Division of Environmental Remediation

Site Characterization Report

Fedders Auto Components
Buffalo, Erie County, New York
Site Number 915024

October 30, 2026

New York State Department of Environmental Conservation
Region 9
700 Delaware Avenue
Buffalo, New York 14209

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LIST OF ACRONYMS

ASP	Analytical Services Protocol
BCA	Brownfield Cleanup Agreement
BCP	Brownfield cleanup Program
BGS	Below Ground Surface
CAMP	Community Air Monitoring Plan
CVOC	Chlorinated Volatile Organic Compound
DER	Division of Environmental Remediation
DUSR	Data Usability and Summary Report
EDD	Electronic Data Deliverable
ELAP	Environmental Laboratory Accreditation Program
ESA	Environmental Site Assessment
FER	Final Engineering Report
GPR	Ground Penetrating Radar
HASP	Health and Safety Plan
IRM	Interim Remedial Measures
IRM WP	Interim Remedial Measures Work Plan
MS/MSD	Matrix Spike / Matrix Spike Duplicate
MSL	Mean Sea Level
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
NYSDOL	New York State Department of Labor
PAH	Polycyclic Aromatic Hydrocarbons
PPB	Parts per Billion
PPM	Parts per Million
PPT	Parts per Trillion
PCB	Polychlorinated Biphenyl
PID	Photo-ionization Detector
PFAS	Per- and Polyfluoroalkyl Substances
PVC	Poly Vinyl Chloride
QA/QC	Quality Assurance / Quality Control
RAO	Remedial Action Objective

LIST OF ACRONYMS (CONTINUED)

REC	Recognized Environmental Condition
RI	Remedial Investigation
RIWP	Remedial Investigation Work Plan
SCG	Standards, Criteria, Guidance
SCO	Soil Cleanup Objective
Site	57 Tonawanda Street, Buffalo, New York
SMP	Site management Plan
SVOC	Semi volatile Organic Compound
TAL	Target Analyte List
TCL	Target Compound List
TCLP	Toxicity Characteristic leaching Procedure
TOGS	technical and Operational Guidance Series
USEPA	United States Environmental Protection Agency
USGS	United States Geological Survey
VOC	Volatile Organic Compound
VOV	Volatile Organic Vapor

1.0 INTRODUCTION

A Remedial Investigation (RI) completed at the 57-71 Tonawanda Street BCP Site (Site No. C915024; Figure 1-1) in 2019 & 2020 documented significant concentrations of chlorinated volatile organic compounds (VOCs) in subsurface soil, groundwater, and sub-slab soil vapor at the site. Based upon this contamination, the NYSDEC determined that the site posed a significant threat to human health and the environment, and that additional investigation was required to fully evaluate the nature and extent of this contamination. The NYSDEC assigned this off-site area site number C915024A and called it the 57-71 Tonawanda Street Off-Site Area. The NYSDEC then began a search to identify potential responsible parties that would be willing to implement a remedial program at the off-site area. A viable responsible party was not identified.

Subsequent to the significant threat determination, the BCP applicant submitted an amendment to remove the 57 Tonawanda Street parcel from the BCP Site due to an ownership dispute. This change was accepted by the NYSDEC in March 2022. As a result, the 57 Tonawanda Street parcel, a portion of the Fedders Auto Components Class 3 Site (Site No. 915024), will not be remediated under the Brownfield Cleanup Program.

In October 2025 the NYSDEC began a Site Characterization of the Fedders Auto Components Site (Figure 1-2) to further evaluate the extent of chlorinated volatile organic compound (VOC) contamination at the site. Site Characterization field activities were completed by LaBella Associates (LaBella), the prime NYSDEC Standby Investigation and Remediation (I&R) Contractor for this project. The NYSDEC was the lead agency for the investigation.

This Site Characterization Report details the findings of the NYSDEC Site Characterization that was completed between October 2025 and August 2026. The remaining sections of this report are organized as follows:

- **Section 2.0, Site History and Background:** This section describes the site and its history, and discusses previous investigations completed at the site;
- **Section 3.0, Study Objectives and Investigation Activities:** This section describes the objectives of the Site Characterization and the activities that were completed

during the investigation;

- **Section 4.0, Geology and Hydrogeology:** This section describes the regional and site geology and hydrogeology. The characteristics, areal extent and hydrogeologic properties of the strata are discussed;

- **Section 5.0, Investigation Results:** This section describes the findings of the Site Characterization, including general observations and a summary of the analytical results obtained from surface soil, shallow fill, subsurface soil, surface water, groundwater and sump water;

- **Section 6.0, Nature and Extent of Contamination:** This section evaluates the analytical results presented in Section 5.0 to determine the nature and extent of contamination at the site;

- **Section 7.0, Discussion and Recommendations:** This section summarizes the findings of the Site Characterization as they relate to the objectives presented in Section 3.0. Recommendations for future activities at the site are also discussed; and

- **Section 8.0, References:** This section contains a list of references utilized or cited in this report.

Figures, tables, and appendices follow Section 8.0.

2.0 SITE HISTORY AND BACKGROUND

2.1 Site Description

The Fedders Auto Components Site is listed as a Class 3 site in NYSDEC's Registry of Inactive Hazardous Waste Disposal Sites (Registry) as site no. 915024. The site consists of two adjacent parcels at the northeast corner of West Avenue and Tonawanda Street in the Black Rock section of the City of Buffalo (Figure 1-1). The 57 Tonawanda Street property is 1.07 acres in size, while the 71 Tonawanda Street property is 1.76 acres in size (Figure 1-2). In the Registry, the site address is listed at 57 Tonawanda Street.

The site is bordered by a bike path and Scajaquada Creek to the east; West Avenue and the 31 Tonawanda Street BCP Site (Site No. C915299) to the south; Tonawanda Street and the 68 Tonawanda Street BCP Site (Site No. C915316) to the west; and the former Pratt & Lambert Inc. inactive hazardous waste disposal site (Site No. 915251) to the north. The New York State Thruway and the Black Rock Canal are located about 0.25 miles southwest of the site.

2.2 Site Features

The 57 Tonawanda Street property contains an approximately 10,230 square foot 2-story building, while the 71 Tonawanda Street property contains an approximately 115,000 square foot 2- to 4-story building (Figure 1-2). The 57 Tonawanda Street building functioned as the offices for the complex and was more recently renovated to accommodate planned student workspaces/housing that never occurred. The 71 Tonawanda Street building is vacant and deteriorated. A portion of the roof is caved in at the southern end, and a portion of the northern end was destroyed by fire sometime after 2008.

A large parking lot extends from the buildings to almost the eastern site boundary. This parking lot is the location of the Fedders Auto Components inactive hazardous waste disposal site. From 1974 to 1981 approximately 165 gallons of waste oil per year were spread over the parking lot for dust control. This practice was discontinued when the parking lot was covered with gravel. At an unknown date the parking lot was paved.

2.3 Site History

In 1907 the Fedders Manufacturing Works was located at 55-59 Tonawanda Street. Available information indicates that the initial plant was a 3-story building located at 55 Tonawanda Street. A major building expansion took place in 1910. By 1914 the company was known as the Fedders Manufacturing Co., Inc., with another major expansion occurring in 1915. A 1916 Sanborn map also shows the company at 31 Tonawanda Street, but it is uncertain when use of that property began.

Prior to being added to the Fedders complex, residential and small storefront properties were located on the 55 to 71 Tonawanda Street properties. The Hall & Son Fire Brick factory complex was located on the eastern portion of these properties and operated from about 1866 to the early 1940s. This plant had large storage sheds for bricks, a flue house and numerous kilns. Between 1936 and 1942, the buildings and kilns were demolished and the demolition material used as on-site fill, possibly along with other imported fill, to raise the elevation of this formerly low-lying area.

Initially, Fedders made milk cans, kerosene tanks for the Standard Oil Co., and bread pans for the National Biscuit Co. Later, Fedders converted the plant to make radiators for automobiles. During World War I the company also made radiators for airplanes and manufactured appliances for heating and electrical refrigeration. During World War II, Fedders received contracts to make links and clips for machine-gun belts and rifle bullets. In the late 1940s through the 1960s, Fedders made room air conditioners and electric water coolers, heaters, radiators, radiator cores, home radiators, convectors, hot-water boilers and women's handbag frames, as well as heat-transfer equipment, including convectors, condensers, evaporators, and dehumidifiers.

In 1974, the Erie County Department of Environmental Quality, Air Pollution Control Division, instructed Fedders to implement some means of fugitive dust control for their parking lot. The company subsequently spread approximately 165 gallons of waste oil per year on the parking lot from 1974 to 1976. Conflicting reports indicated that the practice continued until 1981. Although Fedders officials stated that the oils used for dust control were light lubrication oils and hydraulic fluids, it is thought that the oils may have contained PCBs and solvents. In 1981, the parking lot was covered with gravel, therefore, dust control efforts were no longer necessary.

By 1990 the company was sold to FEDCO who manufactured automobile heating equipment. Manufacturing operations at the facility ceased in June 2005 and the property was sold to Black Rock Trade Center, Inc. later that year.

The Fedders Manufacturing Company had a history of using various chemicals, oils, solvents and other materials in their manufacturing processes. Processes at the property included metal stamping, soldering, brazing, welding, painting, acid washing and degreasing. Industrial wastes were reported to include solder dross, degreasing still bottoms including trichloroethene (TCE) and tetrachloroethene (PCE), and petroleum-based lubricating fluids.

2.4 Remedial History

In 1985 the NYSDEC completed a Phase I Investigation at the Fedders Auto Components inactive hazardous waste disposal site. This was followed by the completion of a Site Investigation by the FEDCO Automotive Components Co. in 1989, and a Phase II Investigation by the NYSDEC in 1990. These investigations documented the presence of volatile organic compounds (primarily chlorinated VOCs) in groundwater and semi-volatile organic compounds (primarily polycyclic aromatic hydrocarbons or PAHs) and select metals (arsenic, cadmium, chromium, lead, manganese and mercury) in soils at the site. These reports can be found online at: https://extapps.dec.ny.gov/data/DecDocs/915024/.

Based upon the results of the previous investigations, the current owner of the 71 Tonawanda Street parcel applied to the NYSDEC's Brownfield Cleanup Program (BCP) in October 2017. The 57 & 71 Tonawanda Street properties were accepted into the BCP in December 2017, and the site was assigned number C915024 by the NYSDEC.

The BCP Remedial Investigation field activities were completed between December 2019 and March 2020 with the completion of soil borings, test pits, and monitoring wells, and the collection of soil, groundwater, and sub-slab soil vapor samples for chemical analysis. The Remedial Investigation report was approved in June 2020. A Decision Document for 57-71 Tonawanda Street BCP Site was issued by the NYSDEC on June 11, 2020.

In September 2020, the NYSDEC installed three (3) wells along the bike path east of the site as part of the Remedial Investigation completed at the 31 Tonawanda Street Off-Site Area.

During the BCP Remedial Investigation, Erie County foreclosed on the 57 Tonawanda Street Parcel and sold it at auction. As a result, the remedy described in the June 2020 Decision Document could not be implemented. To keep the redevelopment project moving forward, the BCP applicant submitted a BCP amendment, and the site boundary was modified in March 2022 to include just the 71 Tonawanda Street property. A Decision Document for the 71 Tonawanda Street BCP Site was issued by the NYSDEC on February 16, 2023. As of September 2025, remediation of the 71 Tonawanda Street BCP Site has not started due to the increased cost of the project.

For a detailed summary of the BCP Remedial Investigation field activities and the overall results of that investigation, please refer to the May 2020 Remedial Investigation/Remedial Alternatives Analysis (RI/RAA) Report prepared by BE3 Corporation. This report can be found online at https://extapps.dec.ny.gov/data/DecDocs/C915024/.

During the Site Investigation completed in 1989, the Phase II Investigation completed in 1990, the BCP Remedial Investigation completed in 2019 and 2020, and the NYSDEC Remedial Investigation completed for the 31 Tonawanda Street Off-Site Area in 2020, samples for analysis were collected from surface soil & fill (Figure 2-1), subsurface soil & fill (Figure 2-2), groundwater (Figure 2-3), surface water (Figure 2-4), sediment (Figure 2-4), and sub-slab soil vapor (Figure 2-5). These investigations determined that various environmental media were contaminated with chlorinated VOCs (trichloroethene (TCE), trichloroethane (TCA), cis-1,2-dichloroethene (DCE), dichloroethane (DCA), vinyl chloride (VC)), polycyclic aromatic hydrocarbons (PAHs), and select metals. The analytical results from these investigations will be described in detail in Section 5.0.

3.0 STUDY OBJECTIVES AND INVESTIGATION ACTIVITIES

3.1 Objectives

The overall objective of the NYSDEC Site Characterization of the Fedders Auto Components Site (Site No. 915024) was to obtain data sufficient to re-evaluate the Class 3 NYSDEC Registry designation for the site. The specific objectives of the NYSDEC Site Characterization were to:

- Further evaluate the extent of chlorinated volatile organic compound (VOC) contamination in subsurface soil & fill at the site;
- Further evaluate the extent of chlorinated VOC contamination in groundwater at the site;
- Determine how far coal tar (non-aqueous phase liquid or NAPL) has migrated onto the site; and
- Complete a comprehensive geologic and hydrogeologic evaluation of the site that includes an evaluation of groundwater flow patterns.

3.2 Site Characterization Activities

To meet the Site Characterization objectives, the following activities were completed during the Site Characterization of the Fedders Auto Components Site: (1) the compilation of results from previous investigations completed at the site; (2) the completion of an initial survey to stake the locations of the proposed soil borings; (3) the completion of soil borings at the site to further characterize subsurface stratigraphy and to evaluate the presence of NAPL in the subsurface environment; (4) the collection of fill and subsurface soil samples for chemical analysis; (5) the installation of overburden monitoring wells throughout the site; (6) the collection of groundwater samples for chemical analysis; (7) an assessment of the monitoring wells for the presence of NAPL; (8) the completion of periodic well gauging for purposes of generating groundwater contour maps; (9) the collection of NAPL samples for chemical analysis; (10) the completion of a final site survey; (11) the completion of Data Usability Summary Reports (DUSRs); (12) the preparation of the electronic data deliverable (EDD) files for upload to EQuIS; and (13) the preparation of a Site Characterization Report. Specific details of the work

completed during the Site Characterization are described in the following sections.

3.2.1 Compilation of Historical Results

Several investigations have been completed at the Fedders Auto Components Site including: (1) a Phase I Investigation completed by the NYSDEC in 1985; (2) a Site Investigation completed by FEDCO in 1989; (3) a Phase II Investigation completed by the NYSDEC in 1990; and (4) a Remedial Investigation completed by BE3 in 2019 & 2020. As part of the NYSDEC Site Characterization of the Fedders Auto Components Site, results from these investigations were compiled to determine if any data gaps exist. Information concerning historical sample collection and analysis is given in Table 3-1.

The historical investigations completed at the site are described briefly as follows:

3.2.1.1 1985 Phase I Investigation

A Phase I Investigation was completed in 1985 by Engineering-Science, in association with Dames & Moore, for the NYSDEC. The work activities completed during this investigation included: (1) a historical records review; (2) a site inspection; and (3) interviews with individuals having knowledge of past and present disposal activities at the site. No sampling nor analysis programs had been conducted at the site at the time off the Phase I Investigation. HNu meter readings taken during the site inspection on March 27, 1985 did not detect volatile organics at concentrations greater than 1 ppm. This investigation, however, identified several possible areas of concern and recommended that an additional site investigation be conducted. The Phase I Investigation Report, dated January 1986, can be found online at: https://extapps.dec.ny.gov/data/DecDocs/915024/.

3.2.1.2 1989 Site Investigation

A Site Investigation was completed in 1989 by Advanced Environmental Services, Inc. (AES) and Conestoga-Rovers and Associates (CRA) for the FEDCO Automotive Components Company. This investigation was completed to evaluate the possible areas of concern identified in the NYSDEC Phase I Report.

The Site Investigation evaluated two areas of concern: (1) the possible use of PCB waste oil on the parking lot; and (2) the historical generation of wastes including degreasing solvents. In order to evaluate PCBs at the site, CRA collected six (6) surface soil samples at the locations

shown on Figure 3-1. Four (4) of these samples were collected from the Fedders Auto Components Site (57 Tonawanda Street; Table 3-1), while two (2) additional samples were collected from property at 31 Tonawanda Street, which was also part of Fedders manufacturing operations. One (1) of these samples was taken directly adjacent to the on-site transformer station.

CRA also installed two (2) shallow overburden wells along the east side of the parking lot adjacent to Scajaquada Creek (Figure 3-1) in order to identify any possible subsurface migration of contaminants via groundwater through the fill towards the Creek. At each well location, one (1) soil and one (1) groundwater sample were collected and analyzed (Table 3-1).

The results from this investigation are discussed in Section 5.0. For more details regarding this investigation, including field procedures, sample collection methodologies, equipment decontamination, and results, the reader is referred to the FEDCO Site Investigation Report. The Site Investigation Report, dated September 1989, can be found online at: https://extapps.dec.ny.gov/data/DecDocs/915024/.

3.2.1.3 1990 Phase II Investigation

A Phase II Investigation was completed in 1990 by Ecology and Environment Engineering, P.C. for the NYSDEC. This investigation was completed to evaluate the extent of contamination at the site, to determine the potential risk to human health and the environment, and to accurately calculate a final Hazard Ranking System (HRS) score. Prior to the site inspection, a detailed record and file search was initiated to review existing data and identify data gaps.

The field activities completed during the Phase II Investigation included the completion of four (4) soil boring (Figure 3-2), the installation of three (3) shallow overburden monitoring wells (Figure 2-3), the collection of fifteen (15) subsurface soil & fill samples for chemical analysis, the collection of three (3) groundwater samples for chemical analysis, the collection of three (3) surface water samples from Scajaquada Creek for chemical analysis, and the collection of three (3) sediment samples from Scajaquada Creek for chemical analysis. Information concerning sample collection and analysis is given in Table 3-1.

The results from this investigation are discussed in Section 5.0. The Phase II Investigation

Report, dated February 1992, can be found online at:
https://extapps.dec.ny.gov/data/DecDocs/915024/.

3.2.1.4 2002 Environmental Site Investigation

An Environmental Site Investigation was completed in 2002 by Stearns & Wheler Redevelopment of North America, LLC (SWRNA) for the FEDCO Automotive Components Company. This investigation was completed to evaluate subsurface conditions downgradient of a former 3000-gallon naphthalene underground storage tank (UST).

The field activities completed during this investigation included the completion of six (6) soil borings (Figure 3-2), the installation of temporary 1-inch PVC well screens within the soil borings, the collection of six (6) soil samples for chemical analysis of naphthalene, and the collection of five (5) groundwater samples for chemical analysis of naphthalene. Since naphthalene was not detected in any of the samples, this investigation will not be discussed further in this report. Stratigraphy from the soil borings, however, has been compiled (see Section 4.2 for details).

The Environmental Site Investigation Report, dated September 2002, can be found online at: https://extapps.dec.ny.gov/data/DecDocs/915024/.

3.2.1.5 2019 BCP Remedial Investigation

Fedder Lofts, LLC, the BCP applicant, contracted with the BE3 Corporation (BE3) to conduct a Remedial Investigation at the site, prepare an Alternatives Analysis Report (AAR), and complete remedial actions, as necessary. Field work for the BCP Remedial Investigation was completed in 2019 & 2020. Fedder Lofts, LLC plans on renovating the existing building for use as residential housing with ancillary commercial and retail uses. Remediation and redevelopment of the site have not yet commenced.

The field activities completed during the BCP Remedial Investigation included the completion of thirteen (13) soil borings east of the building in the parking lot area (Figure 3-2), the excavation of five (5) test pits north of the building (Figure 3-2), the installation of five (5) shallow overburden monitoring wells (Figure 3-3), the collection of five (5) surface soil samples for chemical analysis, the collection of twenty-four (24) subsurface soil & fill samples for chemical analysis, the collection of five (5) groundwater samples for chemical analysis, and the

collection of six (6) sub-slab soil vapor samples for chemical analysis. Information concerning sample collection and analysis is given in Table 3-1.

The results from this investigation are discussed in Section 5.0. The BCP Remedial Investigation Report, dated May 2019 (should be 2020), can be found online at: https://extapps.dec.ny.gov/data/DecDocs/C915024/.

3.2.1.6 2020 Remedial Investigation

A Remedial Investigation of the 31 Tonawanda Street Off-Site Area was completed in 2020 by Groundwater & Environmental Services, Inc. (GES) for the NYSDEC. This investigation was completed to determine the nature and extent of soil, groundwater, surface water, sediment, and soil vapor/air contamination at the Off-Site Area.

The field activities completed during the NYSDEC Remedial Investigation as it relates to the Fedders Auto Components Site include the completion of three (3) soil borings along the bike path adjacent to Scajaquada Creek (Figure 3-2), the installation of shallow overburden monitoring wells in these borings (Figure 3-3), the collection of three (3) subsurface soil & fill samples for chemical analysis, the collection of three (3) groundwater samples for chemical analysis, and the collection of three (3) NAPL samples for chemical analysis. Two (2) of the monitoring wells were completed on the Fedders Auto Components Site, while one (1) monitoring well was completed to the north (Figure 3-3). The three (3) NAPL samples were collected from well MW-100.

The results from this investigation are discussed in Section 5.0. The NYSDEC Remedial Investigation Report for the 31 Tonawanda Street Off-Site Area, dated August 2023, can be found online at: https://extapps.dec.ny.gov/data/DecDocs/C915299A/.

3.2.2 Initial Survey

A detailed survey map of the Fedders Auto Components Site was completed during the BCP Remedial Investigation. The AutoCAD drawing of this survey was provided to the NYSDEC by the BCP applicant for use in the NYSDEC Remedial Investigation of the 31 Tonawanda Street Off-Site Area. This AutoCAD drawing was modified by NYSDEC personnel to include the soil borings, monitoring wells, and samples collected during the NYSDEC Phase II Investigation in 1985 and the soil borings, monitoring wells, and samples collected during the NYSDEC Remedial

Investigation of the 31 Tonawanda Street Off-Site Area.

On Wednesday, October 29, 2025, LaBella's survey crew completed an initial survey to stake the locations of the proposed NYSDEC Site Characterization soil borings. Coordinates for these borings (NY State Plane Coordinate System, Zone NY W-3103) were pre-determined and are provided in Table 3-2. This task was required for three reasons: (1) it was not certain prior to gaining access to the site if the soil boring locations from the BCP Remedial Investigation were still observable in the field; (2) the NYSDEC Site Characterization builds off of that investigation; and (3) the property boundary with the adjacent 71 Tonawanda Street BCP Site runs through the parking lot behind the building and is not discernible in the field.

Additional survey requirements are discussed in Section 3.10.

3.2.3 Soil Boring Program

Sixteen (16) soil borings were completed during the Site Characterization of the Fedders Auto Components Site at the locations shown on Figure 3-2. Each soil boring was advanced to a depth of 30 feet for the purpose of geologic logging, to facilitate sample collection, and to look for the presence of NAPL in the subsurface environment.

Continuous soil cores were collected with dedicated 5-foot long acetate liners using a Geoprobe Dual Tube Sampling System, or equivalent. The Drilling Contractor was responsible for opening these liners. All soil cores were screened for organic vapors using a PID with an 11.7 eV bulb supplied by the Standby I&R Contractor.

Seven (7) of the soil borings were completed as monitoring wells (see Section 3.2.5). Soil borings not completed as wells were backfilled with bentonite pellets or chips to within 4 inches (4") of the ground surface. The remainder of each boring was backfilled with asphalt patch (soil borings completed in the asphalt parking lot) or clean soil (soil borings completed in areas not paved). Asphalt patch was also used to backfill several soil borings that were completed during the BCP Remedial Investigation as the backfill settled and holes were visible in the asphalt.

The direct-push vehicle and sampling equipment were decontaminated prior to arriving at the site. The augers, drill rods and sampler were decontaminated between borings using a steam cleaner. Reusable sampling equipment was decontaminated between samples in 5-gallon buckets using potable water and an appropriate, PFAS-free detergent. Used PPE, disposable sampling

equipment and garbage generated during completion of the borings was bagged and removed from the site when the work was complete. Decontamination water and soil cuttings were drummed for subsequent testing and off-site disposal.

3.2.4 Soil & Fill Sample Collection and Analysis

To determine the depth of chlorinated VOC contamination, the Scope of Work specified that samples for analysis were to be collected from the following intervals at each soil boring location (Figure 3-2):

- 5.0' – 6.0' depth;
- 10.0' – 11.0' depth;
- 15.0' – 16.0' depth;
- 20.0' – 21.0' depth;
- 25.0' – 26.0' depth; and
- 29.0' – 30.0' depth.

During the Site Characterization, some sample depths were altered based upon visual and/or monitoring evidence (i.e., staining, elevated PID readings, chlorinated solvent odors, or the presence of NAPL), and at the direction of the NYSDEC field representative. Upon retrieval, each soil core was described for: percent recovery, soil type, color, moisture content, texture, grain size and shape, consistency, evidence of staining or other chemically related impacts, and any other relevant observations.

Samples were collected by the Standby I&R Contractor in consultation with the NYSDEC field representative and placed into laboratory supplied, pre-cleaned sample jars. All samples collected for VOC analysis were discrete, non-homogenized grab samples. The jars were labeled with a unique sample identification code using the soil boring numbers shown on Figure 3-2 and the sample depth (e.g., SB-VOC-01-Z01-02). The Standby I&R Contractor was responsible for obtaining the appropriate sample bottles from the lab and making sure the numbers and types were correct prior to implementing field work.

Following sample collection, the Standby I&R Contractor was responsible for completing the chain of custody, packing the coolers with the sample bottles and ice (or other similar

coolant), sealing the coolers with tape and custody seals, and shipping the coolers to Pace Analytical Services, LLC in East Longmeadow, Massachusetts for chemical analysis. A courier service was utilized for cooler pickup and delivery.

All soil & fill samples were analyzed for Target Compound List (TCL) volatile organic compounds via United State Environmental Protection Agency (USEPA) method 8260C or newer. Soil & fill samples showing evidence of NAPL were also analyzed for TCL semi-volatile organic compounds via USEPA method 8270D or newer, cyanide via USEPA method 9013A or newer, and ammonia via USEPA method 350.1 or newer. Information concerning sample collection and analysis is given in Table 3-3, results by boring are included in Appendix F, and the lab reports are included in Appendix H.

3.2.5 Well Construction

Five (5) overburden monitoring wells were installed at the 57-71 Tonawanda Street BCP Site during the BCP Remedial Investigation, while three (3) wells were installed along the bike path east of the site as part of the Remedial Investigation completed for the 31 Tonawanda Street Off-Site Area (Figure 3-3). Construction details for these wells are summarized in Table 3-4.

Historically, two (2) wells were installed during the 1989 FEDCO Site Investigation (Figure 3-1), while three (3) wells were installed during the 1990 NYSDEC Phase II Investigation (Figure 2-3). Construction details for these wells are also summarized in Table 3-4. Unfortunately, the five (5) historical wells have been destroyed and/or paved over.

One of the objectives of the Site Characterization was to further evaluate the extent of chlorinated VOC contamination in groundwater at the site. To accomplish this objective, seven (7) soil borings completed during the Soil Boring Program were converted into overburden monitoring wells. The locations of these wells are shown on Figure 3-3. The monitoring wells installed were distributed as follows:

- A deeper overburden well (MW-1D) near BCP well MW-1S to assess downgradient groundwater contamination. This well was installed in soil boring SB-VOC-01;
- A deeper overburden well (MW-2D) in the eastern portion of the site at the 57/71 Tonawanda Street boundary to assess downgradient groundwater contamination. This well was installed in soil boring SB-VOC-02;

- A deeper overburden well (MW-3D) near BCP well MW-3S to assess groundwater contamination in the center of the parking lot. This well was installed in soil boring SB-VOC-03;

- A deeper overburden well (MW-6D) in the parking lot near the building to assess groundwater contamination associated with contaminated soils under the building. This well was installed in soil boring SB-VOC-06;

- A deeper overburden well (MW-7D) along Tonawanda Street between BCP wells MW-4D and MW-5D to assess whether groundwater contamination in well MW-4 extends this far north. This well was installed in soil boring SB-VOC-07;

- A deeper overburden well (MW-8D) in the eastern portion of the site between DEC wells MW-1D and MW-2D to assess downgradient groundwater contamination. This well was installed in soil boring SB-VOC-04; and

- A deeper overburden well (MW-9D) adjacent to BCP well MW-2S to assess downgradient groundwater contamination. This well was installed in soil boring SB-VOC-16.

Monitoring wells MW-2D, MW-8D and MW-9D were screened in the alluvial deposit with the NAPL sump (see below for details) installed into the underlying reddish-brown silty clay. Monitoring wells MW-1D, MW-3D, and MW-6D were screened in the reddish-brown silty clay deposit. Monitoring well MW-7D was screened at a depth similar to BCP monitoring wells MW-4 and MW-5 (Table 3-4) but with a shorter screen length.

All wells were constructed with a 2-foot long NAPL collection sump with a threaded bottom plug, a 10-foot long screen with 0.02-inch slot openings (20-slot), and riser pipe to ground surface. Well material was 2-inch diameter flush-threaded Schedule 40 polyvinyl chloride (PVC) riser pipe and screen. The annular space surrounding the sumps was sealed with bentonite prior to installation of the sand filter pack. An appropriately graded silica sand filter pack was then placed around the screen and extended to approximately 2 feet above the screen.

Bentonite chips or pellets were placed above the filter pack and brought to within 2 feet of the ground surface. The wells were then completed with protective road boxes placed into filter pack sand to promote drainage and surrounded by cement or concrete pads. The bentonite was hydrated prior to placing the cement or concrete. Construction details for the monitoring wells installed during the Site Characterization are summarized in Table 3-4.

Each monitoring well was developed using an appropriate method (e.g., bailing, pumping,

mechanical surging, etc.) by the Standby I&R Contractor. During development the purged water was monitored for pH, temperature, conductivity, oxidation-reduction potential (ORP), dissolved oxygen (DO), and turbidity. These data were recorded on Well Development Logs (see Appendix C). All development water was containerized in 55-gallon drums for later off-site disposal at a NYSDEC approved facility. Development water that shows evidence of contamination (e.g., elevated PID readings, sheens, product, odors, etc.) was containerized in 55-gallon drums separate from development water lacking evidence of contamination. Drums were staged on-site pending disposal.

3.2.6 Groundwater Sample Collection and Analysis

Groundwater samples were collected from all new and existing monitoring wells to evaluate groundwater impacts related to the site. The locations of these wells are shown on Figure 3-3, while construction details are provided in Table 3-4. Prior to sampling, the wells were purged of at least three (3) well volumes, with the purged water monitored for pH, temperature, conductivity, ORP or Eh, dissolved oxygen (DO), and turbidity. These data were recorded on Well Purge and Sampling Logs (see Appendix D). All purging activities were completed by the Standby I&R Contractor using the low-flow purging method with dedicated tubing.

Groundwater samples were collected by the Standby I&R Contractor using the low-flow sampling method with dedicated tubing and placed into laboratory supplied, pre-cleaned sample jars. The jars will be labeled with a unique sample identification code using the well numbers shown on Figure 3-3 (e.g., MW-6D). The Standby I&R Contractor was responsible for obtaining the appropriate sample bottles from the lab and making sure the numbers and types were correct prior to purging and sample collection.

Following sample collection, the Standby I&R Contractor was responsible for completing the chain of custody, packing the coolers with the sample bottles and ice (or other similar coolant), sealing the coolers with tape and custody seals, and shipping the coolers to Pace Analytical Services, LLC in East Longmeadow, Massachusetts for chemical analysis. A courier service was utilized for cooler pickup and delivery.

A total of fourteen (14) groundwater samples were collected and analyzed for TCL

volatile organic compounds via USEPA method 8260D, TCL semi-volatile organic compounds via USEPA method 8270E, 1,4-dioxane via USEPA method 8270E, cyanide via USEPA method 9012, and ammonia via USEPA method SM-4500-NH3 C-2011. Information concerning sample collection and analysis is given in Table 3-3, results by well are included in Appendix F, and the lab reports are included in Appendix H.

3.2.7 Water Level Measurements

To evaluate the hydrogeology of the Fedders Auto Components Site, water levels were measured in existing and newly constructed monitoring wells on eleven (11) occasions between November 10, 2025 and May 11, 2026. Historic water levels between September 16, 2020 and December 20, 2023 are summarized in Table 3-5, while water levels obtained during the NYSDEC Site Characterization are summarized in Table 3-6. These water level data were utilized to construct hydrographs and groundwater contour maps for the various water-bearing zones underlying the site.

3.2.8 NAPL Assessment, Sampling and Analysis

The monitoring wells installed during the NYSDEC Site Characterization were designed to act as collection points for NAPL. During the collection of groundwater samples, NAPL was observed in wells MW-2D, MW-9D, and MW-100. Attempts to collect NAPL samples for analysis, however, were unsuccessful.

3.2.9 Decontamination and Investigation-Derived Waste

The direct-push vehicle and sampling equipment were decontaminated prior to arriving at the site. Reusable sampling equipment (e.g., the sampling tubes) was decontaminated between samples using an appropriate detergent and 5-gallon buckets. Augers were decontaminated between well locations using a steam cleaner.

All excess soil from the borings and soil cuttings removed from the augers were containerized in 55-gallon steel drums. Decontamination and well development water was containerized in 55-gallon steel drums separate from the soil cutting drums. Soils and personal protective equipment (PPE) that show evidence of contamination (e.g., elevated PID readings, sheens, product, odors, etc.) will be containerized in 55-gallon drums separate from soils lacking evidence of contamination. Drum contents were subsequently sampled, characterized, and

properly disposed of at off-site permitted disposal facilities. Manifests from the disposal facilities are provided in Appendix I.

Other investigation-derived wastes (e.g., disposable sampling equipment, used PPE without visible signs of contamination, non-sampling equipment, empty bentonite and Portland cement bags, and other garbage generated during field activities) were bagged and disposed of as municipal waste.

3.2.10 Final Site Survey and Mapping

A surveyor licensed in the State of New York was retained by the Standby I&R Contractor to complete the following survey activities:

- Horizontal locations and ground surface elevations of all soil borings completed during the Site Characterization;
- Horizontal locations and ground surface elevations of all soil borings completed during the BCP Remedial Investigation to the extent they could still be identified; and
- Horizontal locations and vertical elevations of all monitoring wells installed at the Fedders Auto Components Site. This includes wells installed during the BCP Remedial Investigation and the NYSDEC Site Characterization. Elevations will include ground surface and the inner PVC riser of each well.

Vertical control was established to the nearest ±0.1 foot for all ground surface elevations, while monitoring well riser elevations were reported to the nearest ±0.01 foot. Elevations were determined relative to the North American Vertical Datum of 1988 (NAVD 88 or newer), with reference made to an existing monument in the vicinity of the site. Horizontal coordinates were determined relative to the New York State Plane Coordinate System, Zone NY W-3103 (in feet), North American Datum (NAD) of 1983 (or newer) to an accuracy of ±0.5 foot or better. For purposes of EQuIS uploads, latitude and longitude were also recorded.

At the completion of all surveying activities, the surveyor provided the survey data (in Excel format) to the NYSDEC and the Standby I&R Contractor. The survey data included point numbers, northings, eastings, elevations (ft. amsl), point descriptions, latitudes (decimal degree), and longitudes (decimal degree). A final base map for the Fedders Auto Components Site was prepared by NYSDEC personnel.

3.2.11 Data Validation and EQuIS

Analytical results obtained during the NYSDEC Site Characterization of the Fedders Auto Components Site were validated (through the DUSR process) to determine if the data met the criteria for data quality and use. The analytical results for subsurface soil & fill, groundwater, and NAPL were validated by Vali-Data of WNY, LLC. The validated analytical results are discussed in Sections 5.0 and 6.0. The laboratory reports for the subsurface soil & fill and groundwater samples are included in Appendix F, while the Data Usability Summary Reports are included in Appendix G.

Following data validation, the Standby I&R Contractor prepared the electronic data deliverable (EDD) files supplied by the lab and qualified by the data validator for upload to the NYSDEC's Environmental Information Management System (EIMS). The EIMS currently uses the database software application EQuIS™ from EarthSoft® Inc. The Site Characterization results had not been uploaded to EQuIS by the time the Site Characterization Report was completed.

3.2.12 Report Preparation

Following the completion of all Site Characterization activities, NYSDEC personnel prepared this Site Characterization Report to: (1) describe the history of the Fedders Auto Components Site; (2) describe the field activities completed during the Site Characterization; (3) describe both regional and site geology and hydrogeology; (4) present the analytical results of the samples collected during the investigation; (5) evaluate the nature and extent of contamination at the site including the presence of NAPL in the subsurface environment; (6) discuss the results as they relate to the objectives of the Site Characterization; and (7) present recommendations for future activities to be completed at the Fedders Auto Components Site. Soil boring logs, well construction diagrams, well development logs, field sampling logs, lab reports, DUSRs, inspection reports, additional data tables, and survey information are included in the report as appendices.

3.3 Field Activities

The Site Characterization of the Fedders Auto Components Site was completed in phases, beginning on October 3, 2025 and ending on August 24, 2026. Specific details of the field activities completed during the Site Characterization are described in the following sections. All field work

was conducted in level D personal protective equipment, while air monitoring for organic vapors was completed during intrusive activities by the NYSDEC's Standby Investigation and Remediation (I&R) Contractor.

3.3.1 Site Visit

On Friday, October 3, 2025 NYSDEC and LaBella personnel travelled to the Fedders Auto Components Site to meet with the property owner and to conduct an initial site visit. During this visit, personnel looked for the three (3) BCP monitoring wells located in the parking lot behind the former Fedders building (Figure 3-3). Well MW-3 was located, but wells MW-1 and MW-2 were under debris. An attempt was also made to locate the BCP Remedial Investigation soil borings. Several were located but didn't appear at the locations shown on the BCP Remedial Investigation Report figures.

The LaBella representative recommended bringing equipment to the site to move debris in an effort to: (1) find monitoring wells MW-1 and MW-2; (2) find the BCP Remedial Investigation soil borings; and (3) create drill rig access for the Site Characterizations soil borings. The NYSDEC project manager agreed to this course of action.

3.3.2 Debris Clearing

On Friday, October 24, 2025 LaBella brought a skid steer with several attachments to the Fedders Auto Components Site to complete debris clearing. Monitoring well MW-2, located near the billboard, was uncovered first along with nearby soil boring BH-03 (Figures 3-2 and 3-3). Monitoring well MW-1 (Figure 3-3) and nearby soil boring BH-01 (Figure 3-2) were uncovered a short time later.

The NYSDEC representatives found BCP soil borings BH-02, BH-07, and BH-13 by 10:15 am; soil boring BH-07 appeared to be on the 57 Tonawanda Street parcel although figures in the BCP Remedial Investigation Report show it on the 71 Tonawanda Street parcel. BCP soil borings BH-05 and BH-06, completed on the 71 Tonawanda Street parcel, were not located.

Two BCP soil borings were located close to each other near the gate along West Avenue. We suspected that one location was soil boring BH-10 with the second location being BH-12 (see Figure 2-4 of the Site Characterization Scope of Work). A later review of photos in Appendix C of the BCP Remedial Investigation Report indicated that soil boring BH-12 was located further north. It was suspected that the second hole may have been the first attempt of soil boring BH-10 that hit refusal. No statement to this fact is mentioned in the BCP Remedial Investigation Report.

Two BCP soil borings were located that didn't match any of the locations on the BCP Remedial Investigation Report figures. A later review of the photos in the BCP Remedial Investigation Report indicated that soil boring BH-11 was attempted twice, hitting refusal both times, before this soil boring was finally completed. The locations of the first two attempts were found, but not the final location.

Finally, BCP soil borings BH-08 and BH-12 could not be located (Figure 3-2). All soil borings locations were staked and flagged for later surveying.

3.3.3 Initial Survey

On Wednesday, October 29, 2025, LaBella's survey crew completed the initial survey to stake the locations of the proposed NYSDEC Site Characterization soil borings. Additional information regarding this initial survey is provided in Section 3.2.2.

3.3.4 Soil Boring Program

Soil borings for the NYSDEC Site Characterization of the Fedders Auto Components Site began on Thursday, October 30, 2025 and were completed on Tuesday, November 4, 2025. It was rainy, cold, and windy on October 30th, so only three (3) soil borings were completed: SB-VOC-06, SB-VOC-14, and SB-VOC-15 (Figure 3-2). These soil borings were completed as described in Section 3.2.3, with samples collected as described in Section 3.2.4. The gravel below the asphalt at soil borings SB-VOC-06 and SB-VOC-14 was oily and exhibited a petroleum odor and PID hits. Samples of this gravel were collected at both soil boring locations. Below the fill material at these locations, reddish-brown silty clay was encountered to final depth (30 feet below ground surface (bgs)).

Soil borings continued on Friday, October 31, 2025 with the completion of soil borings SB-VOC-02, SB-VOC-03, SB-VOC-05, SB-VOC-08, and SB-VOC-13 (Figure 3-2). Alluvial deposits were encountered at soil borings SB-VOC-03, SB-VOC-05, and SB-VOC-02. More importantly, NAPL was encountered in soil boring SB-VOC-02 at 20 to 25 feet depth. These borings were also completed to 30 feet depth.

Soil borings continued on Monday, November 3, 2025 with the completion of soil borings SB-VOC-01, SB-VOC-04, SB-VOC-09, SB-VOC-10, and SB-VOC-12 (Figure 3-2). Alluvial deposits were encountered at soil borings SB-VOC-01, SB-VOC-04, and SB-VOC-10. More importantly, NAPL was encountered in soil boring SB-VOC-04 at 10 to 25 feet depth. These borings were also completed to 30 feet depth, with the exception of soil boring SB-VOC-04. At this location, the drillers lost the

macro-core sampler on the last sample, so the boring was only completed to 25 feet depth.

The soil boring program was completed on Tuesday, November 4, 2025 with the completion of soil borings SB-VOC-07, SB-VOC-11, and SB-VOC-16 (Figure 3-2). Alluvial deposits were only encountered at soil boring SB-VOC-16, while NAPL was also encountered in this soil boring at 20 to 26.5 feet depth. These borings were completed to 30 feet depth.

Additional information regarding the Soil Boring Program is provided in Section 3.2.3.

3.3.5 Monitoring Well Installation

Well installation for the NYSDEC Site Characterization of the Fedders Auto Components Site began on Monday, November 10, 2025 and were completed on Friday, November 14, 2025. It was snowy and cold on November 10th, so only well MW-3D was completed. Hollow stem augers were advanced to 32 feet depth at the well MW-6D location (Figure 3-3).

Well installation continued on Tuesday, November 11, 2025. Construction of well MW-6D was completed, while hollow stem augers were advanced to 32 feet depth at the well MW-1D location (Figure 3-3).

Well installation continued on Wednesday, November 12, 2025. It was rainy and windy so only two (2) wells were completed: MW-1D and MW-8D (Figure 3-3). Hollow stem augers were advanced to 32 feet depth at the well MW-2D location.

Well installation continued on Thursday, November 13, 2025 with the completion of two (2) wells: MW-2D and MW-9D (Figure 3-3).

Well installation continued on Friday, November 14, 2025 with the completion of well MW-7D (Figure 3-3).

Information regarding well construction is provided in Section 3.2.5.

3.3.6 Groundwater Sample Collection

The collection of groundwater samples began on Monday, December 15, 2025 with the collection of samples from wells MW-1D, MW-3D, and MW-7D (Figure 3-3). No samples were collected on Tuesday, December 16, 2025.

The collection of groundwater samples resumed on Wednesday, December 17, 2025 with the

collection of samples from wells MW-2S, MW-3S, MW-4D, and MW-8D (Figure 3-3).

The collection of groundwater samples was paused due to inclement weather and the holidays, and resumed on Thursday, January 15, 2026. On that day wells MW-1S, MW-5D, and MW-6D were sampled (Figure 3-3).

The collection of groundwater samples was completed on Friday, January 16, 2026 with the collection of samples from wells MW-2D, MW-100, and MW-103 (Figure 3-3).

Additional information regarding groundwater sample collection and analysis is provided in Section 3.2.6.

4.0 GEOLOGY AND HYDROGEOLOGY

One objective of the Site Characterization of the Fedders Auto Components Site was to complete a comprehensive hydrogeologic evaluation of the site and surrounding area. As part of this objective, it is important to establish the characteristics, areal extent and hydrogeologic properties of strata underlying the Study Area. This is important as these attributes govern the occurrence and flow of groundwater (and NAPL) at the Study Area. These attributes also govern the potential for contaminant migration and determine the rate and extent of this migration. As a result, a detailed evaluation of the geology of the Fedders Auto Components Site is essential. Before completing such a detailed evaluation, however, it is important to first describe the regional geologic history of the western New York area as a general knowledge of this history is critical to a complete understanding of the complex interrelationships between the various geologic strata and their hydrogeologic properties. This section, therefore, describes regional and site geology, along with the characteristics, areal extent and hydrogeologic properties of the strata near and underlying the Fedders Auto Components Site.

4.1 Regional Geology

4.1.1 Overburden Geology

Geologic evidence suggests that at least four major glacial episodes covered parts of North America during the Pleistocene Epoch (Buehler and Tesmer, 1963). In western New York, however, there is evidence of only two such episodes. The last glacial event in the area, the Wisconsin, eroded and modified the earlier glacial deposits to such an extent that little evidence of their existence remains. These glacial events widened the preexisting valleys and basins and led to the development of the present-day drainage system in western New York (La Sala, 1968).

During the final retreat of the Wisconsin ice sheet from the region, meltwater formed a complex sequence of proglacial lakes in front of the ice margin. These lakes inundated an extensive area of western New York. This succession originated in the Erie Huron Basin prior to 14,000 years ago as the ice sheet retreated from the basin and ended approximately 9,800 years ago with the formation of Lake Tonawanda (Calkins and Brett, 1978). This lake sequence was responsible for the deposition of the stratified lacustrine clays, silts, sands, and gravels that now cover much of western New York.

The Pleistocene Epoch presented a variety of environments that resulted in the deposition of unconsolidated deposits. In northwestern Erie County these deposits include the following (Malcolm Pirnie, 1987; Engineering-Science, 1989; Recra Environmental, 1990; URS, 1992; Woodward-Clyde, 1993; GeoTrans, 1994; Conestoga Rovers & Associates, 1998; Weston, 1998; May, 2007):

- Glacial till consisting of a non-sorted, non-stratified mixture of sand, silt, clay, gravel and rock fragments deposited directly from glacial ice;
- Glaciolacustrine deposits consisting primarily of silt, sand and clay deposited in lakes that formed during melting and retreat of the ice sheets;
- Glaciofluvial deposits consisting of sand and gravel deposited either by glacial meltwater streams or by the reworking of till and other glacial deposits along the shore of former glacial lakes; and
- Alluvium deposits consisting of silt, sand and gravel deposited by streams during comparatively recent geologic time.

La Sala (1968) reports that glacial till is the most widespread deposit in the Erie-Niagara Basin, ranging in thickness from 2 to 200 feet. Glaciolacustrine clay is also widespread, reaching thicknesses of 300 feet in some valleys within the basin (La Sala, 1968).

4.1.2 Bedrock Geology

The bedrock underlying western New York is characterized as a thick sequence of shales, sandstones, limestones and dolostones deposited in ancient seas during the Silurian and Devonian Periods (Buehler and Tesmer, 1963). This stratigraphic sequence is summarized in Table 4-1. Bedrock bedding generally strikes in an east-west direction, approximately paralleling the Niagara and Onondaga escarpments, and dips to the south at approximately 30 to 40 feet per mile (Johnson, 1964; La Sala, 1968; Yager and Kappel, 1987). Erosion and weathering, however, have produced local differences in the bedrock surface configuration (Snyder Engineering, 1987).

The uppermost bedrock formation underlying the Fedders Auto Components Site is believed to be the Bertie Dolostone of the Salina Group (Figure 4-1), which was deposited in a marine environment during the Late Silurian Period (Rickard and Fisher, 1970; Staubitz and Miller, 1987). The Study Area, however, lies close to the contact with the underlying Camillus

Shale Formation of the Salina Group (Figure 4-1). The Bertie Dolostone extends across northern Erie County in a narrow east-west trending band between the Camillus Shale Formation to the north and the Onondaga Limestone to the south (Seneca, Morehouse, and Clarence Limestone Member of Figure 4-1). The Bertie Dolostone of western New York is everywhere underlain by the Camillus Shale Formation and overlain, where complete sections are found, by the Akron Dolostone (Rickard, 1966).

The Bertie Dolostone consists predominantly of dolostone or dolomitic limestone (Buehler and Tesmer, 1963). The upper Williamsville Dolostone Member (Table 4-1) consists of laminated, fine-grained dolostone, which weathers light gray. Its pronounced conchoidal fracture, among other criteria, serves to distinguish it from the overlying Akron Dolostone, which has an irregular fracture (Rickard, 1966). The underlying Scajaquada Dolostone Member (Table 4-1) consists of dark shales or blocky water limes, is less resistant than the Williamsville Dolostone above or the Falkirk Dolostone below, and presumably contains more argillaceous material than those two members (Rickard, 1966).

The Falkirk Dolostone Member (Table 4-1) is described by Buehler and Tesmer (1963) as a massive brown dolostone, while Rickard (1966, page 27) states that it is "composed of massive beds of dark gray dolomite, weathering yellowish brown, which are characterized by coarse conchoidal fracturing, a small marine fauna and a basal eurypterid horizon."

The underlying Oatka Dolostone Member (Table 4-1) contains dolostone and is difficult to differentiate from the underlying Camillus Shale (Buehler and Tesmer, 1963).

The underlying Camillus Shale is described by Buehler and Tesmer (1963, page 30) as a "thin bedded shale to massive mudstone. Color is gray or brownish gray with some beds showing a red or green tinge. Gypsum and anhydrite are present throughout the formation in Erie County," and occur in beds and lenses up to 5 feet in thickness (La Sala, 1968). Subsurface data indicate, however, that a considerable quantity of grey limestone and dolostone is interbedded within the shale (Stanley Consultants, 1981; GZA, 1983; URS, 1992; Woodward-Clyde, 1993; Parsons Engineering Science, 1995). The upper 10 to 25 feet of this formation can be heavily weathered and often contains abundant bedding planes and vertical fractures enlarged by dissolution and glacial scour (La Sala, 1968).

The thickness of the Bertie Dolostone in western New York is uncertain because few exposures continue downward into the underlying Camillus Shale (Rickard, 1966). The Bertie Dolostone, however, is thought to be approximately 50 to 60 feet thick (Buehler and Tesmer, 1963), although Rickard (1969) states that it could be up to 100 feet thick. Its thickness will, of course, vary from place to place depending upon the amount removed by erosion prior to deposition of the overlying Onondaga Limestone (Rickard, 1966). The maximum thickness of the Camillus Shale is reported to be 400 feet (Buehler and Tesmer, 1963). Within the Erie-Niagara Basin, however, the thickness of this formation ranges from approximately 80 to 100 feet (Rickard, 1966).

Exposures of the Bertie Dolostone and the overlying Akron Dolostone (Table 4-1) are relatively common in the western New York. Outcrops in Buffalo are located near the Main Street entrance to Forest Lawn Cemetery, the old Bennett quarry on East Amherst Street, and in a New York Central Railroad cut between Kensington and Morris Avenues (Buehler & Tesmer, 1963; Rickard, 1966). There are also good exposures at the falls of Ellicott Creek (Glen Park) in Williamsville, in the Louisville Cement Company quarry on the north side of New York route 5 near Clarence (believed to be the current location of ADESA Buffalo), and at the falls of Murder Creek in Akron Falls Park (Buehler & Tesmer, 1963; Rickard, 1966; and Staubitz and Miller, 1987). Further east, exposures of the Bertie and Akron Dolostones can be seen at Indian Falls, at Morganville, and along Route 19 and in Oatka Creek at North LeRoy (Rickard, 1966).

Although bedrock was not encountered at any of the BCP sites within the Study Area, it was encountered at the nearby Iroquois Gas/Westwood Pharmaceuticals Site (Site No. 915141A) to the east and the Pratt & Letchworth Site (Site No. 915045) to the north. At the Westwood Site, bedrock was investigated by Empire Soils Investigation (ESI) between December 1984 and February 1985 while completing test borings for building foundations. ESI logged the bedrock at twelve (12) locations across the site. Bedrock was described as highly fractured and weathered, medium in hardness, thin bedded, tannish gray to white dolostone with frequent to occasional gypsum seams and nodules, interbedded in several instances with medium hard to soft, weathered, thin bedded, gray and white shale (GeoTrans, 1994). This description was consistent with the six (6) borings that encountered bedrock during the Remedial Investigation completed at the site (GeoTrans, 1994).

At the Pratt & Letchworth Site, bedrock was cored at two (2) locations and was thought to be the Bertie Dolostone (Engineering-Science, 1989). The upper 5 to 10 feet of this formation appeared weathered, brown, moderately to highly fractured, and contained chert and shaley partings (Engineering-Science, 1989). The bedrock became gray, and was generally more competent, with depth (Engineering-Science, 1989).

GeoTrans (1994) reported that the bedrock description for the Westwood Site was consistent with that of the Bertie Dolostone. The presence of gypsum seams and nodules, however, is more consistent with the underlying Camillus Shale. In addition, the presence of chert in the bedrock at the Pratt & Letchworth Site is more consistent with the overlying Onondaga Limestone. As a result, the upper bedrock formation underlying the Study Area is not known with any certainty.

4.2 Site Geology

Sixty-five (65) soil borings and test pits have been completed of the Fedders Auto Components Site (Figure 3-2). This includes two (2) soil borings completed during the 1989 FEDCO Site Investigation, six (6) soil borings completed during the 1990 NYSDEC Phase II Investigation, four (4) soil borings completed by National Fuel in 1998 along the future bike path between the site and Scajaquada Creek, six (6) soil borings completed during the 2002 FEDCO Environmental Site Investigation, twenty-eight (28) soil borings and test pits completed during the BCP Remedial Investigation, three (3) soil borings completed along the bike path during the 2020 NYSDEC Remedial Investigation of the 31 Tonawanda Street Off-Site Area, and sixteen (16) soil borings completed during the 2025 NYSDEC Site Characterization of the Fedders Auto Components Site. The stratigraphic logs for these soil borings and test pits are given in Appendix A, while a stratigraphic summary of these logs is given in Table 4-2.

In general, all soil borings and test pits were completed into native reddish-brown clay or silty clay soils (the glaciolacustrine deposit). The exception is along Scajaquada Creek where many borings ended in the alluvium deposit.

The boring and test pit logs were, in many cases, difficult to reconcile as they were logged by different individuals who described what they observed differently. In addition, there were some cases in which the reddish-brown silty clay was encountered above the recent alluvium

deposit. Based upon the regional geology described above, and the experience of this writer, the glaciolacustrine deposit always underlies the recent alluvium deposit. It is suspected that these soils are reworked, being used to fill in low lying areas during construction of the buildings along Tonawanda Street. This soil, when reworked, is often difficult to elucidate between the native reddish-brown silty clay. As a result, the stratigraphic summary presented in Table 4-2 is this author's interpretation of the stratigraphic logs. Other interpretations are possible.

4.2.1 Fill Material

Fill material exists throughout the site at thicknesses ranging from 0.5 feet behind the 71 Tonawanda Street building to 16.63 feet at the eastern site boundary (Table 4-2). Fill thicknesses, however, typically ranged from 2.0 to 7.0 feet (Table 4-2). The fill material consists mainly of grey gravel with some silt and concrete along Tonawanda Street and black sand, cinders, brick, ash, slag, gravel, and reworked silty clay under the parking lot, and black sand and cinders along the bike path.

4.2.2 Reworked Soil

Reworked soil was encountered at thirty-two (32) locations at the Fedders Auto Components Site but was not encountered in the bike path borings (Table 4-2). At all thirty-two (32) locations, reworked brown clay or silty clay was encountered below the fill material at depths ranging from 0.5 to 8.0 feet (Table 4-2). Where completely penetrated, reworked soils ranged in thickness from 0.5 to 10.0 feet (Table 4-2).

4.2.3 Recent Alluvium Deposit

Recent alluvium was encountered at twenty-four (24) locations throughout the central and eastern portions of the Fedders Auto Components Site (Figure 4-2; Table 4-2). Historical maps (1856 and 1894) show that Scajaquada Creek formerly extended across these portions of the site (Figure 4-3). The recent alluvium, therefore, was likely deposited by Scajaquada Creek during recent geologic time. This deposit directly underlies the fill material or reworked soil and consists predominantly of gray gravelly sand and gray sandy silty clay.

The recent alluvium deposit at the Fedders Auto Components Site was encountered at depths ranging from 3.5 to 16.8 feet below ground surface and ranged in thickness from 3.0 to 18.25 feet (Table 4-2). The entire thickness of the recent alluvium deposit was penetrated by

sixteen (16) borings completed at the site (Table 4-2).

4.2.4 Sand and Gravel Deposit

A review of the soil boring logs for the Fedders Auto Components Site (Appendix A) did not reveal the presence of the sand and gravel deposit that is encountered elsewhere in the lower reach of Scajaquada Creek. The National Fuel boring logs for the bike path (Appendix A) describe the recent alluvium deposit as gravel and sand. This deposit was not identified in the soil borings completed along the bike path during the 2020 NYSDEC Remedial Investigation of the 31 Tonawanda Street Off-Site Area (Appendix A).

4.2.5 Glaciolacustrine Silty Clay Deposit

A glaciolacustrine silty clay deposit underlies the entire Fedders Auto Components Site. This deposit is encountered throughout northern Erie County and consists predominantly of reddish-brown to brown, soft to very soft, saturated, highly plastic, silty clay. At many locations throughout the region, laminations (varves) are common throughout this deposit, indicating that it was deposited in a glacial lake environment. Silt lenses, fine sand lenses, and distinct layers of subangular to subrounded gravel and pebbles (drop stones) are also observed within this deposit. The glaciolacustrine deposit acts as a confining layer (aquitard) that prevents the further downward migration of contaminated groundwater and NAPL.

Varves were not observed in this deposit during the BCP Remedial Investigation or the NYSDEC Site Characterization conducted at the Fedders Auto Components Site but were described in several boring logs from the nearby Iroquois Gas/Westwood Pharmaceuticals Site (Site No. 915141A). At Westwood, this deposit was incorrectly identified as a glacial till, and was described as a lean, moderate brown, dry to moist, stiff, massive, silty clay with a trace of gravel.

At the Fedders Auto Components Site, the glaciolacustrine silty clay deposit directly underlies the fill material in the western portion of the site and the alluvium deposit in the east-central portion of the site. This deposit was encountered in forty-one (41) soil borings and test pits completed at the site at depths ranging from 0.83 to 28.0 feet below ground surface (Table 4-2). The glaciolacustrine deposit was not completely penetrated during any investigation completed at the Fedders Auto Components Site so its thickness at the site is unknown (Table 4-2).

At the nearby Iroquois Gas/Westwood Pharmaceuticals Site, this deposit was completely penetrated at seventeen (17) locations, with the thickness ranging from 38.0 to 58.0 feet (Table 4-3). Further north at the Pratt & Letchworth Site (Site No. 915045), the thickness of this deposit ranged from 69.0 to 81.0 feet (Engineering-Science, 1989).

4.2.6 Glacial Till Deposit

The glacial till deposit was not encountered at the Fedders Auto Components Site. At the nearby Iroquois Gas/Westwood Pharmaceutical Site, the glacial till deposit is described as a sand and gravel (Table 4-3). This deposit was encountered at seventeen (17) locations at depths ranging from 60.0 to 75.0 feet below ground surface (Table 4-3). The thickness of this deposit ranged from 1.7 to 28.0 feet (Table 4-3).

Further north at the Pratt & Letchworth Site, the glacial till deposit consisted predominantly of fine sand and gravel. Numerous boulders were also encountered while drilling through this deposit. Visual observations of some of the gravel in the till samples indicated a high percentage of dolomitic limestone; however, some granitic material was also present. The thickness of this deposit ranged from 4.0 to 10.0 feet (Engineering-Science, 1989).

4.2.7 Bedrock

Bedrock was not encountered at the Fedders Auto Components Site. At the nearby Iroquois Gas/Westwood Pharmaceutical Site, bedrock was encountered at seventeen (17) locations at depths ranging from 62.8 to 92.0 feet (Table 4-3). Further north at the Pratt & Letchworth Site, depth to bedrock ranged from 85.0 to 93.0 feet (Engineering-Science, 1989).

4.3 Regional Hydrogeology

Many site investigations and hydrogeologic studies have been completed in northwestern Erie County. These studies indicate that there are four principal hydrogeologic zones in the area described as follows:

- Fill material and shallow alluvium, glaciofluvial, and glaciolacustrine sand deposits, which can be characterized as either unconfined (water table) or perched aquifers;
- The glaciolacustrine silty clay deposit, which can be characterized as an aquitard, confining groundwater from the underlying hydrogeologic zones;

- The glacial till deposit, which is often characterized as an aquitard. At the Iroquois Gas/Westwood Pharmaceutical Site, however, this deposit consists predominantly of sand and gravel, and would therefore be characterized as a water-bearing zone; and
- Upper bedrock, which is generally characterized as a confined aquifer.

In northwestern Erie County, unconfined groundwater is encountered largely within the glaciofluvial, alluvium and fill deposits. Where these deposits overlie the glaciolacustrine silty clay deposit, perched groundwater conditions occur. Well yields from these deposits in the northwestern Erie County are generally unknown, although wells installed in highly permeable outwash deposits in the Tonawanda Creek valley have yields ranging from 1,000 to 1,400 gallons per minute (gpm) (La Sala, 1968).

The glaciolacustrine deposit separates the water table or perched aquifer from the underlying glacial till deposit and confined upper bedrock aquifer. The hydraulic conductivity of this deposit is extremely low, typically ranging from 10-6 to 10-8 cm/sec. The glaciolacustrine deposit, therefore, can be considered an aquitard, preventing the vertical movement of shallow groundwater to the underlying glacial till and Bertie Dolostone. Some vertical movement, however, can occur through desiccation cracks in the upper, unsaturated portion of this deposit. Horizontal groundwater flow within this deposit is also severely limited. This deposit, however, often contains thin seams and stringers of silt and sand that can allow limited horizontal groundwater flow.

Information regarding the hydraulic conductivity and well yields of the Bertie Dolostone is not available. For the Camillus Shale, however, La Sala (1968) reports this bedrock formation is "by far the most productive bedrock aquifer" in the Erie-Niagara Basin, with individual well yields ranging from 300 to 1,200 gpm. The production well at the Dunlop Tire Corporation in the Town of Tonawanda yields 600 to 900 gpm (Pyanowski, 1990), although yields of 1,800 gpm were observed during a 1995 Hydrogeologic Evaluation Study (May, 2007).

4.3.1 Sub-Regional Groundwater Flow

Regional groundwater contour maps are not available for northern Buffalo, New York. However, a series of groundwater contour maps for the area surrounding the intersection of Tonawanda and Niagara Streets (hereinafter called the Study Area) were generated during the NYSDEC Remedial Investigation of the 31 Tonawanda Street Off-Site Area. As a result, sub-

regional groundwater contour maps are available, and will be described in the following paragraphs.

Shallow groundwater within the Study Area occurs under unconfined (water table) conditions in saturated fill, recent alluvium, and the glaciolacustrine deposit. A water table is defined as the surface where the water pressure head is equal to the atmospheric pressure. As a result, wells installed within the fill, recent alluvium, and the upper glaciolacustrine deposit represent unconfined conditions.

The water level data obtained during the 2020 NYSDEC Remedial Investigation of the 31 Tonawanda Street Off-Site Area (Table 3-5) were utilized to construct a series of groundwater contour maps for the unconfined aquifer (Figures 4-10 through 4-14). These groundwater contour maps show that a groundwater divide is present in the study area. This divide is roughly centered over the 68 Tonawanda Street BCP Site to the north and the 31 Tonawanda Street BCP Site to the south. From this divide, groundwater flows to the southeast toward the main channel of Scajaquada Creek and to the southwest toward the Scajaquada Creek Slip and the Niagara River.

Three (3) of the five (5) groundwater contour maps for the unconfined aquifer show a groundwater depression that is centered on the Niagara Street pumphouse. Given that the storm sewer piping beneath Niagara Street is approximately 3 to 4 feet lower than the typical surface water elevation of the Scajaquada Creek Slip, and approximately 1 to 2 feet lower than groundwater elevations in nearby wells, it is suspected that the operation of the pumphouse affects the elevation of groundwater in the vicinity of the pumphouse. The observation of water flow in the storm sewer piping during a dry weather event suggests that groundwater is collected and conveyed by the storm sewer to the pumphouse, effectively maintaining a depressed groundwater elevation beneath Niagara Street.

Information regarding regional groundwater flow in the glacial till and upper Bertie Dolostone bedrock near the Fedders Auto Components Site is not available.

4.4 Site Hydrogeology

The hydrogeologic data compiled and generated during the NYSDEC Remedial

Investigation of the Fedders Auto Components Site reveals that only two of the four principal hydrogeologic zones described in Section 4.3 have been evaluated at the site: (1) the shallow hydrogeologic zone consisting of miscellaneous fill and the recent alluvium deposit, and (2) the glaciolacustrine deposit hydrogeologic zone. As described in Section 4.3, the glaciolacustrine deposit is more accurately characterized as an aquitard, restricting the downward movement of groundwater from the shallow to the deeper hydrogeologic zones. Fifteen (15) monitoring wells currently exist at the Fedders Auto Components Site (Figure 3-3; Table 3-4). The well construction diagrams for these wells are provided in Appendix B.

4.4.1 Fill/Recent Alluvium (Shallow) Hydrogeologic Zone

Nine (9) existing monitoring wells at the Fedders Auto Components Site were installed within the fill material or the recent alluvium deposit (Table 3-4). Water levels in the shallow water-bearing zone BCP wells were measured on numerous occasions between September 16, 2020 and December 20, 2023 (Table 3-5), and in new & existing shallow water-bearing zone wells on eleven (11) occasions between November 10, 2025 and May 11, 2026 (Table 3-6).

These water level data were utilized to construct hydrographs for the shallow water-bearing zone wells at the site (Figures 4-4 through 4-6). These hydrographs show that water levels fluctuated only slightly throughout the year, generally by 1 foot or less. Figure 4-5 shows that the shallow water-bearing zone wells responded slightly during the typically drier summer and early fall months as water level declines were noted in all wells. Water level declines in Scajaquada Creek at the West Avenue bridge followed a similar pattern. Water levels in the wells and Scajaquada Creek increased in December 2023 (Figure 4-5).

Water levels for the shallow water-bearing zone wells at the Fedders Auto Components Site are generally higher than the water levels of Scajaquada Creek but not always (Figures 4-4 through 4-6), indicating that the creek is the discharge point for shallow zone groundwater at the site.

4.4.2 Glaciolacustrine Deposit Aquitard

Six (6) existing monitoring wells at the Fedders Auto Components Site were installed within the reddish-brown silty clay (glaciolacustrine) deposit (Table 3-4). Water levels in the silty clay BCP wells were measured on numerous occasions between September 16, 2020 and

December 20, 2023 (Table 3-5), and in new & existing silty clay wells on eleven (11) occasions between November 10, 2025 and May 11, 2026 (Table 3-6).

These water level data were utilized to construct hydrographs for the silty clay wells at the site (Figures 4-7 through 4-9). Hydrographs for three (3) silty clay wells at the adjacent (to the west) 68 Tonawanda Street BCP Site have also been included in these hydrographs. Figure 4-7 shows that water levels fluctuated only slightly throughout 2021, generally by 1 foot or less. Water levels decreased between May 28, 2021 to July 27, 2021, most likely in response to the typically drier summer months, then increased throughout the remainder of the year. The exception was wells 68-MW-2 & 57-MW-4, which experienced slight declines in water levels in December 2021.

In contrast to 2021, Figure 4-8 shows that water levels in 2023 did not fluctuate throughout the year, with four (4) of the five (5) wells showing gradual increases beginning on August 18, 2023. Water levels in well 68-MW-2 remained relatively constant throughout the year (Figure 4-8).

Water levels for the silty clay wells at the Fedders Auto Components are higher than the water levels of Scajaquada Creek (Figures 4-7 through 4-9), indicating that the creek is the discharge point for groundwater in the glaciolacustrine deposit. However, due to the extremely low hydraulic conductivities of this deposit, groundwater flow through it would be extremely slow.

4.4.3 Glacial Till Deposit Hydrogeologic Zone

There are no wells at the Fedders Auto Components Site that monitor the glacial till deposit, so this water-bearing zone was not evaluated during the 2025 NYSDEC Site Characterization of the site.

4.4.4 Upper Bedrock Hydrogeologic Zone

There are no wells at the Fedders Auto Components Site that monitor the upper bedrock, so this water-bearing zone was not evaluated during the 2025 NYSDEC Site Characterization of the site.

4.4.5 Water Table Groundwater Flow

During the BCP Remedial Investigation completed at the 57-71 Tonawanda Street BCP Site, five (5) overburden groundwater monitoring wells were installed both on-site and off-site to evaluate groundwater quality and flow direction. Historical depth to groundwater at the site ranged from 1.17 to 5.03 feet (Table 3-5). During the NYSDEC Site Characterization, depth to groundwater at the site ranged from 1.31 to 8.23 feet, exclusive of deeper water levels at the time of installation, shortly after development, and shortly after sampling (Table 3-6).

A groundwater contour map for the 57-71 Tonawanda Street BCP Site was generated during the BCP Remedial Investigation. This contour is provided as Figure 4-15 and shows that unconfined groundwater flows across the site from the northwest to the southeast toward Scajaquada Creek. This flow pattern is consistent with the sub-regional groundwater flow maps (Figures 4-10 through 4-14) that were discussed in Section 4.3.1.

5.0 INVESTIGATION RESULTS

A description of the field activities completed during the Remedial Investigation of the Fedders Auto Components Site was presented in Section 3.0. In Section 5.0, the analytical results obtained from the various samples collected or compiled during the investigation are discussed. Analytical results are summarized by environmental media (e.g., surface soil, subsurface soil & fill, groundwater, NAPL, sediment, surface water, and soil vapor).

5.1 Standards, Criteria and Guidance Values

For this report, the analytical results for soil & fill were evaluated against the unrestricted, restricted residential, commercial, and groundwater protection soil cleanup objectives of Tables 375-6.8(a) and 375-6.8(b) contained in the December 2006 NYSDEC publication entitled "*6NYCRR Part 375: Environmental Remediation Programs*". For contaminants not included in 6 NYCRR Part 375, the soil cleanup objectives identified in the October 2010 NYSDEC Commissioner's Policy CP-51 entitled "*Soil Cleanup Guidance*" were utilized.

Please note that a revised 6 NYCRR Part 375 became effective on December 31, 2026. This revision also included updates to some of the soil cleanup objectives. Because the soil & fill analytical tables for the NYSDEC Site Characteristic Report were already complete when the revised Part 375 went into effect, the tables were not revised to incorporate the updated SCOs.

Groundwater and surface water analytical results were evaluated against the water quality standards and guidance values contained in the June 1998 NYSDEC publication entitled "*Technical and Operational Guidance Series (TOGS) 1.1.1: Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations*" and its addenda. The groundwater and surface water standards and guidance values for individual contaminants were taken directly from Table 1 of that document.

NAPL analytical results were not evaluated against either the Part 375 soil cleanup objectives or the TOGS 1.1.1 water quality standards and guidance values. Although the NAPL is a liquid, the lab results were given in solid units (i.e., µg/kg).

Sediment analytical results were evaluated against the sediment guidance values contained in the June 2014 NYSDEC publication entitled "*Screening and Assessment of Contaminated Sediment*". Sediment guidance values for Class A, Class B, and Class C sediment were taken directly from Table 1 of that document, while sediment guidance values for PAHs were taken directly from Table 7. Several sediment criteria for the protection of human health bioaccumulation at 2% TOC were utilized when no other sediment guidance value was available. These values were taken directly from Table 8.

Soil vapor and indoor air analytical results were evaluated against the soil vapor/indoor air matrices contained in the October 2006 NYSDOH publication entitled "*Guidance for Evaluating Soil Vapor Intrusion in the State of New York*" and its addenda.

5.2 Surface Soil & Fill

Nine (9) historical surface soil & fill samples have been collected from the Fedders Auto Components Site including four (4) during the 1989 FEDCO Site Investigation and five (5) during the BCP Remedial Investigation. No surface soil/fill samples were collected during the 2025 NYSDEC Site Characterization. The locations of the FEDCO samples are shown on Figure 3-1, while the BCP samples are shown on Figure 2-1. Information concerning historical sample collection and analysis is given in Table 3-1.

No surface soil & fill were collected during the 2025 NYSDEC Site Characterization.

5.2.1 1989 Site Investigation

Four (4) surface fill samples (plus 1 duplicate sample) were collected from the Fedders Auto Components Site during the 1989 FEDCO Site Investigation and analyzed for TCL volatile organic compounds via USEPA method 8240 and PCBs via USEPA method 8080. The locations of these samples are shown on Figure 3-1. Analytical results for these samples are summarized in Table 5-1, while information concerning sample collection and analysis is given in Table 3-1. The lab report for these samples is included in Appendix E.

The results of the organic analyses revealed that six (6) volatile organic compounds were detected in these samples (Table 5-1). Petroleum VOCs detected included ethylbenzene (1 sample), toluene (1 sample), m,p-xylene (2 samples) and o-xylene (2 samples). Trichloroethene

was detected in 2 samples, while styrene was detected in 1 sample. Of these contaminants, only total xylenes (2 samples) exceeded the NYSDEC Part 375 unrestricted soil cleanup objectives (Table 5-1). None of the contaminants exceeded the NYSDEC Part 375 groundwater protection soil cleanup objectives (Table 5-1).

Table 5-1 shows that polychlorinated biphenyls (PCBs) were detected in two (2) surface fill samples collected from the site. The concentrations of total PCBs in both samples exceeded the NYSDEC Part 375 commercial and groundwater protection soil cleanup objectives (Table 5-1). The highest concentration of total PCBs detected was 34,200 ug/kg (ppb) in sample SS1 (Table 5-1), which was collected directly adjacent to a bank of transformers along the east side of FEDCO Building B (Figure 3-1).

5.2.2 2019 BCP Remedial Investigation

Five (5) surface soil & fill samples were collected from the 57-71 Tonawanda Street BCP Site during the BCP Remedial Investigation and analyzed for TCL semi-volatile organic compounds via USEPA method 8270D, TCL pesticides via USEPA method 8081B, Silvex via USEPA method 8151A, TCL PCBs via USEPA method 8082A, TAL metals via USEPA method 6010C, mercury via USEPA method 7471B, Hexavalent Chromium via USEPA method 7196A, cyanide via USEPA method 9014, PFAS via Isotope Dilution, and 1,4-dioxane via USEPA method EPA 8270D SIM. The locations of these samples are shown on Figure 2-1. Analytical results for these samples are summarized in Tables 5-2 & 5-3, while information concerning sample collection and analysis is given in Table 3-1. The lab report for these samples is included in Appendix E.

The surface soil & fill samples collected during the BCP Remedial Investigation were not analyzed for volatile organic compounds (Table 5-2).

The results of the organic analyses revealed that seventeen (17) semi-volatile organic compounds were detected in the surface soil & fill samples collected during the BCP Remedial Investigation with fifteen (15) of these compounds being polycyclic aromatic hydrocarbons (Table 5-2). PAHs are a group of over 100 different chemicals that are ubiquitous in the environment. Sources of PAHs include incomplete combustion of coal, oil, gasoline, garbage, wood from stoves, automobiles, and incinerators. PAHs are also found in asphalt, coal tar, crude oil, creosote, roofing tar, medicines, dyes, plastics, and pesticides. Of the PAH compounds, benzo(a)anthracene (4 samples), benzo(a)pyrene (4 samples), benzo(b)fluoranthene (4

samples), benzo(k)fluoranthene (3 samples), chrysene (3 samples), dibenzo(a,h)anthracene (4 samples), and indeno(1,2,3-cd)pyrene (4 samples) were detected at concentrations that exceeded the NYSDEC Part 375 restricted residential soil cleanup objectives (Table 5-2).

Concentrations of benzo(a)anthracene (3 samples), benzo(a)pyrene (4 samples), benzo(b)fluoranthene (3 samples), dibenzo(a,h)anthracene (3 samples), and indeno(1,2,3-cd)pyrene (3 samples) also exceeded the NYSDEC Part 375 commercial soil cleanup objectives (Table 5-2). In addition, concentrations of benzo(a)anthracene (4 samples), benzo(b)-fluoranthene (4 samples), benzo(k)fluoranthene (3 samples), chrysene (4 samples), and indeno(1,2,3-cd)pyrene (2 samples) exceeded the NYSDEC Part 375 groundwater protection soil cleanup objectives (Table 5-2).

The surface soil & fill samples collected from the 57-71 Tonawanda Street BCP Site were also analyzed for pesticides and PCBs (Table 5-2). Fifteen (15) pesticides were detected in these samples with only the concentrations of 4,4'-DDD (1 sample), 4,4'-DDE (2 samples), and 4,4'-DDT (3 samples) exceeding the NYSDEC Part 375 unrestricted soil cleanup objectives (Table 5-2). None of the concentrations, however, exceeded the NYSDEC Part 375 restricted residential, commercial or groundwater protection soil cleanup objectives (Table 5-2). PCBs were only detected in one (1) surface soil & fill sample at a concentration that did not exceed any of the NYSDEC Part 375 soil cleanup objectives (Table 5-2).

Thirteen (13) metals were detected in the surface soil & fill samples collected from the 57-71 Tonawanda Street BCP Site with ten (10) of these metals being EPA priority pollutant metals (Table 5-2). EPA priority pollutant metals are toxic metals for which technology-based effluent limitations and guidelines are required by Federal law. The only priority pollutant metals that exceeded the NYSDEC Part 375 restricted residential soil cleanup objectives included cadmium (1 sample), copper (1 sample), and lead (1 sample) (Table 5-2). The concentration of copper also exceeded the NYSDEC Part 375 commercial soil cleanup objectives (Table 5-2). Only the concentration of selenium (1 sample) exceeded the NYSDEC Part 375 groundwater protection soil cleanup objectives (Table 5-2). Hexavalent chromium was not detected in any of the samples, so it was not included in Table 5-2.

Cyanide was detected in one (1) surface soil & fill sample collected from the site, but the concentration did not exceed any of the NYSDEC Part 375 soil cleanup objectives (Table 5-2).

Twelve (12) per- and polyfluoroalkyl substances (PFAS) were detected in the surface soil & fill samples collected from the 57-71 Tonawanda Street BCP Site (Table 5-3). The concentrations of PFOS (2 samples) exceeded the NYSDEC unrestricted and protection of groundwater soil guidance values (Table 5-3). None of the concentrations exceeded the NYSDEC residential or commercial soil guidance values (Table 5-3). It is important to note, however, that NYSDEC soil guidance values are only available for PFOS and PFOA.

5.3 Subsurface Soil & Fill

Forty-four (44) historical subsurface soil & fill samples have been collected from the Fedders Auto Components Site including: two (2) subsurface fill samples during the 1989 FEDCO Site Investigation; nine (9) subsurface fill and six (6) subsurface soil samples during the 1990 NYSDEC Phase II Investigation; thirteen (13) subsurface fill and eleven (11) subsurface soil samples during the BCP Remedial Investigation; and one (1) subsurface fill and two (2) subsurface soil samples during the 2020 NYSDEC Remedial Investigation of the 31 Tonawanda Street Off-Site Area. The locations of these samples are shown on Figure 2-2. Information concerning historical sample collection and analysis is given in Table 3-1.

Ninety-eight (98) subsurface soil & fill samples (not counting duplicates & MS/MSD samples) were collected during the NYSDEC Site Characterization at the Fedders Auto Components Site. The locations of the soil borings from which these samples were collected are shown on Figure 3-2. Information concerning sample collection and analysis is given in Table 3-3.

5.3.1 1989 Site Investigation

Two (2) subsurface fill samples were collected from the Fedders Auto Components Site during the 1989 FEDCO Site Investigation and analyzed for TCL volatile organic compounds via USEPA method 8240 and PCBs via USEPA method 8080. The locations of these samples are shown on Figure 3-1. Analytical results for these samples are summarized in Table 5-4, while information concerning sample collection and analysis is given in Table 3-1. The lab report for these samples is included in Appendix E.

The results of the organic analyses revealed that methylene chloride (sample MW-2), trichloroethene (sample MW-2), and Aroclor 1254 (sample MW-2) were the only contaminants

detected in these samples (Table 5-4). The concentrations of all three (3) contaminants exceeded the NYSDEC Part 375 unrestricted (but not the restricted residential) soil cleanup objectives, while the concentrations of methylene chloride and trichloroethene also exceeded the NYSDEC Part 375 groundwater protection soil cleanup objectives (Table 5-4). None of the concentrations exceeded the NYSDEC Part 375 restricted residential soil cleanup objectives (Table 5-4).

5.3.2 1990 Phase II Investigation

Nine (9) subsurface fill and six (6) subsurface soil samples were collected from the Fedders Auto Components Site during the 1990 NYSDEC Phase II Investigation and analyzed for TCL volatile organic compounds (method not provided), TCL semi-volatile organic compounds (method not provided), pesticides (method not provided), PCBs (method not provided), TAL metals (method not provided), and cyanide (method not provided). Analytical results for these samples are summarized in Table 5-5 (VOCs) and Table 5-9 (SVOCs, Pesticides, PCBs, Metals, & Cyanide), while information concerning sample collection and analysis is given in Table 3-1. The lab report for these samples is included in Appendix E.

The results of the organic analyses revealed that both volatile and semi-volatile organic compounds were detected in the subsurface soil & fill samples collected from the site in 1990 (Tables 5-5 & 5-9). Twelve (12) volatile organic compounds were detected in these samples with chlorinated VOCs being detected most frequently (Table 5-5). Chlorinated VOCs detected included 1,1,1-trichloroethane (5 samples), 1,1,2-trichloroethane (2 samples), 1,1-dichloroethane (3 samples), 1,1-dichloroethene (3 samples), 1,2-dichloroethane (2 samples), total 1,2-dichloroethene (5 samples), chloroethane (1 sample), trichloroethene (11 samples), and vinyl chloride (1 sample).

Chlorinated VOCs that exceeded the NYSDEC Part 375 unrestricted (but not the restricted residential) soil cleanup objectives included 1,1,1-trichloroethane (3 samples), 1,1-dichloro-ethane (3 samples), and trichloroethene (2 samples) (Table 5-5). These samples also exceeded the NYSDEC Part 375 groundwater protection soil cleanup objectives (Table 5-5). None of the chlorinated VOCs exceeded the NYSDEC Part 375 restricted residential soil cleanup objectives (Table 5-5).

When detected, the concentrations of total chlorinated VOCs ranged from 6.0 to 3,527 ug/kg (parts per billion or ppb) (Table 5-5).

Petroleum VOCs were also detected in the subsurface soil & fill samples collected from the Fedders Auto Components Site during the 1990 NYSDEC Phase II Investigation (Table 5-5). Petroleum VOCs detected included ethylbenzene (4 samples), toluene (3 samples), and total xylenes (5 samples). Only the concentration of total xylenes in two (2) samples exceeded the NYSDEC Part 375 unrestricted (but not the restricted residential) soil cleanup objectives (Table 5-5). Neither concentration, however, exceeded the NYSDEC Part 375 commercial or groundwater protection soil cleanup objectives (Table 5-5).

Twenty (20) semi-volatile organic compounds were detected in the subsurface soil & fill samples collected during the 1990 NYSDEC Phase II Investigation with sixteen (16) of these compounds being polycyclic aromatic hydrocarbons (Table 5-9). Of the PAH compounds, benzo(a)anthracene (6 samples), benzo(b)fluoranthene (8 samples), dibenzo(a,h)anthracene (3 samples), and indeno (1,2,3-cd)pyrene (7 samples) were detected at concentrations that exceeded the NYSDEC Part 375 restricted residential (but not the commercial) soil cleanup objectives (Table 5-9).

Only the concentrations of benzo(a)pyrene (6 samples) and dibenzo(a,h)anthracene (1 sample) exceeded the NYSDEC Part 375 commercial soil cleanup objectives (Table 5-9), while concentrations of benzo(a)anthracene (6 samples), benzo(b)fluoranthene (5 samples), benzo(k)fluoranthene (1sample), and chrysene (6 samples) exceeded the NYSDEC Part 375 groundwater protection soil cleanup objectives (Table 5-9).

Pesticides and PCBs were not detected in any of the subsurface soil & fill samples collected during the 1990 NYSDEC Phase II Investigation (Table 5-9).

Twenty-two (22) metals were detected in the subsurface soil & fill samples collected during the 1990 NYSDEC Phase II Investigation with eleven (11) of these metals being EPA priority pollutant metals (Table 5-9). The only priority pollutant metals that exceeded the NYSDEC Part 375 restricted residential (but not the commercial) soil cleanup objectives included cadmium (3 samples), chromium (1 sample), lead (2 samples), and mercury (1 sample) (Table 5-9). Only the concentrations of arsenic (2 samples) and copper (1 sample) exceeded the

NYSDEC Part 375 commercial soil cleanup objectives (Table 5-9). The concentrations of arsenic (2 samples) and lead (1 sample) exceeded the NYSDEC Part 375 groundwater protection soil cleanup objectives (Table 5-9).

Cyanide was detected in six (6) subsurface soil & fill samples collected from the Fedders Auto Components Site. Only the concentration in one (1) sample exceeded the NYSDEC Part 375 commercial and groundwater protection soil cleanup objectives (Table 5-9).

5.3.3 2019 BCP Remedial Investigation

Thirteen (13) subsurface fill and eleven (11) subsurface soil samples were collected from the 57-71 Tonawanda Street BCP Site during the BCP Remedial Investigation and analyzed for TCL semi-volatile organic compounds via USEPA method 8270D, TCL pesticides via USEPA method 8081B, Silvex via USEPA method 8151A, TCL PCBs via USEPA method 8082A, TAL metals via USEPA method 6010C, mercury via USEPA method 7471B, Hexavalent Chromium via USEPA method 7196A, cyanide via USEPA method 9014, PFAS via Isotope Dilution, and 1,4-dioxane via USEPA method EPA 8270D SIM. The locations of these samples are shown on Figure 2-2. Analytical results for these samples are summarized in Table 5-6 (VOCs), Table 5-10 (SVOCs, Pesticides, PCBs & Metals), and Table 5-11 (Emerging Contaminants). Information concerning sample collection and analysis is given in Table 3-1, while the lab reports for these samples are included in Appendix E.

The results of the organic analyses revealed that both volatile and semi-volatile organic compounds were detected in the subsurface soil & fill samples collected from the site during the BCP Remedial Investigation (Tables 5-6 & 5-10). Ten (10) volatile organic compounds were detected in these samples with chlorinated VOCs being detected most frequently (Table 5-6). Chlorinated VOCs detected included 1,1,2-trichloroethane (2 samples), cis-1,2-dichloroethene (7 samples), trans-1,2-dichloroethene (13 samples), trichloroethene (17 samples), and vinyl chloride (3 samples).

Chlorinated VOCs that exceeded the NYSDEC Part 375 unrestricted (but not the restricted residential) soil cleanup objectives included cis-1,2-dichloroethene (3 samples), trichloroethene (7 samples), and vinyl chloride (2 samples) (Table 5-6). These samples also exceeded the NYSDEC Part 375 groundwater protection soil cleanup objectives (Table 5-6). Chlorinated VOCs that exceeded the NYSDEC Part 375 restricted residential soil cleanup objectives included

trichloroethene (2 samples) and vinyl chloride (1 sample) (Table 5-6). Trichloroethene exceeded the NYSDEC Part 375 commercial soil cleanup objective in one (1) sample (Table 5-6).

When detected, the concentrations of total chlorinated VOCs ranged from 2.85 J to 1,980,000 ug/kg (ppb) (Table 5-6). Total chlorinated VOC concentrations and sample depths are summarized on Figure 5-1.

Acetone (4 samples), carbon disulfide (2 samples), ethylbenzene (1 sample), 1,2,4-trimethylbenzene (2 samples), and xylenes (3 samples) were also detected in the subsurface soil & fill samples collected during the BCP Remedial Investigation (Table 5-6). Only the concentration of total xylenes in one (1) sample exceeded the NYSDEC Part 375 unrestricted soil cleanup objectives (Table 5-6).

Twenty (20) semi-volatile organic compounds were detected in the subsurface soil & fill samples collected during the BCP Remedial Investigation with seventeen (17) of these compounds being polycyclic aromatic hydrocarbons (Table 5-10). Of the PAH compounds, benzo(a)anthracene (9 samples), benzo(b)fluoranthene (8 samples), benzo(k)fluoranthene (2 samples), chrysene (3 samples), dibenzo(a,h)anthracene (3 samples), and indeno (1,2,3-cd)pyrene (9 samples) were detected at concentrations that exceeded the NYSDEC Part 375 restricted residential (but not the commercial) soil cleanup objectives (Table 5-10). In addition, the concentrations of 2-methylnaphthalene in three (3) samples exceeded the CP-51 residential soil cleanup objectives (Table 5-10).

Concentrations of benzo(a)anthracene (3 samples), benzo(a)pyrene (11 samples), benzo(b)fluoranthene (3 samples), dibenzo(a,h)anthracene (5 samples), and indeno(1,2,3-cd)pyrene (2 samples) exceeded the NYSDEC Part 375 commercial soil cleanup objectives (Table 5-10), while concentrations of benzo(a)anthracene (12 samples), benzo(b)fluoranthene (9 samples), benzo(k)fluoranthene (4 samples), chrysene (12 samples), and indeno(1,2,3-cd) pyrene (1 sample) exceeded the NYSDEC Part 375 groundwater protection soil cleanup objectives (Table 5-10).

Eighteen (18) pesticides were detected in the subsurface soil & fill samples collected during the BCP Remedial Investigation (Table 5-10). Only the concentrations of DDD (3 samples) and DDT (8 samples) exceeded the NYSDEC Part 375 unrestricted soil cleanup objectives (Table

5-10). None of the concentrations exceeded the NYSDEC Part 375 restricted residential or groundwater protection soil cleanup objectives (Table 5-10).

PCBs were only detected in three (3) subsurface soil & fill samples collected during the BCP Remedial Investigation (Table 5-10). None of the concentrations, however, exceeded any of the NYSDEC Part 375 soil cleanup objectives (Table 5-10).

Thirteen (13) metals were detected in the subsurface soil & fill samples collected during the BCP Remedial Investigation with ten (10) of these metals being EPA priority pollutant metals (Table 5-10). The only priority pollutant metals that exceeded the NYSDEC Part 375 restricted residential (but not the commercial) soil cleanup objectives included cadmium (1 sample), lead (2 samples), and mercury (1 sample) (Table 5-10). Only the concentrations of arsenic (2 samples), copper (4 samples), and lead (2 samples) exceeded the NYSDEC Part 375 commercial soil cleanup objectives (Table 5-10). The concentrations of arsenic (2 samples), copper (1 sample), lead (4 samples), silver (1 sample), and zinc (2 samples) exceeded the NYSDEC Part 375 groundwater protection soil cleanup objectives (Table 5-10).

Cyanide was detected in seven (7) subsurface soil & fill samples collected during the BCP Remedial Investigation, with the concentrations in two (2) samples exceeding both the NYSDEC Part 375 commercial and groundwater protection soil cleanup objectives (Table 5-10).

Seven (7) per- and polyfluoroalkyl substances (PFAs) were detected in the subsurface soil & fill samples collected from the 57-71 Tonawanda Street BCP Site (Table 5-11). Only the concentration of PFOS in one (1) sample exceeded both the NYSDEC unrestricted and groundwater protection soil guidance values (Table 5-11). None of the concentrations exceeded the NYSDEC residential or commercial soil guidance values (Table 5-11). It is important to note, however, that NYSDEC soil guidance values are only available for PFOS and PFOA.

1,4-Dioxane was not detected in any of the subsurface soil & fill samples collected during the BCP Remedial Investigation (Table 5-11).

5.3.4 2020 Remedial Investigation

One (1) subsurface fill and two (2) subsurface soil samples were collected from the bike path soil borings during the 2020 NYSDEC Remedial Investigation of the 31 Tonawanda Street

Off-Site Area and analyzed for TCL volatile organic compounds via USEPA method 8260C and TCL semi-volatile organic compounds via USEPA method 8270D. The locations of these samples are shown on Figure 2-2. Analytical results for these samples are summarized in Table 5-7 (VOCs) and Table 5-12 (SVOCs). Information concerning sample collection and analysis is given in Table 3-1, while the lab report for these samples is included in Appendix E.

The results of the organic analyses revealed that both volatile and semi-volatile organic compounds were detected in the subsurface soil & fill samples collected from the bike path borings (Tables 5-7 & 5-12). Seven (7) volatile organic compounds were detected in these samples with petroleum VOCs being detected most frequently. Petroleum VOCs detected included benzene (2 samples), ethylbenzene (2 samples), isopropylbenzene (2 samples), toluene (2 samples), and total xylenes (2 samples) (Table 5-7). Methylene chloride (1 sample) and styrene (1 sample) were also detected in these samples (Table 5-7). No chlorinated volatile organic compounds were detected in the bike path subsurface soil & fill samples (Table 5-7).

Of the VOCs detected, only the concentrations of benzene (1 sample), ethylbenzene (1 sample), toluene (1 sample), and total xylenes (1 sample) exceeded the NYSDEC Part 375 restricted residential (but not the commercial) soil cleanup objectives (Table 5-7). None of these contaminants exceeded the NYSDEC Part 375 commercial soil cleanup objectives (Table 5-7). Concentrations of benzene (2 samples), ethylbenzene (2 samples), methylene chloride (1 sample), toluene (1 sample), and xylenes (2 samples) exceeded the groundwater protection soil cleanup objectives (Table 5-7). Methylene chloride was also detected in the blank sample (Table 5-7), so the presence of this compound is likely related to laboratory contamination.

Twenty (20) semi-volatile organic compounds were detected in the subsurface soil & fill samples collected from the bike path with seventeen (17) of these compounds being polycyclic aromatic hydrocarbons (Table 5-12). Of the PAH compounds, acenaphthene (1 sample), acenaphthylene (1 sample), anthracene (1 sample), benzo(k)fluoranthene (3 samples), chrysene (2 samples), fluoranthene (1 sample), fluorene (1 sample), indeno (1,2,3-cd)pyrene (1 sample), naphthalene (1 sample), phenanthrene (1 sample), and pyrene (1 sample) were detected at concentrations that exceeded the NYSDEC Part 375 restricted residential (but not the commercial) soil cleanup objectives (Table 5-12). Concentrations of 2-methylnaphthalene in all three (3) samples exceeded the CP-51 residential soil cleanup objectives (Table 5-12).

Concentrations of benzo(a)anthracene (3 samples), benzo(a)pyrene (3 samples), benzo(b)fluoranthene (3 samples), chrysene (1 sample), dibenzo(a,h)anthracene (3 samples), indeno(1,2,3-cd)pyrene (2 samples), naphthalene (1 sample), and phenanthrene (1 sample) exceeded the NYSDEC Part 375 commercial soil cleanup objectives (Table 5-12), while concentrations of acenaphthene (1 sample), acenaphthylene (1 sample), benzo(a)anthracene (3 samples), benzo(a)pyrene (1 sample), benzo(b)fluoranthene (3 samples), benzo(k)fluoranthene (3 samples), chrysene (3 samples), indeno(1,2,3-cd)pyrene (1 sample), and naphthalene (2 samples) exceeded the NYSDEC Part 375 groundwater protection soil cleanup objectives (Table 5-12).

Biphenyl (2 samples), carbazole (3 samples) and dibenzofuran (2 samples) were also detected in the subsurface soil & fill samples collected from the bike path borings. The concentration of dibenzofuran in one (1) sample exceeded the NYSDEC Part 375 unrestricted soil cleanup objectives but did not exceed any other soil cleanup objective (Table 5-12). There are no NYSDEC Part 375 or CP-51 soil cleanup objectives for biphenyl or carbazole.

5.3.5 2025 Site Characterization

Ninety-eight (98) subsurface soil & fill samples were collected from the Fedders Auto Components Site during the NYSDEC Site Characterization and analyzed for TCL volatile organic compounds via USEPA method 8260D, TCL semi-volatile organic compounds via USEPA method 8270E, cyanide via USEPA method 9014, and ammonia via USEPA method SM21-24 4500 NH3 C Modified. The locations of these samples are shown on Figure 3-2. Analytical results for these samples are summarized in Table 5-8 (VOCs) and Table 5-13 (SVOCs, Ammonia & Total Cyanide). Information concerning sample collection and analysis is given in Table 3-3. The lab reports for these samples are included in Appendix F.

The results of the organic analyses revealed that both volatile and semi-volatile organic compounds were detected in the subsurface soil & fill samples collected from the site during the NYSDEC Site Characterization (Tables 5-8 & 5-13). Twenty-nine (29) volatile organic compounds were detected in these samples with petroleum and chlorinated VOCs being detected most frequently (Table 5-8).

Petroleum VOCs detected included benzene (22 samples), ethylbenzene (18 samples), isopropylbenzene (11 samples), p-isopropyltoluene (4 samples), n-butylbenzene (2 samples), sec-butylbenzene (2 samples), n-propylbenzene (7 samples), toluene (60 samples), 1,2,4-trimethylbenzene (15 samples), 1,3,5-trimethylbenzene (8 samples), and total xylenes (24 samples) (Table 5-8).

Petroleum VOCs that exceeded the NYSDEC Part 375 unrestricted (but not the restricted residential) soil cleanup objectives included benzene (4 samples), ethylbenzene (3 samples), n-propylbenzene (2 samples), toluene (2 samples), 1,2,4-trimethylbenzene (1 sample), 1,3,5-trimethylbenzene (2 samples), and total xylenes (5 samples) (Table 5-8). These samples also exceeded the NYSDEC Part 375 groundwater protection soil cleanup objectives, the exception being the concentration of total xylenes in 3 samples (Table 5-8). Petroleum VOCs that exceeded the NYSDEC Part 375 restricted residential (but not the commercial) soil cleanup objectives included benzene (2 samples), ethylbenzene (1 sample), 1,2,4-trimethylbenzene (3 samples), 1,3,5-trimethylbenzene (2 samples), and total xylenes (2 samples) (Table 5-8). Benzene (3 samples), ethylbenzene (3 samples), toluene (2 samples), 1,2,4-trimethylbenzene (2 samples), and total xylenes (2 samples) exceeded the NYSDEC Part 375 commercial soil cleanup objectives (Table 5-8).

Chlorinated VOCs detected included 1,1,1-trichloroethane (7 samples), 1,1,2-trichloroethane (3 samples), 1,1-dichloroethane (6 samples), 1,1-dichloroethene (6 samples), 1,2-dichloroethane (2 samples), cis-1,2-dichloroethene (21 samples), trans-1,2-dichloroethene (7 samples), chloroethane (1 sample), trichloroethene (36 samples) and vinyl chloride (10 samples) (Table 5-8).

Chlorinated VOCs that exceeded the NYSDEC Part 375 unrestricted (but not the restricted residential) soil cleanup objectives included 1,1,2-trichloroethane (2 samples), 1,1-dichloroethane (4 samples), 1,1-dichloroethene (2 samples), 1,2-dichloroethane (1 sample), cis-1,2-dichloroethene (6 samples), trans-1,2-dichloroethene (1 sample), chloroethane (1 sample), trichloroethene (6 samples) and vinyl chloride (4 sample) (Table 5-8). These samples also exceeded the NYSDEC Part 375 groundwater protection soil cleanup objectives (Table 5-8). Chlorinated VOCs that exceeded the NYSDEC Part 375 restricted residential soil cleanup objectives included 1,1,2-trichloroethane (2 samples), 1,1-dichloroethane (4 samples), 1,1-

dichloroethene (2 samples), 1,2-dichloroethane (1 sample), cis-1,2-dichloroethene (6 samples), trans-1,2-dichloroethene (1 sample), chloroethane (1 sample), trichloroethene (6 samples) and vinyl chloride (4 samples) (Table 5-8). Trichloroethene exceeded the NYSDEC Part 375 commercial soil cleanup objective in one (1) sample (Table 5-8).

When detected, the concentrations of total chlorinated VOCs ranged from 0.70 to 750,573 ug/kg (ppb) (Table 5-8). Total chlorinated VOC concentrations and sample depths are summarized on Figure 5-2.

Acetone (26 samples), chloroform (4 samples), methyl acetate (1 sample), methyl ethyl ketone (4 samples), methyl cyclohexane (55 samples), styrene (2 samples), 1,2,3-trichlorobenzene (1 sample), and 1,2,4-trichlorobenzene (1 sample) were also detected in the subsurface soil & fill samples collected during the NYSDEC Site Characterization (Table 5-8). Only the concentration of acetone in 2 samples exceeded the NYSDEC Part 375 unrestricted soil cleanup objectives (Table 5-8). There are no NYSDEC soil cleanup objectives for methyl acetate, methyl cyclohexane, styrene, 1,2,3-trichlorobenzene, or 1,2,4-trichlorobenzene (Table 5-8).

Twenty-four (24) semi-volatile organic compounds were detected in the subsurface soil & fill samples collected during the NYSDEC Site Characterization with eighteen (18) of these compounds being polycyclic aromatic hydrocarbons (Table 5-13). Of the PAH compounds, acenaphthene (4 samples), acenaphthylene (2 samples), anthracene (1 sample), benzo(a)-anthracene (3 samples), benzo(b)fluoranthene (5 samples), benzo(k)fluoranthene (6 samples), chrysene (7 samples), fluoranthene (2 samples), fluorene (1 sample), indeno (1,2,3-cd)pyrene (5 samples), naphthalene (4 samples), phenanthrene (5 samples), and pyrene (5 samples) were detected at concentrations that exceeded the NYSDEC Part 375 restricted residential (but not the commercial) soil cleanup objectives (Table 5-13). In addition, the concentrations of 2-methylnaphthalene in fifteen (15) samples exceeded the CP-51 residential soil cleanup objectives (Table 5-13).

Concentrations of acenaphthene (4 samples), acenaphthylene (2 samples), anthracene (1 sample), benzo(a)anthracene (9 samples), benzo(a)pyrene (12 samples), benzo(b)fluoranthene (9 samples), benzo(k)fluoranthene (1 sample), chrysene (1 sample), dibenzo(a,h)anthracene (9 samples), fluoranthene (2 samples), fluorene (1 sample), indeno (1,2,3-cd)pyrene (8 samples),

naphthalene (3 samples), phenanthrene (1 sample), and pyrene (1 sample) exceeded the NYSDEC Part 375 commercial soil cleanup objectives (Table 5-13).

Concentrations of acenaphthene (3 samples), acenaphthylene (3 samples), benzo(a)-anthracene (12 samples), benzo(a)pyrene (7 samples), benzo(b)fluoranthene (11 samples), benzo(k)fluoranthene (8 samples), chrysene (7 samples), dibenzo(a,h)anthracene (2 samples), indeno (1,2,3-cd)pyrene (6 samples) and naphthalene (7 samples) exceeded the NYSDEC Part 375 groundwater protection soil cleanup objectives (Table 5-13). In addition, the concentrations of 2-methylnaphthalene in six (6) samples exceeded the CP-51 groundwater protection soil cleanup objectives (Table 5-13).

Ammonia (51 samples) and total cyanide (40 samples) were also detected in the subsurface soil & fill samples collected during the NYSDEC Site Characterization with concentrations of total cyanide (4 samples) exceeding the NYSDEC Part 375 unrestricted, restricted residential, and commercial soil cleanup objectives, which is 27.0 ppm for all three uses (Table 5-13). Concentrations of cyanide in three (3) samples also exceeded the NYSDEC Part 375 groundwater protection soil cleanup objectives (Table 5-13). There are no NYSDEC soil cleanup objectives for ammonia (Table 5-13).

5.4 Groundwater

Thirteen (13) historical groundwater samples have been collected from the Fedders Auto Components Site including: two (2) during the 1989 FEDCO Site Investigation, three (3) during the 1990 NYSDEC Phase II Investigation, five (5) during the BCP Remedial Investigation, and three (3) during the 2020 NYSDEC Remedial Investigation of the 31 Tonawanda Street Off-Site Area. The locations of these samples are shown on Figures 2-3 and 3-1. Information concerning historical sample collection and analysis is given in Table 3-1.

Fourteen (14) groundwater samples (not counting duplicates & MS/MSD samples) were collected during the NYSDEC Site Characterization at the Fedders Auto Components Site. The locations of the wells from which these samples were collected are shown on Figure 3-3. Information concerning historical sample collection and analysis is given in Table 3-1.

5.4.1 1989 Site Investigation

Two (2) overburden groundwater samples were collected from the Fedders Auto Components Site during the 1989 FEDCO Site Investigation and analyzed for TCL volatile organic compounds via USEPA method 8240 and PCBs via USEPA method 608. The locations of the monitoring wells from which these samples were collected are shown on Figure 3-1. Analytical results for these samples are summarized in Table 5-14 (VOCs) and Table 5-18 (PCBs), while information concerning sample collection and analysis is given in Table 3-1. The lab report for these samples is included in Appendix E.

The results of the organic analyses revealed that eight (8) volatile organic compounds were detected in the groundwater samples collected in 1989 including 1,1,1-trichloroethane (2 samples), 1,1-dichloroethane (2 samples), 1,1-dichloroethene (1 sample), trans-1,2-dichloroethene (1 sample), benzene (2 samples), ethylbenzene (1 sample), trichloroethene (1 sample), and vinyl chloride (2 samples) (Table 5-14). All detections exceeded the NYSDEC groundwater standards or guidance values (Table 5-14).

PCBs were not detected in the groundwater samples collected during the 1989 FEDCO Site Investigation (Table 5-18).

5.4.2 1990 Phase II Investigation

Three (3) overburden groundwater samples were collected from the Fedders Auto Components Site during the 1990 NYSDEC Phase II Investigation and analyzed for TCL volatile organic compounds (method not provided), TCL semi-volatile organic compounds (method not provided), pesticides (method not provided), PCBs (method not provided), TAL metals (method not provided), and cyanide (method not provided). Analytical results for these samples are summarized in Table 5-14 (VOCs) and Table 5-18 (SVOCs, Pesticides, PCBs, Metals, & Cyanide), while information concerning sample collection and analysis is given in Table 3-1. The lab report for these samples is included in Appendix E.

The results of the organic analyses revealed that both volatile and semi-volatile organic compounds were detected in the groundwater samples collected in 1990 (Tables 5-14 and 5-18). Six (6) volatile organic compounds were detected in these samples including 1,1,1-trichloroethane (3 samples), 1,1-dichloroethane (3 samples), total 1,2-dichloroethene (3

samples), acetone (1 sample), methylene chloride (3 samples), and trichloroethene (3 samples) (Table 5-14). With the exception of acetone, every detection exceeded the NYSDEC groundwater standards or guidance values (Table 5-14). Acetone and methylene chloride were also detected in the blank sample (Table 5-14), so the presence of these compounds in the groundwater samples is likely related to laboratory contamination.

Twelve (12) semi-volatile organic compounds were detected in the groundwater samples collected during the NYSDEC Phase II Investigation with five (5) of these compounds being polycyclic aromatic hydrocarbons (Table 5-18). Only the concentration of benzo(b)fluoranthene (1 sample) exceeded the NYSDEC groundwater standards or guidance values (Table 5-18).

Other semi-volatile organic compounds detected in the groundwater samples included 1,2-dichlorobenzene (1 sample), 1,2,4-trichlorobenzene (1 sample), bis(2-ethylhexyl)phthalate (3 samples), diethylphthalate (1 sample), di-n-butylphthalate (3 samples), hexachlorobenzene (1 sample), and phenol (1 sample) (Table 5-18). Only the concentrations of bis(2-ethylhexyl) phthalate (3 samples), hexachlorobenzene (1 sample), and phenol (1 sample) exceeded the NYSDEC groundwater standards or guidance values (Table 5-18). Bis(2-ethylhexyl)phthalate was also detected in the blank sample (Table 5-18), so the presence of this compound in the groundwater samples is likely related to laboratory contamination.

Delta-BHC (1 sample) was the only pesticide detected in the groundwater samples collected during the NYSDEC Phase II Investigation (Table 5-18). The concentration of delta-BHC, however, exceeded the NYSDEC groundwater standards or guidance values (Table 5-18).

Groundwater samples collected from the Fedders wells in 1990 did not contain any PCBs (Table 5-18).

Twelve (12) metals (including cyanide) were detected in the groundwater samples collected during the NYSDEC Phase II Investigation with only three (3) of these metals being EPA priority pollutant metals (Table 5-18). No EPA priority pollutant metals exceeded the NYSDEC groundwater standards or guidance values (Table 5-18). Other metals that exceeded the NYSDEC groundwater standards or guidance values included iron (3 samples), magnesium (2 samples), and sodium (3 samples) (Table 5-18). Cyanide was detected in one (1) sample at a concentration that significantly exceeded the NYSDEC groundwater standards or guidance

values (Table 5-18).

5.4.3 2019 BCP Remedial Investigation

Five (5) overburden groundwater samples were collected from the 57-71 Tonawanda Street BCP Site during the BCP Remedial Investigation and analyzed for TCL volatile organic compounds via USEPA method 8260C, TCL semi-volatile organic compounds via USEPA method 8270D, TCL pesticides via USEPA method 8081B, Silvex via USEPA method 8151A, TCL PCBs via USEPA method 8082A, TAL metals via USEPA method 6010C, mercury via USEPA method 7470A, Hexavalent Chromium via USEPA method 7196A, cyanide via USEPA method SM 4500, PFAS via Isotope Dilution, and 1,4-dioxane via USEPA method EPA 8270D SIM. The locations of these samples are shown on Figure 2-1. Analytical results for these samples are summarized in Table 5-15 (VOCs), Table 5-19 (SVOCs, Pesticides, PCBs & Metals), and Table 5-20 (Emerging Contaminants). Information concerning sample collection and analysis is given in Table 3-1, while the lab reports for these samples are included in Appendix E.

The results of the organic analyses revealed that volatile organic compounds were detected in the groundwater samples collected in 2020 (Tables 5-15 & 5-19). Six (6) volatile organic compounds were detected in these samples with chlorinated VOCs being detected most frequently (Table 5-15). Chlorinated VOCs detected included 1,1,1-trichloroethane (2 samples), 1,1-dichloroethane (1 sample), cis-1,2-dichloroethene (2 samples), trichloroethene (5 samples) and vinyl chloride (1 sample).

Chlorinated VOCs that exceeded the NYSDEC groundwater standards or guidance values included 1,1,1-trichloroethane (1 sample), 1,1-dichloroethane (1 sample), cis-1,2-dichloro-ethene (1 sample), trichloroethene (3 samples), and vinyl chloride (1 sample) (Table 5-15). Acetone was detected in three (3) samples at concentrations that exceeded the NYSDEC groundwater standards or guidance values (Table 5-15).

Groundwater samples collected from the 57-71 Tonawanda Street BCP Site did not contain any semi-volatile organic compounds, pesticides, silvex, or PCBs (Table 5-19).

Eight (8) metals (including cyanide) were detected in the groundwater samples collected from the 57-71 Tonawanda Street BCP Site with five (5) of these metals being EPA priority pollutant metals (Table 5-19). The only priority pollutant metals that exceeded the NYSDEC

groundwater standards or guidance values included lead (1 sample) and selenium (3 samples) (Table 5-19). Concentrations of manganese (4 samples) also exceeded the NYSDEC groundwater standards or guidance values (Table 5-19). Cyanide was only detected in one (1) sample but at a concentration that did not exceed the NYSDEC groundwater standards or guidance values (Table 5-19). Hexavalent chromium was not detected in any of the samples.

Twelve (12) per- and polyfluoroalkyl substances (PFAS) were detected in the groundwater samples collected from the 57-71 Tonawanda Street BCP Site (Table 5-20). Only the concentration of PFOS in one (1) sample exceeded the NYSDEC groundwater standards or guidance values (Table 5-20). It is important to note, however, that NYSDEC groundwater standards or guidance values are only available for PFOS and PFOA.

1,4-dioxane was detected in four (4) groundwater sample collected from the 57-71 Tonawanda Street BCP Site with the concentrations in three (3) samples exceeding the NYSDEC groundwater standards or guidance values (Table 5-20).

5.4.3 2020 Remedial Investigation

Three (3) overburden groundwater samples from monitoring wells along the bike path were collected during the 2020 NYSDEC Remedial Investigation of the 31 Tonawanda Street Off-Site Area and analyzed for TCL volatile organic compounds via USEPA method 8260C, TCL semi-volatile organic compounds via USEPA method 8270D, TCL pesticides via USEPA method 8081B, TCL PCBs via USEPA method 8082A, TAL metals via USEPA method 6010C, and mercury via USEPA method 7470A. The locations of these samples are shown on Figure 2-3. Analytical results for these samples are summarized in Table 5-16 (VOCs) and Table 5-21 (SVOCs, Pesticides, PCBs & Metals). Information concerning sample collection and analysis is given in Table 3-1. The lab report for these samples is included in Appendix E.

The results of the organic analyses revealed that both volatile and semi-volatile organic compounds were detected in the groundwater samples collected from the bike path wells in 2020 (Tables 5-16 & 5-21). Six (6) volatile organic compounds were detected in these samples with petroleum VOCs being detected most frequently (Table 5-16). Petroleum VOCs detected included benzene (2 samples), ethylbenzene (3 samples), isopropylbenzene (1 sample), toluene (2 samples), and total xylenes (3 samples). Styrene was also detected in one (1) sample. All

detections exceeded the NYSDEC groundwater standards or guidance values (Table 5-16). No chlorinated volatile organic compounds were detected in the bike path groundwater samples (Table 5-16).

Twenty-three (23) semi-volatile organic compounds were detected in the groundwater samples collected from the bike path wells with seventeen (17) of these compounds being polycyclic aromatic hydrocarbons (Table 5-21). Of the PAH compounds, acenaphthene (3 samples), anthracene (1 sample), benzo(a)anthracene (3 samples), benzo(a)pyrene (2 samples), benzo(b)fluoranthene (2 samples), benzo(k)fluoranthene (1 sample), chrysene (3 samples), fluoranthene (1 sample), fluorene (1 sample), indeno(1,2,3-cd)pyrene (1 sample), naphthalene (2 samples), phenanthrene (3 samples) and pyrene (1 sample) were detected at concentrations that exceeded the NYSDEC groundwater standards or guidance values (Table 5-21).

Phenolic compounds were also detected in the groundwater samples from the bike path wells including 2,4-dimethylphenol (1 sample) and phenol (3 samples). Concentrations of phenol (2 samples) exceeded the NYSDEC groundwater standards or guidance values (Table 5-21).

Acetophenone (1 sample), biphenyl (2 samples), carbazole (3 samples), and dibenzofuran (3 samples) were also detected in the groundwater samples collected from the bike path wells (Table 5-21). Concentrations of biphenyl (2 samples) exceeded the NYSDEC groundwater standards or guidance values (Table 5-21). There are no NYSDEC groundwater standards or guidance values for acetophenone, carbazole, or dibenzofuran.

Six (6) pesticides were detected in the groundwater samples collected from the bike path wells (Table 5-21). The pesticides detected included DDT (1 sample), delta-BHC (1 sample), endrin aldehyde (1 sample), endrin ketone (1 sample), gamma-BHC (2 samples) and heptachlor (1 sample). Pesticides that exceeded the NYSDEC groundwater standards included delta-BHC (1 sample), gamma-BHC (1 sample) and heptachlor (1 sample) (Table 5-21).

Groundwater samples collected from the bike path wells did not contain any PCBs (Table 5-21).

Sixteen (16) metals were detected in the groundwater samples collected from the bike

path wells with five (5) of these metals being EPA priority pollutant metals (Table 5-21). The only priority pollutant metal that exceeded the NYSDEC groundwater standards or guidance values was lead (1 sample) (Table 5-21). Other metals that exceeded the NYSDEC groundwater standards or guidance values included iron (3 samples), magnesium (2 samples), manganese (3 samples) and sodium (3 samples) (Table 5-21).

5.4.5 2025 Site Characterization

Fourteen (14) overburden groundwater samples were collected from the Fedders Auto Components Site during the NYSDEC Site Characterization and analyzed for TCL volatile organic compounds via USEPA method 8260D, TCL semi-volatile organic compounds via USEPA method 8270E, 1,4-dioxane via USEPA method 8270E, cyanide via USEPA method 9012, and ammonia via USEPA method SM-4500-NH3 C-2011. The locations of these samples are shown on Figure 3-3. Analytical results for these samples are summarized in Table 5-17 (VOCs) and Table 5-22 (SVOCs, 1,4-Dioxane, Ammonia & Total Cyanide). Information concerning sample collection and analysis is given in Table 3-3. The lab reports for these samples are included in Appendix F.

The results of the organic analyses revealed that both volatile and semi-volatile organic compounds were detected in the groundwater samples collected during the NYSDEC Site Characterization (Tables 5-17 & 5-22). Twenty-six (26) volatile organic compounds were detected in these samples with petroleum VOCs being detected most frequently (Table 5-17). Petroleum VOCs detected included benzene (6 samples), ethylbenzene (6 samples), isopropylbenzene (5 samples), p-isopropyltoluene (2 samples), naphthalene (5 samples), n-butylbenzene (1 sample), n-propylbenzene (4 samples), toluene (5 samples), 1,2,4-trimethylbenzene (5 samples), 1,3,5-trimethylbenzene (5 samples), and total xylenes (5 samples) (Table 5-17).

Petroleum VOCs that exceeded the NYSDEC groundwater standards or guidance values included benzene (5 samples), ethylbenzene (6 samples), isopropylbenzene (4 samples), naphthalene (5 samples), n-propylbenzene (2 samples), toluene (4 samples), 1,2,4-trimethylbenzene (5 samples), 1,3,5-trimethylbenzene (4 samples), and total xylenes (5 samples) (Table 5-17).

Chlorinated VOCs were also detected in the groundwater samples including 1,1,2-trichloroethane (2 samples), 1,1-dichloroethane (4 samples), 1,1-dichloroethene (2 samples), 1,2-dichloroethane (1 sample), cis-1,2-dichloroethene (6 samples), trans-1,2-dichloroethene (1 sample), chloroethane (1 sample), trichloroethene (6 samples) and vinyl chloride (4 sample) (Table 5-17).

Chlorinated VOCs that exceeded the NYSDEC groundwater standards or guidance values included 1,1,2-trichloroethane (2 samples), 1,1-dichloroethane (1 sample), 1,1-dichloroethene (2 samples), 1,2-dichloroethane (1 sample), cis-1,2-dichloroethene (4 samples), chloroethane (1 sample), trichloroethene (2 samples) and vinyl chloride (3 sample) (Table 5-17).

Acetone (1 sample), chloroform (2 samples), methyl ethyl ketone (3 samples), and styrene (1 sample) were also detected at concentrations that exceeded the NYSDEC groundwater standards or guidance values (Table 5-17).

Twenty-one (21) semi-volatile organic compounds were detected in the groundwater samples collected during the NYSDEC Site Characterization with fifteen (15) of these compounds being polycyclic aromatic hydrocarbons (Table 5-22). Of the PAH compounds, acenaphthene (3 samples), anthracene (1 sample), benzo(a)anthracene (3 samples), benzo(a)pyrene (3 samples), chrysene (3 samples), fluorene (1 sample), indeno(1,2,3-cd)pyrene (3 samples), naphthalene (3 samples), phenanthrene (3 samples) and pyrene (2 samples) were detected at concentrations that exceeded the NYSDEC groundwater standards or guidance values (Table 5-22).

Phenolic compounds were also detected in the groundwater samples collected during the NYSDEC Site Characterization including 3 & 4-Methylphenol (1 sample) and phenol (1 sample). Concentrations of both phenolic compounds exceeded the NYSDEC groundwater standards or guidance values (Table 5-22).

Acetophenone (3 samples), biphenyl (5 samples), carbazole (4 samples), and dibenzofuran (4 samples) were also detected in the groundwater samples collected from the Fedders wells (Table 5-22). Concentrations of biphenyl (3 samples) exceeded the NYSDEC groundwater standards or guidance values (Table 5-22). There are no NYSDEC groundwater standards or guidance values for acetophenone, carbazole, or dibenzofuran.

Ammonia (9 samples), total cyanide (4 samples), and 1,4-dioxane (8 samples) were also detected in the groundwater samples collected during the NYSDEC Site Characterization with concentrations of ammonia (5 samples) and 1,4-dioxane (8 samples) exceeding the NYSDEC groundwater standards or guidance values (Table 5-22).

5.5 Surface Water

Four (4) historical surface water samples have been collected from Scajaquada Creek to evaluate off-site migration from the Fedders Auto Components Site. These samples include three (3) during the 1990 NYSDEC Phase II Investigation and one (1) during the 2020 NYSDEC Remedial Investigation of the 31 Tonawanda Street Off-Site Area. The locations of these samples are shown on Figures 2-4. Information concerning historical sample collection and analysis is given in Table 3-1.

No surface water samples were collected during the 2025 NYSDEC Site Characterization.

5.5.1 1990 Phase II Investigation

Three (3) surface water samples were collected from Scajaquada Creek during the 1990 NYSDEC Phase II Investigation and analyzed for TCL volatile organic compounds (method not provided), TCL semi-volatile organic compounds (method not provided), pesticides (method not provided), PCBs (method not provided), TAL metals (method not provided), and cyanide (method not provided). Analytical results for these samples are summarized in Table 5-23, while information concerning sample collection and analysis is given in Table 3-1. The lab report for these samples is included in Appendix E.

The results of the organic analyses revealed that acetone and methylene chloride were the only volatile organic compounds detected in the surface water samples collected from Scajaquada Creek, while bis(2-ethylhexyl) phthalate and di-n-butyl phthalate were the only semi-volatile organic compound detected (Table 5-23). Acetone, methylene chloride, and bis(2-ethylhexyl) phthalate were also detected in the blank samples (Table 5-23), so the presence of these compounds in the surface water samples is likely related to laboratory contamination. Concentrations of di-n-butyl phthalate did not exceed NYSDEC surface water standards or guidance values (Table 5-23).

Pesticides and PCBs were not detected in any of the surface water samples collected from Scajaquada Creek in 1990 (Table 5-23).

Ten (10) metals were detected in the surface water samples collected from Scajaquada Creek with only two (2) of these metals being EPA priority pollutant metals (Table 5-23). No EPA priority pollutant metal exceeded the NYSDEC surface water standards or guidance values (Table 5-23). Other metals that exceeded the NYSDEC surface water standards or guidance values included aluminum (3 samples) and iron (3 samples) (Table 5-23). Ecology & Environment (1992) reports, however, that aluminum was detected in the preparation blank at a concentration of 150 µg/L, so they consider the aluminum results to be non-detect.

5.5.2 2020 Remedial Investigation

One (1) surface water sample was collected from Scajaquada Creek downstream of West Avenue during the 2020 NYSDEC Remedial Investigation of the 31 Tonawanda Street Off-Site Area and analyzed for TCL volatile organic compounds via USEPA method 8260D, TCL semi-volatile organic compounds via USEPA method 8270E, TCL pesticides via USEPA method 8081B, TCL herbicides via USEPA method 8151A, TCL PCBs via USEPA method 8082A, TAL metals via USEPA method 6010D, mercury via USEPA method 7470A, and 1,4-dioxane via USEPA method 8270E. The analytical results for this sample are summarized in Table 5-23, while information concerning sample collection and analysis is given in Table 3-1. The lab report for these samples is included in Appendix E.

No organic compounds (VOCs, SVOCs, Pesticides, and PCBs) were detected in the surface water sample collected from Scajaquada Creek in 2022 (Table 5-23).

Twelve (12) metals were detected in the surface water sample collected from Scajaquada Creek in 2022 with only three (3) of these metals being EPA priority pollutant metals (Table 5-23). Antimony was the only priority pollutant metal that exceeded the NYSDEC surface water standards or guidance values (Table 5-23). No other metal exceeded the NYSDEC surface water standards or guidance values (Table 5-23).

1,4-dioxane was detected in the surface water sample collected in 2022 at a concentration that did not exceed the NYSDEC surface water guidance value for this contaminant (Table 5-23).

5.6 Sediment

Five (5) historical sediment samples have been collected from Scajaquada Creek to evaluate off-site migration from the Fedders Auto Components Site. These samples include three (3) during the 1990 NYSDEC Phase II Investigation and two (2) compiled for the 2020 NYSDEC Remedial Investigation of the 31 Tonawanda Street Off-Site Area. The locations of these samples are shown on Figure 2-4. Information concerning historical sample collection and analysis is given in Table 3-1.

No sediment samples were collected during the 2025 NYSDEC Site Characterization.

5.6.1 1990 Phase II Investigation

Three (3) sediment samples were collected during the 1990 NYSDEC Phase II Investigation and analyzed for TCL volatile organic compounds (method not provided), TCL semi-volatile organic compounds (method not provided), pesticides (method not provided), PCBs (method not provided), TAL metals (method not provided), and cyanide (method not provided). Analytical results for these samples are summarized in Table 5-24, while information concerning sample collection and analysis is given in Table 3-1. The lab report for these samples is included in Appendix E.

The results of the organic analyses revealed that volatile organic compounds were detected in the sediment samples collected from Scajaquada Creek (Table 5-24). Chlorinated VOCs detected included 1,2-dichloroethene (1 sample), tetrachloroethane (1 sample), and trichloroethene (1 sample). None of the concentrations, however, exceeded the NYSDEC sediment guidance values (Table 5-24). Acetone and methylene chloride were also detected in the blank samples (Table 5-24), so the presence of these compounds in the sediment samples is likely related to laboratory contamination.

Twenty (20) semi-volatile organic compounds were detected in the sediment samples collected in 1990 with seventeen (17) of these compounds being polycyclic aromatic hydrocarbons (Table 5-24). Of the PAH compounds, benzo(a)anthracene (1 sample), benzo(a)pyrene (1 sample), benzo(b)fluoranthene (1 sample), benzo(k)fluoranthene (1 sample), chrysene (1 sample), fluoranthene (1 sample), phenanthrene (1 sample), and pyrene (1 sample) were detected at concentrations that exceeded the NYSDEC sediment guidance values

(Table 5-24). No other semi-volatile organic compounds exceeded any of the NYSDEC sediment guidance values (Table 5-24).

Total PAH concentrations in the sediment samples ranged from 7,005 µg/kg in sample SED-3 to 379,950 µg/kg in sample SED-1 (Table 5-24). The total PAH concentration in sediment sample SED-1 exceeded the NYSDEC Class C sediment guidance value, while the total PAH concentrations in samples SED-2 & SED-3 exceeded the NYSDEC Class B sediment guidance value (Table 5-24).

Pesticides were not detected in any of the sediment samples collected from Scajaquada Creek in 1990 (Table 5-24).

PCBs were detected in all three (3) sediment samples collected from Scajaquada Creek during the 1990 NYSDEC Phase II Investigation, with the concentrations exceeding the NYSDEC Class B (2 samples) or Class C (1 sample) sediment guidance values (Table 5-24).

Nineteen (19) metals were detected in the sediment samples collected from Scajaquada Creek (Table 5-24). Of these metals, eight (8) were detected at concentrations that exceeded the NYSDEC sediment guidance values, with seven (7) of these metals being EPA priority pollutant metals. The EPA priority pollutant metals that exceeded the Class B (but not Class C) sediment guidance values included arsenic (1 sample), cadmium (2 samples), chromium (1 sample), and mercury (1 sample) (Table 5-24). Class C sediment guidance values were exceeded for cadmium (1 sample), copper (3 samples), lead (3 samples), mercury (1 sample), and zinc (3 samples) (Table 5-24). Concentrations of nickel also exceeded the NYSDEC Class B (3 samples) sediment guidance values (Table 5-24).

5.6.2 2020 Remedial Investigation

Between March 28 and April 5, 2017, Empire GeoServices, Inc., under contract to the NYSDEC, completed a sediment sampling investigation of Scajaquada Creek from Elmwood Avenue to the mouth of the creek at the Black Rock Canal. Sediment samples were collected from 34 locations to evaluate contamination in Scajaquada Creek. Results for sediment samples collected downstream of West Avenue were tabulated and included in the 2020 NYSDEC Remedial Investigation of the 31 Tonawanda Street Off-Site Area. One of these samples (SCJ-12-01-02) was collected immediately downstream of West Avenue (Figure 2-4) and is useful for

evaluating contaminant migration from the Fedders Auto Components Site. Analytical results for this sample are summarized in Table 5-24, while information concerning sample collection and analysis is given in Table 3-1. The lab report for this sample is included in Appendix E.

On September 25, 2017, the U.S. Army Corp of Engineers (USACE) collected fifteen (15) sediment samples from Scajaquada Creek between the West Avenue bridge and the Black Rock Canal. These samples were collected as part of a larger investigation of the Niagara River Area of Concern (AOC). The objective of this investigation was to collect, evaluate and characterize sediment samples from the Niagara River AOC to evaluate potential exposure to ecological receptors. The results for these samples were tabulated and included in the 2020 NYSDEC Remedial Investigation of the 31 Tonawanda Street Off-Site Area. One of these samples (SJ-5-E) was collected immediately downstream of West Avenue (Figure 2-4) and is useful for evaluating contaminant migration from the Fedders Auto Components Site. Analytical results for this sample are summarized in Table 5-24, while information concerning sample collection and analysis is given in Table 3-1. The lab report for this sample is included in Appendix E.

The two (2) sediment samples collected immediately downstream of the West Avenue bridge in 2017 were not analyzed for volatile or semi-volatile organic compounds (Table 5-24).

Five (5) pesticides were detected in the NYSDEC sediment sample collected from Scajaquada Creek downstream of West Avenue (Table 5-24). The USACE sediment sample was not analyzed for pesticides (Table 5-24). Pesticides that exceeded the NYSDEC sediment criteria for the protection of human health bioaccumulation included DDD (1 sample), DDE (1 sample), and delta-BHC (1 sample). No other NYSDEC sediment criteria were exceeded (Table 5-24).

PCBs were detected in the NYSDEC sediment sample collected from Scajaquada Creek downstream of West Avenue (Table 5-24). The USACE sediment sample was not analyzed for PCBs (Table 5-24). The concentration of total PCBs in the NYSDEC sample exceeded the NYSDEC Class B sediment guidance values (Table 5-24).

Twenty-three (23) metals were detected in the sediment samples collected in 2017 immediately downstream of the West Avenue bridge (Table 5-24). Of these metals, eight (8) were detected at concentrations that exceeded the NYSDEC sediment guidance values, with seven (7) of these metals being EPA priority pollutant metals. The EPA priority pollutant metals

that exceeded the Class B (but not Class C) sediment guidance values included arsenic (1 sample), cadmium (1 sample), chromium (1 sample), and mercury (2 samples) (Table 5-24). Class C sediment guidance values were exceeded for copper (1 sample), lead (2 samples), and zinc (1 sample) (Table 5-24). Concentrations of nickel also exceeded the NYSDEC Class B (1 sample) sediment guidance values (Table 5-24).

5.7 Non-Aqueous Phase Liquid (NAPL)

The most recent investigations (2020 & 2025) completed at the site documented the presence of coal tar (NAPL) in soil borings completed along the bike path and at the easternmost portion of the Fedder's parking lot (Figure 5-3). Three (3) NAPL samples were collected from the Fedders Auto Components Site during the 2020 NYSDEC Remedial Investigation of the 31 Tonawanda Street Off-Site Area. The locations of these samples are shown on Figures 3-4 & 5-3. Information concerning historical sample collection and analysis is given in Table 3-1. No NAPL samples were collected during the 2025 NYSDEC Site Characterization.

5.7.1 2020 Remedial Investigation

Three (3) NAPL samples were collected from bike path well MW-100 (Figure 3-3) during the Remedial Investigation of the 31 Tonawanda Street Off-Site Area and analyzed for TCL volatile organic compounds via USEPA method 8260C, TCL semi-volatile organic compounds via USEPA method 8270D, TCL pesticides via USEPA method 8081B, TCL PCBs via USEPA method 8082A, TAL metals via USEPA method 6010C, mercury via USEPA method 7471B, and specific gravity via ASTM method D1429-87. Information concerning sample collection and analysis is given in Table 3-1, while the lab reports for these samples are included in Appendix E. It is important to note that the October 2020 NAPL sample was prepped/analyzed outside the specified holding times so these results should be used with caution.

The analytical results for the bike path NAPL samples are summarized in Table 5-25. For comparison purposes, this table also includes the analytical results for two (2) NAPL samples collected from the Iroquois Gas/Westwood Pharmaceuticals site in 1992. New York State does not currently have any standards, criteria or guidance values appropriate for NAPL. Information concerning sample collection and analysis is given in Table 3-1, while the lab reports for these samples are included in Appendix E.

The results of the organic analyses revealed that both volatile and semi-volatile organic compounds were detected in the Westwood and bike path NAPL samples (Table 5-25). Seven (7) volatile organic compounds were detected in these samples with petroleum VOCs being detected most frequently (Table 5-25). Petroleum VOCs detected included benzene (4 samples), ethylbenzene (4 samples), isopropylbenzene (2 samples), toluene (3 samples), and xylenes (4 samples). Total BTEX (benzene, ethylbenzene, toluene, and xylenes) concentrations ranged from 3,500 J to 14,700 mg/kg (ppm) (Table 5-25).

Methylene chloride (1 sample) and styrene (1 sample) were also detected in the NAPL samples (Table 5-25). Methylene chloride was also detected in the blank sample (Table 5-25), so the presence of this compound in the NAPL sample is likely related to laboratory contamination.

Twenty (20) semi-volatile organic compounds were detected in the NAPL samples collected from Westwood and bike path well MW-100 with seventeen (17) of these compounds being polycyclic aromatic hydrocarbons (Table 5-25). Excluding the results for the sample prepped/analyzed outside of holding times, total PAH concentrations ranged from 180,600 J to 224,240 J mg/kg (ppm) (Table 5-25).

The Westwood and bike path NAPL samples also contained dibenzofuran (4 samples), while the NAPL from bike path well MW-100 also contained biphenyl (2 samples) and carbazole (1 sample) (Table 5-25).

The volatile and semi-volatile organic compounds detected in the Westwood and bike path NAPL samples were similar, as were their concentrations, suggesting that the NAPL collected from well MW-100 is coal tar that originated from the Iroquois Gas/Westwood Pharmaceuticals site.

Two (2) pesticides were detected in the bike path NAPL samples collected during the Remedial Investigation of the 31 Tonawanda Street Off-Site Area (Table 5-25). The pesticides detected included DDT (1 sample) and methoxychlor (1 sample). The Westwood NAPL samples were not analyzed for pesticides (Table 5-25).

PCBs were not detected in the bike path NAPL samples (Table 5-25). The Westwood

NAPL samples were not analyzed for PCBs (Table 5-25).

Fourteen (14) metals were detected in the bike path NAPL samples with five (5) of these metals being EPA priority pollutant metals (Table 5-25). The EPA priority pollutant metals detected included arsenic (1 sample), chromium (1 sample), copper (1 sample), lead (1 sample) and zinc (1 sample) (Table 5-25). The Westwood NAPL samples were not analyzed for metals (Table 5-25).

The specific gravity of the bike path NAPL samples was measured as 1.0017 and 1.0275 grams per milliliter (g/mL), while density of the Westwood NAPL samples was measured as 1.031 and 1.054 grams per cubic centimeter (g/cc) (Table 5-25). The viscosity of the Westwood NAPL samples was measured as 44.35 and 68.75 centipoise (Table 5-25).

5.8 Sub-Slab Soil Vapor

Six (6) sub-slab soil vapor samples were collected from the Fedders Auto Components during the BCP Remedial Investigation. The locations of these samples are shown on Figure 2-5. No soil vapor intrusion samples were collected during the 2025 NYSDEC Site Characterization. Information concerning historical sample collection and analysis is given in Table 3-1.

No sub-slab soil vapor samples were collected during the 2025 NYSDEC Site Characterization.

5.8.1 2019 BCP Remedial Investigation

Six (6) sub-slab soil vapor samples were collected below the concrete floor of the on-site buildings during the BCP Remedial Investigation of the 57-71 Tonawanda Street BCP Site and analyzed for volatile organic compounds via USEPA method TO-15. The locations of these samples are shown on Figure 2-5. The analytical results for these samples are summarized in Table 5-26, while information concerning sample collection and analysis is given in Table 3-1. The lab reports for these samples are included in Appendix E. Indoor air samples were not collected as the roof is partially collapsed, most of the windows in the building are missing, and none of the buildings are heated.

New York State does not currently have any standards, criteria or guidance values for sub-slab soil vapor. The NYSDOH, however, has developed decision matrices to be used as a risk management tool to provide guidance on when actions are required to address current and potential exposures related to soil vapor intrusion. Because indoor air samples were not collected during the BCP Remedial Investigation, the matrices cannot be used to directly assess mitigation requirements.

The NYSDOH decision matrices provide sub-slab soil vapor concentrations that would automatically require mitigation regardless of indoor air concentrations. These are the action levels utilized in Table 5-26 for evaluating the sub-slab soil vapor sample results.

Twenty-eight (28) volatile organic compounds were detected in the sub-slab soil vapor samples with ten (10) of these compounds being chlorinated VOCs (Table 5-26). Chlorinated VOCs detected included 1,1,1-trichloroethane (4 samples), 1,1,2-trichloroethane (1 sample), 1,1-dichloroethane (1 sample), carbon tetrachloride (1 sample), chloroform (5 samples), chloromethane (2 samples), cis-1,2-dichloroethene (3 samples), tetrachloroethene (3 samples), trans-1,2-dichloroethene (2 samples), and trichloroethene (6 samples). Only concentrations of trichloroethene (4 samples) exceeded the NYSDOH action levels (Table 5-26).

Three (3) petroleum VOCs were also detected in the sub-slab soil vapor samples including benzene (6 samples), m&p-xylene (5 samples), and toluene (6 samples) (Table 5-26). None of the concentrations exceeded the NYSDOH action levels (Table 5-26).

6.0 NATURE AND EXTENT OF CONTAMINATION

The findings of all investigations completed at the Fedders Auto Components Site were discussed in Section 5.0. In this section, those findings are evaluated in more detail to assess the nature and extent of contamination associated with the site.

Analytical results for the Fedders Auto Components Site span a period of 37 years (1989 to 2026). Therefore, the nature and extent of contamination was evaluated using the analytical results from the most recent investigations (i.e., the 2019 BCP Remedial Investigation of the site, the 2020 NYSDEC Remedial Investigation of the 31 Tonawanda Street Off-Site Area, and the 2025 NYSDEC Site Characterization of the site). The exceptions to this include surface soil, surface water, and sediment. Surface soil samples were not collected during either NYSDEC investigation and were not analyzed for VOCs during the BCP Remedial Investigation. Surface water and sediment samples were not collected during the most recent investigations. For these environmental media the older results were evaluated.

6.1 Contaminants of Concern

The primary contaminants of concern (COCs) for the Fedders Auto Components Site are those compounds detected at concentrations that exceed their respective comparison criteria. For subsurface soil, these criteria are the NYSDEC Part 375 soil cleanup objectives. For groundwater and surface water, these criteria are the NYSDEC TOGS 1.1.1 water quality standards and guidance values. For sediment, these criteria are the NYSDEC sediment guidance values. For soil vapor, these criteria are the NYSDOH soil vapor/indoor air matrices. There are no standards, criteria, or guidance values appropriate for assessing the NAPL results.

The principal COCs for subsurface soil, groundwater, and soil vapor are chlorinated VOCs. The primary chlorinated VOCs in these media are 1,1,1-trichloroethane, cis-1,2-dichloroethene, tetrachloroethene, trichloroethene, and vinyl chloride. The principal COCs for sediment from Scajaquada Creek are petroleum VOCs, polycyclic aromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs), and EPA priority pollutant metals. The primary petroleum VOCs in sediment are benzene, ethylbenzene, toluene, and xylenes. The principal COCs for surface water from Scajaquada Creek are metals, specifically aluminum, antimony, and iron.

In addition to the chlorinated VOCs, petroleum VOCs, semi-volatile organic compounds (specifically PAHs), and EPA priority pollutant metals were also detected in subsurface soil at concentrations that exceeded the NYSDEC Part 375 soil cleanup objectives. Petroleum VOCs and PAHs were also detected in groundwater and surface water at concentrations that exceeded the NYSDEC water quality standards and guidance values. These compounds are secondary contaminants of concern for these environmental media.

6.2 Chlorinated Volatile Organic Compounds

Nine (9) surface soil & fill samples have been collected from the Fedders Auto Components Site but only the four (4) samples collected during the 1989 FEDCO Site Investigation were analyzed for volatile organic compounds (Table 3-1). Trichloroethene (2 samples) was the only chlorinated VOC detected in these samples, but concentrations did not exceed any of the NYSDEC Part 375 soil cleanup objectives (Table 5-1).

One hundred forty-two (142) subsurface soil & fill samples have been collected from the Fedders Auto Components Site: (1) two during the 1989 FEDCO Site Investigation; (2) fifteen during the 1990 NYSDEC Phase II Investigation; (3) twenty-four during the BCP Remedial Investigation; (4) three during the 2020 NYSDEC Remedial Investigation of the 31 Tonawanda Street Off-Site Area; and (5) ninety-eight during the 2025 NYSDEC Site Characterization (Tables 3-1 & 3-3). All 142 samples were analyzed for volatile organic compounds (Tables 3-1 & 3-3).

During the most recent investigations (2019 through 2025), chlorinated VOCs in subsurface soil & fill samples that exceeded the NYSDEC Part 375 unrestricted (but not the restricted residential) soil cleanup objectives included 1,1,2-trichloroethane (2 samples), 1,1-dichloroethane (4 samples), 1,1-dichloroethene (2 samples), 1,2-dichloroethane (1 sample), cis-1,2-dichloroethene (6 samples), trans-1,2-dichloroethene (1 sample), chloroethane (1 sample), trichloroethene (13 samples), and vinyl chloride (6 samples) (Tables 5-6, 5-7 & 5-8). These samples also exceeded the NYSDEC Part 375 groundwater protection soil cleanup objectives (Tables 5-6, 5-7 & 5-8).

Chlorinated VOCs in subsurface soil & fill samples that exceeded the NYSDEC Part 375 restricted residential soil cleanup objectives included 1,1,2-trichloroethane (2 samples), 1,1-dichloroethane (4 samples), 1,1-dichloroethene (2 samples), 1,2-dichloroethane (1 sample), cis-

1,2-dichloroethene (6 samples), trans-1,2-dichloroethene (1 sample), chloroethane (1 sample), trichloroethene (8 samples) and vinyl chloride (5 samples) (Tables 5-6, 5-7 & 5-8). Trichloroethene exceeded the NYSDEC Part 375 commercial soil cleanup objective in two (2) samples (Tables 5-6, 5-7 & 5-8). No chlorinated volatile organic compounds were detected in the bike path subsurface soil & fill samples (Table 5-7).

When detected, the concentrations of total chlorinated VOCs in the subsurface soil & fill samples ranged from 0.70 to 1,980,000 ug/kg (ppb) (Tables 5-6, 5-7 & 5-8). Total chlorinated VOC concentrations and sample depths are summarized on Figure 5-1 (2019 & 2020 samples) and Figure 5-2 (2025 samples).

Twenty-seven (27) overburden groundwater samples have been collected from the Fedders Auto Components Site: (1) two during the 1989 FEDCO Site Investigation; (2) three during the 1990 NYSDEC Phase II Investigation; (3) five during the BCP Remedial Investigation; (4) three during the 2020 NYSDEC Remedial Investigation of the 31 Tonawanda Street Off-Site Area; and (5) fourteen during the 2025 NYSDEC Site Characterization (Tables 3-1 & 3-3). All 27 samples were analyzed for volatile organic compounds (Tables 3-1 & 3-3).

During the most recent investigations (2019 through 2025), chlorinated VOCs that exceeded NYSDEC groundwater standards or guidance values included 1,1,1-trichloroethane (1 sample), 1,1,2-trichloroethane (2 samples), 1,1-dichloroethane (2 samples), 1,1-dichloroethene (2 samples), 1,2-dichloroethane (1 sample), cis-1,2-dichloroethene (5 samples), chloroethane (1 sample), trichloroethene (5 samples), and vinyl chloride (4 samples) (Tables 5-15, 5-16 & 5-17). No chlorinated VOCs were detected in the bike path wells (Table 5-16).

Four (4) surface water samples have been collected from Scajaquada Creek to evaluate off-site migration from the Fedders Auto Components Site with all four (4) samples being analyzed for volatile organic compounds (Table 3-1). Chlorinated VOCs were not detected in any of these samples (Table 5-23).

Five (5) sediment samples have been collected from Scajaquada Creek to evaluate off-site migration from the Fedders Auto Components Site. Only the three (3) samples collected during the 1990 NYSDEC Phase II Investigation were analyzed for volatile organic compounds (Table 3-1). Three (3) chlorinated VOCs were detected in these samples (1,2-dichloroethene, tetra-

chloroethane, and trichloroethene) but none of the concentrations exceeded any of the NYSDEC sediment guidance values (Table 5-24).

Three (3) NAPL samples have been collected from the Fedders Auto Components Site with all three (3) being analyzed for volatile organic compounds (Table 3-1). Chlorinated VOCs were not detected in any of these samples (Table 5-25).

Six (6) sub-slab soil vapor samples have been collected from the Fedders Auto Components Site and analyzed for volatile organic compounds (Table 3-1). Ten (10) chlorinated VOCs were detected in these samples but only the concentrations of trichloroethene (4 samples) exceeded the NYSDOH action levels (Table 5-26).

6.2.1 Summary

Chlorinated VOCs (principally 1,1,1-trichloroethane and trichloroethene and their breakdown products) are considered primary contaminants of concern for subsurface soil, groundwater, and sub-slab soil vapor at the Fedders Auto Components Site. During the most recent investigations (2019 through 2025), the highest concentrations of chlorinated VOCs in subsurface soil & fill samples were found under the former Fedder's building, and in front of the building along Tonawanda Street (Tables 5-6, 5-7 & 5-8; Figures 5-1 & 5-2). The highest concentrations of chlorinated VOCs in groundwater during these investigations were associated with wells MW-4D and MW-7D located in front of the building along Tonawanda Street. A loading dock is present in this area so the presence of chlorinated VOCs in subsurface soil & fill and groundwater samples is likely related to leaks and spills during solvent off-loading.

Chlorinated VOCs were not detected in NAPL samples collected from the site or in surface water samples collected from Scajaquada Creek. Chlorinated VOCs were detected but did not exceed applicable SCGs in surface soil samples (restricted residential soil cleanup objectives) from the site or sediment samples (Class B or Class C sediment criteria) from Scajaquada Creek. Chlorinated VOCs were not detected in any surface water samples collected from Scajaquada Creek (Table 5-23). Thus, although chlorinated VOCs have adversely impacted subsurface soil, groundwater, and sub-slab soil vapor at the site, these contaminants have not impacted surface water and sediment in Scajaquada Creek.

The presence of 1,1-dichloroethane, a breakdown product of 1,1,1-trichloroethane, in subsurface soil and groundwater suggests that 1,1,1-trichloroethane is naturally attenuating. The general absence of chloroethane, a breakdown product of 1,1-dichloroethane, suggests that the natural attenuation process has not gone to completion.

Likewise, the presence of dichloroethene, a breakdown product of trichloroethene, in subsurface soil, groundwater, and sub-slab soil vapor, suggests that trichloroethene is naturally attenuating. Once again, the general absence of vinyl chloride, a breakdown product of dichloroethene, suggests that the natural attenuation process has not gone to completion.

Groundwater results obtained during the BCP Remedial Investigation (Table 5-15) show that chlorinated VOCs in the parking lot wells were detected at lower concentrations, in some cases significantly, than were detected in the 1989 and 1990 groundwater samples (Table 5-14). Once again, this suggests that natural attenuation is occurring but also shows that this process is proceeding very slowly.

As stated in Section 2.3, the Fedders Manufacturing Company had a history of using various chemicals, oils, solvents, and other materials in their manufacturing processes. Plant processes included metal stamping, soldering, brazing, welding, painting, acid washing and degreasing. Industrial wastes were reported to include solder dross, degreasing still bottoms including trichloroethene (TCE) and tetrachloroethene (PCE), and petroleum-based lubricating fluids. The Fedders Manufacturing Company, therefore, is the likely source of the chlorinated VOCs detected at the Fedders Auto Components Site.

6.3 Petroleum Volatile Organic Compounds

Nine (9) surface soil & fill samples have been collected from the Fedders Auto Components Site but only the four (4) samples collected during the 1989 FEDCO Site Investigation were analyzed for volatile organic compounds (Table 3-1). Several petroleum VOCs were detected in these samples (ethylbenzene, toluene, and xylenes) but only concentrations of total xylenes (2 samples) exceeded the NYSDEC Part 375 unrestricted (but not the restricted residential) soil cleanup objectives (Table 5-1). None of the contaminants exceeded the NYSDEC Part 375 restricted residential or groundwater protection soil cleanup objectives (Table 5-1).

One hundred forty-two (142) subsurface soil & fill samples have been collected from the Fedders Auto Components Site: (1) two during the 1989 FEDCO Site Investigation; (2) fifteen during the 1990 NYSDEC Phase II Investigation; (3) twenty-four during the BCP Remedial Investigation; (4) three during the 2020 NYSDEC Remedial Investigation of the 31 Tonawanda Street Off-Site Area; and (5) ninety-eight during the 2025 NYSDEC Site Characterization (Tables 3-1 & 3-3). All 142 samples were analyzed for volatile organic compounds (Tables 3-1 & 3-3).

The most recent investigations (2020 & 2025) completed at the site documented the presence of coal tar (NAPL) in soil borings completed along the bike path and at the easternmost portion of the Fedder's parking lot (Figure 5-3). Petroleum VOCs are known to be associated with this NAPL so the subsurface soil & fill results for this area will be discussed separately from the main Fedders site.

For the subsurface soil & fill samples collected from the bike path/eastern area soil borings, petroleum VOCs detected included benzene (14 samples), ethylbenzene (14 samples), isopropylbenzene (10 samples), p-isopropyltoluene (3 samples), n-butylbenzene (1 sample), n-propylbenzene (4 samples), toluene (16 samples), 1,2,4-trimethylbenzene (11 samples), 1,3,5-trimethylbenzene (7 samples), and total xylenes (14 samples) (Tables 5-7 & 5-8).

Of these compounds, concentrations of benzene (4 samples), ethylbenzene (4 samples), n-propylbenzene (2 samples), toluene (2 samples), 1,2,4-trimethylbenzene (1 sample), 1,3,5-trimethylbenzene (2 samples), and total xylenes (3 samples) exceeded the NYSDEC Part 375 unrestricted (but not the restricted residential) soil cleanup objectives (Tables 5-7 & 5-8). These samples also exceeded the NYSDEC Part 375 groundwater protection soil cleanup objectives (Tables 5-7 & 5-8). Petroleum VOCs that exceeded the NYSDEC Part 375 restricted residential (but not the commercial) soil cleanup objectives included benzene (2 samples), ethylbenzene (2 samples), toluene (1 sample), 1,2,4-trimethylbenzene (2 samples), 1,3,5-trimethylbenzene (2 samples), and total xylenes (3 samples) (Tables 5-7 & 5-8). Benzene (3 samples), ethylbenzene (3 samples), toluene (2 samples), 1,2,4-trimethylbenzene (2 samples), and total xylenes (2 samples) exceeded the NYSDEC Part 375 commercial soil cleanup objectives (Tables 5-7 & 5-8).

For the main portion of the site (west of the bike path/eastern area), several petroleum VOCs were detected including benzene (10 samples), ethylbenzene (7 samples), isopropylbenzene (3 samples), p-isopropyltoluene (1 sample), n-butylbenzene (1 sample), sec-

butylbenzene (2 samples), n-propylbenzene (3 samples), toluene (46 samples), 1,2,4-trimethylbenzene (6 samples), 1,3,5-trimethylbenzene (1 sample), and total xylenes (15 samples) (Tables 5-6 & 5-8).

Of these compounds, only the concentrations of benzene (1 sample) and total xylenes (4 samples) exceeded the NYSDEC Part 375 unrestricted (but not the restricted residential) soil cleanup objectives (Tables 5-6 & 5-8). The concentration of benzene also exceeded the NYSDEC Part 375 groundwater protection soil cleanup objectives (Tables 5-6 & 5-8). None of the petroleum VOCs exceeded the NYSDEC Part 375 restricted residential or commercial soil cleanup objectives (Tables 5-6 & 5-8).

Twenty-seven (27) overburden groundwater samples have been collected from the Fedders Auto Components Site: (1) two during the 1989 FEDCO Site Investigation; (2) three during the 1990 NYSDEC Phase II Investigation; (3) five during the BCP Remedial Investigation; (4) three during the 2020 NYSDEC Remedial Investigation of the 31 Tonawanda Street Off-Site Area; and (5) fourteen during the 2025 NYSDEC Site Characterization (Tables 3-1 & 3-3). All 27 samples were analyzed for volatile organic compounds (Tables 3-1 & 3-3).

During the most recent investigations (2019 through 2025), petroleum VOCs detected included benzene (8 samples), ethylbenzene (9 samples), isopropylbenzene (6 samples), p-isopropyltoluene (2 samples), naphthalene (5 samples), n-butylbenzene (1 sample), n-propylbenzene (4 samples), toluene (7 samples), 1,2,4-trimethylbenzene (5 samples), 1,3,5-trimethylbenzene (5 samples), and total xylenes (8 samples) (Tables 5-15, 5-16 & 5-17).

Of these compounds, concentrations of benzene (7 samples), ethylbenzene (9 samples), isopropylbenzene (5 samples), naphthalene (5 samples), n-propylbenzene (2 samples), toluene (6 samples), 1,2,4-trimethylbenzene (5 samples), 1,3,5-trimethylbenzene (4 samples), and total xylenes (8 samples) exceeded the NYSDEC groundwater standards or guidance values (Table 5-17).

Four (4) surface water samples have been collected from Scajaquada Creek to evaluate off-site migration from the Fedders Auto Components Site with all four (4) samples being analyzed for volatile organic compounds (Table 3-1). Petroleum VOCs were not detected in any of these samples (Table 5-23).

Five (5) sediment samples have been collected from Scajaquada Creek to evaluate off-site migration from the Fedders Auto Components Site. Only the three (3) samples collected during the 1990 NYSDEC Phase II Investigation were analyzed for volatile organic compounds (Table 3-1). Petroleum VOCs were not detected in these samples (Table 5-24).

Three (3) NAPL samples have been collected from the Fedders Auto Components Site with all three (3) being analyzed for volatile organic compounds (Table 3-1). Petroleum VOCs detected in these samples included benzene (2 samples), ethylbenzene (2 samples), isopropylbenzene (2 samples), toluene (2 samples) and xylenes (2 samples) (Table 5-25). Total BTEX concentrations in these samples ranged from 12,240 to 14,700 mg/kg (ppm) (Table 5-25).

Six (6) sub-slab soil vapor samples have been collected from the Fedders Auto Components Site and analyzed for volatile organic compounds (Table 3-1). Only three (3) petroleum VOCs were detected in these samples including benzene (6 samples), m&p-xylene (5 samples), and toluene (6 samples) (Table 5-26). None of the concentrations, however, exceeded the NYSDOH action levels (Table 5-26).

6.3.1 Summary

Petroleum VOCs (principally benzene, ethylbenzene, toluene, and xylenes or BTEX) are considered the primary contaminants of concern for NAPL at the Fedders Auto Components Site and secondary contaminants of concern for subsurface soil and groundwater. Petroleum VOCs are common components of gasoline, fuel oil, hydraulic fluids, lubricants, and coal tar to name a few, and are common contaminants at brownfield sites. In addition, starting in 1974 and continuing until as late as 1981, the Fedders Manufacturing Company spread approximately 165 gallons per year of waste lubrication oils and hydraulic fluids on the parking lot behind the building for dust control.

Petroleum VOCs were detected at significant concentrations in the NAPL samples collected from bike path well MW-100 (Table 5-25). New York State, however, does not have standards, criteria, or guidance values (SCGs) that are appropriate for NAPL samples. This NAPL, suspected to be coal tar from the nearby Iroquois Gas/Westwood Pharmaceuticals Site (Site Nos. 915141A&B), is known to be present under Scajaquada Creek east of the Fedders Auto Components Site.

Petroleum VOCs were detected in surface soil & fill, subsurface soil & fill, and sub-slab soil vapor samples collected from the main portion (west of the bike path) of the Fedders Auto Components Site. None of the concentrations, however, exceeded any of the applicable SCGs (the NYSDEC restricted residential soil cleanup objectives; the NYSDEC TOGS 1.1.1 water quality standards and guidance values; the NYSDOH soil vapor/indoor air matrices). For the subsurface soil & fill samples collected from the bike path soil borings, several petroleum VOCs exceeded the restricted residential and groundwater protection soil cleanup objectives. The source of these contaminants is likely the coal tar known to be present in this area of the site and under Scajaquada Creek.

Petroleum VOCs were not detected in any of the groundwater samples collected from the main portion (west of the bike path/eastern area) of the site (Tables 5-15 & 5-17) but exceeded NYSDEC groundwater standards or guidance values in the bike path/eastern area wells (Tables 5-16 & 5-17). These results suggest that coal tar is the likely source of the petroleum VOCs in the groundwater samples collected from the bike path wells.

Petroleum VOCs were not detected in any of the surface water (Table 5-23) or sediment (Table 5-24) samples collected from Scajaquada Creek.

6.4 Polycyclic Aromatic Hydrocarbons (PAHs)

Nine (9) surface soil & fill samples have been collected from the Fedders Auto Components Site but only the five (5) samples collected during the BCP Remedial Investigation have been analyzed for semi-volatile organic compounds (Table 3-1). Fifteen (15) PAHs were detected in these samples (Table 5-2).

Of the PAH compounds detected in surface soil & fill samples, concentrations of benzo(a)anthracene (4 samples), benzo(a)pyrene (4 samples), benzo(b)fluoranthene (4 samples), benzo(k)fluoranthene (3 samples), chrysene (3 samples), dibenzo(a,h)anthracene (4 samples), and indeno(1,2,3-cd)pyrene (4 samples) exceeded the NYSDEC Part 375 restricted residential (but not the commercial) soil cleanup objectives (Table 5-2).

Concentrations of benzo(a)anthracene (3 samples), benzo(a)pyrene (4 samples), benzo(b)fluoranthene (3 samples), dibenzo(a,h)anthracene (3 samples), and indeno(1,2,3-

cd)pyrene (3 samples) in the surface soil & fill samples also exceeded the NYSDEC Part 375 commercial soil cleanup objectives (Table 5-2). Finally, concentrations of benzo(a)anthracene (4 samples), benzo(b)fluoranthene (4 samples), benzo(k)fluoranthene (3 samples), chrysene (4 samples), and indeno(1,2,3-cd)pyrene (2 samples) exceeded the NYSDEC Part 375 groundwater protection soil cleanup objectives (Table 5-2).

One hundred forty-two (142) subsurface soil & fill samples have been collected from the Fedders Auto Components Site: (1) two during the 1989 FEDCO Site Investigation; (2) fifteen during the 1990 NYSDEC Phase II Investigation; (3) twenty-four during the BCP Remedial Investigation; (4) three during the 2020 NYSDEC Remedial Investigation of the 31 Tonawanda Street Off-Site Area; and (5) ninety-eight during the 2025 NYSDEC Site Characterization (Tables 3-1 & 3-3). One hundred thirty-four (134) of these samples were analyzed for semi-volatile organic compounds (Tables 3-1 & 3-3).

During the most recent investigations (2019 through 2025), eighteen (18) polycyclic aromatic hydrocarbons were detected in the subsurface soil & fill samples (Tables 5-10, 5-12 & 5-13). Of the PAH compounds, acenaphthene (5 samples), acenaphthylene (3 samples), anthracene (2 samples), benzo(a)anthracene (15 samples), benzo(b)fluoranthene (13 samples), benzo(k)fluoranthene (8 samples), chrysene (12 samples), dibenzo(a,h)anthracene (3 samples), fluoranthene (3 samples), fluorene (2 samples), indeno (1,2,3-cd)pyrene (15 samples), naphthalene (5 samples), phenanthrene (6 samples), and pyrene (6 samples) were detected at concentrations that exceeded the NYSDEC Part 375 restricted residential (but not the commercial) soil cleanup objectives (Tables 5-10, 5-12 & 5-13). In addition, the concentrations of 2-methylnaphthalene in twenty-one (21) samples exceeded the CP-51 residential soil cleanup objectives (Tables 5-10, 5-12 & 5-13).

Concentrations of acenaphthene (4 samples), acenaphthylene (2 samples), anthracene (1 sample), benzo(a)anthracene (15 samples), benzo(a)pyrene (26 samples), benzo(b)fluoranthene (15 samples), benzo(k)fluoranthene (1 sample), chrysene (2 samples), dibenzo(a,h)anthracene (27 samples), fluoranthene (2 samples), fluorene (1 sample), indeno (1,2,3-cd)pyrene (12 samples), naphthalene (4 samples), phenanthrene (2 samples), and pyrene (1 sample) exceeded the NYSDEC Part 375 commercial soil cleanup objectives (Tables 5-10, 5-12 & 5-13).

Concentrations of acenaphthene (4 samples), acenaphthylene (4 samples), benzo(a)-anthracene (27 samples), benzo(a)pyrene (8 samples), benzo(b)fluoranthene (23 samples), benzo(k)fluoranthene (15 samples), chrysene (22 samples), dibenzo(a,h)anthracene (2 samples), indeno (1,2,3-cd)pyrene (8 samples) and naphthalene (9 samples) exceeded the NYSDEC Part 375 groundwater protection soil cleanup objectives (Tables 5-10, 5-12 & 5-13). In addition, the concentrations of 2-methylnaphthalene in eight (8) samples exceeded the CP-51 groundwater protection soil cleanup objectives (Tables 5-10, 5-12 & 5-13).

Twenty-seven (27) overburden groundwater samples have been collected from the Fedders Auto Components Site: (1) two during the 1989 FEDCO Site Investigation; (2) three during the 1990 NYSDEC Phase II Investigation; (3) five during the BCP Remedial Investigation; (4) three during the 2020 NYSDEC Remedial Investigation of the 31 Tonawanda Street Off-Site Area; and (5) fourteen during the 2025 NYSDEC Site Characterization (Tables 3-1 & 3-3). Twenty-five (25) of these samples were analyzed for semi-volatile organic compounds (Tables 3-1 & 3-3).

As previously stated, the most recent investigations (2020 & 2025) completed at the site documented the presence of coal tar (NAPL) in soil borings completed along the bike path and at the easternmost portion of the Fedder's parking lot (Figure 5-3). Polycyclic aromatic hydrocarbons are known to be associated with this NAPL so the overburden groundwater results for this area will be discussed separately from the main Fedders site.

For the groundwater samples collected from the main area wells, pyrene (well MW-7D) was the only PAH detected (Tables 5-19 & 5-22). The concentration, however, did not exceed the NYSDEC groundwater guidance value (Table 5-22).

For the groundwater samples collected from the bike path/eastern area wells, PAHs that exceeded the NYSDEC groundwater standards or guidance values included acenaphthene (6 samples), anthracene (2 samples), benzo(a)anthracene (6 samples), benzo(a)pyrene (5 samples), benzo(b)fluoranthene (2 samples), benzo(k)fluoranthene (1 sample), chrysene (6 samples), fluoranthene (1 sample), fluorene (2 samples), indeno(1,2,3-cd)pyrene (4 samples), naphthalene (5 samples), phenanthrene (6 samples) and pyrene (3 samples) (Tables 5-21 & 5-22).

Four (4) surface water samples have been collected from Scajaquada Creek to evaluate off-site migration from the Fedders Auto Components Site with all four (4) samples being analyzed for semi-volatile organic compounds (Table 3-1). PAHs were not detected in these samples (Table 5-23).

Five (5) sediment samples have been collected from Scajaquada Creek to evaluate off-site migration from the Fedders Auto Components Site. Only the three (3) samples collected during the 1990 NYSDEC Phase II Investigation were analyzed for semi-volatile organic compounds (Table 3-1). Seventeen (17) PAHs were detected in these samples (Table 5-24).

Of the PAH compounds detected in the sediment samples, concentrations of benzo(a)anthracene (1 sample), benzo(a)pyrene (1 sample), benzo(b)fluoranthene (1 sample), benzo(k)fluoranthene (1 sample), chrysene (1 sample), fluoranthene (1 sample), phenanthrene (1 sample), and pyrene (1 sample) exceeded the NYSDEC sediment guidance values (Table 5-24). Total PAH concentrations in the sediment samples ranged from 7,005 µg/kg to 379,950 µg/kg (Table 5-24). The total PAH concentration in sediment sample SED-1 exceeded the NYSDEC Class C sediment guidance value, while the total PAH concentrations in samples SED-2 & SED-3 exceeded the NYSDEC Class B sediment guidance value (Table 5-24).

Three (3) NAPL samples have been collected from the Fedders Auto Components Site with all three (3) being analyzed for semi-volatile organic compounds (Table 3-1). Seventeen (17) PAHs were detected in these samples (Table 5-25). Excluding the results for the sample prepped/analyzed outside of holding times, total PAH concentrations in these samples ranged from 180,600 J to 224,240 J mg/kg (ppm) (Table 5-25).

6.4.1 Summary

Polycyclic aromatic hydrocarbons (PAHs) are primary contaminants of concern for surface soil & fill, subsurface soil & fill, and NAPL at the Fedders Auto Components Site. PAHs are also primary contaminants of concern for groundwater at the bike path/eastern area, and secondary contaminants of concern for sediment in Scajaquada Creek. As previously stated, PAHs are a group of over 100 different chemicals that are ubiquitous in the environment. Sources of PAHs include incomplete combustion of coal, oil, gasoline, garbage, wood from stoves, automobiles, and incinerators. PAHs are also found in asphalt, coal tar, crude oil, creosote,

roofing tar, medicines, dyes, plastics, and pesticides. As a result, PAHs are generally the most common contaminants found at brownfield sites.

PAHs exceeded the restricted residential, commercial, and/or groundwater protection soil cleanup objectives in soil & fill samples (both surface & subsurface) collected from the Fedders Auto Components Site (Tables 5-2, 5-10, 5-12 & 5-13).

PAHs were detected at significant concentrations in the NAPL samples collected during the Remedial Investigation of the 31 Tonawanda Street Off-Site Area (Table 5-25). New York State, however, does not have standards, criteria, or guidance values (SCGs) that are appropriate for NAPL samples. PAHs were also detected in groundwater samples collected from the bike path/eastern area wells where NAPL is known to be present (Tables 5-21 & 5-22), but generally not in groundwater samples collected from the main area of the site (Tables 5-19 & 5-22). These results suggest that the source of PAHs in the bike path/eastern area wells is the coal tar known to be present in this area of the site and under Scajaquada Creek. This coal tar is associated with the Iroquois Gas/Westwood Pharmaceuticals Site (Site Nos. 915141A&B).

PAHs were detected in sediment samples collected from Scajaquada Creek adjacent to the Fedders Auto Components Site and immediately downstream of West Avenue at concentrations that exceeded the NYSDEC sediment guidance values (Table 5-24). As discussed in the Remedial Investigation Report for the 31 Tonawanda Street Off-Site Area, PAHs were detected in sediment from the Scajaquada Creek Slip, and to a much lesser degree, in sediment samples from Scajaquada Creek downstream of West Avenue to the mouth of the creek. Thus, PAH contamination of sediment in Scajaquada Creek is widespread and likely results from multiple sources.

PAHs in soil & fill, groundwater, NAPL, and sediment have not adversely impacted surface water in Scajaquada Creek (Table 5-23).

6.5 Polychlorinated Biphenyls (PCBs)

Nine (9) surface soil & fill samples have been collected from the Fedders Auto Components Site with all nine (9) samples being analyzed for PCBs (Table 3-1). PCBs were only detected in three (3) surface soil & fill samples with the concentrations of total PCBs in two (2)

samples exceeding the NYSDEC Part 375 commercial and groundwater protection soil cleanup objectives (Tables 5-1 & 5-2).

One hundred forty-two (142) subsurface soil & fill samples have been collected from the Fedders Auto Components Site: (1) two during the 1989 FEDCO Site Investigation; (2) fifteen during the 1990 NYSDEC Phase II Investigation; (3) twenty-four during the BCP Remedial Investigation; (4) three during the 2020 NYSDEC Remedial Investigation of the 31 Tonawanda Street Off-Site Area; and (5) ninety-eight during the 2025 NYSDEC Site Characterization (Tables 3-1 & 3-3). Only thirty-five (35) of these samples were analyzed for PCBs (Table 3-1). The subsurface soil & fill samples collected during the 2025 NYSDEC Site Characterization were not analyzed for PCBs (Table 3-3).

PCBs were only detected in four (4) subsurface soil & fill samples, but none of the concentrations exceeded the restricted residential, commercial, or groundwater protection soil cleanup objectives (Tables 5-4, 5-9 & 5-10). The subsurface soil & fill samples collected during the 2025 NYSDEC Site Characterization were not analyzed for PCBs (Table 3-3).

Twenty-seven (27) overburden groundwater samples have been collected from the Fedders Auto Components Site: (1) two during the 1989 FEDCO Site Investigation; (2) three during the 1990 NYSDEC Phase II Investigation; (3) five during the BCP Remedial Investigation; (4) three during the 2020 NYSDEC Remedial Investigation of the 31 Tonawanda Street Off-Site Area; and (5) fourteen during the 2025 NYSDEC Site Characterization (Tables 3-1 & 3-3). Only 13 of these samples were analyzed for PCBs (Tables 3-1 & 3-3).

PCBs were not detected in any of the groundwater samples collected from the site (Tables 5-18, 5-19 & 5-21). The groundwater samples collected during the 2025 NYSDEC Site Characterization were not analyzed for PCBs (Table 3-3).

Four (4) surface water samples have been collected from Scajaquada Creek to evaluate off-site migration from the Fedders Auto Components Site with all four (4) samples being analyzed PCBs (Table 3-1). PCBs were not detected in any of the surface water samples collected from Scajaquada Creek (Table 5-23).

Five (5) historical sediment samples have been collected from Scajaquada Creek to

evaluate off-site migration from the Fedders Auto Components Site with four (4) of these samples being analyzed for PCBs (Table 3-1). PCBs were detected in all four (4) samples with concentrations exceeding the NYSDEC Class B (3 samples) or Class C (1 sample) sediment guidance values (Table 5-24).

Three (3) NAPL samples have been collected from the Fedders Auto Components Site with all three (3) being analyzed for PCBs (Table 3-1). PCBs were not detected in any of these samples (Table 5-25).

6.5.1 Summary

Polychlorinated biphenyls (PCBs) are primary contaminants of concern for sediment in Scajaquada Creek and secondary contaminants of concern for surface soil at the Fedders Auto Components Site.

PCBs were detected in sediment samples collected from Scajaquada Creek adjacent to the Fedders Auto Components Site and immediately downstream of West Avenue at concentrations that exceeded the NYSDEC Class B (3 samples) or Class C (1 sample) sediment guidance values (Table 5-24). As discussed in the Remedial Investigation Report for the 31 Tonawanda Street Off-Site Area, PCBs were detected in twenty-seven (27) sediment samples collected from Scajaquada Creek upstream of West Avenue, in fourteen (14) sediment samples collected downstream of West Avenue, and in eighteen (18) sediment samples collected from the Scajaquada Creek Slip. These results suggest an upstream source of PCBs. The results from these samples are discussed in more detail in the 2023 NYSDEC Remedial Investigation Report for the 31 Tonawanda Street Off-Site Area.

PCBs were detected in three (3) surface soil & fill samples collected from the Fedders Auto Components Site with the concentrations of total PCBs in two (2) samples exceeding the NYSDEC Part 375 commercial and groundwater protection soil cleanup objectives (Table 5-1). Both samples were collected in 1989 from the parking lot behind the building prior to its being paved.

PCBs were only detected in four (4) subsurface soil & fill samples, and concentrations did not exceed the restricted residential, commercial, or groundwater protection soil cleanup objectives (Tables 5-4, 5-9 & 5-10). In addition, PCBs were not detected in groundwater (Tables

5-18, 5-19 & 5-21), surface water (Table 5-23), or NAPL (Table 5-25), indicating that the Fedders Auto Components Site is not the source of PCBS detected in Scajaquada Creek sediment.

6.6 EPA Priority Pollutant Metals

EPA priority pollutant metals are toxic metals for which technology-based effluent limitations and guidelines are required by Federal law. These metals include antimony, arsenic, beryllium, cadmium, chromium, copper, lead, mercury, selenium, silver, and zinc.

Nine (9) surface soil & fill samples have been collected from the Fedders Auto Components Site but only the five (5) samples collected during the BCP Remedial Investigation were analyzed for metals (Table 3-1). Ten (10) EPA priority pollutant metals were detected in these samples, with concentrations of cadmium (1 sample) and lead (1 sample) exceeding the NYSDEC Part 375 restricted residential (but not the commercial) soil cleanup objectives (Table 5-2). Only the concentration of copper (1 sample) exceeded the NYSDEC Part 375 commercial soil cleanup objectives, while the concentration of selenium (1 sample) exceeded the NYSDEC Part 375 groundwater protection soil cleanup objectives (Table 5-2).

One hundred forty-two (142) subsurface soil & fill samples have been collected from the Fedders Auto Components Site: (1) two during the 1989 FEDCO Site Investigation; (2) fifteen during the 1990 NYSDEC Phase II Investigation; (3) twenty-four during the BCP Remedial Investigation; (4) three during the 2020 NYSDEC Remedial Investigation of the 31 Tonawanda Street Off-Site Area; and (5) ninety-eight during the 2025 NYSDEC Site Characterization (Tables 3-1 & 3-3). Only thirty-three (33) of these samples were analyzed for metals (Table 3-1). The subsurface soil & fill samples collected during the 2025 NYSDEC Site Characterization were not analyzed for metals (Table 3-3).

Eleven (11) EPA priority pollutant metals were detected in these samples, with concentrations of cadmium (4 samples), chromium (1 sample), lead (4 samples), and mercury (2 samples) exceeding the NYSDEC Part 375 restricted residential (but not the commercial) soil cleanup objectives (Tables 5-9 & 5-10). Only the concentrations of arsenic (4 samples), copper (5 samples), and lead (2 samples) exceeded the NYSDEC Part 375 commercial soil cleanup objectives, while concentrations of arsenic (4 samples), copper (1 sample), lead (5 samples), silver (1 sample), and zinc (2 samples) exceeded the NYSDEC Part 375 groundwater protection

soil cleanup objectives (Tables 5-9 & 5-10).

Twenty-seven (27) overburden groundwater samples have been collected from the Fedders Auto Components Site: (1) two during the 1989 FEDCO Site Investigation; (2) three during the 1990 NYSDEC Phase II Investigation; (3) five during the BCP Remedial Investigation; (4) three during the 2020 NYSDEC Remedial Investigation of the 31 Tonawanda Street Off-Site Area; and (5) fourteen during the 2025 NYSDEC Site Characterization (Tables 3-1 & 3-3). Only 13 of these samples were analyzed for PCBs (Tables 3-1 & 3-3).

Eight (8) EPA priority pollutant metals were detected in groundwater samples collected during the most recent investigations (2019 through 2025), with only the concentrations of lead (2 samples) and selenium (3 samples) exceeding the NYSDEC groundwater standards or guidance values (Tables 5-19 & 5-21). The groundwater samples collected during the 2025 NYSDEC Site Characterization were not analyzed for metals (Table 3-3).

Four (4) historical surface water samples have been collected from Scajaquada Creek to evaluate off-site migration from the Fedders Auto Components Site with all four (4) samples being analyzed for metals (Table 3-1). Four (4) EPA priority pollutant metals were detected in these samples, with only the concentration of antimony (1 sample) exceeding the NYSDEC surface water standards or guidance values (Table 5-23).

Five (5) historical sediment samples have been collected from Scajaquada Creek to evaluate off-site migration from the Fedders Auto Components Site with all five (5) samples being analyzed for metals (Table 3-1). Seven (7) EPA priority pollutant metals were detected in these samples, with the concentrations of arsenic (2 samples), cadmium (3 samples), chromium (2 samples), and mercury (3 samples) exceeding the Class B (but not Class C) sediment guidance values (Table 5-24). Class C sediment guidance values were exceeded for cadmium (1 sample), copper (4 samples), lead (5 samples), mercury (1 sample), and zinc (4 samples) (Table 5-24).

Three (3) NAPL samples have been collected from the Fedders Auto Components Site with all three (3) being analyzed for metals (Table 3-1). Five (5) EPA priority pollutant metals were detected in these samples including arsenic (1 sample), chromium (1 sample), copper (1 sample), lead (1 sample) and zinc (1 sample) (Table 5-25).

6.6.1 Summary

The Fedders Manufacturing Company made various products at the Tonawanda Street plant that utilized metals. Some of these products included radiators for airplanes, radiators for automobiles, radiator cores, and home radiators. Radiators manufactured up to the early 1970s were typically made from copper and brass (an alloy of copper and zinc) (Copper Development Association, Inc. website, accessed February 14, 2023). In addition, plant processes included metal stamping, soldering, brazing, and welding. Solder is a metal alloy typically made of tin and lead, while brazing uses copper, a copper-silver alloy, a copper-zinc alloy, or a copper-tin alloy.

Thus, EPA priority pollutant metals associated with manufacturing activities at the Fedders Manufacturing Company include copper, lead, silver, and zinc. These metals will be termed the Fedders site-specific EPA PPM.

Site-specific EPA PPM exceeded the restricted residential, commercial, and/or groundwater protection soil cleanup objectives in soil & fill samples (both surface & subsurface) collected from the Fedders Auto Components Site (Tables 5-2, 5-9, 5-10 & 5-12). The site-specific EPA PPM were also detected in groundwater samples collected from the Fedders Auto Components Site but only the concentrations of lead (2 samples) exceeded the NYSDEC groundwater standards or guidance values (Tables 5-18, 5-19 & 5-21).

Site-specific EPA PPM were detected in the sediment samples collected from Scajaquada Creek adjacent to the Fedders Auto Components Site and immediately downstream of West Avenue at concentrations that exceeded the NYSDEC Class C (5 samples) sediment guidance values (Table 5-24).

The Fedders Manufacturing Company is the likely source of copper and lead in soil & fill (both surface & subsurface) at the Fedders Auto Components Site and copper, lead, and zinc in sediment of Scajaquada Creek adjacent to the site and immediately downstream of West Avenue.

Other EPA priority pollutant metals that exceeded the NYSDEC Part 375 restricted residential or commercial soil cleanup objectives include arsenic (subsurface soil & fill), cadmium (surface soil & fill; subsurface soil & fill), chromium (subsurface soil & fill), and mercury (subsurface soil & fill). These metals also exceeded the Class B (arsenic, cadmium, chromium, and mercury) or Class C (cadmium and mercury) sediment guidance values (Table 5-

24). Mercury is commonly associated with electric switches, thermostats, and fluorescent lighting, and is likely related to manufacturing activities at the Fedders Manufacturing Company. Finally, all arsenic, cadmium, and chromium concentrations that exceeded the NYSDEC Part 375 restricted residential soil cleanup objectives were associated with fill samples collected from the site (Tables 5-9 & 5-10). Concentrations of arsenic, cadmium, chromium, and mercury, however, did not exceed the NYSDEC groundwater standards or guidance values (Tables 5-18, 5-19 & 5-21).

EPA priority pollutant metals detected in the NAPL samples collected from bike path well MW-100 included arsenic, chromium, copper, lead, and zinc (Table 5-25). Therefore, the presence of arsenic, chromium, copper, lead, and zinc in the sediment samples collected from Scajaquada Creek could also be related to the presence of NAPL (coal tar) in the former creek channel of Scajaquada Creek.

Site-specific EPA PPM (copper, lead, silver, and zinc) are primary contaminants of concern for soil & fill (both surface & subsurface) and groundwater at the Fedders Auto Components Site and for sediment in Scajaquada Creek. Other EPA priority pollutant metals (arsenic, cadmium, chromium, and mercury) are primary contaminants of concern for soil & fill (both surface & subsurface) at the Fedders Auto Components Site and for sediment in Scajaquada Creek. EPA priority pollutant metals are not contaminants of concern for surface water (Table 5-23).

7.0 CONCLUSIONS

As discussed in Section 3.0, the overall objective of the NYSDEC Site Characterization of the Fedders Auto Components Site (Site No. 915024) was to obtain data sufficient to re-evaluate the Class 3 NYSDEC Registry designation for the site. The specific objectives of the NYSDEC Site Characterization were to:

- Further evaluate the extent of chlorinated volatile organic compound (VOC) contamination in subsurface soil & fill at the site;
- Further evaluate the extent of chlorinated VOC contamination in groundwater at the site;
- Determine how far coal tar (non-aqueous phase liquid or NAPL) has migrated onto the site; and
- Complete a comprehensive geologic and hydrogeologic evaluation of the site that includes an evaluation of groundwater flow patterns.

These objectives were evaluated through the completion of sixteen (16) soil borings, the collection of 98 subsurface soil & fill samples, the installation of seven (7) overburden monitoring wells, and the collection of fourteen (14) groundwater samples.

The extent of chlorinated VOC contamination in subsurface soil & fill at the site was discussed in Sections 5.3 and 6.2 and will not be discussed further in this section.

The extent of chlorinated VOC contamination in groundwater at the site was discussed in Sections 5.4 and 6.2 and will not be discussed further in this section.

The most recent investigations (2020 & 2025) completed at the site documented the presence of coal tar (NAPL) in soil borings completed along the bike path and at the easternmost portion of the Fedder's parking lot (Figure 5-3). The extent of NAPL at the site appears to be restricted to the 1894 historical channel of Scajaquada Creek.

A comprehensive geologic and hydrogeologic evaluation of the Fedders Auto Components Site was discussed in Section 4.0 and will not be discussed further in this section.

It is important to note here two major inconsistencies in the site history (Section 2.0) as

revealed by the analytical results obtained for the site (Sections 5.0 and 6.0). In Section 2.3 of this report, the following statement is made:

> "In 1974, the Erie County Department of Environmental Quality, Air Pollution Control Division, instructed Fedders to implement some means of fugitive dust control for their parking lot. The company subsequently spread approximately 165 gallons of waste oil per year on the parking lot from 1974 to 1976. Conflicting reports indicated that the practice continued until 1981. Although Fedders officials stated that the oils used for dust control were light lubrication oils and hydraulic fluids, *it is thought that the oils may have contained PCBs and solvents*. In 1981, the parking lot was covered with gravel, therefore, dust control efforts were no longer necessary."

The analytical results obtained from soil & fill samples collected during numerous investigations completed at the Fedders Auto Components Site did not reveal significant chlorinated VOC contamination in the parking lot area. Historically, only two (2) samples exceeded the NYSDEC Part 375 commercial and groundwater protection soil cleanup objectives for PCBs (Tables 5-1 & 5-2). These results confirm the statement made by Fedders officials that the oils used for dust control were light lubrication oils and hydraulic fluids. It is highly doubtful that these oils and hydraulic fluids contained PCBs or significant quantities of solvents.

It is also stated in Section 2.3 that industrial waste from manufacturing activities were reported to include solder dross, degreasing still bottoms including trichloroethene (TCE) and tetrachloroethene (PCE), and petroleum-based lubricating fluids. The analytical results obtained from investigations completed at the site reveal that tetrachloroethene was not detected in soil & fill or groundwater samples collected from the site, and in only three (3) sub-slab soil vapor samples collected under the on-site buildings. As a result, it is highly doubtful that tetrachloroethene was used during manufacturing activities at the site.

8.0 REFERENCES

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