475.71	478.45	475.19
MW-17	11.32	11.16	11.25	463.89	466.02	454.77
MW-18	11.78	11.73	5.14	474.10	475.96	470.82
SCT CO-1	NA	NA	7.05	NA	472.30	465.25
SCT CO-2	NA	NA	7.91	NA	473.42	465.51
SCT CO-3	NA	NA	5.60	NA	471.21	465.61
NCT CO-1	NA	NA	11.30	NA	464.70	453.40
MH-2	NA	NA	13.40	NA	465.31	451.91

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: 9/19/02

MW-6R	7.51	7.45	1.25	462.69	462.46	461.21
MW-13A	11.07	11.10	3.82	467.30	469.23	465.41
MW-14	12.94	13.00	7.53	475.71	478.45	470.92
MW-17	11.32	11.34	11.34	463.89	466.02	454.68
MW-18	11.78	11.81	7.86	474.10	475.96	468.10
SCT CO-1	NA	NA	7.10	NA	472.30	465.20
SCT CO-2	NA	NA	7.91	NA	473.42	465.51
SCT CO-3	NA	NA	5.60	NA	471.21	465.61
NCT CO-1	NA	NA	11.28	NA	464.70	453.42
MH-2	NA	NA	13.45	NA	465.31	451.86

Notes:

MW-17 was found dry during both monitoring events, bottom elevation = 454.70 feet.

T.I.C. = Top of Inner Casing

SCT = Southern Collection Trench

NCT = Northern Collection Trench

CO = Clean Out (Depths and Elevations are Approximate)

MH = Manhole

NA = Not Applicable

TABLE 4-2
HISTORIC GROUNDWATER LEVEL MEASUREMENTS
2002 ANNUAL OPERATION, MAINTENANCE, AND MONITORING REPORT
2200 BLEEKER STREET, 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
3/27/2002	NA	460.96	466.89	475.19	DRY	470.82
9/19/2002	NA	461.21	465.41	470.92	DRY	468.10

Note: MW-3 was decommissioned in September 2001.

TABLE 4-3
GROUNDWATER PARAMETERS, METHODS, AND PRACTICAL QUANTIFICATION LIMITS
2002 ANNUAL OPERATION, MAINTENANCE, AND MONITORING REPORT
2200 BLEEKER STREET, UTICA, NEW YORK
NYSDEC SITE NO. 622003

Constituent	Practical Quantification Limits (PQLs) (ppb)
VOCs of Concern ¹	
cis-1,2-Dichloroethene	1
trans-1,2-Dichloroethene	1
Trichloroethylene	1
Vinyl Chloride	1 (March); 2 (September)
Metals of Concern ²	
Chromium	10
Copper	10
Lead	10
Zinc	10
PCBs	
Aroclor 1016	0.05
Aroclor 1221	0.05
Aroclor 1232	0.05
Aroclor 1242	0.05
Aroclor 1248	0.05
Aroclor 1254	0.05
Aroclor 1260	0.05

Notes:

ppb = parts per billion, approximately equivalent to micrograms per liter (ug/L)

VOCs = Volatile Organic Compounds

PCBs= Poly chlorinated biphenyls

¹ = PQLs 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.

TABLE 4-4
GROUNDWATER ANALYTICAL RESULTS
2002 ANNUAL OPERATION, MAINTENANCE, AND MONITORING REPORT
2200 BLEEKER STREET, UTICA, NEW YORK
NYSDEC SITE NO. 622003

March 2002 Sampling Event

Well ID	Detection Limit	NYSDEC Standards	MW-6R	MW-13A	MW-13A	MW-14	MW-17	MW-18
Date Sampled			3/27-28/2002	3/27-28/2002	3/27-28/2002	3/27-28/2002	3/27-28/2002	3/27-28/2002
Sample Type			Primary	Primary	Duplicate	Primary	Primary	Primary
Volatile Organic Compounds								
cis-1,2-Dichloroethene	1	5	<1	<1	<1	<1	NS	<1
trans-1,2-Dichloroethene	1	5	<1	<1	<1	<1	NS	<1
Trichloroethene	1	5	<1	<1	<1	<1	NS	<1
Vinyl Chloride	2	2	<1	<1	<1	<1	NS	<2
Inorganics								
Chromium	10	10	<10	<10	<10	<10	NS	<10
Copper	10	25	11	14	<10	<10	NS	<10
Lead	10	5	<10	<10	<10	<10	NS	<10
Zinc	10	20	64	18	<10	<10	NS	10
Polychlorinated Biphenyls								
Aroclor 1016	0.05	0.09	<0.05	<0.05	<0.05	<0.05	NS	<0.05
Aroclor 1221	0.05	0.09	<0.05	<0.05	<0.05	<0.05	NS	<0.05
Aroclor 1232	0.05	0.09	<0.05	<0.05	<0.05	<0.05	NS	<0.05
Aroclor 1242	0.05	0.09	<0.05	<0.05	<0.05	<0.05	NS	<0.05
Aroclor 1248	0.05	0.09	<0.05	<0.05	<0.05	<0.05	NS	<0.05
Aroclor 1254	0.05	0.09	<0.05	<0.05	<0.05	<0.05	NS	<0.05
Aroclor 1260	0.05	0.09	<0.05	<0.05	<0.05	<0.05	NS	<0.05

September 2002 Sampling Event

Well ID	Detection Limit	NYSDEC Standards	MW-6R	MW-6R	MW-13A	MW-14	MW-17	MW-18
Date Sampled			9/19-20/2002	9/19-20/2002	9/19-20/2002	9/19-20/2002	9/19-20/2002	9/19-20/2002
Sample Type			Primary	Duplicate	Primary	Primary	Primary	Primary
Volatile Organic Compounds								
cis-1,2-Dichloroethene	1	5	<1	<1	<1	<1	NS	<1
trans-1,2-Dichloroethene	1	5	<1	<1	<1	<1	NS	<1
Trichloroethene	1	5	<1	<1	<1	<1	NS	<1
Vinyl Chloride	1	2	<1	<1	<1	<1	NS	2.6
Inorganics								
Chromium	10	10	<10	<10	200	<10	NS	<10
Copper	10	25	<10	<10	20	<10	NS	<10
Lead	10	5	<10	<10	<10	<10	NS	<10
Zinc	10	20	29	35	92	20	NS	<10
Polychlorinated Biphenyls								
Aroclor 1016	0.05	0.09	<0.05	<0.05	<0.05	<0.05	NS	<0.05
Aroclor 1221	0.05	0.09	<0.05	<0.05	<0.05	<0.05	NS	<0.05
Aroclor 1232	0.05	0.09	<0.05	<0.05	<0.05	<0.05	NS	<0.05
Aroclor 1242	0.05	0.09	<0.05	<0.05	<0.05	<0.05	NS	<0.05
Aroclor 1248	0.05	0.09	<0.05	<0.05	<0.05	<0.05	NS	<0.05
Aroclor 1254	0.05	0.09	<0.05	<0.05	<0.05	<0.05	NS	<0.05
Aroclor 1260	0.05	0.09	<0.05	<0.05	<0.05	<0.05	NS	<0.05

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 Technical and Operational Guidance Series (TOGS)

NS = Not Sampled (Well Dry)

Bolded detections exceed the NYSDEC Standards

TABLE 4-5
HISTORIC GROUNDWATER ANALYTICAL RESULTS
2002 ANNUAL OPERATION, MAINTENANCE, AND OPERATION REPORT
2200 BLEEKER STREET, 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-1	<5	<5	<5	8.9	<5	9.2	MW-17
September 2001	NS-1	<5	<5	<5	7.4	<5	7.4	MW-17
March 2002	NS-1	<1	<1	<1	NS-2	<1	<1	MW-13A
September 2002	NS-1	<1	<1	<1	NS-2	<1	<1	MW-6R
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-1	<5	<5	<5	<5	<5	<5	MW-17
September 2001	NS-1	<5	<5	<5	<5	<5	<5	MW-17
March 2002	NS-1	<1	<1	<1	NS-2	<1	<1	MW-13A
September 2002	NS-1	<1	<1	<1	NS-2	<1	<1	MW-6R
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-1	<5	<5	<5	24	<5	25	MW-17
September 2001	NS-1	<5	<5	<5	16	<5	16	MW-17
March 2002	NS-1	<1	<1	<1	NS-2	<1	<1	MW-13A
September 2002	NS-1	<1	<1	<1	NS-2	<1	<1	MW-6R
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-1	<2	<2	<2	<2	<2	<2	MW-17
September 2001	NS-1	<5	<5	<5	<5	<5	<5	MW-17
March 2002	NS-1	<1	<1	<1	NS-2	<2	<1	MW-13A
September 2002	NS-1	<1	<1	<1	NS-2	2.6	<1	MW-6R

TABLE 4-5
HISTORIC GROUNDWATER ANALYTICAL RESULTS
2002 ANNUAL OPERATION, MAINTENANCE, AND OPERATION REPORT
2200 BLEEKER STREET, UTICA, NEW YORK
NYSDEC SITE NO. 622003

Analytes	MW-3	MW-6R	MW-13A	MW-14	MW-17	MW-18	DUP-1	DUP Well
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
March 2002	NS	<10	<10	<10	NS-2	<10	<10	MW-13A
September 2002	NS	<10	200	<10	NS-2	<10	<10	MW-6R
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
March 2002	NS	11	14	<10	NS-2	<10	<10	MW-13A
September 2002	NS	<10	20	<10	NS-2	<10	<10	MW-6R
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
March 2002	NS	<10	<10	<10	NS-2	<10	<10	MW-13A
September 2002	NS	<10	<10	<10	NS-2	<10	<10	MW-6R
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
March 2002	NS	64	18	<10	NS-2	<10	<10	MW-13A
September 2002	NS	29	92	20	NS-2	<10	35	MW-6R

TABLE 4-5
HISTORIC GROUNDWATER ANALYTICAL RESULTS
2002 ANNUAL OPERATION, MAINTENANCE, AND OPERATION REPORT
2200 BLEEKER STREET, 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
March 2002	NS	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	MW-13A
September 2002	NS	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	MW-6R
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
March 2002	NS	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	MW-13A
September 2002	NS	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	MW-6R
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
March 2002	NS	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	MW-13A
September 2002	NS	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	MW-6R
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
March 2002	NS	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	MW-13A
September 2002	NS	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	MW-6R
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
March 2002	NS	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	MW-13A
September 2002	NS	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	MW-6R

TABLE 4-5
HISTORIC GROUNDWATER ANALYTICAL RESULTS
2002 ANNUAL OPERATION, MAINTENANCE, AND OPERATION REPORT
2200 BLEEKER STREET, UTICA, NEW YORK
NYSDEC SITE NO. 622003

Analytes	MW-3	MW-6R	MW-13A	MW-14	MW-17	MW-18	DUP-1	DUP Well
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
March 2002	NS	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	MW-13A
September 2002	NS	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	MW-6R
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
March 2002	NS	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	MW-13A
September 2002	NS	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	MW-6R

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 or equal to the Instrument Detection Limit (IDL).

E = The reported value is estimated due to the presence of interference(s).

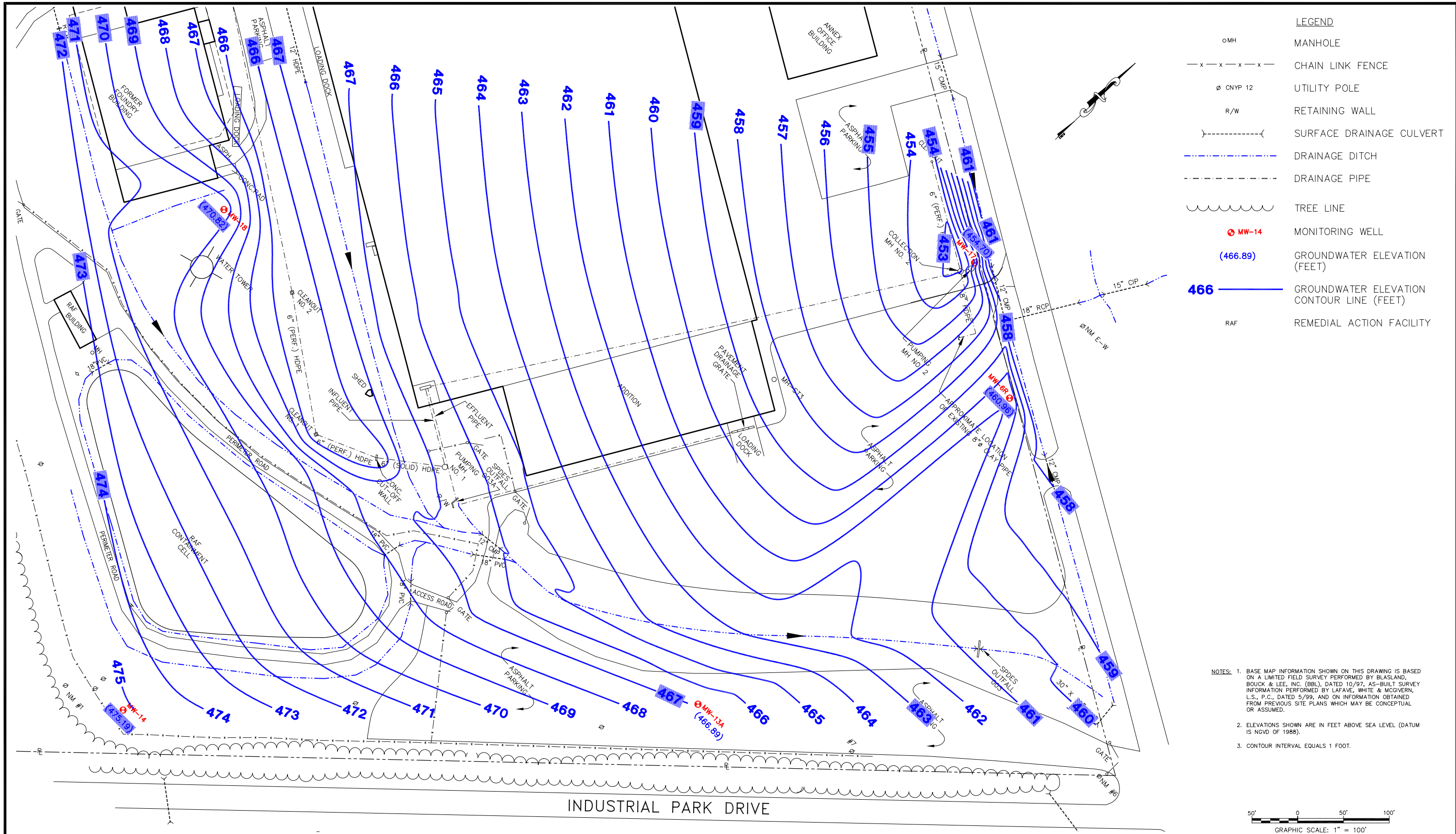
ND = None Detect

NS-1 = No Sample - Decommissioned

NS-2 = No Sample - Well Dry

4.6 FIGURES

- 4-1 Overburden Groundwater Elevation Contour Map, March 27, 2002
- 4-2 Overburden Groundwater Elevation Contour Map, September 19, 2002



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

2002 ANNUAL
OPERATION, MAINTENANCE, AND
MONITORING REPORT

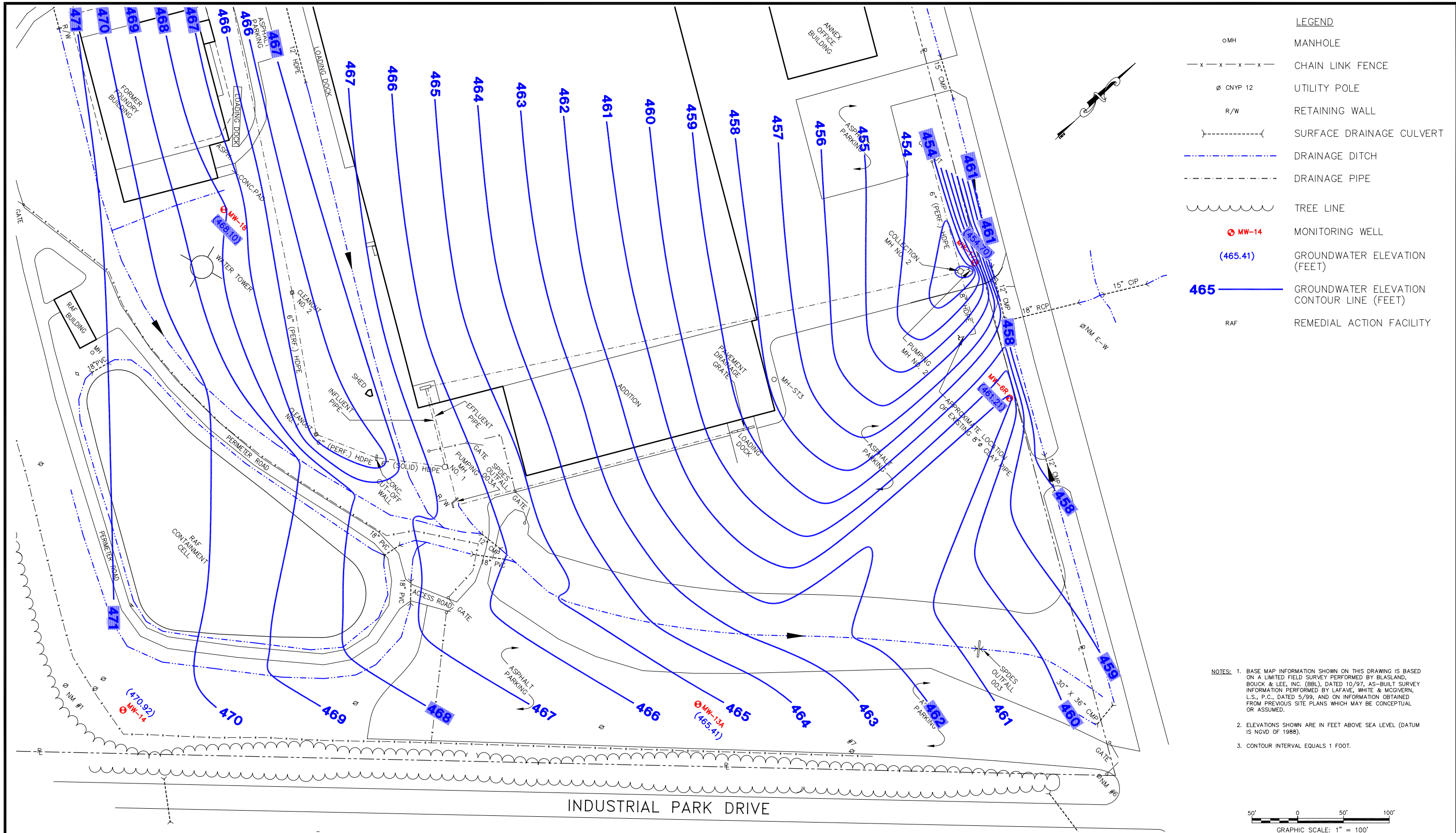
2200 BLEECKER STREET
UTICA, NEW YORK

**OVERBURDEN GROUNDWATER
ELEVATION CONTOUR MAP
MARCH 27, 2002**

PROJECT NO.:
740T.45154.00.0003

DATE:
MARCH 2003

FIGURE NO.:
4-1



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

2002 ANNUAL
OPERATION, MAINTENANCE, AND
MONITORING REPORT

2200 BLEECKER STREET
UTICA, NEW YORK

**OVERBURDEN GROUNDWATER
ELEVATION CONTOUR MAP
SEPTEMBER 19, 2002**

PROJECT NO.:
740T.45154.00.0003

DATE:
MARCH 2003

FIGURE NO.:
4-2

5.0 GROUNDWATER TREATMENT SYSTEM

This section documents the O&M of the Groundwater Treatment System, originally constructed as an 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 2002. The surface components of the collection trenches, to included manholes and clean outs, 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.

5.1 SYSTEM CONSTRUCTION

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 (**Figure 2-2**). MH-1 currently receives groundwater from the SCT. MH-2 was constructed at the northern extent of the property to collect effluent water from an existing clay pipe and receives groundwater from the NCT, as well. Groundwater is directed to the manholes where it is then automatically 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 of the eastern drainage ditch (former Area 14). The eastern drainage ditch is monitored as SPDES Outfall 003, prior to discharging off-site at the northern property boundary.

The operation and maintenance of the IRM Groundwater Treatment System is not provided in the RA OMM Manual. A separate O&M Manual, dated April 1995, was prepared to address the 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 2002, with the following exceptions:

- May 2, October 17 and 18, system shut down for acid cleaning;
- March 5 through March 14, MH-2 shutdown during upgrading activities; and
- June 1 and 2, system down due to power and telephone disconnected during rainstorm.

Generally the air stripper was not operating during the aforementioned 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 2002, a total of approximately 3,000,000 gallons of water was pumped, treated, and released.

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 trichloroethene (TCE), cis-1,2-dichloroethene (1,2-DCE), trans-1,2-dichloroethene (1,2-DCE), and vinyl chloride (VC).

Samples are collected by CP for the SPDES Outfall 03A, from a sampling port located in the effluent pipe prior to flowing into the eastern drainage ditch. The analytical results from the weekly sampling are submitted by CP 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

No mechanical failures or equipment replacement activities occurred during 2002 which would have resulted in the groundwater treatment system going offline. However, the groundwater treatment system was shut down and the stripper internally inspected and cleaned with a nitric acid solution on May 2, 2002 and October 17 and 18, 2002. This cleaning process regained the air stripper efficiency by removing mineral scaling. In addition, the following unscheduled maintenance event resulted in the partial shutdown of the groundwater treatment system between March 5 and March 14, 2002.

- Pumping Manhole No. 2 (new) was installed north of the previously existing MH-2 (hereinafter referred to as Collection Manhole No. 2) to improve the operation of the northern collection trench. The two manholes were connected in series with the bottom of MH-2 set approximately four feet below the bottom of Collection Manhole No. 2. (See **Figure 5-1**).

Soil excavated during the installation of pumping MH-2 was field screened for VOCs utilizing a photoionization detector (PID). Field screening activities identified the presence of VOCs in the soil, and as such, a composite sample of the excavated soil was

collected for laboratory analyses of the RA VOCs of concern; 1,2-cis-DCE, 1,2-trans-DCE, TCE, and VC in accordance with USEPA Method 8260;

Based on the results of the laboratory analyses, the soil was classified as a non-hazardous waste, but still required off-site disposal due to its unsuitability as fill material at the property. Approximately 80 tons of excavated soil was manifested for disposal at High Acres Landfill (Fairport, New York) on June 10 to 11, 2002.

Approximately 18,000 gallons of groundwater was collected during the installation of pumping MH-2, and contained in a temporary holding tank. Upon completion of the installation of pumping MH-2, the water was discharged from the temporary holding tank to MH-2, where it was then pumped to the on-site air stripper for treatment prior to final discharge to SPDES Outfall 03A.

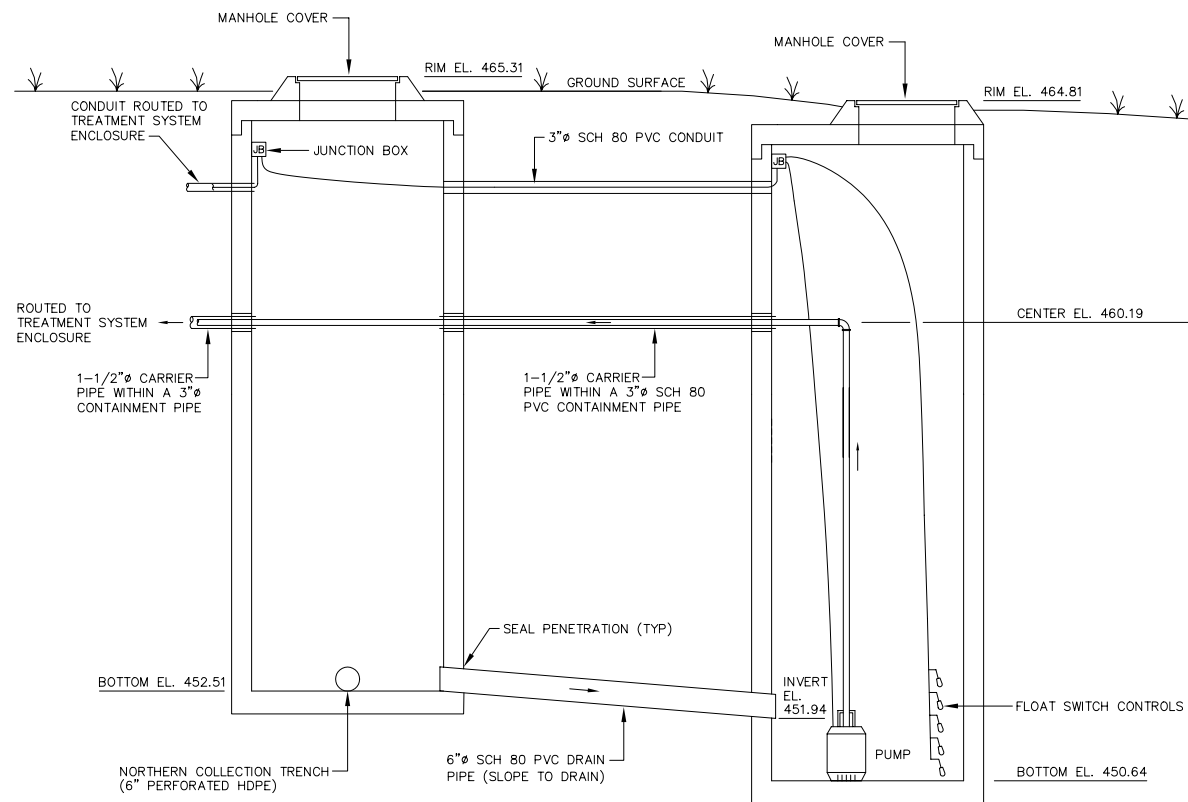
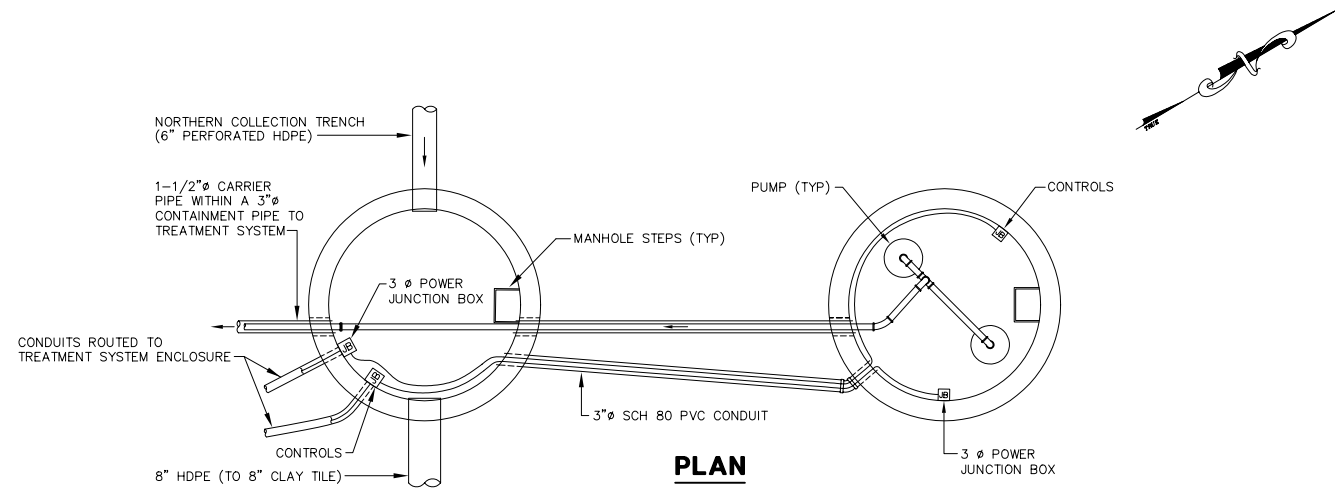
Upon completion of pumping MH-2 installation, the area was initially restored by grading disturbed areas. Later, a landscaper was employed to add top soil, seed and mulch. Additional details pertaining to the installation and operation of MH-2 are discussed in SECOR's May 17, 2002 *Corrective Action Summary Report Pumping Manhole No. 2* submitted to Philip Waite, P.E., NYSDEC Region 6.

5.4 SUMMARY

The groundwater treatment system has been in operation for approximately 8 years. The air stripper, pumps, and appurtenances operations have been consistent and continuous and within compliance of the SPDES permit. The system was partially shut down between March 5 and 14, 2002 during the installation of MH-2; during several other short duration occasions for maintenance, which included system checks and acid cleaning of the internal air stripper components; and once during a power outage resulting from a significant weather event. The treatment system flow totalizer indicates that approximately 3,000,000 gallons of groundwater was processed during 2002, based on O&M information provided by CP.

5.5 FIGURES

5-1 As-Built Pumping Manhole No. 2 Plan and Sections



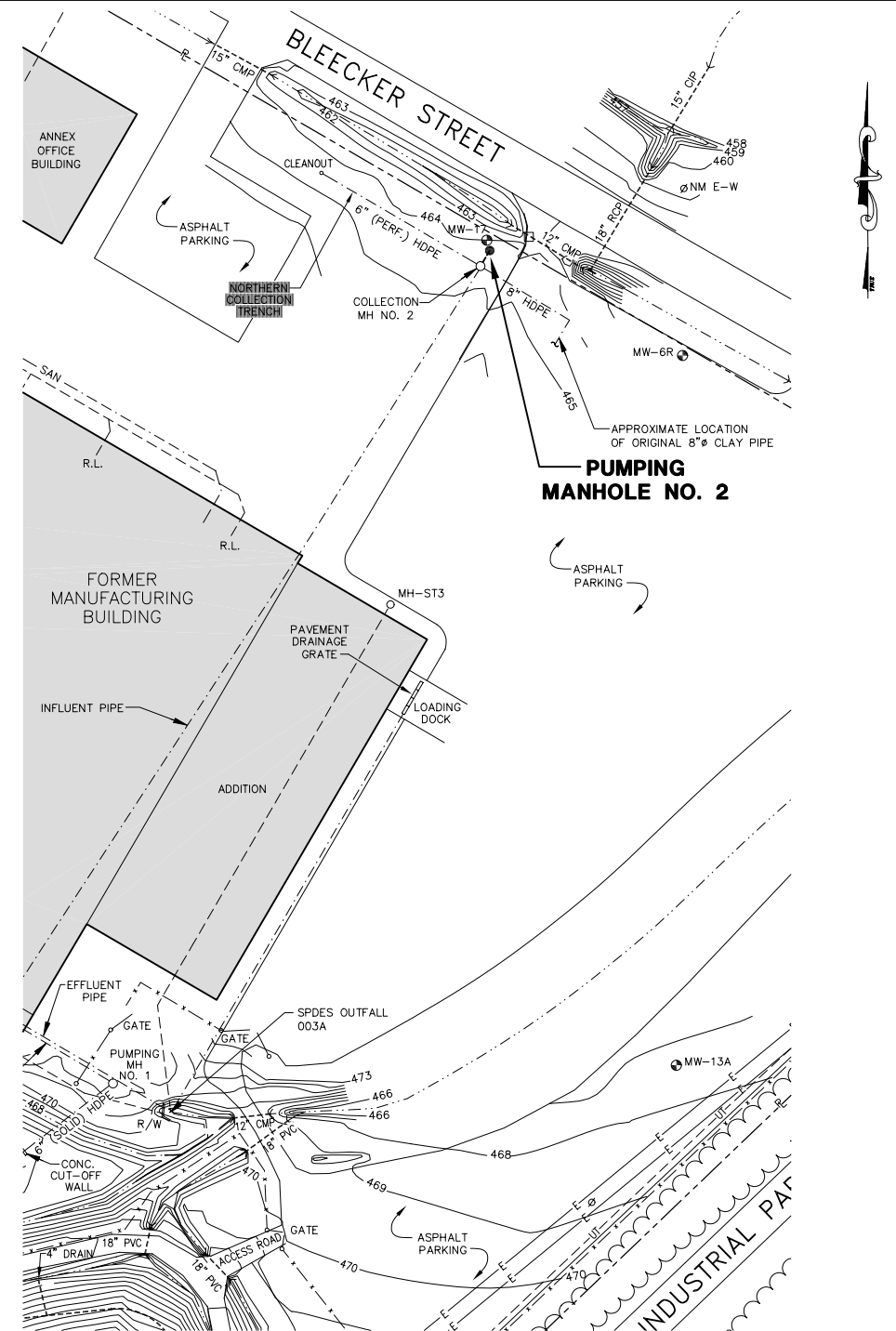
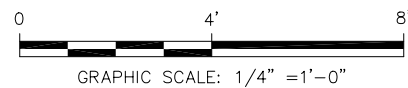
COLLECTION MANHOLE

PUMPING MANHOLE

GENERAL SECTION

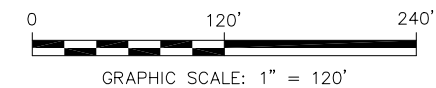
PUMPING MANHOLE NO. 2 PLAN AND SECTION

SCALE: 1/4" = 1'-0"



MANHOLE LOCATION PLAN

SCALE: 1" = 120'



APPENDIX A

SECOR International Incorporated

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

SECOR International Incorporated

Leachate Disposal Correspondence and Analytical Data

INCLUDED IN PRINTED COPY SUBMITTAL TO NYSDEC

APPENDIX D

SECOR International Incorporated

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

SECOR International Incorporated

Groundwater Analytical Data

INCLUDED IN PRINTED COPY SUBMITTAL TO NYSDEC