

**CONSTRUCTION COMPLETION REPORT
OFF-SITE INTERIM REMEDIAL MEASURE
BATAVIA IRON AND METAL
STATE SUPERFUND SITE NUMBER: 819018
(T) BATAVIA (C) GENESEE**

Prepared For:

**New York State Department of Environmental Conservation
Division of Environmental Remediation
Remedial Bureau E
Albany, New York**

Prepared By:

**MACTEC Engineering and Consulting, PC
Portland, Maine**

MACTEC Project Number: 3617137301

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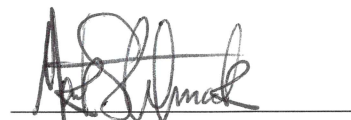
January 2019

Submitted by:



Charles Staples, P.G.
Project Scientist

Approved by:



Mark Stelmack, P.E.
Project Manager

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GLOSSARY OF ACRONYMS AND ABBREVIATIONS

ACM	asbestos containing material
AST	above-ground storage tank
CAMP	Community Air Monitoring Program
DIR	Daily Construction Inspection Reports
DUSR	Data Usability Summary Report
ESG	Environmental Services Group
GPI	GPI Surveyors
ID	Identification
IRM	Interim Remedial Measure
IWC	In-situ Waste Characterization
Lozier	Lozier Environmental Consulting, Inc.
MACTEC	MACTEC Engineering and Consulting, P.C.
mg/Kg	milligram(s) per kilogram
mg/L	milligrams(s) per liter
NYCRR	New York Codes, Rules, and Regulations
NYS	New York State
NYSDEC	New York State Department of Environmental Conservation
PCBs	polychlorinated biphenyls
PFAS	per- and poly-fluoroalkyl substances
ppm	parts per million
RAWP	Remedial Action Work Plan

GLOSSARY OF ACRONYMS AND ABBREVIATIONS (CONTINUED)

RCRA	Resource Conservation and Recovery Act
SCO	Soil Cleanup Objective
Site	Batavia Iron and Metal Company site
TCLP	Toxicity Characteristic Leaching Procedure
TSCA	Toxic Substances Control Act
TSDF	treatment, storage, or disposal facility
UHC	underlying hazardous constituent

1.0 INTRODUCTION AND SITE BACKGROUND

MACTEC Engineering and Consulting, P.C. (MACTEC), under contract to the New York State (NYS) Department of Environmental Conservation (NYSDEC), is submitting this Construction Completion Report to document the off-site soil removal Interim Remedial Measure (IRM) implemented from July 2017 to May 2018 at the Batavia Iron and Metal Site (the Site), in Batavia, Genesee County, New York.

This report has been prepared by MACTEC in accordance with the NYSDEC requirements in work assignment No. D007619-36 outlined in the Superfund Standby Contract between MACTEC and the NYSDEC; and with DER-10/Technical Guidance (NYSDEC, 2010). IRM Contractor activities described in this report include:

- mobilization of equipment and personnel to the Site
- identification of offsite licensed treatment, storage, or disposal facilities (TSDF)
- installation of temporary construction fencing
- clearing of trees and ground cover
- surveyed layout of contaminated soil to be removed
- removal of contaminated soil and soil/debris piles
- pumping and treating of groundwater from the excavations
- characterization of waste generated during execution of the work and transport and disposal of construction clearing debris, non-hazardous waste soil, and one aboveground storage tank (AST) at licensed TSDFs.
- completion of site restoration activities.

Also included in this report is documentation of:

- groundwater sample results for polychlorinated biphenyls (PCBs)
- groundwater sample results for emerging contaminants.

1.1 SITE LOCATION

The Batavia Iron and Metal Co., Inc. Site (formerly Batavia Waste Material Co.), located at 301 Bank Street in Batavia, New York, consists of approximately 6.8 acres. A Site Location Map is provided as Figure 1.1. The Site, currently abandoned after historical commercial/industrial use, is located in the City of Batavia, Genesee County, New York, and is listed as a Class 2 Inactive hazardous waste site

- Site No. 819018 - in the Registry of Hazardous Waste Sites in NYS. An approximate 8,000 square foot vacant building is currently present on the southern portion of the Site near Bank Street.

Prior to the IRM activities documented in this report, various waste debris (e.g., concrete block, scrap metal, wood crates, rubber tires, propane tanks, asbestos containing material (ACM), steel drums, and storage tanks including a 2,000 to 3,000-gallon AST) were present on the ground surface across the central and northern portions of the Site. Much of this surface waste debris including the 15 debris piles and AST shown on Figure 1.2 were removed and disposed offsite during the IRM. Figure 1.3 shows aerial views of the site before and after removal of the surface waste debris piles.

The subject of this report is the cleanup of contaminated fill that was placed on the adjacent City of Batavia-owned property at 299 Bank Street during operations at the Site, as well as the cleanup of debris on the Site property.

1.2 SITE HISTORY

The Site operated as a metal recycling facility from 1951 to 1999. Batavia Iron and Metal filed for bankruptcy in February 2000. The Site was reportedly used to reclaim iron, metal, and wire materials for sale to recycling and manufacturing firms. Maintenance files indicate that in addition to recycling metal, Batavia Iron and Metal also purchased and handled electrical transformers on the property. ASTs and underground storage tanks on the property were used to store gasoline, diesel fuel, and numbers 1, 2, and 4 fuel oil, and waste oils were stored in 55-gallon drums at the facility. Two furnaces operated on the facility from the early 1970s until 1994 for the purpose of reclaiming wire and smelting white metals. Prior to the use of the furnaces, site operations included open burning in dumpsters in the yard to remove insulation from the wiring (NYSDEC, 2013). During the facilities operations, Batavia Iron and Metals also accepted fill and demolition debris that was used to level the property and was also spread onto adjacent properties.

2.0 REMEDIAL ACTION SCOPE OF WORK

The following documents provided the direction for the off-site soil removal IRM:

RA Work Plan (RAWP): Remediation of City of Batavia owned property (MACTEC, 2017a). The RAWP (Appendix A.1), issued on July 27, 2017, provides a general description of the IRM items. RAWP drawings were re-issued on August 30, 2017 (MACTEC, 2017b) with refined limits of excavation based on soil borings completed in August 2017. The RAWP and the re-issued drawings are included in Appendix A.1 and Appendix A.2, respectively, to this report. In general, the RAWP indicates that the IRM would involve excavation of impacted soil on the adjacent City of Batavia owned property, as well as remediation of a strip of the adjoining Batavia Iron and Metals property. Drawings and specifications included in the RAWP were prepared by MACTEC to direct the Contractor’s soil excavation work. The objectives of the work were to remove soil containing metals and PCBs at concentrations above the numerical goals stated in NYSDEC Title 6 of the New York Codes, Rules, and Regulations (NYCRR) Part 375 Table 375-6.8(b): Restricted Use Soil Cleanup Objectives (SCOs), Residential. NYSDEC used an existing Standby Response Contractor, Nature’s Way Environmental, to complete the remedial activities in accordance with the requirements described in the RAWP. MACTEC, as a representative of the NYSDEC, provided construction inspection, community air monitoring, and quality assurance services. References set forth in this report to MACTEC shall be equivalent to “Engineer” references in the drawings and specifications. MACTEC serves as both the design engineer for the project and inspecting engineer for the construction.

In addition to the work described in the RAWP, 15 piles of waste material including concrete, metal, slag, and/or ACM, were removed during the IRM. Twelve of these piles were identified and characterized prior to the IRM (MACTEC, 2017c), and three were identified during the IRM. Several of the piles were located on the City of Batavia property, or on top of on-Site areas to be excavated during the IRM, and the remainder of the 15 piles were removed to allow for future characterization of the Batavia Iron and Metals property.

The IRM included the following general items:

- mobilization of personnel and equipment to the work site
- installation of site access controls including temporary perimeter fence

- implementation of erosion control measures
- waste profiling and removal of contaminated material piles containing ACM, concrete, scrap metal, and slag
- waste profiling and removal of contaminated soil from the City of Batavia owned property and from a limited portion of the adjoining Batavia Iron and Metals property
- backfill of excavation with common borrow to six inches below final grade, and then topsoil, seed, and mulch
- stockpiling, shredding, and offsite disposal of approximately 5,000 tires encountered during the work
- site restoration including the replacement of site fencing.

Appendix B is the Standby Contractor Authorization Form issued to Nature’s Way by NYSDEC. The form authorizes the IRM Contractor to conduct work items included in the RAWP, as well as items that were changes to the work and not included in the RAWP. Contractor submittals documenting materials used in the work or required deliverables (e.g., survey) were reviewed by MACTEC and are included in Appendix C. Contractor submittals included the following:

- Submittal 01: Proposed Woven Fence
- Submittal 02: Proposed Filter Sox
- Submittal 03: Surveyor Information
- Submittal 04: Proposed Groundwater Treatment System
- Submittal 05: Proposed Common Fill
- Submittal 06: Pre-Construction Field Verification Survey
- Submittal 07: Topsoil Analytical
- Submittal 08: Proposed Chain Link Fencing
- Submittal 09: Final Survey: Limits of Excavation Survey and As-Built Survey

As on-site construction and inspection engineer, MACTEC documented IRM implementation in Daily Construction Inspection Reports (DIR) beginning on August 14, 2017. Daily Inspection Reports are included in Appendix D. As part of the daily inspections, MACTEC implemented the Community Air Monitoring Program (CAMP). The CAMP consisted of continuous real-time monitoring for particulates, and compliance was documented in the DIR. During the execution of the IRM, air-borne particulates were consistently reported at concentrations below action levels. During wet or snowy weather, air monitoring was not conducted. CAMP data is included in Appendix E.

A description of the work performed is included in the following report subsections. Contractor mobilization commenced on August 14, 2017. The project was satisfactorily completed by Nature’s Way on September 16, 2018. Additional work was completed in November 2018 including the shredding and offsite disposal of approximately 5,000 tires stockpiled during the work. The Engineer did not oversee the November 2018 activities. Progress meetings with MACTEC, Nature’s Way, and the NYSDEC were conducted approximately every two weeks throughout the project; progress meeting minutes are included in Appendix F.

2.1 PROPERTY ACCESS AGREEMENTS, OWNER APPROVALS, AND CONTRACTOR SITE MOBILIZATION

Much of the work was conducted on the City of Batavia owned property at 299 Bank Street (County of Genesee Tax Map Parcel Number 71.019-1 [10.B]). The letter from the NYSDEC requesting access to the property and the Access Acknowledgment signed by the City of Batavia are included in Appendix G.

Nature’s Way had the following equipment and material delivered to the Site during initial site mobilization:

- Case CX160 Excavator
- Case CX210 Excavator
- Kubota SVL 90-2 Skid Steer
- Case 40XT Skid Steer
- MQ Power 45 Generator
- Hamm H7i Roller
- Vermeer chipper BC1000XL
- 1200-foot chain link fence
- 1320 -foot silt-soxx erosion control
- 3 rolls woven geotextile fabric, 500 x 17.5 feet each
- Aggregate base
- Kleemann 3-Ply Screener

Prior to conducting IRM soil excavation tasks, Nature’s Way executed the following tasks:

- construction of a temporary perimeter security fence to prevent trespassing
- tree removal
- topographic site survey
- collection and laboratory analyses of direct push soil samples to determine contamination depth
- construction of a soil pile holding and loadout area.

To minimize erosion and sedimentation during the work, and in accordance with best management practices as defined in the New York Standards and Specifications for Erosion and Sediment Control, August 2005 by the NYS Soil and Water Conservation Committee, filter sox were placed along the perimeters of work.

2.2 UTILITY MARKOUT AND TREE REMOVAL

Nature's Way conducted a utility markout and called Dig Safely New York prior to commencing work. Trees located in the areas where soil excavation or direct push soil borings took place were removed and chipped. Stumps and roots were removed and staged on-site.

2.3 DIRECT PUSH SOIL SAMPLING AND SOIL DISPOSAL CHARACTERIZATION

To refine the area and depth planned for remediation in the RAWP, 16 direct push borings were completed across the planned excavation area in accordance with the proposed locations on RAWP Drawing C-102, with samples collected from multiple depths at each location. Sampling Field Data Records are included in Appendix H. Based on the results of the sampling, proposed excavation extent (depths and area) were updated on Drawings C-103 and C-104 of the RAWP, and the drawings were re-issued for construction (Appendix A.2).

The updated RAWP drawings were used to estimate the quantity of soil to be removed. Based on the estimated quantity of soil to be removed, and review of previous sample results, additional sampling was required by US Ecology, the proposed TSDF. This included soil boring samples to define the areas where PCBs exceeded 50 milligrams per kilogram (mg/Kg), as well as collection of toxicity characteristic leaching procedure (TCLP) metals samples from 18 designated areas across the remediation area (referred to as in-situ waste characterization [IWC] areas). Laboratory Data Packages are included in Appendix I. A figure showing the IWC locations is included in Appendix J.

Soil sample results were used to profile the various waste soil types for disposal and to correlate each excavation cell with a profile number.

2.4 CONSTRUCTION WATER MANAGEMENT

Prior to the initiation of excavation activities, a water storage and treatment area was created to manage and treat water from excavation areas, and decontamination water generated during the IRM. Groundwater was generally encountered between four and six feet below existing grade. During excavation activities, various submersible pumps were used to pump water to on-site storage tanks. Water from the holding tanks was pumped through a sediment filter and granular activated carbon system for treatment and into a second holding tank, where sampling was conducted. The water treatment system was housed and operated inside the existing onsite building.

Prior to its discharge into the onsite municipal sanitary sewer, the water was treated and sampled in accordance with the state issued surface water equivalent discharge permit (Appendix K). A total of 873,200 gallons of water were treated and discharged during the IRM with approval from the City of Batavia Bureau of Water and Wastewater and the Batavia Waste Water Treatment Plant.

City of Batavia discharge approvals and the construction water tracking sheet are included in Appendix K, and Laboratory data packages provided to the Batavia Waste Water Treatment Plant are included in Appendix I.

2.5 CONTAMINATED SOIL EXCAVATION AND REMOVAL

Soil removal areas were determined by incorporating the results of the pre-IRM surface soil and direct push sampling conducted by MACTEC prior to and during the initial stages of the IRM. Contaminants of concern present in soils at concentrations above the residential SCOs included cadmium, chromium, copper, lead, mercury, and PCBs. ACM was also identified in or below several of the soil piles. US Ecology assisted in profiling the in-place waste for disposal based on contaminant types and concentrations. The soil waste profiles and approvals are included in Appendix L, along with the original figure and table designating waste cell and waste profile association.

Based on the type of waste and the contaminants, soil was disposed at the following locations under the following waste approval numbers (the color scheme used by Nature’s Way for tracking waste transported to various US Ecology TSDFs is indicated below and on Figure 1 in Appendix L):

- 1) Wayne Disposal Facility, Belleville, Michigan (EPA ID # MID048090633)
 - a. Not Toxic Substances Control Act (TSCA)/Non-Resource Conservation and Recovery Act (RCRA) Soil
(Approval J170009WDI) (Nature’s Way – Gray)
 - b. RCRA Lead under 7.5 milligrams per liter (mg/L) TCLP Soil (PCB < 10 parts per million [ppm]) (Waste Code D008)
Underlying hazardous constituent (UHC) for cadmium
(Approval J170022WDI) (Nature’s Way – Blue)
 - c. TSCA debris and soil – Non-RCRA (Waste Code PCB1)
(Approval J170007WDI) (Nature’s Way – Yellow)
 - d. PCB soil and debris with Asbestos
(Approval J170005WDI) (Nature’s Way – Red)
- 2) Michigan Disposal Waste Treatment Plant, Belleville, MI (EPA ID # MID000724831)
 - a. Lead contaminated Debris with PCBs < 50 ppm (Waste Code D0008)
(Approval # J170025MDI) (Nature’s Way – Blue)
 - b. RCRA lead greater than 7.5 mg/L TCLP (Waste Code D008)
(Approval J170024MDI) (Nature’s Way – Blue)
 - c. Lead contaminated soil with PCB < 50 ppm (Waste Code D0008)
UHC for cadmium, antimony, nickel, and PCBs
(Approval J170050WDI) (Nature’s Way – Blue)
 - d. PCB Remediation Waste Debris and Soil – Non-TSCA
(Approval B180053MDI)
- 3) US Ecology Idaho, Grand View Idaho (EPA ID # IDD073114654)
 - a. TSCA and RCRA lead Debris
(Approval 44640-0) (Nature’s Way – Pink)
(Approval 45881-0)(Pile 2A)
 - b. TSCA and RCRA lead Soil
(Approval 44641-0) (Nature’s Way – Pink)

Excavation of soil/debris, including removal of above ground piles, was conducted from October 12, 2017 to April 27, 2018. A total of 17,465.99 tons of impacted soil and debris were removed from the site and transported to the facilities listed above for disposal and/or treatment. A truck log and waste disposal manifests are included in Appendix M.

Waste disposal manifests, weight documentation summaries, and certificates of disposal for the 112.82 tons of discarded tires landfilled at US Ecology’s Wayne Disposal Facility, Belleville, Michigan are included in Appendix M.1.

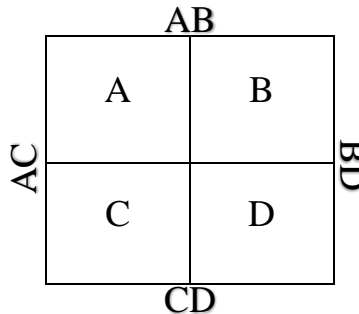
With the exception of the ACM piles or areas with identified ACM and the waste tires, soil/debris were loaded into dedicated on-site dump trucks, which deposited the material into the staging area. Material from the staging area was then loaded into awaiting dump trailer trucks, reducing decontamination requirements.

ACM was direct loaded into dump trailer trucks by subcontractor Environmental Services Group (ESG). Air monitoring during removal of ACM was conducted by MACTEC for Pile 7, and by Lozier Environmental Consulting, Inc. (Lozier) for Pile 2A, Pile 13, Area 14, and Pile 15. ACM was not identified in Pile 14; however, after the pile was removed ACM was identified on the ground below and around former Pile 14 and cleanup of this ACM was referred to as Area 14. The MACTEC air monitoring report, including the New York State Department of Labor variance and waste manifests, is included in Appendix N. The Lozier air monitoring reports, as well as ACM sampling report for Pile 13, Area 14, and Pile 15 are included in Appendix O.

For the subsurface removal, the preliminary excavation area was delineated based on previous sampling results. For ease of excavation and for consistent confirmation sampling, the excavation area was gridded into 25-foot square cells, each with a designated alpha-numerical identification. GPI Surveyors (GPI, subcontractor to Nature’s Way) provided the field layout of the excavation area and depth of preliminary excavation as shown on remedial design Drawing C-103 and C-104 in Appendix A.2. GPI maintained a daily onsite presence during the work to guide sampling limits. Nature’s Way excavated the material in accordance with the surveyed field layout.

The consistency of the excavated material was observed to vary; the material included organic topsoil, silty sand, gravel, and fill consisting of brick, concrete, ash, and other debris. Many areas were stained (colors included black, gray, and green). Groundwater was encountered in many of the excavations, with the groundwater depth varying based on time of year and weather (water table was observed to be impacted during periods of heavy precipitation).

Confirmation soil samples were collected at the bottom of each 25 foot by 25-foot excavation cell, with four bottom samples collected per cell (Designated as A, B, C, and D at the end of the cell identification [ID]). Sample IDs included the elevation of the sample at the end of the ID. Sidewall samples were also collected if they were located on the exterior of the overall excavation limits, or if they adjoined an excavated cell having a relative bottom depth greater than 6-inches. Sidewall samples were designated with the cell ID followed by the side of the cell where the sample was collected (e.g., AB).



Example: Cell ID = H14.

Additional sidewall samples were collected along the southern edge of the soil removal area to aid in the future remediation of soils located on the Batavia Iron and Metals Property. If sample results exceeded the cleanup objectives, MACTEC directed Nature’s Way to conduct additional excavations. A summary of sample results and excavation directions are presented in the decision table included in Appendix P. Sample locations are also described on the Field Data Records included in Appendix H.

MACTEC collected a total of 560 samples during the removal action. Excavations were conducted until:

- confirmation sample results met the soil cleanup objective

- sample results showing a low concentration exceedance (e.g., PCB concentration of 1.3 mg/Kg) were excavated an additional three to six inches, with no further sampling.

Excavation areas where large boulders were encountered at depths greater than five feet and thus could not be excavated to meet the cleanup objective for PCBs of 1 mg/Kg were backfilled with concurrence from the NYSDEC (Field Order No. 02 included in Appendix Q) after collection of documentation samples. At four locations, low level detections of PCBs (less than 3 mg/Kg) remain at depths shallower than refusal. Figure 2.1 shows the sampling grids and the locations where post-IRM PCB concentrations in the documentation samples exceed the SCO of 1 mg/Kg.

Results for 20 of the 389 confirmation samples analyzed for metals exceeded the Part 6 NYCRR Part 375 SCOs for residential use. Metals that exceed the residential SCO include cadmium, chromium, copper and mercury.

Samples representing soil remaining in place (i.e., confirmation/documentation samples) were validated following the data usability summary report (DUSR) guidance presented in DER-10. The DUSR is presented in Appendix R; analytical results are presented in Table 2.1. A DUSR was not completed for samples representing waste removed from the site. Laboratory data packages for all sample results are presented in Appendix I.

The extent of the completed soil excavation activities is shown on the limits of excavation survey prepared by GPI and included with the contractor submittals in Appendix C. Excavation areas and associated elevations of the bottom of the excavation are shown on the record drawings.

The excavator and dump trucks used during the soil/debris removal activities remained on the Site throughout the project, precluding the need to decontaminate the construction vehicles. At the end of the project, the excavator bucket and dump truck beds were cleaned and sampled for PCBs by Nature's Way in accordance with 40 Code of Federal Regulations 761.79 prior to demobilizing from the Site. Laboratory reports containing conforming wipe test results are included in Appendix I. Wipe testing was conducted on the following:

- Subcontractor ESG:
 - Excavator PC 300
 - Trucks 330L and 300R

- Nature's Way:
 - Excavators CX210 and CX350C
 - Haul trailer CAT 725

 - Frac tanks (used for water treatment): 505B, 515B, 529D, 544B, 546C, 550B, 552B, and 552C

2.6 GROUNDWATER QUALITY EVALUATION

PCBs in Offsite Groundwater. Groundwater was encountered often at many of the areas excavated. At several locations the excavations extended below the water table and groundwater was observed infiltrating into the excavation from the bottom and from the sides. At a number of these locations, the groundwater was observed to have an oily sheen or oily bubbles floating to the surface. Several oily water samples were collected by dipping a bottle into the water. The samples were analyzed to evaluate: 1) the potential type of oil/petroleum product; 2) if the concentrations of contaminants in the water would be sufficiently treated by the construction water treatment system; and, 3) if PCBs present in the oil/groundwater might re-contaminate the soil at PCB concentrations greater than 1 mg/Kg.

PCBs were detected in a groundwater sample collected from Cell H22 on December 9, 2017 at a concentration of 0.0378 mg/L (metals detected in groundwater at this location were reported at concentrations below groundwater criteria). A total petroleum hydrocarbon scan indicated that the fingerprint of the oil was similar to that of transformer oil.

PCBs were detected in a groundwater sample collected from Cell H30 at a concentration of 2.8 mg/L and determined to be treatable by the existing construction water treatment system. In addition, it was determined that the concentrations present in the groundwater/oil would not result in the re-contamination of the clean backfill on the City-owned property at concentrations greater than the cleanup objectives of 1 mg/Kg. Calculations and discussions relating to the PCB groundwater concentrations potential effects on soil are presented in Appendix S.

An oily sheen was observed on the water in Cell H32 and as a result, a new monitoring well, MW-101, was installed during backfilling activities to allow for future groundwater monitoring in this area.

Emerging Contaminants. To evaluate whether emerging contaminants per- and poly-fluoroalkyl substances (PFAS) and 1,4-dioxane are present in groundwater as a result of historic site activities, a

round of groundwater samples was collected from six wells located on and adjacent to the Batavia Iron and Metal site. Sampling locations are presented on Figure 1.2 and analytical results are presented in Table 2.2. Concentrations of both contaminants were detected at one or more locations at concentrations greater than the United States Environmental Protection A Advisory Limit (PFAS) or Screening Level (1,4-dioxane).

2.7 SURFICIAL METAL DEBRIS REMOVAL

During the remedial activities, metal debris present on the surface of the site was moved to a staging area. The debris included metal baskets, pipes, casting ingots, and a counter weight from a crane. Representative wipe samples were collected from the material to determine potential presence of PCBs. Subsequent to a review of the results, the scrap metal was removed by a local metal recycling facility. The evaluation report is included in Appendix T.

In addition, an approximately 2,000-gallon above ground storage tank historically used to contain gasoline or diesel was present on the southeast corner of the Site, east of the Site building (Figure 1.2). This tank was cleaned by Nature’s Way on April 9, 2018 and disposed at a local metal recycling facility.

2.8 TIRE REMOVAL/PROCESSING/DISPOSAL

The minutes of the March 16, 2018 progress meeting (Appendix F) document discussion of the approximately 5,000 vehicle tires unearthed and stockpiled by Nature’s Way during the work. During the meeting it was determined that if the remaining budget in the callout contract covered the cost, the tires would be processed (by shredding) and then disposed offsite. Email correspondence referenced in Subsection 2.11 of this report document subcontractor procurement and schedule for the tire shredding and offsite disposal effort conducted and completed in November 2018.

A total of 112.82 tons of shredded tires were disposed at US Ecology’s Wayne Disposal Facility in Belleville, Michigan. The waste profile is included in Appendix L. Waste disposal manifests, certificates of disposal, and weight documentation summaries are included in Appendix M.1. The shredded tires were accepted at the TSDF as PCB solids.

2.9 IMPORTED BACKFILL

In accordance with the IRM drawings and specifications, the excavation areas were backfilled with common borrow soil. Crusher run gravel was used for backfilling the bottom of some of the excavated areas located below the water table. Common borrow soil was placed on top of the crusher run. Following acceptance of subgrade preparation by MACTEC, the backfill was compacted by multiple passes with a roller. Six inches of compacted topsoil were placed over the common borrow on the City of Batavia-owned property to create final grades equal to those which had existed prior to the IRM. The backfilled soil quality complied with the Unrestricted SCOs as described in NYSDEC 6 NYCRR Part 375 Table 375-6.8(a). Common borrow, crusher run gravel, and topsoil imported to the Site were obtained from Seven Springs Gravel Products located in Batavia. Analytical reports documenting results of particle size and environmental testing for the imported backfill are included with contractor Submittals 5, 5A, 5B, and 7 in Appendix C.

For the strip of on-site area excavated, the area was restored with a gravel access road to allow a clean accessway to the north end of the property, and to act as a berm to prevent run-off from the Site re-contaminating the City of Batavia property.

Installation of the surface materials (e.g., seed and mulch, landscaping, and fencing) is described in Subsection 2.10 – Site Restoration.

2.10 SITE RESTORATION

After completion of soil/debris excavation and backfill, Nature’s Way restored the excavated areas in accordance with the RAWP included in Appendix A.1. Activities included:

- Application of hydroseed to the areas restored with topsoil (Field Order No. 01 included in Appendix Q)
- Installation of a chain link fence along the western property line.

MACTEC’s construction inspection and associated DIRs in Appendix D cover the period through May 18, 2018, at which time the remaining work items included:

- completion of backfilling of the northern end of the excavation (rainwater had not yet receded by May 18, 2018) (completed)
- placement of the topsoil (completed May 31, 2018)
- hydroseeding (completed June 1, 2018)
- replacement of the chain link fence (completed July 20, 2018)
- demobilization of equipment and water treatment system (completed July 9, 2018).

In accordance with RAWP Specification 02921-5, Section 3.05, Nature’s Way is responsible for ensuring a reasonably thick uniform stand of grass with a minimum coverage of approximately 80 percent of the seeded area.

In addition to restoration of the excavated areas, Nature’s Way conducted onsite restoration activities after removal of the soil piles, and in preparation for the pre-design investigation (conducted by MACTEC in July/August 2018), including:

- smoothing many areas of the site with the blade of the front end loader
- stockpiling of stumps and tires.

2.11 ISSUES AND CHANGES TO THE WORK

This subsection describes project activities related to changes in the work as defined in the RAWP.

Field Orders. Four Field Orders (Appendix Q) were issued during the work.

FO 01 provided direction for grading the site surface at project completion to provide drainage to the north of the site, and instructions for seeding, fertilizing, and mulching disturbed areas onsite and offsite.

FO 02 instructed the contractor to terminate excavations in certain designated cells where large boulders were encountered; in those cells, documentation samples could be collected at refusal and backfill could commence.

FO 03 provided direction to discontinue backfill of stone, common borrow, and topsoil at designated low-lying cells inundated by standing water; the contractor is to return after the seasonal water table has receded to complete backfilling in those areas.

FO 04 instructed the contractor to construct the new chain link fence separating the Batavia Iron and Metals site and City of Batavia property along the property line.

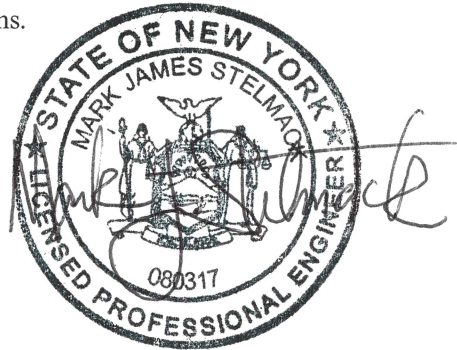
Other Changes and Clarifications to the Work. Changes and Clarifications to the work documented in email correspondence (arranged by date in Appendix Q.1) include the following:

- **12-22-2017:** NYSDEC approval was given for use of snow fencing in lieu of geotextile fabric as a demarcation barrier for marking the vertical soil excavation limit.
- **01-15-2018:** MACTEC documented that soil confirmation samples could be collected without dewatering the excavation, and that backfilling is to be preceded by dewatering.
- **03-02-2018:** Nature’s Way documented the plan to dispose of a grease drum excavated during the work at ESG’s recycling facility (American Recyclers, Tonawanda, New York); the analytical report referenced in the email is included in Appendix I, and the drum’s waste profile is included in Appendix L.
- **08-28-2018:** Nature’s Way indicated that bids were being solicited for the tire shredding/offsite disposal effort.
- **10-19-2018:** NYSDEC requested that Nature’s Way repair the damaged overhead door to the onsite building, and that the power and heat within the building be shut off for the winter.
- **11-08-2018:** Nature’s Way documented that onsite tire shredding was completed.
- **11-26-2018:** Nature’s Way documented that offsite disposal of the shredded tires at the US Ecology TSDF was completed, and that the new overhead door to be installed at the onsite building had been ordered.
- **01-02-2019:** Nature’s Way documented that the new overhead door is scheduled to be installed on January 11, 2019 at which time the utility accounts for providing heating fuel and electric service to the building would be terminated.

3.0 ENGINEER'S CONSTRUCTION CERTIFICATION

3.1 CONCLUSIONS AND CERTIFICATION

I, Mark Stelmack, certify that I am currently a NYS licensed professional engineer. I had primary direct responsibility for the implementation of the subject construction program, and I certify that the Offsite RAWP was implemented and that all construction activities were completed in substantial conformance with the DER-approved Remedial Design Plans and Specifications.



Signature: _____

Mark J. Stelmack, P.E.
Associate Engineer

Date: _____

January 11, 2019

4.0 REFERENCES

MACTEC, 2017a. Interim Remedial Measures – Offsite City of Batavia Owned Property, Batavia Iron and Metal, NYSDEC Site No. 819018. July 2017.

MACTEC, 2017b. Remedial Action Design Drawings, *Re-Issued for Construction*, Batavia Iron and Metal Company, Drawings C-103 and C-104, NYSDEC Site No. 819018. August 30, 2017.

MACTEC, 2017c. Surficial Debris Pile Characterization and Asbestos Containing Material Survey, Batavia Iron and Metal, NYSDEC Site No. 819018. March 2, 2017.

New York State Department of Environmental Conservation (NYSDEC), 2013. Record of Decision, Batavia Iron and Metal Company, Inc., Environmental Restoration Project, Batavia, Genesee County, Site No. E819018. April 2013.

NYSDEC, 2010. DER-10 / Technical Guidance for Site Investigation and Remediation, Issued May 3, 2010.