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**ENVIRONMENTAL ASSESSMENT OF  
MDT CORPORATION**

Prepared for

Skadden, Arps, Slate, Meagher & Flom  
Washington, DC

On Behalf of  
Getinge Industrier AB

Prepared by

ENVIRON Corporation  
Princeton, NJ and Arlington, VA

April 1996

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## I. INTRODUCTION

ENVIRON International Corporation (a division of APBI Environmental Sciences Group, Inc.) (ENVIRON) was retained by Skadden, Arps, Slate, Meagher & Flom (Skadden) to conduct an environmental assessment of seven current facilities of MDT Corporation and its subsidiaries (MDT). The seven facilities currently operated by MDT include: 1) MDT Corporation in Henrietta, New York; 2) MDT Biologic Company in Mercersburg, Pennsylvania; 3) four facilities operated by MDT Diagnostic Company located in North Charleston, South Carolina; and 4) MDT Biologic Company in Rancho Dominguez, California.

The purpose of ENVIRON's review was to identify any on-site and off-site environmental issues that could result in potentially significant liabilities or compliance costs. In addition, occupational safety and health issues were briefly reviewed to determine whether any major areas of concern are present. In the context of this report, the term "potentially significant" is generally used to describe areas of concern that could reasonably result in liabilities or compliance costs in excess of \$25,000. ENVIRON's conclusions about the relative significance of areas of concern are based primarily upon our professional judgment and are meant to provide some guidance in areas of uncertainty.

The environmental assessment generally included the following components:

- Site visits to the seven facilities.
- Interviews with selected facility and corporate personnel.
- A review of documents provided by MDT.

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- A search of federal and state environmental data bases conducted for ENVIRON by Vista Information Solutions, Inc. (Vista) for the seven sites, as well as properties adjacent to or in the vicinity of the sites (Vista's Site Assessment Plus Report). Vista conducted its search of environmental data bases in March 1996. Data bases searched by Vista are listed in Appendix A. Because the environmental data bases themselves are sometimes not updated by the specific regulatory agencies for periods of up to one year (depending on the data base and the state), the data base search conducted herein will not necessarily list any facility or site for which an environmental investigation/ listing has been initiated subsequent to the last update. The Vista data base searches contained a number of unmapped sites. Although ENVIRON briefly reviewed the list of unmapped sites for any properties observed during the site visit to be adjacent to the subject site, it was beyond the scope of this assessment to locate each of the unmapped sites.
- A review of a Facility Risk Profile prepared by Vista, which is a presentation of government filings on the MDT facilities, including records of existing or potential contamination, records of hazardous materials or environmental permits, and records of environmental noncompliance.
- A review of the CERCLIS data base to determine if any of the off-site waste management facilities used by MDT are listed.
- A review of United States Geologic Survey (USGS) topographic maps for the sites.
- A review of aerial photographs for the sites.
- A review of Sanborn fire insurance maps, where available.

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No environmental samples were collected as part of this review, nor were chain-of-title documents provided for ENVIRON's review. ENVIRON did not independently verify all of the written or oral information provided. Consequently, this report is accurate and complete only to the extent that information provided to ENVIRON was itself accurate and complete.

Following this Introduction (Chapter I), a Summary of Conclusions for the environmental assessment is presented in Chapter II. Chapters III through IX present the environmental assessments for the seven MDT facilities subject to this review.

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## II. SUMMARY OF CONCLUSIONS

ENVIRON performed a due diligence review of the facilities of the MDT Corporation. Subject to the qualifications and limitations stated in this report, ENVIRON has identified some potentially significant environmental liabilities associated with some of MDT's current facilities. For the purposes of this review, significant liabilities are those areas of concern that could reasonably result in liabilities or compliance costs in excess of \$25,000. In the following chapters of this report, ENVIRON presents the results of its review of potential liabilities at each MDT facility included in this investigation. ENVIRON's conclusions concerning the potentially significant liabilities of the MDT facilities are summarized in this chapter.

Some of the potentially significant liabilities identified by ENVIRON relate to regulatory noncompliance issues that could result in fines or civil penalties. The maximum civil penalty that may be assessed under certain applicable environmental laws ranges from \$5,000 to \$10,000 to \$25,000 per day of violation, depending on the statute. It is ENVIRON's experience, however, that regulatory agencies typically do not seek fines for noncompliance that approach the maximum that can be assessed under law. Moreover, if such fines are sought, significantly lesser fines can often be negotiated if a company shows a good faith effort to correct the noncompliance.

### MDT Biologic Company, Henrietta, NY

The following areas of potentially significant environmental concern were identified by ENVIRON during its review of the MDT Biologic Company facility in Henrietta, New York:

- The site had a former on-site wastewater treatment system, which consisted of a pump house, a clarigester, two sand beds, a sludge drying bed, and an effluent discharge into a

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small on-site impoundment. The treatment system reportedly treated wastewater from the facility from the time the facility began operation in 1955 until the site was hooked to the sanitary sewer some time around 1960. Based on facility drawings provided by MDT, the sand beds and the sludge drying beds were underlain by soil. Given the existence of degreasing and metal plating operations at the facility since 1955, and based on ENVIRON's experience at similar sites with on-site treatment and disposal systems, there is a significant potential that chlorinated solvents may have been present in the wastewater discharged into the treatment system and that there may be residual soil and/or ground water contamination resulting from that operation.

- The current metal plating operation at the facility is reportedly smaller than that operation has been in the past. Until July 1995, a vapor degreaser was operated that reportedly used 1,1,1-trichloroethane (TCA) as the degreasing agent. The degreaser was located in the plating area. There are also trenches present within the plating area; according to MDT, there has been no evaluation of the integrity of the trenches or drains in the plating area. The potential exists that releases of chlorinated solvents or plating solutions may have occurred within the plating room.
- The facility has an outdoor hazardous waste storage area located on the north side of the facility. This area does not have any secondary containment. According to facility plans this area may have been used for chemical or waste storage since 1955. ENVIRON recommends that secondary containment be provided for this area; costs associated with modifications to the outdoor storage area would not be expected to exceed \$20,000.
- Facility personnel reported that the facility historically disposed of plating/finishing sludge at a location now covered by Interstate 390. The exact location was not known. The fate of any materials removed during highway construction in the 1970s is not known, although some soils removed during highway construction were reportedly stockpiled on the vacant lot on the western side of the site. Without further information, it is not

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possible for ENVIRON to accurately evaluate potential liabilities associated with historical waste disposal.

- ENVIRON observed potential asbestos containing insulation on the facility's heating boilers that appeared to be deteriorating. A comprehensive asbestos survey has reportedly never been performed at the site. Reportedly, encapsulation of some asbestos was performed in 1987. ENVIRON recommends that the facility identify and review the condition of asbestos containing materials at the site and perform any necessary corrective actions. ENVIRON expects the cost to perform a facility-wide asbestos survey would likely not exceed \$10,000. Costs to address asbestos issues cannot be estimated until the asbestos survey is performed.
- The facility currently has air permits for twenty air emissions sources. There are at least two welding operations which have not had Certificates to Operate issued. In addition, several sources included on the permit are reportedly not used, including one ethylene oxide source and three paint booths, and at least two ethylene oxide sources had its permitted emissions control equipment, a catalytic oxidation unit, replaced with a sulfuric acid scrubber without the permit being modified. ENVIRON recommends that the facility review its current operations and air emissions sources and make any modifications necessary to ensure that all its air emissions sources are properly permitted. Costs to address these air permit issues is not likely to exceed \$10,000; potential fines associated with air permit issues could be significant.
- Based on information obtained from facility personnel, no known employee exposure assessments to chemicals have been performed at the site. Employee exposure monitoring is required for ethylene oxide and formaldehyde under OSHA regulations where employees have the potential to be exposed to these chemicals. The initial monitoring results form the basis for deciding whether engineering controls, personal protective equipment, employee training, and medical surveillance are required. The costs to

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implement an employee monitoring program would likely be approximately \$10,000, with potential additional costs if the results of the initial monitoring identify the need for engineering controls, medical surveillance, etc. In addition, potential fines associated with this compliance issue could be significant.

Although not considered significant in the context of this review, the following noteworthy issues were identified by ENVIRON:

- Two underground fuel oil storage tanks were removed in 1988. The tanks were reportedly located within a concrete vault. A representative of the Town of Henrietta observed the tank removal. In 1995, the New York Department of Environmental Conservation (NYDEC) visited the site to verify the closure and issued a letter to MDT providing approval for the closure in compliance with applicable regulations. No sampling was conducted at the time of the tank removal and the underground piping associated with the tanks was reportedly not removed. However, based on the closure letter issued by NYDEC, ENVIRON does not believe that any additional actions will be required by the NYDEC regarding these former tanks.
- The facility has reportedly been named as a potentially responsible party at three Superfund sites: XX Kem in Toledo, Ohio; Envirotex in Tonawanda, NY; and a site referred to as Chem-Trol/Balasdell. ENVIRON has not reviewed any information that identifies MDT as a major contributor at these sites; rather MDT appears to be a small or *de minimis* contributor. Reportedly, the facility paid a \$2,500 settlement for the Envirotex site and the case is closed and the facility reports a liability of approximately \$400 for the XX Kem site, although the facility's involvement in that site has not yet been resolved. The facility was reportedly liable for a \$13,000 settlement for the Chem-Trol site, which was reportedly paid and MDT reports not further liability at that site.

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- The facility has had some exceedances for some metals in its wastewater discharges in 1995. Reportedly, these exceedances resulted because the wastewater was not allowed sufficient time for precipitation of the metals during the pretreatment process. The facility has corrected this problem and has reportedly not had exceedances since October 1995. In November 1995, a cracked tank in the plating operation resulted in a slug discharge of a nitric acid solution to the sewer. The facility has reported that it has not been fined for either the exceedances or the November discharge.

### III. HENRIETTA, NEW YORK

#### A. Introduction

This chapter presents the results of ENVIRON's environmental assessment of the MDT Biologic Company (MDT) facility located in Henrietta, New York. It is based primarily on the following:

- A visit to the site and an inspection of the facility by Michael Nozik of ENVIRON on March 21 and 22, 1996. Mr. Scott Lesnick, Plant Engineering and Maintenance Manager, provided information associated with site history and environmental matters.
- A review of documents provided by MDT, including historical blueprints of parts of the facility created prior to the construction of the original facility.
- A review of federal environmental regulatory data bases searched by Vista and received by ENVIRON during the week of March 25, 1996. A description of the federal data bases searched is provided in Appendix A.
- A review of New York State Department of Environmental Conservation (NYDEC) data bases searched by Vista during the week of March 25, 1996 including the following (the date of the most recent update is shown in parentheses): the Hazardous Waste Disposal Sites List which is the state equivalent of the NPL (SPL-July 1995); the Incinerators-Resource Recovery Projects List (January 1994), the Recycler's Listing (April 1993), the Active Solid Waste Disposal Sites List (September 1995), and the Inactive Solid Waste Disposal Sites List (September 1995) which all identify

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solid waste landfills, incinerators, and transfer stations and which are collectively referred to as "SWLF"; the Leaking Underground Storage Tank Database which identifies known leaking UST sites (LUST-November 1995), the Underground Storage Tank Database which identifies registered USTs (UST-November 1995); and the Aboveground Storage Tank List which identifies registered ASTs (AST-November 1995).

- A review of the CERCLIS data base for off-site waste management facilities reported to have received wastes generated by the facility.
- A review of the USGS 7.5 minute topographic map for the Pittsford, NY quadrangle.
- A review of historical aerial photographs covering the location of the facility for the years 1930, 1951, 1961, 1970, 1976, 1988, and 1993 at the Monroe County Environmental Management Council (MCEMC).
- A review of generalized geologic and hydrogeologic information provided by MCEMC and covering the Monroe County area.
- A review of known and suspected waste disposal sites situated within one mile of the facility identified by MCEMC and the Monroe County Health Department (MCHD) and provided by MCEMC.
- Historical Sanborn fire insurance maps for the site were requested through Vista. Vista reported that no Sanborn maps were identified for the site.

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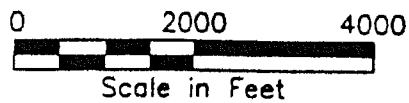
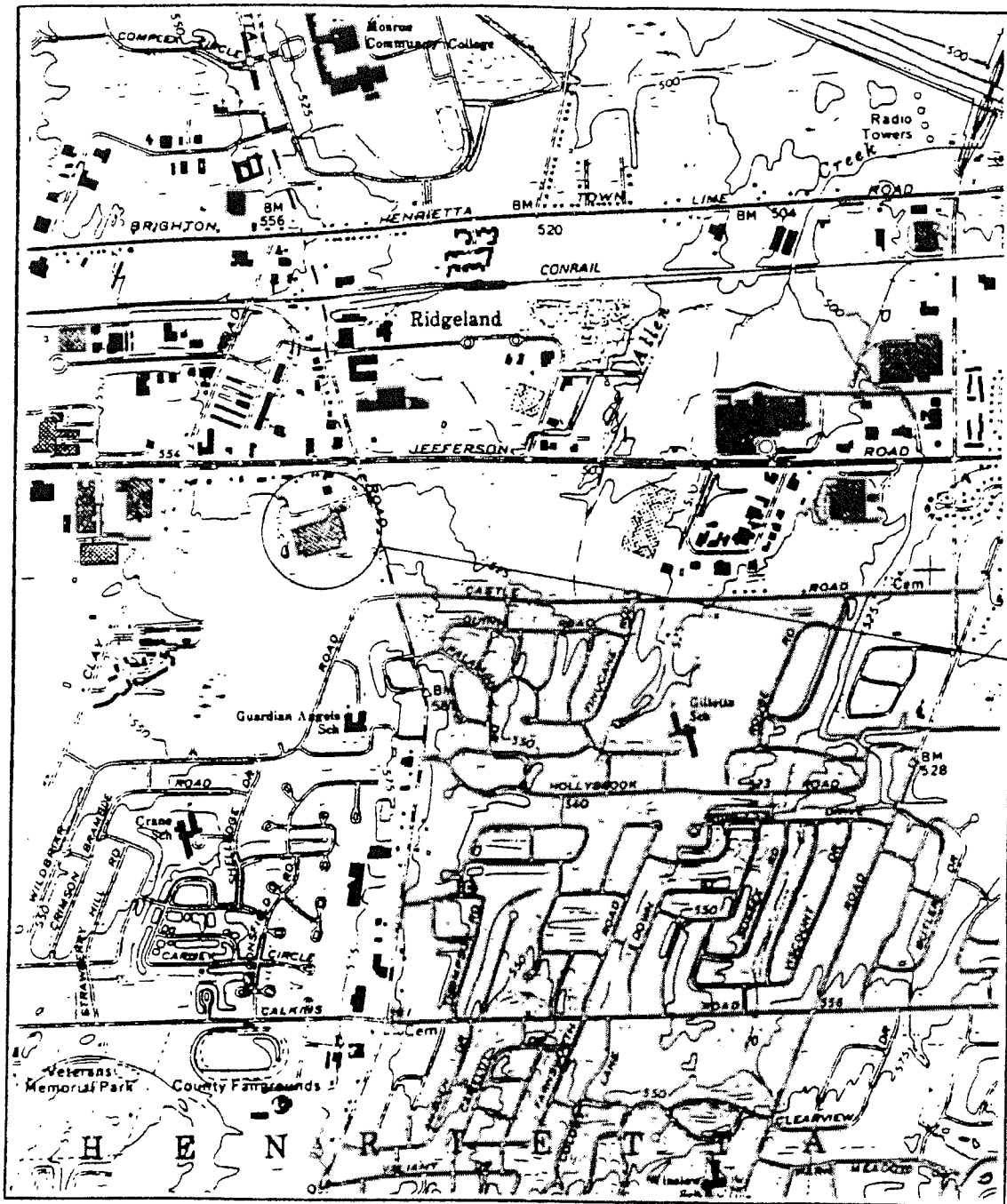
## B. Site Description

### 1. Site Setting

MDT Biologic Company owns and operates a facility at 1777 East Henrietta Road, Henrietta, Monroe County, New York (hereafter referred to as "the facility" in this chapter). Figure III-1 is a site location map showing the general facility location. The facility consists of two buildings situated on 33.245 acres of land. The main building is 274,320 square feet with approximately 60,000 square feet used as office space and the remaining 215,000 square feet used for production and manufacturing operations. Figure III-2 is site plan of the facility. A small basement area in the main building is used for printing facility literature and for storage of paper products. The research and development (R&D) building is 27,764 square feet and contains office space, product testing areas, and a biological laboratory operation.

Approximately 230,000 square feet of the site is paved with asphalt parking lots and roadways. This includes a roadway which the facility leases from Genesee Regional Market that links the site to Jefferson Road. A large section of the remainder of the site located on the west side of the property is undeveloped. This area reportedly received soil excavated during the construction of Interstate 390 which is situated adjacent to the southern boundary of the facility site.

The facility is located in a mainly commercial area of Henrietta. As mentioned above, Interstate 390 bounds the south side of the facility with a mainly residential area further south. E. Henrietta Road bounds the east side of the MDT site. Directly across the road is a Holiday Inn hotel. Adjacent to the north side of the site are a number of commercial establishments lining Jefferson Road including a nursery (Harris Seed), a software distribution company, a muffler shop, an automotive oil change shop, and restaurants. West of the site beyond the undeveloped portion of the site are commercial and light industrial establishments along Clay Road. There also are a few residential homes along Clay Road as well.



SCALE: 1 INCH = 2,000 FEET  
CONTOUR INTERVAL: 5 FEET

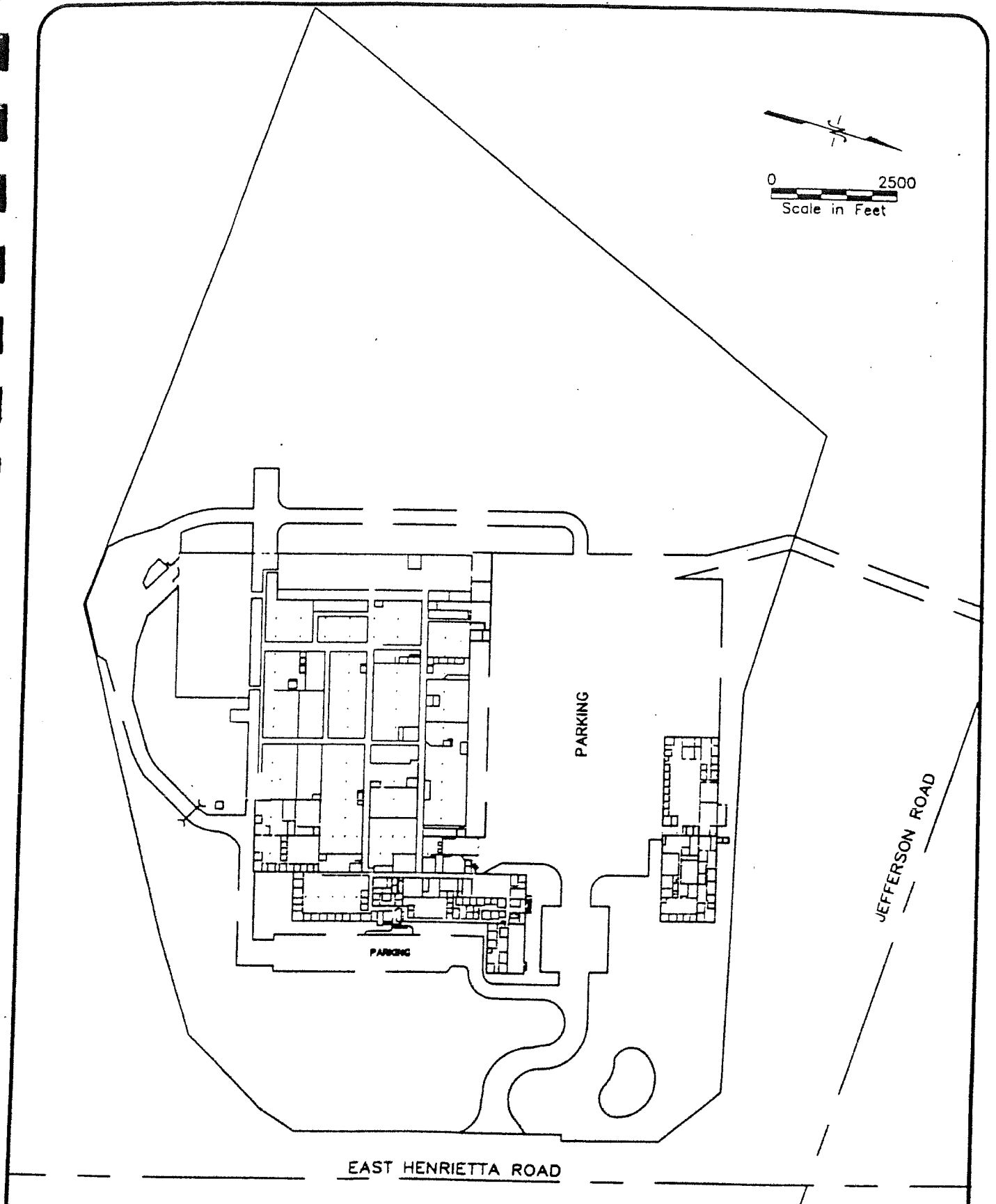
SOURCE: USGS PITTSFORD, NY TOPOGRAPHIC QUADRANGLE, 7.5 MINUTE SERIES, 1971. PHOTOREVISED 1978.

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FACILITY LOCATION MAP  
MDT BIOLOGIC COMPANY  
1777 F HENRIETTA ROAD - HENRIETTA, NY

FIGURE  
III-1

DRAFTED BY: YB DATE: 1/20/88



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MDT BIOLOGIC COMPANY  
1777 E. HENRIETTA ROAD

FIGURE  
III-2

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Based on a review of a topographical survey of the MDT property, the facility sits at an elevation of approximately 555 feet above mean sea level (amsl). The buildings at the site sit atop a flat area that slopes down to the north, east and south. The change in elevation from the area of the buildings down to E. Henrietta Road and Jefferson Road is approximately 30 to 40 feet. The undeveloped area of the site to the west of the buildings is actually higher in elevation than the rest of the site with an elevation of roughly 565 feet amsl.

Surface drainage from a majority of the site is directed to a detention basin located at the northeast corner of the property. A series of swales, storm water collection drains, and underground drainage conduits situated around the outside areas of the facility collect storm water and convey it to the pond. From the pond, drainage is reportedly discharged underneath E. Henrietta Road and Jefferson Road to what appears to be an intermittent tributary of Allen Creek. Based on a review of the USGS Pittsford, NY topographic quadrangle, Allen Creek eventually discharges into the Erie Canal, which is located approximately one and one-quarter mile to the northeast of the facility. Drainage from the undeveloped part of the site most likely either infiltrates into the ground or runs off onto adjacent areas. A review of historic aerial photographs shows that a smaller pond was formerly located off the south side of the building. This former pond may have been used to collect storm water from the south side of the site and is no longer present. Currently, a swale collects storm water from the south side of the facility and conveys it to the detention pond.

With the exception of the detention pond and possibly the drainage swales, it does not appear that any other portions of the site could be classified as wetlands. It is noted that a detailed inspection of the undeveloped portion of the site could not be performed, so it is not certain if any portion of the undeveloped area could potentially be considered wetlands. At the time of the site inspection, snow covered a majority of the site preventing an inspection of the entire ground surface.

Generalized geologic and hydrogeologic information obtained from documents held by MCEMC indicates that depth to ground water in the area of the facility is

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approximately 30 feet below ground surface. Based on a review of ground water elevation contours for the general area in which the facility is located, the direction of ground water flow in the vicinity of the facility appears to be to the northeast. Depth to bedrock in the area of the facility appears to be approximately 75 feet below ground surface with the average overburden thickness of approximately 50 feet to 100 feet.

Drinking water is provided by the Monroe County Water Authority and is obtained from either Lake Ontario or Hemlock Lake. There are reportedly no ground water supply wells on-site. The facility is connected to the Monroe County Pure Waters sewage system which operates the VanLare wastewater treatment plant on Lake Ontario.

Facility personnel believe that the facility was connected to the local sewer system around 1960. It is known that prior to hookup to the sewer system, the facility operated an on-site wastewater treatment facility which discharged its treated effluent to what is now the detention pond at the northeast corner of the site. According to facility personnel, the treatment system operated from 1954 to approximately the time the facility was connected to the sewer system around 1960. Facility personnel reported that wastewater from facility operations, with the exception of plating/finishing wastewater, was directed to the wastewater treatment system (plating wastewater was reportedly held in a sump inside the facility where the water was evaporated). The treatment facility was reportedly dismantled over a period of time and no signs of it remain visually evident. The area where the treatment system was previously located is now largely covered by a building and parking lots.

Electricity is provided by Rochester Gas & Electric (RG&E). Natural gas is line-fed by RG&E to the facility and is the main fuel source. The facility operates two 200 horsepower, low-temperature boilers for facility heating and two 150 horsepower and 160 horsepower boilers for processes. No. 2 fuel oil was used on-site as either a primary fuel source or a secondary fuel source until 1988 when the two fuel oil underground storage tanks were closed and removed (see Section F.1 below).

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## 2. Site History

Use of the site for manufacturing operations began in 1954 when the original facility was constructed by the Wilmot Castle Company (WCC) for the manufacture of sheet metal specialty products. WCC eventually merged with the Ritter Pfuadler Corporation (1966) and then with Sybron Corporation. According to the Chain of Title provided to ENVIRON by MDT, prior to purchase by WCC, the site was used as an airport by Genesee Airport, Inc. The period of use as an airport is not clear, however, the airport existed before 1945, but was not observed on 1930 aerial photographs covering the general location of the site. Use of the site prior to the airport is unknown, however, a review of the Chain of Title does not suggest industrial usage. It is suspected that the site was most likely used for farming or agricultural uses, as the area in which the site is located appeared to be rural based on a review of the 1930 aerial photographs. Aerial photographs taken in 1951 do show the site to be occupied by a relatively small airport. The buildings apparently associated with the airport operations were located in what appears to be the northeastern section of the current facility's property. In 1951, the area around the airport appeared to be predominantly agricultural in nature.

The original facility constructed in 1954 has been enlarged by constructing additions at numerous times during its operational history. Major additions to the main building occurred in 1957-58 (quonset building), 1960 (high bay), 1965 (north office), and 1991 (warehouse). The original R&D building was constructed in 1963 and was expanded in 1972 and 1980. Sybron owned and operated the facility until 1987 when MDT bought the property and the facility from Sybron.

A review of the 1961 aerial photographs shows that the facility was present, although somewhat smaller than current proportions. The wastewater treatment facility is evident to the north of the main building in the vicinity of the north end of the current R&D building (note that the R&D facility was not present in 1961). The detention pond, which is still present on-site, is evident as is another pond located on the south side of the main building. The pond on the south side of the facility is believed to have collected surface

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drainage water from the area south of the main building. The surrounding area was observed to be generally agricultural in nature.

The 1970 photographs show the facility to be relatively the same configuration observed in the 1961 photographs with the north office area and the original R&D building constituting the main additions. The wastewater treatment facility is not apparent on the photographs indicating that it had been removed between 1961 and 1970. The area where it was located was observed to have a lighter shading to it as compared to surrounding undeveloped areas. The light shading appears to extend along the west and south sides of the main building to approximately the area where the former pond was located. The light shading may indicate ground disturbance, however, the cause was not clear from the photographs. The detention pond on the northeast corner of the site is evident as is the pond off the south side of the facility. The surrounding area appears to be a bit more developed, especially to the north, however, agricultural areas are evident to the west and south.

In the 1976 photographs, the facility appears relatively similar in configuration to its appearance in the 1970 photographs. The most prominent feature evident on the 1976 photographs is the apparent increase in height of the area to the west of the facility which may have resulted from the reported deposition of soil excavated from the construction of the adjacent Interstate 390. The construction of Interstate 390 is believed to have occurred in the mid-1970s. The light shaded area along the west side of the facility is evident as are the two ponds on-site. The review of the 1988 and 1993 photographs shows the facility much as it currently appears. On the 1988 photograph, an area within the undeveloped portion which appears to have been excavated like a borrow pit. This corroborates information provided by Mr. Lesnick indicating that the facility used to sell soil from that portion of the site as clean fill. The pond on the south side of the facility is not evident on the 1988 or on the 1993 photographs indicating it had been removed sometime between 1976 and 1988. Mr. Lesnick believed the pond was removed as a result of the Interstate 390 construction. The pond on the northeast corner of the site is evident on the photographs.

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### **C. Records Review**

ENVIRON reviewed the results of the environmental data base searches performed by Vista. The data bases that were searched are identified in Appendix A. The MDT location (listed as Castle Company, Division of Sybron) is identified as having had two 10,000 gallon underground storage tanks (USTs) used to store fuel oil that were closed and removed. These USTs are discussed further in Section F.1 of this chapter. The MDT location (listed as Castle Company) is also identified on the state leaking underground storage tank (LUST) data base as experiencing a 3-gallon release of diesel fuel due to the failure of a tank on a truck/vehicle and not from the former USTs. The listing indicates that the release occurred in 1990 and that the case is closed and the cleanup complete. Mr. Lesnick had no recollection of the spill event occurring.

The identification of the facility on other federal and state data bases as indicated on a Facility Risk Profile (FRP) report generated by Vista is discussed in appropriate sections of this chapter.

No National Priority List (NPL) or RCRA treatment, storage or disposal (TSD) sites were identified within one-mile of the facility. Two state SPL sites were identified as being located within one-half mile to one mile of the facility. Based on the distance of these sites from the facility and the apparent situation of these sites to the northeast and to the northwest of the facility (i.e. not upgradient), these sites are not considered to represent a significant potential contamination threat to facility property.

No sites listed on the Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) were identified as being located within one-half mile of the facility. Aside from the MDT facility itself, a total of six state LUST sites were identified as being located within one-half mile of the facility with one site located within one-eighth mile and two sites located between one-eighth mile and one-quarter mile of the facility. The 390 Truck Stop is listed as being located 0.05 miles to the north of the facility and is reported to have been the cause of petroleum ground water contamination which was discovered in 1989. The data base listing for this site indicates that the cleanup was completed and the case is closed. The location of this site is noted to currently be occupied by a Mobil

gasoline station. The two LUST sites located between one-eighth and one-quarter mile from the facility are indicated to have had their respective cleanups completed. The three remaining LUST sites are located far enough away from the facility (i.e., greater than one-quarter mile) to indicate that they most likely do not represent a significant contamination threat. Out of the six LUST sites identified within one-half mile of the facility, none appear to be situated in a location upgradient of the facility, assuming that ground water in the area generally flows to the northeast.

No state Solid Waste Landfill (SWLF) sites were identified as being located within one-half mile of the facility. A total of seven state UST sites were identified as being located within one-quarter mile of the facility and one state aboveground storage tank (AST) site was identified as being located between one-eighth mile and one-quarter mile of the facility. No sites listed on the Emergency Response Notification System (ERNS) as having had reported releases were identified as being located within one-eighth mile of the facility. One RCRA large quantity hazardous waste generator site and two RCRA small quantity hazardous waste generators sites were identified as being located within one-eighth mile of the facility. The identification of these sites in the vicinity of the facility does not necessarily represent an environmental concern.

#### **D. Description of Operations**

The MDT facility in Henrietta, New York fabricates, assembles, and tests medical products including sterilizer units; sanijet washers; rinser dryers; and stools, intravenous stands and other similar items. The facility also operates a biological laboratory in which bacteria are harvested and impregnated onto strips that are used to test the effectiveness of sterilizer units. The reported Standard Industrial Classification (SIC) code for the facility is 3841: Manufacture of Surgical and Medical Instruments and Apparatus. Manufacture of products includes machining, forming, buffing, etching, and welding of metals into desired configurations; degreasing of some components prior to plating/finishing operations; washing of components using a 5-stage washer prior to painting operations; painting using manual paint spray booths; assembly of products using fabricated parts and pre-manufactured

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electronic components; and testing of finished products. The facility also contains a cafeteria, warehouse space, administrative office space, engineering office space, and R&D office space.

The primary raw materials used in manufacturing operations include metals (carbon steel, aluminum, nickel alloy, copper tubing, and stainless steel); welding materials and gases; plating chemicals (including but not limited to sulfuric acid, muriatic acid, zinc chloride, hydrochloric acid, sodium hydroxide, and nitric acid), and solvent-based paints and thinners. Finishing operations consist mainly of zinc plating and electropolishing. Small amounts of methylene chloride and Freon 12 are used in one product line, however, according to Mr. Lesnick, the product line is to be terminated eliminating the use of those chemicals. For the growth of bacteria, the facility uses two strains of bacteria spores; agar (a gelatinous colloid extracted from algae with yeast extract, glucose, and tryptone); and tryptic soy broth (a soybean-based general purpose media), which is used as a nutrient source for the bacteria.

Testing of sterilizer products includes the use of ethylene oxide (in a mixture that is 10% ethylene oxide and 90% carbon dioxide or in a mixture that is 12% ethylene oxide and 88% dichlorofluoromethane, otherwise known as Freon 12), formaldehyde (in a product that is called Vapo-Steril - 0.23% formaldehyde, 72% alcohol, and the rest water), and peracetic acid which has recently begun being used by the facility as a potential replacement for ethylene oxide. Use of ethylene oxide and peracetic acid only occurs in testing chambers located in the R&D building. Vapo-Steril containing formaldehyde is used for testing units within the main building. The Vapo-Steril product is not manufactured at this MDT Facility, but is stored and used on-site only for testing purposes. The small facility printing operation located in the basement of the main building uses water-based inks and isopropyl alcohol to wipe down the small printing units. Mr. Lesnick reported that the printing operation was soon to be terminated.

Other chemicals used on-site include wastewater treatment chemicals; chemicals used in the 5-stage washer (including but not limited to iron phosphate, an aqueous-based degreaser, and chrome containing sealer); petroleum distillates for parts washing in Safety-Kleen parts cleaning units; boiler treatment chemicals; aluminum oxide for sandblasting; petroleum oils for gear boxes, hydraulic machinery, and air compressors; an aqueous-based detergent for

cleaning products prior to plating operations; cutting fluids for machining operations; and general facility maintenance and cleaning substances. The biological laboratory reportedly stores small amounts of miscellaneous chemicals for R&D purposes.

MDT's operations at the facility have reportedly always been similar to current operations. Prior to MDT purchasing the site from Sybron in 1987, it is believed that the same general manufacturing operations were conducted (i.e., the manufacture of medical sterilizers and related products). Specific changes in chemical usage identified by Mr. Lesnick during MDT's operation of the site include the elimination of 1,1,1-trichloroethane (1,1,1-TCA) for degreasing, the elimination of cyanides in the plating operation, the replacement of zinc phosphate with iron phosphate in the 5-stage washer, and the replacement of a Safety-Kleen parts washer solvent with one that has a flash-point above the hazardous waste threshold for ignitability (140°F). 1,1,1-TCA was used for an undetermined period of time ending in July 1995 when an aboveground vapor degreasing tank located in the plating department was reportedly removed from service and from the site. It was replaced with a washer that utilizes an aqueous-based cleaner.

#### **E. Asbestos and Polychlorinated Biphenyls**

According to Mr. Lesnick, there has never been a comprehensive asbestos survey conducted at the facility, however, there has been some spot checking and subsequent abatement actions. Asbestos abatement actions include identifying asbestos containing materials (ACMs) on the facility heating boilers and having such ACM encapsulated, as well as reportedly removing boiler room pipe insulation containing ACM. Such abatement work was reportedly conducted in 1987. Certain floor tiles present in the facility were reportedly tested and were determined to contain asbestos. In addition, Mr. Lesnick reported that roof materials containing asbestos were removed during 1993. ENVIRON has not received any documentation concerning asbestos testing or abatement activities as of the date of this report.

During the site inspection, the encapsulated ACM on the heating boilers was observed to be deteriorating. Insulation was observed on much of the piping present in the boiler room, and although much of it appeared to be fiberglass, a detailed inspection of all pipe insulation in

the boiler room or throughout the entire facility was not conducted by ENVIRON. Floor tiles and ceiling tiles of the type known to have historically contained asbestos were noted in office areas and other non-production areas of the facility. It was reported that carpet covers much of the floor tiles determined to contain asbestos. According to Mr. Lesnick, most of the ceiling tiles in the facility have been replaced within the last 10 years.

ENVIRON recommends that known ACMs at the facility be evaluated to determine their physical condition and that the facility take appropriate actions (e.g. re-encapsulate the boiler ACM, if necessary). If any construction activities or modifications to the facility are conducted which may disturb suspect or known ACMs, the facility should ensure that it complies with OSHA's asbestos regulations found in 29 CFR 1926.1101. In addition, pursuant to 27 CFR 1910.1001, building and facility owners are required to inform employers of employees, and employers are required to inform employees who perform housekeeping activities in areas which contain ACM or potential ACM of the presence and location of ACM and potential ACM. This requirement includes, among other things, the posting of warning signs to alert workers of the presence of ACM or potential ACM.

USEPA has established National Emission Standards for Hazardous Air Pollutants (NESHAPs) which apply to asbestos (40 CFR 61, Subpart M). In terms of the facility, the asbestos standard would potentially apply if demolition and/or renovation activities are conducted (§61.146 and 61.147), and/or if asbestos-containing insulating materials are present (§61.150). The facility should ensure it complies with these requirements, if they are found to be applicable.

Mr. Lesnick reported no knowledge of polychlorinated biphenyls (PCBs) currently on-site. He did report the former presence of two facility-owned transformers that contained 675 gallons of PCB-containing liquid. These two transformers were located within the main building and were removed in 1987. They were replaced with three dry-type units. The transformers and the PCB-containing liquid were disposed of at General Electric Company, 175 Milens Road, Tonowanda, NY 14150 (EPA ID # NYD067539940). Currently, the facility owns and operates the three dry units, but there are three utility owned, pole-mounted units outside the facility as well as one utility owned, pad-mounted unit located outside the

R&D building. Mr. Lesnick did not know if the utility owned units had ever been checked for PCB content by Rochester Gas and Electric Company (RG&E). No PCB markings were observed on the pad-mounted unit, and no evidence of leakage from any of the utility owned units was evident.

Mr. Lesnick had no knowledge of any PCB-containing capacitors and did not believe any of the hydraulic machinery contained any PCB-containing oils. He stated that facility generated waste oils are annually analyzed for contaminants, and PCBs have never been detected. No information was available as to whether PCB-containing hydraulic oils may have been used by previous owners of the facility. No light ballasts at the facility were known to him to be PCB-containing.

#### **F. Chemical and Chemical Waste Storage**

##### **1. Underground Storage Tanks**

The facility does not currently have any underground storage tanks (USTs) on-site. During the site inspection, ENVIRON did not note any evidence (e.g., vent lines, fill ports, pump stations) of USTs at the facility. Two 10,000-gallon USTs used to store No. 2 fuel oil, which were originally installed in 1954, were closed and removed in 1988. According to Mr. Lesnick, at the time the USTs were excavated and removed, no visual or olfactory contamination was encountered, and the USTs were noted to be situated within a concrete vault. The USTs were located just off the northeast side of the main parking lot between the main building and the R&D building. No soil or ground water samples were obtained at the time of closure. Based on the lack of any evidence of contamination, the USTs were removed and the excavations were filled in. The lines running from the USTs to the facility heating boilers were reportedly not removed or evaluated at the time the USTs were closed. The lines are believed to still be present underneath the main parking lot.

Reportedly, a representative of the Town of Henrietta observed the removal operations; however, the New York State Department of Environmental Conservation



(NYDEC) did not observe the excavation or removal in 1988. However, NYDEC did visit the site in 1995 to verify the proper closure of the USTs. Mr. Lesnick did not know why it took so long for NYDEC to visit the site. Based on NYDEC's site visit, NYDEC issued a letter to MDT granting approval for the closure of the USTs in compliance with applicable regulations.

## **2. Aboveground Storage Tanks**

The facility currently utilizes two aboveground storage tanks (ASTs) on-site; a 14,000- pound AST used to store argon for welding, and a 100-gallon AST used to store gasoline for lawn mowers and tractors. The argon AST is located off the south side of the facility and is maintained by Linde for MDT. Since argon is a gas, liquid spill containment is not relevant. The gasoline AST is located off the north-northeast side of the facility and does not have any secondary containment around it. Mr. Lesnick had no knowledge of any spills or leaks associated with the gasoline AST. ENVIRON recommends that the gasoline AST be equipped with secondary containment to prevent leaks or discharges from impacting the underlying ground. No visually evident signs of leaks were noted around the gasoline AST.

## **3. Drum and Other Storage Areas**

Drums and smaller containers are stored throughout the facility primarily at points of use. There is no specific location dedicated to new chemical storage, however, paints in 5-gallon and smaller containers are stored in a small room that is kept locked and is labeled with signs indicating the presence of flammable materials. During the inspection of the production area of the facility, drums appeared to be stored haphazardly in areas not equipped with secondary containment. For example, a number of drums apparently not associated with the 5-stage wash system were observed around that unit. Also, in the plating area, drums and other containers of chemicals were observed to be situated in such a manner as to allow for a release to enter the plating area trench system if a release occurred. According to Mr. Lesnick, production area floor drains have been sealed and

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the plating area trench system main drain is closed after regular operational hours. During the site inspection of the production areas, minor staining, which is assumed to have occurred from years of operations, was noted. No visually apparent evidence of significant releases were noted. ENVIRON recommends that the facility implement secondary containment measures for its bulk chemicals and attempt to consolidate the storage of its bulk chemicals to eliminate unnecessary distribution of drums and other containers throughout the facility.

Hazardous wastes and empty chemical containers are stored within a covered and raised concrete platform that is located outside off the north-northwest side of the main building. This structure is not equipped with curbing or other means of secondary containment to prevent spill or leaks of wastes from reaching the pavement and storm drains around it. At the time of the site inspection, approximately 50 empty drums were situated within and around the storage structure. In addition, one drum of flammable paint waste (hazardous - D001) was stored within the structure. No visually apparent evidence of staining or chemical releases were noted around the storage structure, however, it is noted that the presence of the numerous drums in the area prohibited an inspection of the entire asphalt surface.

ENVIRON recommends that the storage structure be equipped with secondary containment and that the facility implement some means of separating hazardous waste containers from empty drums and other wastes (e.g., waste oils and coolants). An effort should be made to keep the area around the storage structure free of empty drums, as empty drums can contain residues that can leak onto the asphalt and into nearby storm drains. Costs associated with these suggested modifications to the storage structure would not be expected to exceed \$20,000.

Ethylene oxide-containing chemicals are kept within the R&D building and according to Mr. Lesnick the facility normally stores approximately six 140 pound bottles of the ethylene oxide-containing chemicals on-site at any one time. He also estimated that approximately 320 liters of Vapo-Steril solution is stored in the main building for testing purposes. Mr. Lesnick reported that no chemicals are stored outside the facility and that to

his knowledge, there has not been other outside locations where the facility has stored hazardous wastes or empty drums.

**4. Spill Prevention Control and Countermeasures (SPCC) Plan**

Facilities with the capacity to store oil or petroleum products in a single aboveground container larger than 660 gallons or in a combination of aboveground containers with a total volume of 1,320 gallons, and facilities with an underground storage capacity exceeding 42,000 gallons are required to prepare an SPCC plan, as specified under 40 CFR Part 112.3, if the facility could reasonably be expected to discharge petroleum to navigable waters. According to Mr. Lesnick, the facility would store on average a total of ten 55-gallon drums of oils and coolants at any one time. Based on this information and assuming that all the drums hold petroleum products, the drum volume in combination with the 100 gallons of gasoline in the AST would not exceed the aboveground storage capacity threshold. Therefore, the facility does not appear to be required to prepare an SPCC plan.

**G. Hazardous and Nonhazardous Waste**

**1. Hazardous Waste Management**

The facility's EPA ID Number is NYD002215739. According to Mr. Lesnick, the facility was operating as a large quantity generator (LQG) of hazardous waste until it eliminated the generation of waste 1,1,1-TCA (by eliminating the use of 1,1,1-TCA) and by switching to a petroleum distillate with a flashpoint below the hazardous threshold. The elimination of these hazardous waste streams occurred by the end of 1995 and the facility reportedly currently generates less than 2,200 pounds (1,000 kg) of hazardous waste, which would designate the facility as a small quantity generator (SQG). Mr. Lesnick requested a change in generator status with NYDEC in January 1996 and is still awaiting confirmation from NYDEC.

According to Mr. Lesnick, the facility's main hazardous waste streams include paint-related wastes (paint residues, thinners, rags, etc.) and electroplating sludge. The facility currently generates approximately four drums per year of paint wastes and approximately one drum per year of electroplating sludge. A review of the facility's most recent hazardous waste manifest dated January 17, 1996 indicates one drum of waste isopropyl alcohol and methyl alcohol (D001), one drum of caustic alkali liquids (sodium hydroxide and potassium hydroxide - D002), one drum of waste paint including 1,1,1-TCA (D001 and F001), and one drum of flammable liquids (isopropyl acetate and pyridine) (D001 and D038). According to Mr. Lesnick three of the four drums listed on the manifest represent waste streams not consistently generated by the facility. The isopropyl alcohol and methanol were generated from product testing using Vapo-Steril solution which is only conducted periodically. The caustic alkali liquids were virgin materials which could not be used by the facility. The flammable liquids were from inks no longer used by the facility. The 1,1,1-TCA in the paint waste represented left over solvent from the former vapor degreasing operation which appears to have been mixed together with the facility's paint waste stream.

A review of facility manifests for the last three years shows similar generation of hazardous wastes (i.e., primary waste streams with periodic disposal of miscellaneous chemicals). Waste 1,1,1-TCA which was generated from the former vapor degreasing operation and spent Safety-Kleen parts cleaning solvent which was hazardous based on its flashpoint (below 140° F) were noted on past manifests when these wastes were being generated by the facility. Periodic cleaning of the R&D laboratory results in disposal of small amounts of miscellaneous hazardous wastes. The last such cleaning occurred in 1994 and resulted in a lab-pack disposal of numerous wastes.

At the time of ENVIRON's site inspection only one drum of waste paint was being stored in the designated hazardous waste storage area. Mr. Lesnick reported that hazardous waste is removed from the site within the designated time frame required (90 days for a large quantity generator and 180 days for a small quantity generator). The facility uses satellite accumulation drums to hold waste paint materials in the paint area

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and in the plating room for the sludge removed by filter or by manual removal from the bottom of the finishing tanks. Hazardous waste drums were noted to be labeled and marked correctly, and no visually evident signs of leaks or spills associated with the storage of hazardous wastes were noted.

Based on information supplied by Mr. Lesnick, on a review of facility manifests and annual hazardous waste generation reports, and on observations made during the site inspection, it appears as though the facility is in substantial compliance with RCRA hazardous waste regulations. As a LQG, the facility has met its requirements for submitting annual reports to NYDEC, providing RCRA hazardous waste training for designated personnel, conducting at a minimum weekly inspections of hazardous waste storage area, storing hazardous waste on-site for less than 90 days, and maintaining manifests and related documentation on-site for required periods of time. When the facility is officially designated a SQG, it will not be required to comply with all of the same requirements applicable to LQG, however, the facility will still need to ensure it meets the SQG requirements, which include but are not limited to storing wastes on-site for no longer than 180 days, using accepted waste manifests, disposing of hazardous wastes at RCRA-permitted facilities, and maintaining waste records on-site for required periods of time (usually 3 years).

According to Mr. Lesnick, the last RCRA hazardous waste inspection of the facility occurred in 1989 by NYDEC. He did not have a copy of the inspection report, however, he stated that no violations were noted and no fines were imposed by NYDEC on the facility. In 1988, the facility had also received a RCRA inspection and was fined \$3,000 as a result of violations noted by NYDEC. Violations identified by NYDEC included:

- Failure to appropriately label hazardous waste containers;
- Failure to mark hazardous waste containers with waste accumulation start dates;
- Failure to conduct weekly inspections of hazardous waste storage areas;
- Failure to post appropriate signs at hazardous waste storage areas;
- Lack of a written emergency contingency plan;

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- Failure to provide personnel with RCRA hazardous waste management training; and
- Failure to keep hazardous waste drums closed during periods of non-use.

The facility corrected the noted violations and received a follow-up inspection later in 1988. No violations were noted during the follow-up inspection.

The facility uses Laidlaw Environmental Services (Laidlaw) to transport its hazardous wastes to a Laidlaw facility located in Lawrence, MA. According to documentation provided to the facility by Laidlaw, Laidlaw can use a number of designated disposal facilities for ultimate disposal of the wastes. Mr. Lesnick was not specifically aware of the other disposal facilities used by Laidlaw for the disposal of facility wastes, however, Mr. Lesnick had requested Laidlaw to supply a list of the disposal facilities used.

Mr. Lesnick provided hazardous waste disposal information in the form of annual hazardous waste generation reports required for submission by the facility to NYDEC. Reports from 1989 to the present were reviewed by ENVIRON. Disposal facilities identified from the annual reports are listed on Table III-1. Also included on Table III-1 are other waste disposal facilities reported by Mr. Lesnick to have received wastes generated by the facility. Mr. Lesnick believed the facility has used Laidlaw for approximately six years. Specific information regarding hazardous waste information prior to the late 1980s was unknown to Mr. Lesnick with the exception of the use of Safety-Kleen which he believed dates back to the 1970s for disposal of parts cleaning wastes.

Facility personnel reported that the facility historically used to dispose of plating/finishing sludge generated from the evaporation of wastewater by disposing of it at a location described as being located in an area now covered by Interstate 390. Mr. Lesnick did not believe that area would include any areas currently within facility property, however, he has no direct knowledge of historical facility disposal practices. No other information concerning historical waste disposal (e.g., sludge disposal from the former wastewater treatment facility or historical chlorinated solvent disposal from

TABLE III-1 Waste Disposal Facilities Reported to Have Received Wastes Generated by MDT, Henrietta, NY		
Facility Identification	CERCLIS Listing	NPL Listing
General Electric Co. 175 Milens Road Tonowanda, NY NYD067539940	Not Listed	Not Listed
Laidlaw Environmental Services Northeast Solvents Creclamation Corp. 300 Canal Street Lawrence, MA MAD000604447	DS - 7/30/91 PA - 6/22/92	Not Listed
Ogden Martin 100 Recovery Way Haverhill, MA MAD097435416	Not Listed	Not Listed
Bison Waste Oil PO Box 147 240 Main St. Cowlesville, NY 14037 NY0986876365	Not Listed	Not Listed
Lyle Metals Rochester, NY	Not Identified	Not Identified
High Acres Landfill Waste Management Inc. Perinton, NY	Not Identified	Not Identified
Safety-Kleen 1525 W. Henrietta Rd. Avon, NY NYD980753784	Not Listed	Not Listed
Marine Shale Processors Highway 90 East Morgan City, LA LAD981055706	DS - 10/1/89 PA - 1/1/90	Not Listed
North American Environmental Services Division 2321 Kenmore Avenue Buffalo, NY NYD986875854 or NYD045969433	Not Listed	Not Listed
Hazmat Environmental Service Group 60 Commerce Drive Buffalo, NY NYD986887354	Not Listed	Not Listed
Environmental Service Group 177 Wales Ave. Tonawanda, NY NYD986903904	Not Listed	Not Listed

TABLE III-1 Waste Disposal Facilities Reported to Have Received Wastes Generated by MDT, Henrietta, NY		
Facility Identification	CERCLIS Listing	NPL Listing
Chemtron 35850 Schneider Court Avon, OH OHD066060609	DS - 9/1/80 PA - 8/1/84 NFRAP	Not Listed
Research Oil Co. 2655 Transport Rd. Cleveland, OH OHD004178612	DS - 1/15/88 PA - 1/6/89 NFRAP	Not Listed
Mercury Refining Co. 20 Railroad Ave. Colonie, NY NYD048148175	See NPL Listing	DS - 8/1/82 PA 1 - 8/1/82 SI 1&2 - 12/1/82 HR - 12/1/82 NF - 9/8/83 CO - 3/19/85 RV 1 - 1/2/86 ACO - 6/9/89 RS1 - 9/7/90 RS2 - 2/3/93
Environmental Enterprises Inc. 4650 Spring Grove Ave. Cincinnati, OH OHD083377010	DS - 1/15/88 PA - 1/9/89	Not Listed
Safety-Kleen State Highway 146 New Castle, KY KYD053348108	DS - 11/179 PA - 8/1/84 SI - 4/1/85	Not Listed
Safety-Kleen Corp. 1200 Sylvan Ave. Linden, NJ NJD002182897	DS - 11/1/79 PA 1 - 1/1/80 SI - 4/1/80 PA 2 - 6/3/88	Not Listed
Frontier Chemical Waste Process 4626 Royal Ave. Niagara Falls, NY NYD043815703	DS - 9/1/85 PA 1 - 11/1/85 SI 1 - 12/1/85 PA 2 - 3/15/86 RV 1 - 8/15/94 RV 2 - 5/16/94 RV 3 - 3/21/95	Not Listed
GSX Chemical Services of Ohio 7415 Bessemer Ave. Cleveland, OH OHD980569438	DS - 4/15/88 PA - 4/7/89 NFRAP	Not Listed



TABLE III-1 Waste Disposal Facilities Reported to Have Received Wastes Generated by MDT, Henrietta, NY		
Facility Identification	CERCLIS Listing	NPL Listing
XXKem 3903 Stickney Ave. Toledo, OH OHD980586804	DS - 6/1/81 PA - 4/20/88 SI - 9/27/93 ES - 9/29/94	Not Listed
Enviroteck 2 4000 River Rd. Tonowanda, NY NYD038641601	ACO - 5/9/90 RV - 5/28/93	Not Listed
Kaplan Container Corp. 100 Despatch Dr. Rochester, NY	Not Listed	Not Listed
Notes:		
DS = Discovery	NF = NPL Final Listing	
PA = Preliminary Assessment	ACO = Administrative Consent Order	
SI = Site Inspection	NFRAP = No Further Remedial Action Planned	
RV = Removal Action	CO = Combined RI/FS	
ES = Listing Site Inspection	RS = Removal Investigation - NPL	

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degreasing operations) was known to Mr. Lesnick. Without further information it is not possible for ENVIRON to accurately evaluate the liabilities associated with former hazardous waste disposal by the facility.

According to Mr. Lesnick, the facility has been identified as a potentially responsible party (PRP) for three Superfund sites: XXKem in Toledo, OH; Enviroteck 2 in Tonawanda, NY; and a site referred to as Chem-Trol/Balasdell. Mr. Lesnick reported that for the XXKem site, the facility was liable for approximately \$400, but that the facility's involvement in the case has not yet been resolved. The facility reportedly paid approximately \$2,500 as a PRP for the Envirotex site and reportedly this case has been closed. The facility, under operation by Sybron, was held liable for \$13,000 in the Chem-Trol/Balasdell site. According to Mr. Lesnick, MDT has no liability associated with this site. No additional information concerning the facility's PRP involvement was provided to ENVIRON.

## **2. Nonhazardous Waste Management**

Nonhazardous waste generated by the facility includes office trash, cafeteria waste, paper and plastic, and packaging waste. These wastes are collected in an on-site compactor and are picked up by Waste Management, Inc. (WMI) and are disposed of at the High Acres Landfill in Perinton, NY. The facility separates the following materials for recycling: corrugated cardboard, office paper, glass, aluminum cans, and wooden pallets. WMI handles the recycling effort for these materials.

The facility also has two special nonhazardous waste streams that are also disposed of by WMI at the High Acres Landfill; pulverized aluminum oxide generated from sandblasting operations, and spent paint filters from spray painting operations. Waste characterizations have been performed on these waste streams by WMI, which document that they are nonhazardous streams. Aluminum oxide is collected in a separate dumpster from the other wastes, however, the spent paint filters are put in with the other nonhazardous waste going to High Acres.

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The biologic laboratory operation generates what is referred to as a "media" waste stream. This includes plastic petri-dishes and glass vials containing the T-soy growth media, agar, and the bacteria. As part of the facility's standard operating procedures, the media waste is sterilized to kill all living bacteria. The facility determined that the media waste is not a medical waste stream since it does not contain an infectious agent or pathological material. Mr. Lesnick reported that this waste stream was formerly disposed of at the High Acres Landfill; however, in 1990-1991, the Landfill stopped accepting the waste due to concerns about its biological constituents. As a result, the facility was forced to find an alternative for disposal and eventually contracted with Laidlaw to transport the media waste to the Ogden Martin facility in Haverhill, MA for incineration. The media waste is not a hazardous waste, but is handled and marked separate from the rest of the facility's nonhazardous waste streams. Approximately 80 plastic 55-gallon drums of media waste are generated annually. The facility stores the red plastic drums off the west side of the R&D building. At the time of the site inspection, approximately 30 drums of media waste were observed in this area and no signs of leaks or discharges were noted around the drums.

Other nonhazardous waste streams include spent Safety-Kleen parts cleaning solvent generated from the seven parts cleaning units located throughout the facility, scrap metal, and empty chemical drums. The Safety-Kleen solvent used is reportedly "Premium Solvent" which is composed of various petroleum hydrocarbons. Safety-Kleen services the parts cleaning units on a regular basis and recycles the spent solvent. Safety-Kleen periodically samples the waste solvent to ensure it is not hazardous. Scrap metal is collected throughout the facility and is eventually purchased by Lyle Metals for recycling. Mr. Lesnick reported that residues in drums are removed and plastic drums are returned to the vendor (mainly Sterling Chemical) and metal drums are taken by Kaplan Container. Empty drums are stored in and around the hazardous waste storage structure prior to pickup.

#### H. Air Emissions

The primary sources of air emissions at the facility include the spray painting operations; the 5-stage washer unit; plating/finishing operations; welding and buffing operations; product testing using materials containing ethylene oxide, formaldehyde, and peracetic acid; and process and heating boilers. According to information and documentation provided by Mr. Lesnick, the facility currently has 20 NYDEC permitted air emission sources. Table III-2 lists the permitted emission sources, associated control equipment, listed contaminants, and listed permissible emission rates. Based on a review of the Certificates to Operate for the sources and of Applications to Construct provided for some of the sources, the permissible emission rates listed appear to be based on facility calculated annual emissions (i.e., for most permitted sources the annual actual emissions are the same as the permissible annual emissions). Mr. Lesnick was not aware of any other emission estimates for facility sources. No stack testing or other air emission monitoring has been conducted at the facility. Fugitive emissions have apparently not been calculated for facility operations. All Certificates to Operate appear to have been issued in 1992 and all appear to expire in 1997.

According to Mr. Lesnick, the facility's current operations do not result in emissions rates approaching the permissible limits established in the permits because the facility has eliminated or reduced to amount of contaminants used since the calculated annual emission estimated were generated. The facility is reportedly not operating at maximum production capacity, and Mr. Lesnick did not believe an increase in production rates would result in exceedances of the permissible limits.

According to Mr. Lesnick, there are at least two new welding sources for which Applications to Construct have not been submitted to NYDEC. As a result, no Certificates to Operate have been obtained. A review of the facility's Certificates to Operate show three emission points for ethylene oxide (301, 302, and 310). According to Mr. Lesnick only two of them (302 and 310) are actually used. The third was reportedly never established, although the permit was obtained. In addition, the permits for emission points 302 and 310 indicate the use of a catalytic unit for air pollution control when in actuality the facility replaced that unit with the sulfuric acid scrubber a few years ago. Furthermore, although the facility has six

TABLE III-2  
Permitted Emission Sources

Emission Point ID Number	Description of Emission Source	Control Equipment	Contaminants Emitted	Permissible Emission Rate (lb/yr)
001	Paint drying oven	Fan	Paint thinner (volatiles)	1689
004	Plating tank	Fan	Zinc chloride	192
006	Cleaning Tank	Fan	Hydrogen sulfide Sulfuric Acid	844 76.8
007	Reproduction machine	Fan	Ammonia	748.8
111	5-stage washer with two exhaust stacks	Fan	Sodium hydroxide Chromic Acid	2.4 2.4
112	Paint bake oven	Fan	Cellosolve acetate	480
113	Paint spray booth	Fan and filter	Particulates Cellosolve acetate	21.6 1080
114	Paint spray booth	Fan and filter	Particulates Cellosolve acetate	21.6 1080
115	Paint spray booth	Fan and filter	Particulates Cellosolve acetate	21.6 1080
116	Paint spray booth	Fan and filter	Particulates Cellosolve acetate	21.6 1080
117	Paint spray booth	Filter	Particulates Cellosolve acetate	10.8 540
119	Paint spray booth	Fan and filter	Particulates Cellosolve acetate	24 300
123	Grinding and machining	Dust collector	Particulates	1407
301	Product testing	None	Ethylene oxide Freon 12	79.3 476.2
302	Product testing	Sulfuric acid scrubber	Ethylene oxide Freon 12	0.118 912
304	Product testing	None	Formaldehyde Methanol Ethanol Propanol	Not listed 3.2 3.2 1.8
306	Cleaning of application gun	None	Methylene chloride Organic particulates	613 8.760

TABLE III-2 Permitted Emission Sources				
Emission Point ID Number	Description of Emission Source	Control Equipment	Contaminants Emitted	Permissible Emission Rate (lb/yr)
307	Product testing	None	Ethanol Formaldehyde Methanol	4977 19.97 300
310	Product testing	Sulfuric acid scrubber	Freon 12 CO2 Ethylene oxide	1528 480 9.880
12200	Soldering and welding	Fan	Lead Tin Particulates	Not Listed Not Listed 1407

permitted paint spray booths, only three are reportedly used. ENVIRON recommends that the facility review its current operations and make the necessary modifications in terms of bringing its permitted sources up-to-date; estimated costs to perform that review would not likely exceed \$10,000. It is possible that if the facility received an air inspection by NYDEC, it could be fined for operating sources without authorization or for modifying sources without authorization; such fines could be significant. Mr. Lesnick reported that the facility has not received an air inspection by NYDEC since the late 1980s. He was not aware of any noted fines or violations associated with facility air emissions.

USEPA has established National Ambient Air Quality Standards (NAAQS) for six criteria pollutants: ozone, nitrogen dioxide, sulfur oxides, carbon monoxide, particulate matter (PM<sub>10</sub>), and lead. States are required to meet NAAQS by regulating emissions of criteria pollutants (in the case of ozone, ozone's reactive precursors, volatile organic compounds [VOCs] and nitrogen oxides [NO<sub>x</sub>], are regulated) from sources that are determined to be "major sources" of the criteria pollutants. A source is considered major if it has the potential to emit any of the pollutants above established thresholds. A facility's potential-to-emit generally means the amount of a pollutant the facility could emit if it operated its production processes continuously for 24 hours a day, 7 days a week, 52 weeks per year.

The established major source thresholds are dependent upon how USEPA has assessed current air quality in different geographic regions of the United States. Regions that are considered to have air quality as good or better than the established NAAQS are designated as "attainment areas." Regions that are considered to have air quality below NAAQS are designated as "non-attainment" areas. Non-attainment areas are categorized as marginal, moderate, serious, severe, or extreme, depending upon how poor the air quality is assessed to be. Major source thresholds are higher in attainment areas than in non-attainment areas and decrease in relation to the designation of non-attainment areas. Regions can be designated as attainment for some criteria pollutants, and non-attainment for others.

The MDT facility is located in New York State which is considered part of the Northeast Ozone Transport Region. Major source thresholds for criteria pollutants in the Northeast Ozone Transport Region are 50 tons per year of VOCs, and 50 tons per year of NO<sub>x</sub>. USEPA

has also identified 189 individual chemicals which have been designated as hazardous air pollutants (HAPs). Facilities are considered major sources of HAPs if they emit 10 tons per year of any individual HAP or 25 tons per year of aggregate HAPs. The designation of a major source facility for HAPs has no connection to attainment or non-attainment areas, which have been established only in association with criteria pollutants.

Title I of the Clean Air Act Amendments of 1990 (CAAA) requires existing major sources of VOCs and NO<sub>x</sub> in ozone non-attainment areas to install Reasonably Available Control Technology (RACT) to limit emissions of these criteria pollutants. Under Title III of CAAA, Maximum Available Control Technology (MACT) emission standards are being developed for major sources of HAPs within various source categories. In general, a facility that is regulated as a major source under Title I or Title III is required to obtain an operating permit pursuant to Title V of CAAA. All states were required to submit their operating permit programs to USEPA for review and approval. Some states have already received authorization to implement the Title V permitting program. NYDEC was to receive authorization to implement its Title V permitting program by spring of 1996.

The facility has not conducted an evaluation of its emissions with respect to compliance with the CAAA. Mr. Lesnick believes that the facility is not required to submit information to NYDEC until 1997. Based on Mr. Lesnick's knowledge of the amounts of chemicals used annually in facility operations, he does not believe the facility would exceed major source thresholds for criteria pollutants or for HAPs. The facility does emit criteria pollutants and a number of HAPs (including but not limited to ethylene oxide, formaldehyde, hydrochloric acid, methyl ethyl ketone, hexone, toluene, xylene, and some metals). Finishing operations conducted at the facility would appear to bring the facility under the Miscellaneous Metal Parts and Products category of the Surface Coating source category for which MACT standards are to be established for major sources in the year 2000. Mr. Lesnick expects to begin evaluation of the facility's emissions this year to determine if the facility's emissions fall under major source thresholds.

Based on a review of annual chemical usage rates and on a review of permitted emission rates provided by Mr. Lesnick, it does not appear that the facility uses chemicals in amounts



that would approach major source emission thresholds. Based on that information only, and without assessing the facility's potential-to-emit regulated chemicals, it does not appear that the facility would be designated a major source subject to the Title V operating permit program requirement or to MACT standards (for HAP emissions). However, the facility needs to evaluate its emissions more closely, including assessing its potential-to-emit numbers. Only then can an appropriate determination with regard to compliance with CAAA regulations be made.

### I. Wastewater Discharges

Wastewater streams generated at the facility and discharged to the sanitary sewer system include sanitary wastewater from bathrooms and cooking facilities, boiler blowdown, air compressor condensate, wash water from the 5-stage wash unit, water used in hydrostatic testing of products, aqueous-based detergents used for degreasing in the plating area, and plating operation wastewater which has been pre-treated to remove metals. The average monthly water consumption of the facility is approximately 127,000 gallons per day. The plating/finishing operation consumes approximately 39,000 gallons per day while the rest of the facility operations consume approximately 87,000 gallons per day. The facility discharges to the sanitary sewer under terms of Sewer Use Permit No. 628, issued by Monroe County. The permit is issued on an annual basis and the current permit for the facility expires on September 30, 1996.

According to the current permit, the facility is subject to effluent guidelines for the Metal Finishing Existing Source pretreatment category (40 CFR 413 and 433). Accordingly, the permit establishes certain effluent limitations, which are listed in Table III-3. The permit requires the facility to conduct its own monthly sampling and analysis in accordance with 40 CFR 136. Table III-3 lists sample types and the number of samples required for the specified parameters. To achieve the established effluent limitations, the facility pretreats its plating/finishing wastewater for metals removal and pH neutralization. Metals are precipitated out from wastewater in the muriatic acid tank while wastewater from the BrightDip tank, the zinc acid tank, the electropolish tank and the nitric acid tank is fed through a filter to remove

**TABLE III-3**  
**Wastewater Effluent Standards**

Parameter	PSES Daily Max (ppm)	PSES Max Monthly Ave (ppm)	Sample Type	Sampling Frequency
pH	5.5 - 10 SU	--	Grab	Monthly
Cyanide (total)	0.31	0.20	Grab	Monthly
Cadmium (total)	0.21	0.08	Timed Composite	Monthly
Chromium (total)	0.85	0.53	Timed Composite	Monthly
Copper (total)	0.92	0.64	Timed Composite	Monthly
Lead (total)	0.21	0.13	Timed Composite	Monthly
Nickel (total)	0.92	0.73	Timed Composite	Monthly
Silver (total)	0.13	0.07	Timed Composite	Monthly
Zinc (total)	0.80	0.45	Timed Composite	Monthly
Total Toxic Organics*	0.65	--	Timed Composite	Monthly

Notes:

- PSES = Pretreatment Standards for Existing Sources  
 \* = The facility reported that it is not required by Monroe County to analyze for TTO. Monroe County will periodically obtain its own wastewater sample and include TTO in its analyses.

The facility also reports that it has an Oil and Grease limit of 100 ppm.

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particulates containing metals and other solids. Water from the nitric acid tank, the zinc acid tank and the electropolishing tanks is recirculated to reuse the water during the finishing process. Wastewater generated from the muriatic acid tank, the rinse tanks, and the sodium hydroxide tank (after neutralization) is discharged from the tanks to a series of concrete floor trenches, which lead to a main drain discharging to the sewer system.

A review of the facility's monthly wastewater monitoring reports for the last year indicate that the facility has generally been in compliance with its sewer use permit. Exceptions appear to have occurred in September 1995 when the facility exceeded its limits for copper, nickel, chrome, and lead, and in October 1995 when the lead limit was exceeded. According to Mr. Lesnick, the exceedances occurred because facility personnel did not allow enough time for metal precipitation to occur. The problem was identified and steps were implemented to ensure it would not happen again. The only other significant exceedance resulted from a crack in a tank that caused a slug discharge to the sewer in November 1995. None of the exceedances resulted in fines from the sewer authority. Based on information provided by Mr. Lesnick, the facility appears to otherwise consistently meet its discharge requirements. Mr. Lesnick reported no outstanding sewer violations or fines. The sewer authority periodically visits the facility to conduct an inspection and to obtain its own wastewater sample from the designated wastewater sampling location which is just of the north side of the R&D building. Mr. Lesnick was not aware of any concerns associated with the sampling of wastewater by the sewer authority.

The facility submitted an application for a general storm water permit to NYDEC in 1993. The facility collected storm water samples as part of the permit application. A review of the sample analyses shows no significantly high parameter results except for pH which was detected in one sample at 9.22 SU. The reason for the elevated pH is unknown. According to Mr. Lesnick, NYDEC has not yet responded to the permit application. At the time the storm water permit application was submitted, the facility reportedly was discharging water used for hydrostatic testing of products to a drainage swale located on the south side of the facility. This discharge was eliminated in 1995 so that there is no water associated with facility operations currently discharged to the ground or to surface water with the exception of boiler

blowdown from the R&D building boiler which is discussed below in Section J. The facility does store vessels and other miscellaneous metal parts outside, however no chemicals or items which could potentially contaminate storm water were observed. Based on the reported SIC of the facility, it appears that the facility is only required to submit an application for a storm water permit if storm water has the potential of being contaminated by facility operations. If the facility can eliminate storage of all items from outside areas, it is possible that the facility may not require a permit. The facility may want to consider informing NYDEC of the modification of its storm water discharge, since that may influence the determination of whether or not the facility requires a storm water permit.

As described above, a series of drains and swales collect and convey storm water to the detention pond located on the northeast corner of the property. Roof drains discharge to the swales and air conditioner condensate is discharged to swales as well. Storm water from the site reportedly is eventually discharged to the Erie Canal.

#### **J. On-site Soil and Ground Water Contamination**

Mr. Lesnick reported no knowledge of any on-site soil or ground water contamination. During the site inspection, ENVIRON did not note any visually apparent signs (e.g., significant soil staining, dead or stressed vegetation) of soil contamination with the exception of a small area which appeared to receive blowdown from the boiler located in the R&D building. This area is located along the north side of the R&D building, and lack of grass was noted in the discharge area. The area was not observed to be extensive and is estimated to be one to two square feet in area. The facility should eliminate the blowdown discharge to the ground.

Based on information provided by facility personnel and on the site visit, ENVIRON identified several potential sources of soil and/or ground water contamination at the facility, primarily related to historical operations at the site. These include:

- The former operation of an on-site wastewater treatment system which discharged treated wastewater to an on-site pond and for which sludge disposal practices are unknown.
- The existence of plating/finishing operations on-site since 1954 which has utilized hazardous chemicals including cyanides and metals. The concrete drain system present in the plating area has reportedly never been investigated for integrity.
- The reported historic disposal of sludge generated from the plating/finishing operations in an area described as being located in the vicinity of Interstate 390 adjacent to the south side of the facility and the uncertainty of whether disposal occurred on current facility property.
- The use of 1,1,1-TCA for degreasing operations for an undetermined period of time ending in 1995 and the uncertainty associated with historic disposal practices associated with degreasing operations.
- Undocumented historical waste disposal practices for hazardous materials used at the facility over its operating life.

ENVIRON did not obtain or review any information during this environmental assessment indicating that there currently is a significant soil and/or ground water contamination problem; however, based on past practices reported to have occurred, ENVIRON believes there is a possibility that significant contamination could exist. Additional information from a field investigation would be required to further evaluate the potential for contamination at this site.

#### **K. Emergency Planning and Community Right-to-Know**

The facility is subject to the requirements of the Emergency Planning and Community Right-to-Know Act (EPCRA) of 1986, also known as Title III of the Superfund Amendments

and Reauthorization Act (SARA), based on the use and storage of designated chemicals over established threshold quantities. Section 302 (Emergency Planning) requires notification to proper authorities if Extremely Hazardous Substances (EHSs) are stored on-site above Threshold Planning Quantities (TPQs). Ethylene oxide and formaldehyde are designated EHSs, however, according to information provided by Mr. Lesnick, the facility does not store them in quantities (approximately 34 pounds and 4 pounds, respectively) above their respective TPQs. Therefore, assuming the facility does not have other EHSs on-site above TPQs, the facility appears to not be subject to Section 302 requirements.

Sections 311 and 312 of SARA required inventory reporting (generally in the form of a Tier II submission to the state and to designated local authorities) of hazardous materials stored in excess of threshold quantities, typically 500 pounds for an EHS and 10,000 pounds for a hazardous substance as defined by EPCRA. Mr. Lesnick tracks usage of materials used at the facility and files Tier II forms, as necessary. For the calendar year 1995, Mr. Lesnick submitted Tier II forms for hydrochloric acid, nitric acid, and sulfuric acid.

Section 313 requires submission of Toxic Chemical Release Inventory Forms (Form Rs) to USEPA and state environmental agencies for listed toxic chemicals manufactured or processed in excess of 25,000 pounds per year, or used in excess of 10,000 pounds per year. As with the Tier II submissions, Mr. Lesnick tracks the usage of toxic chemicals. For the calendar year 1994 (1995 reporting is not due until July 1, 1996), the facility filed Form Rs for manganese, chromium, and nickel, which are all constituents of the metals used for product manufacturing.

#### **L. Occupation Safety and Health**

Although a comprehensive review of occupational health issues was beyond the scope of ENVIRON's assessment, a brief review of current operations was conducted to determine whether any major areas of concern were evident. Mr. Lesnick reported that the facility human resources department has responsibility for health and safety concerns. ENVIRON did not interview any human resources personnel, but obtained information from Mr. Lesnick.

The facility does have a written hazard communication plan and facility personnel reportedly receive hazard communication training and updates. Training records are maintained on-site by the human resources department. Material Safety Data Sheets (MSDSs) are compiled and kept in locations accessible to all employees. The facility reportedly has written training plans covering forklift training, respiratory protection training, lockout/tagout training, and bloodborne pathogen training. All personnel requiring such training receive it as needed. Mr. Lesnick was not aware of the need for confined space entry training at the facility. Safety equipment and protective clothing are reportedly provided for all employees as needed.

The facility has never conducted employee exposure monitoring for ethylene oxide or for formaldehyde. Employee exposure monitoring for ethylene oxide and formaldehyde is required under OSHA regulations at any facility where employees have the potential to be exposed to these chemicals. Unless the facility can effectively prove that employee exposure is not a possibility, the facility must perform initial exposure monitoring. The initial monitoring results form the basis for deciding whether engineering controls, personal protective equipment, employee training, and medical surveillance are required. The R&D testing areas which use ethylene oxide are equipped with ethylene oxide monitors and alarms designed to sound if ethylene oxide levels reach concentrations of concern. No incidents of employee overexposure to either of the chemicals was reported by Mr. Lesnick. The costs to implement an employee monitoring program would likely be approximately \$10,000, with potential additional costs if the results of the initial monitoring program identify the need for engineering controls, medical surveillance, etc. In addition, potential fines associated with this compliance issue could be significant.

The only air monitoring surveys reported to have been conducted at the facility involved monitoring of welding fumes and ozone in the welding area. A NIOSH survey was performed in 1988 which recommended better capture of welding fumes. To evaluate modifications made to the welding area, a new survey was conducted by the facility's insurance company in 1995. The results of the 1995 survey concluded that employee exposure levels were within current hygienic standards, however, time-weighted average exposures in some instances exceed

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proposed ACGIH threshold limit values (TLVs). To minimize employee exposure to welding fumes, it was suggested the facility continue the use of respirators, welding robots, and ventilation controls.

The facility last received an OSHA inspection in 1987 as a result of an employee fatality that was caused by a piece of equipment falling on the employee. The facility was fined \$500 and according to Mr. Lesnick the investigation was closed and there currently are no outstanding OSHA matters.

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