FINAL REMOVAL ACTION REPORT

MORGAN MATERIALS SITE

Town of Tonawanda, Erie County, New York

Site Code: 02KL
CERCLIS Code: NY0002190205

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1.0 INTRODUCTION

At the request of the New York State Department of Environmental Conservation (NYSDEC), the U.S. Environmental Protection Agency, Region II (EPA) with the support of Weston Solutions, Inc., Removal Support Team 3 (RST 3), currently Superfund Technical Assessment & Response Team V (START V), and EPA's Emergency and Rapid Response Services ("ERRS") contractor, Guardian Environmental Services (GES), conducted Removal Action activities from March 13, 2017 through June 14, 2018 at the Morgan Materials Site (Site) to mitigate the threat of release of hazardous substances which were confirmed to be present at the Site. In addition, RST 3 assisted EPA in its oversight of removal contractors employed by volunteer companies that fully participated to remove and reuse/recycle, or dispose chemical materials originating from their companies.

1.1 Site Location and Description

The Site is the location of the Morgan Materials Inc. facility (Facility) which is situated in a mixed residential and commercial neighborhood at 380 Vulcan Street in the Town of Tonawanda, Erie County, New York. The Site consists of four separate parcels 380, 400, 408 and 416 Vulcan Street and a series of connected warehouse buildings. The Site encompasses several adjacent properties where a warehousing/repackaging operation involving off-specification chemical materials resulted in a vast accumulation of chemical material including hazardous liquid flammables and substantial quantities of uncharacterized waste. The warehouse structures were in fair condition, although the roofs of some of the buildings needed repair. Refer to Attachment A, Figure 1: Site Location Map and Figure 2: Site Overview Map.

1.2 Site History

The Site is a property of Morgan Materials, Inc. also known as Morgan Chemicals Inc., which was a broker of off-specification and discontinued chemicals that were purchased for the purpose of resale. On March 14, 1997, the NYSDEC requested that the EPA evaluate the Site for a Removal Action. Following the request, the EPA performed a removal site evaluation and found numerous environmental concerns. During the evaluation, EPA observed between 8,000 and 10,000 drums of chemicals containing pollutants or contaminants and hazardous substances which included flammable liquids, corrosive liquids and solids and poisonous liquids at the Site. Many of these drums were found to be leaking, corroding, crushed, deteriorating and/or threatening to topple over from over-stacked pallets. Drums were primarily stacked on pallets, four levels high, without adequate aisle space.

On August 6, 1997, EPA entered into an Administrative Order on Consent (AOC) with Morgan Chemicals property at Hertel Warehouse located at Hertel Avenue and the owner, Donald Sadkin (Respondents). This AOC required the Respondents to secure and stabilize all drums onsite, and then identify and contact raw chemical manufacturers in an effort to encourage companies to cooperate with removal of these materials for beneficial use that would otherwise require offsite treatment and/or disposal. In 1998, drums remaining at the Site were removed by EPA due to their overall poor and/or stored condition, including drums of unknown contents that had no labels or with labels that were illegible), drums from bankrupt or defunct companies, drums of spill clean-

up material, and drums from identified companies that had not expressed willingness to remove them from the Site for recycling/disposal.

In July 2016, the EPA received a request from NYSDEC regarding the Morgan Materials, Inc. property located at 380 Vulcan Street and, on July 26, 2016, the EPA conducted a joint inspection of the 380 Vulcan Street Facility with officials from Occupational Safety and Health Administration (OSHA), NYSDEC, New York State Division of Homeland Security & Emergency Services (NYSDHSES), and the Town of Tonawanda. Morgan Materials, Inc. was represented by the Facility owner's son, the Plant Manager, and an environmental consultant. The inspection identified substantial quantities of chemicals (flammables, resins and other unknown) stored together with the drums above incompatible materials. In an outside storage area underneath a cloth canopy were eight rows of triple stacked pallets of drums, which contained flammable and corrosive materials. In addition, several stainless-steel totes containing flammable materials were also stored in this area. The chemicals/materials contained in drums, boxes, super sacks, and other assorted containers were stored on racks up to four shelves high, and two or three pallets high. It was estimated that 10,000 containers were at the Site. The condition of the containers ranged from very good to very poor, with many of them open to the environment. "Flammable" and "corrosive" labels were observed on many of the drums throughout the Facility, indicating the potential presence of Resource Conservation and Recovery Act (RCRA) hazardous waste and Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) hazardous substances.

A concrete lined secondary containment in the outside storage area was found to contain cracks and gaps in the floor, and overall in a poor and dilapidated condition. The condition of containers stored outside ranged from very good to very poor, and some of them showed evidence of bulging and tilting to the point of falling off the pallets. Some of the drums were open to the environment and others exhibited evidence of recently spilled material over them. Throughout the Facility area, "flammable" and "corrosive" labels were observed to be mixed in or in close proximity with some drums with "oxidizer" and "poison" labels. Evidence of spillage was present on much of the building floors throughout the Facility. During the inspection, odors were noted in portions of some buildings, with field instrumentation (MultiRAE) indicating readings up to 1.2 parts per million (ppm). In general, housekeeping was found to be very poor.

On November 10, 2016, EPA's Removal Action Branch (RAB) received a formal referral letter from the NYSDEC requesting assistance from EPA to perform a Removal Action at the Site. On November 17, 2016, the NYSDEC issued a Summary Abatement Order (SAO) to the owner of Morgan Materials, Inc. as respondent, ordering the owner to mitigate the imminent danger presented as a result of improper accumulation of hazardous and nonhazardous chemicals/materials, storage of incompatible chemicals/materials, non-working fire suppression system, and other serious violations documented after several facility inspections by local, state, and federal agencies. With the issuance of the SAO, the NYSDEC officially arranged and granted access to EPA and its ERRS and RST 3 contractors. Consequently, EPA assumed the responsibility to provide a 24-hour/7-days a week site security service and initiate actions to assess and stabilize the Site in order to mitigate the imminent danger to the public and environment. Refer to Attachment B: Agency Documents, for the NYSDEC Referral Letter to EPA for a Removal Action and the EPA Region II Action Memorandum.

Information obtained by EPA during on-site actions for site stabilization and a material inventory summary provided by NYSDEC indicated that approximately 13 million pounds of chemicals exist in drums and other container types in the Facility. The inventory summary was based on information obtained from the current inventory system operated by Morgan Materials, Inc. The Facility indicated that the quantities were only an estimate of the amount and variety of materials stored at the Facility. The EPA, in partnership with NYSDEC, contacted chemical manufacturers to voluntarily remove to repurpose/recycle/dispose all chemicals/materials that they previously sold to Morgan Materials, Inc. EPA and NYSDEC requested companies removing their material from the Facility to provide information on the final disposition of the material in a disposal report, outlining the type and quantity of material removed, and transportation, storage, and disposal facility information. As of EPA's May 2018 demobilization from the Site, a total of 7,751 drums/totes (7,346 drums and 405 totes) and 5,665,765 pounds of chemicals/materials were addressed by 36 volunteer companies, with EPA addressing an additional 3,441 drums/totes (3,227 drums and 214 totes) and 3,336,706 pounds of chemicals/materials. Refer to Appendix A: Tables 1 through 10, for lists and summaries of all chemicals/materials shipped offsite.

On November 18, 2016, EPA, RST 3, ERRS, and the NYSDEC conducted a Site reconnaissance as part of a Removal Assessment of the Site, including the storage area, which encompasses a large warehouse with a series of smaller connected warehouses and a tented storage area in the northern rear area. The purpose of the Removal Assessment was to identify areas where drums with incompatible materials were reported to be comingled and field-assess the contents (through label identification) in order to provide recommendations for future actions. RST 3 screened for volatile organic compounds (VOCs) using a MultiRAE Pro equipped with a photoionization detector and screened for radiation using a Ludlum Model 19 microroentgen meter (Ludlum-19).

During the Site reconnaissance, field screening results did not indicate presence of VOCs in ambient air; however, radiation readings indicated elevated levels, 17 microroentgen per hour (µR/hr) and 18 µR/hr respectively, approximately three-times (3x) above background, at two locations where abrasive materials were stored in sacks within the warehouse. Radiation level throughout other areas of the warehouse was at background level, approximately 5 µR/hr. ERRS created an inventory of stored hazardous materials and relocated drums and storage containers containing incompatible materials that were comingled throughout the Site. Skids of drums and containers were moved from entrances to side rooms, and drums marked "poison" were placed on a separate pallet which was staged on the warehouse floor. An inventory listing of chemicals and materials and their manufacturing companies obtained from NYSDEC and the Owner were utilized by RST 3 to crosscheck, cross reference, as well as record any chemical/material without any identifying information on the drums and containers. An inventory of the estimated quantities of drums and totes present onsite, with the exception of those belonging to DuPont, Dow Chemical, and Momentive, was created. A total of 6,043 55-gallon drums, 45 40-gallon containers, 652 30-gallon containers (including fiber drums, metal containers and drums), 90 5-gallon container (including pails), 20 3-gallon containers, 48 over-pack containers, and 372 totes, all containing hazardous materials, were found in warehouse spaces throughout the Site. Refer to Appendix B: Inventory Summary Database, for the Drum and Powder Inventory.

Following the initial Site reconnaissance conducted by EPA, from November 2016 through February 2017, pre-remediation work continued by contacting chemical manufacturers to

voluntarily remove to repurpose/recycle/dispose all chemicals/materials that they previously sold to Morgan Materials, Inc.

2.0 SCOPE OF WORK

The main scope of work (SOW) for the Removal Action at the Site was to assess and dispose/recycle more than 10,000 containers with chemical materials, including flammable liquids and solids, corrosive liquids and solids, oxidizers, radioactive abrasive materials, resins, and unknown materials. The SOW was completed in two phases. Phase I was the removal of chemicals/materials by manufacturers that volunteered to remove their products and Phase II was EPA's initiative to remove the remaining containers of chemicals/materials that were orphaned or that manufacturers refused to cooperate in the removal process.

2.1 Air Monitoring

At the request of the EPA On-Scene Coordinator (OSC), real-time indoor air monitoring was conducted on a daily basis throughout the duration of the Removal Action. Air monitoring devices were placed at various locations in the Facility's warehouses depending on which warehouse was designated as the active work area for the day. Real-time air monitoring was utilized to monitor the levels of dust migration and the potential for other site-related contaminants from becoming air-borne during intrusive site activities (*i.e.*, the removal of hazardous and non-hazardous materials). The objectives of the real-time air monitoring were to evaluate and control the level of exposure to personnel working at the Site and prevent the possible offsite migration to the surrounding receptors. DataRAM® particulate monitoring devices equipped with PM_{10} (particulate matter smaller than 10 microns [µm] in diameter) detectors were used to monitor particulate levels and AreaRAE® air monitoring devices equipped with multi gas sensors were used to monitor for VOCs, percent Lower Explosive Limit (% LEL) of combustible gases, carbon monoxide (CO), oxygen (O_2), and hydrogen disulfide (H_2S).

2.2 Site Activity Documentation

Documentation of Site activities by RST 3 was accomplished through observations, Site Logbook entries, digital photographs, database entries, electronic spreadsheets, tables, and charts. ERRS and contractors of volunteer chemical manufacturing companies also documented Site work in database entries, log sheets, chains of custody (COC) record, daily reports, and manifests, all of which are summarized in this report.

3.0 VOLUNTEER REMOVAL ACTIVITIES BY MANUFACTURERS

After assuming responsibility for the Site cleanup, EPA requested the Facility owner to provide inventory list of all hazardous and non-hazardous materials present onsite. The inventory list provided by the Facility owner listed the names of the manufacturers that produced/sold the materials present at the Site. Although the inventory list was not completely accurate, it provided guidance and a general idea of the types of materials stored onsite. Notably, some of the materials stored in the Facility were not listed and/or could not be identified using the inventory list. Therefore, a new inventory list was generated based on the materials found onsite and periodically

updated based on the removal of materials from the Facility for recycling/disposal. The inventory list was divided into two database categories, a drum database and a powder database. Refer to Appendix B: Inventory Summary Database, for the Drum and Powder Inventory.

3.1 Manufacturer Outreach by EPA

Due to the amount of material onsite (approximately 18 million pounds), EPA successfully conducted an outreach to manufacturers/companies using the list provided by the Facility owner or by researching the origin of a chemical/material to request their voluntary assistance to remove their chemicals/materials for recycling/reuse and/or disposal. Chemicals/materials that were not removed due to unwilling manufacturers were addressed by EPA. A total of 38 manufacturers agreed to voluntarily remove their materials for proper recycling/reuse or disposal under EPA oversight. Refer to Table 3.3-1 in Section 3.3 of this report for a list of volunteer manufacturers that assisted with the removal and recycling/proper disposal of their chemicals/materials.

3.2 Removal Requirements

Once a manufacturer was identified, EPA contacted and inform the manufacturer of the existence of chemicals/materials believed to have originated from them or their vendor. Subsequently, EPA advised the manufacturer to review the information provided in regard to the materials and verify origin/ownership. A Facility visit was coordinated by the EPA OSC for a representative of the listed manufacturer to visit the Site, inspect the materials, and determine if the material(s) originated from them. The manufacturer's representative was allowed to take photographs and/or samples if necessary, in order to complete the verification of the materials stored on Site.

After determining ownership of any material by a specific manufacturer, the manufacturer was given options to pick up the material and take it back to their facilities for reuse or recycling, dispose of the material at a designated disposal facility, or hire a company to dispose of the material on their behalf at a facility approved by CERCLA Offsite Rule.

Prior to removing any material from the Site, the material had to be stored in an appropriate container, properly labeled and documented in a manifest. Any containers that were damaged or leaking were over-packed to prevent any spills prior to, during, and after transportation. In addition, each manufacturer was responsible for submitting a final report to EPA detailing all the materials they removed from the Site, including but not limited to chemical name, classification, and quantity. The manufacturer was also required to inform EPA of the chemical/material's final fate. All manufacturers were required to comply with this instruction from EPA regardless of whether the material was taken back to the manufacturers' facilities for reuse or recycling or for disposal at a designated facility approved by CRECLA Offsite Rule. If a manufacturer disposed of the material at a disposal facility, then a manifest from the disposal facility was required as proof of proper disposal. Refer to Appendix D1 for the Volunteer Companies Waste Manifests.

3.3 Summary of Volunteer Companies

Notably, based on the inventory list provided by the Facility owner, not every manufacturer and/or company listed agreed to comply with the EPA request to voluntarily remove their

chemicals/materials, and not every manufacturer and/or company listed was still in business or had been acquired by other manufacturers at the time of the Removal Action. All the manufacturers and/or companies that were contacted and volunteered to assist with removing their chemicals/materials from the Site are listed in Table 3.3-1: List of Volunteer Companies and Appendix A, Table 1: List of Volunteer Companies and the Chemicals/Materials Recovered from Site.

Table 3.3-1: List of Volunteer Companies

Names of Volunteer Companies			
America Hoechst	Eastman	International Papers	SE Tylose
Arizona Chemicals	Evonik Degussa	Johnson Mathews	Sekisui
Arkema	Flint Group CDR	Lanxess (Crompton & Knowless / Bayer / Chemtura)	Sherwin Williams
Ashland	FMC	Lubrisol Carboset	Silberline
BASF	GE Plastic (Sabic)	Momentive Performance Materials	Solvay
Cabot	Goodyear	MPM Lawter	Speciality Polymer
Cassella	HB Fuller	Nexeo (Quantum)	SPI Pharma
Covestro (formerly Bayer Chemicals)	Hilton Davis (Dystar)	PolyOne (GEON)	Valspar
DOW	Huber Index	PVS Chemical	
DuPont	Inolex	Sasol	

3.4 Summary of Material Removed from the Site

Based on the label information found on the containers at the Site, the categories of hazardous materials identified from the container labels included: inorganic pigments, organic dyes, inks, inorganic salts, organic solvents, liquid and solid corrosives, poisonous materials, oxidizers, bisphenol A, organic resins, and radioactive materials. The EPA was able to ascertain from the container label information that approximately 10,000 containers of chemicals/materials, many of which contained hazardous materials and/or substances, were stored at the Site. Many of the containers had acutely and/or chronically toxic substances as noted on their labels and respective Safety Data Sheets (SDS). A significant number of containers with unknown contents were also present. If a release were to occur due to a chemical reaction of incompatible materials, a fire, or vandalism, the environmental impact could have been severe and the potential danger to the nearby schools, residential areas and business communities could have been extensive.

The list of materials removed from the Site was a complex mix of hazardous and non-hazardous materials encompassing more than 3,000 compounds excluding unknown materials. Refer to Appendix A: Tables 2 through 10, for lists and summaries of all chemicals/materials shipped offsite. Not every container with unknown material was identified through laboratory analysis since this approach would not have been cost effective. Under EPA directions, a cost-effective approach of using Hazard Categorization (HazCat) field testing was utilized to verify the unknown materials of containers. Hazard Categorization (HazCat® System), also referred to as HazCat for

the purpose of this report, is a generic acronym unrelated to the registered trademark "HazCat" and ERRS does not utilize the methods associated with the registered trademark. HazCat field screening was accomplished by performing several qualitative and semi-quantitative field tests which include testing for pH levels, oxidizers, sulfides and cyanides, ignitability, and solubility in water and hexane. In addition, a detailed information of physical characteristics including color, clarity, viscosity, are also documented.

After completing HazCat field testing, the containers were sorted into groups based on physical and chemical properties and compatibility. A composite sample was collected from containers in each group of compatible materials and submitted for laboratory analysis to determine if the grouped chemicals were hazardous or non-hazardous. Based on documented information from HazCat field testing and analytical results of the composite samples, containers of unknown materials were classified into distinctive groups for disposal purposes, and a composite number generated with description was used to identify and document the unknown materials. Refer to Appendix A, Table 3 for the List of Composite Numbers and Descriptions and Appendix C for the Inventory HazCat Sheets.

3.5 Explosive Material

While conducting drum inventory, ERRS and RST 3 found a large number of drums located in the "Far Back Room" (Refer to Attachment A, Figure 3: Facility Layout Map and Attachment C: Photographic Documentation Log, Photographs 49 & 50), which contained aluminum paste (a potentially explosive material). A total of 383 drums of aluminum paste labeled MMD-001207, MMD-001208, MMD-001249, MMD-001250, MMD-002255, MMD-002391, MMD-002978 through MMD-002981, MMD-003281 through MMD-003283, MMD-003782 through MMD-004153 and MMD-004913, were noted at the Site. Aluminum paste is a stable material when in the paste form, but it can react violently (explosive) if it dries up and comes in contact with water, a heat source, oxidizers, or halogenated hydrocarbons (including fire extinguishing agents). For safety reasons, all other drums in the vicinity of the drummed aluminum paste were removed immediately and the area delineated with caution tape. Minimal contact was the established Site protocol for handling of the drummed aluminum paste, and the drums were only to be handled when absolutely necessary.

In an effort to eliminate the hazard posed by the presence of the aluminum paste at the Site, EPA attempted to contact a few manufacturers that utilized aluminum paste for their manufacturing process to ascertain if they would be interested in picking up the aluminum paste for reuse. The EPA contacted Silberline Manufacturing Co. Inc., (Silberline), the manufacturer that showed interest in the aluminum paste, and made necessary arrangements with their representatives to remove the drums with aluminum paste from the Site. On January 24 and 31, 2018, representatives of Silberline were on Site to collect the 383 drums of aluminum paste. Under bills of lading numbers LD3180085, LD3180086, LD3180087, LD3180088, and LD3180089, an estimated 203,500 pounds (lbs.) of aluminum paste was transported offsite in five trucks provided by a transporting company, Top Class LLC., to the Silberline facility in Tamaqua, Pennsylvania.

Silberline rejected five drums that were assumed to contain aluminum paste. The five drums rejected by Silberline were left onsite and they included three empty drums, one drum containing

an unknown liquid, and one drum with unknown paste, but not aluminum paste. ERRS disposed of the three empty drums and the remaining two drums with contents were shipped offsite for disposal at designated facilities. The 383 drums picked up by Silberline are listed in Appendix B1: Drum Inventory Database based on number tracking; however, since the drums were removed by a volunteer manufacturer, the final total weight is accounted for under Appendix A, Table 1: List of Volunteer Companies and the Materials Recovered from Site.

3.5.1 Department of Homeland Security

In January 2017, the United States Department of Homeland Security (DHS) contacted the EPA regarding the ongoing material inventory at the Site. The inquiry in support of Executive Order 13560 "Improving Chemical Facility Safety" and DHS's "Chemical Facility Anti-Terrorism Standards", was to identify specific Chemicals-of-Interest. After a review of the material inventory provided by the Facility owner, aluminum paste was identified as being on the DHS watch-list. A Site visit was conducted by representatives of DHS to confirm that the aluminum paste was properly stored and secured at the Facility. DHS requested to be notified of any changes regarding the status of the aluminum paste, including removal (i.e., recovery by manufacturer and/or disposal). In February 2018, EPA notified DHS that the aluminum paste was recovered by Silberline and recycled at the MagPro, LLC facility in Camden, Tennessee. Subsequently, certificates of recycling from MagPro were provided to DHS by Silberline.

4.0 REMOVAL ACTIVITIES BY EPA CONTRACTORS

After the EPA took over the Site, a careful inspection of the Facility was conducted to verify how much material was present onsite and determine the best method to organize, categorize, segregate, and remove the materials in the Facility's warehouses. Each manufacturer was given the option of bringing their own crew and equipment, or to hire a subcontractor to do the work. The willingness of some manufacturers to visit the Site, visually inspect the materials onsite, determine ownership, and subsequently remove some of the materials stored at the Site, was a major step towards accomplishing the objectives of the Removal Action. The organization and removal of the materials stored onsite was facilitated by EPA's contractors, ERRS, RST 3 and one volunteer manufacturer's contractor, Clean Harbors, Inc.

At the outset of the Removal Action, the focus for EPA and volunteer manufacturers' contractors, such as Clean Harbors, with the help of AECOM, one of the oversight contractors for volunteer companies, was to locate, identify, and facilitate the loading and removal of material from the warehouses back to the volunteer manufacturers' facilities or disposal at EPA-approved disposal facilities. Since each manufacturer was required to provide a report detailing what was disposed of and the associated disposal manifests, Clean Harbors and AECOM maintained detailed records of drums, super-sacks, bags, and totes that were removed by each manufacturer that hired them for the removal.

ERRS was responsible for conducting HazCat field screening of chemicals/materials of all remaining drums, totes, and containers and their subsequent removal for disposal at designated EPA-approved facilities. In addition, ERRS was responsible for post-removal cleanup of the Site, which involved disposal of empty drums, pallets, trash, and other miscellaneous material found

onsite. Once the material inside any container was identified and categorized, the container was ready for disposal by ERRS, or the manufacturer, if one was identified. If the manufacturer was not identified, ERRS was responsible for arranging for the disposal at a designated EPA-approved facility. ERRS also collected a sample from each drum and tote for laboratory analysis in order to identify and categorize the materials for proper disposal. Other materials listed in the powder inventory (super-sacks, bags, and cubic-yard boxes full or material) were also disposed of by ERRS.

Utilizing a unique naming and storage nomenclature, ERRS maintained a database of all the materials that were stored onsite in drums, totes, super-sacks, palletized bags, and cubic-yard boxes. This naming system organized the materials by identifying the chemical category, storage container type, and storage location onsite, which made tracking and locating materials for disposal seamless. For example, a drum assigned Morgan Material Drum (MMD) identification number MMD-000234 and storage location AJ-A1-R-F in the data base would be found in Warehouse A, row 'J', bin A1, right front shelve. Refer to Attachment A, Figure 3: Facility Layout Map and Appendix B: Inventory Summary Database.

The role of RST 3 during the Removal Action included air monitoring, generating daily photographic documentation, documenting onsite activities in the Site logbook (Refer to Appendix I: Logbook Documentation), and providing technical, contractor oversight support and air sampling. Indoor air monitoring was performed during container removal activities using DataRAMs for particulate monitoring and AreaRAEs to monitor for VOCs, LEL, CO, O_2, and H_2S (Refer to Appendix E: Air Monitoring Data). In addition, RST 3 provided oversight for documenting the activities of ERRS, volunteer company contractors, and significant Site events and issues. RST maintained a database to track inventory of storage containers and HazCat and laboratory information generated by ERRS. The Site and warehouse schematics were prepared, as necessary. Health and safety meetings with ERRS and daily operations meetings with volunteer company contractors were documented. Information regarding SDSs were researched by ERRS as directed by the EPA OSC. At the conclusion of the removal activity, RST 3 was tasked to collect indoor air samples for polyaromatic hydrocarbons (PAHs), heavy metals including mercury, and hydrogen cyanide, analyses to confirm if the removal and building decontamination activity adequately removed chemicals and dust to the level where they cannot impact public health and the environment. Refer to Appendix F: Removal Action Air Sampling Report.

4.1 Site Security

The Site is enclosed by an 8-foot high chain-link fence with an electronic gate at the main entrance on Vulcan Street. From November 11, 2016 through July 20, 2017, 24-hour security services were provided by U.S. Security Associates, Inc. Subsequently, following EPA's decision to switch the security company, Securitas Security Services USA, Inc. provided 24-hour security services at the Site from July 7, 2017 through May 16, 2018.

4.2 Site Air Monitoring

Air monitoring activities at the Site were conducted in accordance with the procedures outlined within the EPA guidance document entitled, "Superfund Program Representative Sampling

Guidance, Volume 2: Air (Short-Term Monitoring), Interim Final. 1995. EPA 540/R-95/140. (OSWER Directive 9360.4-09, PB 96-963206)." Air monitoring was continuous during site-intrusive activities (i.e., materials handling operations) and conducted using three DataRAMs and three AreaRAEs, which were deployed strategically throughout the Facility's warehouses in order to maximize coverage during removal operations at the Site.

At each air monitoring station, one DataRAM and one AreaRAE were deployed, and unique identifier numbers were assigned to each air monitoring equipment in order to accurately track the data generated by each air monitor. Particulate monitoring was focused on PM_{10} and, although ambient air monitoring was focused on VOCs, other air quality parameters, including LEL, CO, O_2, and H_2S, were also monitored for potential exceedance above the OSHA Permissible Exposure Limit (PEL).

All the air monitoring equipment were connected to EPA's VIPER system (a wireless network-based communication system). The VIPER system received, stored, and provided instantaneous real-time air quality readings through a computer server (Viper Deployment Manager [VDM]). At any time, if needed, the data stored on the EPA VDM server can be accessed, retrieved, analyzed, and presented in the form of charts. Refer to Appendix E: Air Monitoring Data.

Based on the established Site-Specific Action Levels for particulates (minimum of 100 micrograms per cubic meter [$\mu g/m^3$] and maximum of 150 $\mu g/m^3$) and the Site-Specific Action Levels for VOCs (5 ppm), alarms were set on each air monitor and the VIPER system was programmed to send cell phone notifications to the EPA OSC and the RST 3 Site Project Manager (SPM) when particulate or VOC concentrations exceeded the Site-Specific Action Levels to warrant the re-evaluation of Site activities, including slowing down work in the warehouses and implementing engineering controls to mitigate the cause of the exceedances.

4.2.1 Air Sampling

On April 17, 2018, EPA requested RST 3 provide support for the collection of air samples at the Site for laboratory analysis. The purpose of the air sampling event was to utilize the analytical results to verify that Site-related contaminants did not impact the air quality within the warehouse following the completion of removal activities.

On May 14 through 15, 2018, 10 indoor air samples were collected by EPA from 10 locations throughout the warehouses at the Site. On May 15, 2018, the air samples were submitted to TestAmerica Laboratories, Inc. (TestAmerica) located in South Burlington, Vermont under COC Record No. 2-051518-143215-0001 and analyzed for PAHs, mercury, and cyanide, via EPA Method Toxic Organics (TO)-13, National Institute for Occupational Safety and Health (NIOSH) Method 7300, NIOSH Method 6009, and NIOSH Method 6010, respectively.

Validated analytical results indicated that concentrations of target analytes in the 10 air samples collected within the warehouses at the Site were below the EPA Regional Screening Levels (RSLs) for Composite Worker Air. Refer to Appendix F: Removal Action Air Sampling Report.

4.3 Inventory/ Database Development

The container inventory conducted by EPA during the removal site evaluation was based on a review of the inventory list provided by the Facility owner and the label information observed on the containers at the Site. EPA was able to determine that inorganic pigments, organic dyes, inks, inorganic salts, organic solvents, liquid and solid corrosives, poisonous materials, oxidizers, bisphenol A, organic resins, and radioactive materials, were present at the Site. EPA was also able to determine that these chemicals/materials encompassed approximately 10,000 containers, including drums, totes, super-sacks, paper or synthetic sacks, and cubic-yard boxes, many of which contained hazardous materials and/or substances in liquid, solids, or powder forms. Many of the containers contained acutely and/or chronically toxic substances as noted on their labels and respective SDSs. A number of containers with unknown contents were also present at the Site. Therefore, in order to keep track of these containers during removal operations, two inventory databases, for drums and powders, were created. Refer to Appendix B for the Inventory Summary Database.

4.3.1 Drum Inventory Database

Drum inventory was created using a Container Inventory System Application (CISA) designed by RST 3, and installed for use on an iPad tablet. CISA enabled the user to move around the Site to locate and log container (drums, tote, etc.) information and update the container inventory. The chemical/material profile information logged in CISA included a full description of each container, its capacity, condition, markings, labels, warnings, access, safety and locking mechanism, photographs, and sampling status. Refer to Appendix B1: Drum Inventory Data Base.

CISA was utilized to generate lists, spreadsheets, and tables, which provided reference for sorting through information when requested by the EPA OSCs, vendors, and onsite personnel for the retrieval and/or disposal of containers. CISA was also used to prepare weekly updates for tracking materials which had been removed or disposed of from the Site.

The process adopted onsite for creating and updating CISA involved ERRS utilizing forklifts to stage drums in one of the warehouses, usually 70 to 80 drums at a time, with similar contents, when possible. RST 3 then inputs as much information as possible for each drum (size, material, manufacturer, content, level of content, condition of drum, labels, and a photograph). A unique MMD identification number (i.e., MMD-000001) was assigned to each drum, which was then placed at a location with an assigned number (i.e., AA-A1-F-L) indicating warehouse, row, bin, front/rear, and right/left, where it will be retrieved later for disposal and/or recycle. This method was also applied for inventorying totes, and/or other variously sized containers that were found in the warehouses.

Once all the applicable information for each container was updated, ERRS prepared and performed sampling for disposal. Any drum, tote and/or container which did not have a chemical name written on it, or had no label on the exterior, was sampled for HazCat field screening in order to determine its content. All the samples collected in containers were documented with digital photographs. Drums and totes which had labels were also sampled at a frequency of every fourth container. This information was used to categorize the drums and/or containers for subsequent disposal. All samples collected were shipped to a laboratory for a full toxicity characteristic

leaching procedure (TCLP) analysis. In addition to the container information entered in CISA, sampling information and analytical results were updated in the database to provide a comprehensive profile of each container during disposal operations.

Once all the containers in the database were identified, the containers were divided into groups referred to as composites which were based on the HazCat and physical information collected during the container inventory. Refer to Appendix A, Table 3: Composite Numbers and Descriptions, Appendix C: Inventory HazCat Sheets, and Appendix G: Laboratory Data Reports.

4.3.2 Powder Inventory Database

The powder inventory database was created to identify all remaining items left onsite after the drum inventory was completed. There were approximately 3,300 powdered items remaining onsite after most of the drums were removed. These remaining materials were stored in containers such as super-sacks (ranging from 100 to 2,500 pounds), paper or synthetic sacks (ranging from 25 to 85 pounds placed on pallets), cubic-yard boxes (ranging from 700 to 2,500 pounds) and 55-gallon drums (accounted for in the drum inventory). Refer to Appendix B2, Powder Inventory Data Base.

Since the drum inventory was successfully accomplished by using the iPad application, EPA decided to replicate the same process for the powder inventory with minor adjustments. However, while the inputting of data worked on the same principle, the management of data was more challenging and slower; therefore, the iPad application could not be effectively utilized, and the powder database had to be created and updated in an excel spreadsheet to facilitate continued movement of the remaining powdered items throughout the different warehouses.

Due to the number of unknown items remaining after the drum removal was completed, the powder inventory was challenging, especially because the locations of the items to be inventoried were two rows deep and three to five levels high on the storage racks. Upon completing both the first and second round of inventory, approximately 1,400 items out of the approximately 3,300 unknown items remained unidentified. EPA utilized a device known as Ahura First Defender® (this device uses Raman Spectrometer to quickly identify unknown solids) to complete the identification, inventory, and proper disposal of the remaining powdered items. Due to the limited chemical library of the Ahura First Defender®, darker materials could not be accurately identified, and based on the success rate for identifying chemicals, only 40% of the unknowns were identified using the spectrometer.

Other challenge that was experienced during the second round of powder inventory was the number of containers with materials stacked on top of each other. Most of these stacked containers were super-sacks of approximately 200 lbs. to 2,500 lbs. in size and contained a variety of materials. With the assistance of ERRS in a forklift, the top stacked items were segregated to clear items below for identification using available information on labels or marking on the storage containers. Where a label or marking was missing, a sample was collected for analysis with Ahura First Defender®.

After the second round of powder material identification and inventory was completed, a total of 600 items remained unidentified either due to unavailable identification information/markings on the storage bags or the inability to identify using Ahura First Defender®. RST 3 and ERRS

collected a sample of each remaining unknown items for HazCat field screening to determine the physical properties. The unknowns were then divided into different groups forming a composite based on their physical properties. A total of 26 composites were generated. The 26 composites were shipped to a laboratory for analysis (Refer to Appendix G1: Laboratory Data Report for ALS Environmental). The analytical results of the 26 composites were utilized to properly classify and dispose the unknowns. Once all the items in the powder inventory were identified and classified into different groups (composites), the disposal of the powder inventory was initiated.

Since the landfill designated to receive the powdered items would not accept drummed items, a portion of the powder inventory which was stored in approximately 380 55-gallon poly drums, were transferred into synthetic super-sacks prior to transportation for disposal at landfill facilities. The transfer of the powdered material was accomplished by using a vacuum unit (Hurricane 500-0339 by Industrial Vacuum) with a large wide hose, which was capable of handling large volumes of powder. The empty drums were stacked and set aside for disposal at another disposal facility. Refer to Attachment C: Photographic Documentation Log, Photographs 45 and 46.

4.4 Process of Classification

The submission of material profiles was the prerequisite requirement for the acceptance of any materials by disposal facilities. To comply with the requirements of designated disposal facilities, waste profiles were generated and submitted to the designated facilities for approval prior to transportation for disposal. Same procedures were applied to generate waste profile for unknown materials by utilizing information from HazCat field tests and laboratory analytical results.

4.4.1 Composite Sampling

In order to initiate the disposal of materials at the Site, the contents of individual containers found to be compatible were grouped into waste streams for characterization. These groupings were determined by various methods. Each method begins with identifying the material to be characterized for disposal and assigning it a unique container identification number. During the Removal Action, three unique identification systems were utilized:

- MMD-######" was the prefix utilized to sequentially number drums and totes for inventory and tracking purposes.
- MP######" was the prefix utilized to sequentially number pallets, bags and similar containers.
- MLP######" was the prefix utilized to sequentially number small containers for inventory and tracking purposes.

Compatibility testing at the Site was initiated by first segregating samples into groups based on the information collected during field characterization. These groups generally fall in line with the U.S. Department of Transport (DOT) hazard classes and EPA characteristic waste codes (Refer to Appendix H, Hazardous Waste Codes). This initial step grouped the containers into flammable and combustible liquids, flammable solids, corrosives, explosives, oxidizers, peroxides, and radioactive categories. After the containers have been placed in these groups, they are further segregated based on more specific criteria. Once the material is identified to contain potential chemical that could be composited, small aliquots of individual samples were combined to test and

verify compatibility, including explosivity and/or other rapid releases of energy, solidification, off-gassing, polymerization, separation, etc. Waste composites that consisted of approximately 20-25 individual containers (based on solid waste (SW)-846 guidelines) were determined for disposal. However, groups much larger or smaller may result based on how similar or dissimilar the materials are.

4.4.2 Profile

A profile is a comprehensive and full description of any material or product based on the physical, chemical, and regulatory category which is required to be submitted to a disposal facility for approval prior to the delivery of the material to a designated disposal facility. A typical profile includes the following information:

- The chemical composition of the material
- How it was created (End-of-life chemical, Industrial byproduct, Accidental spill)
- Physical state (Liquid, Solid, Sludge)
- Whether it is odorous
- Whether it is volatile and (if so) its flash point
- Whether you intend to transport it in boxes, drums, or other storage containers
- EPA hazardous waste code
- DOT description

4.5 Disposal Process

The disposal of materials stored at the Site was initiated prior to the commencement of the Removal Action. The disposal of all material from the Site was conducted in two phases. Phase I was the voluntary removal of materials stored onsite by the manufacturers of the products identified. Phase II was the removal of unidentified and orphan materials, or materials which manufacturers or brokers refused to voluntarily remove from the Site. Phase II was completed by ERRS as directed by EPA. Notably, the removal of material by voluntary manufacturers was ongoing throughout EPA's Removal Action.

The disposal of chemicals/materials began by reviewing the chemicals/materials inventory list provided by the Facility owner, locating the warehouses onsite where each chemical/material is stored, determining the types and amounts of chemicals/materials associated with specific manufacturers, and searching and contacting manufacturers to voluntarily remove the chemicals/materials from the Site for reuse/recycling or proper disposal. Once a manufacturer was identified and contacted, the manufacturer's representative would be advised to visit the Facility to inspect the chemicals/materials identified in the warehouses and arrange for off-site removal. Once the ownership of the chemical/material was verified, the manufacturer had the option of arranging to pick up the chemical/materials and take them back to their facilities for reuse/recycling, or disposing of the chemical/material at an EPA-approved disposal facility, or the manufacturer hires an environmental remediation contractor to remove and dispose of their chemicals/materials. In cases where a manufacturer could not be identified, or located, or the manufacturer took no action, EPA utilized its ERRS contractor for removal and offsite disposal of the chemical/materials.

For a complete list of disposal facilities, refer to Appendix A, Table 1: List of Volunteer Companies and the Materials Recovered from Site, Table 2: Summary of Drummed Material Shipped by GES for Offsite Disposal, Table 7: Summary of Powder Material Shipped by GES for Offsite Disposal.

4.6 Summary of Material Removed from the Site

The physical state of the materials found onsite were as follows: liquid, solid, powder, gelatinous or paste. Materials that appeared to be of similar physical state were stored in one or more of the following type and sizes of containers: drums, ranging in size from 1 to 55 gallons made of steel, aluminum, fiber or plastic (poly) material; totes ranging in size from 250 to 350 gallons made of plastic (poly) material; super-sacks ranging in size from 100 to 2,500 lbs. made of synthetic material; bags ranging in size from 35 to 85 lbs. made of paper or synthetic material placed on flat pallets with 5 to 40 bags per pallet. Palletized bags were assigned one identification number per pallet regardless of the number of bags on each pallet.

Many containers were found in deteriorating conditions. Depending on what the containers were made of, the locations onsite, and if exposed to the elements, containers were classified into one of three categories: good, fair or poor. Any containers that were classified as poor were placed into an over-pack container (85 or 110 gallons in size) prior to disposal; however, if the containers were less than 55 gallons, a 55-gallon steel drum was used for over-pack (Refer to Attachment C: Photographic Documentation Log). Approximately 1,071 containers were over-packed by ERRS during the Removal Action. A list of all the materials removed from the Site, including disposal facilities, and all pertinent information, are presented in Appendix A, Table 2: Summary of Drummed Material Shipped by GES for Offsite Disposal, Table 7: Summary of Powder Material Shipped by GES for Offsite Disposal, and Appendix D2: GES Waste Manifests.

4.6.1 Drum Data Base (Inventory)

After the drum inventory, HazCat field screening, and the classification of unknown materials in drums and/or totes were completed (Refer to Appendix C: Inventory HazCat Sheets), ERRS initiated the disposal of drums containing hazardous and/or non-hazardous materials by grouping similar physical and chemical characteristics under the same composite number for disposal. Each composite number represented a separate group (Refer to Appendix A, Table 3: Composite Numbers and Descriptions). Based on the composite number, a profile was generated to determine the grouping of the containers. The profiles generated were submitted to the different facilities to verify if they would accept the material for treatment and/or disposal.

Upon receipt of the approvals from the different waste facilities, ERRS procured the services of a trucking company to pick up the waste materials and deliver them to the designated disposal facilities. Each truckload was accompanied by a disposal manifest which listed the entire contents and estimated weight of the load. Upon receipt and acceptance of the transported materials, the waste facility processed the disposal manifests and mailed back an endorsed copy of the manifest. For the disposal of drums and totes, all weights were estimated.

Although a total of 5,091 containers are listed in the drum inventory (Refer to Appendix B1: Drum Inventory Data Base), ERRS disposed of approximately 4,011 drums; (Refer to Appendix A: Table 2: Summary of Drummed Material Shipped by GES for Offsite Disposal and Appendix D2: GES Waste Manifests) the remaining containers were disposed of by other contractors associated with the manufacturers/companies under the volunteer program. Based on the drum inventory utilized for tracking waste disposal at the Site, ERRS transported and disposed of approximately 2,303,167 lbs. of materials at various facilities. Of the 4,011 containers disposed of by ERRS, approximately 308 were totes, and the remaining 3,703 containers were drums.

4.6.2 Drums Containing Water (Outside)

A total of 28 poly and metal drums filled with water were found at various locations through the Site. Some of the drums contained debris which were suspected to be associated with material from the Site. Samples of the debris were collected from each drum, composited into two samples, and shipped to a laboratory for full TCLP analysis. Laboratory analytical results indicated that the water was not contaminated with any materials associated with the Site. Based on the analytical results, the drummed water was emptied into the sanitary sewer system (Refer to Attachment C: Site Photographic Documentation Log, Photographs 42 through 43). All debris were removed prior to disposing the drummed water into the sanitary sewer system. The emptied drums were cut into manageable pieces and placed in a roll-off dumpster for disposal at the designated facility.

On March 1, 2018, ERRS submitted two water samples (Comp 303 and Comp 305) to TestAmerica located in Amherst, New York for VOC, SVOC, metals, pesticides, and polychlorinated biphenyls [PCB], analyses under COC Record No. TA-07. Laboratory analytical results indicated that the water samples were not contaminated and may be rainwater. Reference Appendix G1: Laboratory Data Report, TestAmerica Laboratories, Inc. Job ID: 480-132058-1 for analytical results.

4.6.3 Drums Containing Powder Material

During drum inventory activities at the Site, ERRS and RST 3 discovered a portion of the powder materials that were stored in 55-gallon poly drums and 30-gallon fiber drums, respectively. A total of 322 poly and fiber drums (Reference Appendix A, Table 9: Summary of Powder Material Transferred from Drums to Super Sacks) containing various types of powder material were found at locations throughout the Facility. The drummed powder materials were tagged, sampled, and added to the drum database. Due to the disposal facility's requirement, ERRS transferred the powder material from the poly drums into super-sacks prior to disposal, and the poly drums were cut into manageable pieces and placed in a roll-off dumpster for disposal.

A total of 50 super-sacks (MP003300 – MP003313, MP003335 – MP003341, MP003346 – MP003355, MP003357 – MP003375), under Composite No. 650, were generated after transferring the powder material from poly drums to super-sacks. Although the 322 drums of powder material are listed in the main database for drums based on drum number tracking, the disposal of the 50 super-sacks of powder material was accounted for in the powder material disposal inventory list and not the drum disposal inventory list (Refer to Appendix A, Table 7: Summary of Powder Material Shipped by GES for Offsite Disposal, Appendix B: Inventory Summary Database, and Appendix D: Waste Manifests).

4.6.4 Petroleum Based Drum Material

A total of eight drums (MMD-005072 through MMD- 005079) containing petroleum-based materials, including kerosene, unused oil (automatic transmission fluid, NIA Super SAE 10W40 and 0609 Ultra Multi Gear Oil), diesel fuel, used motor oil, and hydraulic oil were discovered in Warehouse B (Refer to Appendix A, Figure 2: Facility Layout Map, Appendix A, Table 4: Summary of Petroleum Based Material Discovered Onsite, and Attachment C: Photographic Documentation Log, Photograph 44). Originally, these drums were intended to be left-in-place onsite and addressed at a later date since their contents do not fall under the category of the CERCLA hazardous substances. However, due to the potential fire hazard posed by the presence of these materials which may impact the existing CERCLA hazardous substances, and the possible vandalism if left not addressed at the Site, EPA decided to dispose the eight drums as part of the Removal Action.

On May 4, 2018, after a profile was generated for the eight drums (MMD-005072 through MMD-005079), drums MMD-005072 and MMD-005073 were shipped for disposal to Petro-Chem Processing in Detroit, Michigan under manifest No. 018381308 JJK, and MMD-005074 through MMD-005079 were shipped for disposal to Vexor Technology in Medina, Ohio under manifest No. 00282. Refer to Appendix A, Table 2: Summary of Drummed Material Shipped by GES for Offsite Disposal, Table 4: Summary of Petroleum Based Material Discovered Onsite, and Appendix D2: GES Waste Manifests.

4.6.5 Totes Containing Water and/or Residual Material (Outside)

Throughout the Site there were totes that were either containing some materials or empty. Some of the totes had some water and/or some residual material left in them. Totes that were completely empty were cut to manageable pieces and shipped to a landfill for disposal. Any tote which had water and/or residual material was set aside for composite sampling and laboratory analysis prior to cutting and disposal.

The water found in totes were combined with the water found in the drums outside and submitted as part of two composite samples (Comp 303 and Comp 305) on March 1, 2018 to TestAmerica located in Amherst, New York for VOC, SVOC, metals, pesticides and PCBs, analyses under COC No. TA-07. Laboratory analytical results indicated that the water samples were not contaminated. Refer to Appendix G1: Laboratory Data Reports, TestAmerica Laboratories, Inc., Job ID: J132058-1 for analytical results.

4.6.6 Radioactive Material (Grit)

Large quantities of low-level radioactive material, grit, with varying colors and textures, were discovered at the Site (Reference Appendix A, Table 5: Summary of Radioactive Material Discovered on Site). Grit emits low levels of gamma radiation which is a potential health hazard if a person is exposed to it over a prolonged period of time. To mitigate the potential for exposure of Site personnel to gamma radiation, the radioactive materials were placed in the Middle Back Room for safety. RST 3 and ERRS identified, tagged, and updated the inventory and disposal lists for the grit material.

On July 27, 2017, a total of 22 samples of grit material were collected, packaged, and shipped by ERRS under COC No. 30229024 to Pace Analytical (Pace) in Greensburg, Pennsylvania for analysis (Refer to Appendix G3: Laboratory Data Reports, Pace Analytical Services, Inc. for analytical results). The analytical data for the grit was necessary in order to provide an accurate profile of the radioactive material to the receiving disposal facility. Approximately 1,100 containers of grit material were stored onsite in various sized containers, including 50 lb bags, 30-gallon fiber drums, and 2,300 lb super-sacks. The 50 lb bags were placed on pallets in groups of approximately 40 bags per pallet. Refer to Attachment C: Site Photographic Documentation Log, Photograph 35.

Upon receipt of the laboratory analytical results of the grit material, ERRS submitted the profile for approval to Waste Management/American Landfill (WM/AL) in Waynesburg, Ohio, and EQ Disposal Inc. (EQ) in Belleville, Michigan. Both facilities approved the Grit profile but specified that the acceptable storage container for disposal of the grit would be a roll-off container. The grit material was transferred into a lined roll-off container and delivered to both facilities for disposal. The original storage containers for the grit materials were crushed, packed, and shipped separately to the facilities for disposal. Refer to Attachment C: Photographic Documentation Log, Photographs 36 through 38.

From February 5 through 19, 2018, a total of five dumpsters with a combined weight of 150,500 lbs. of grit were shipped to the disposal facilities; one dumpster was shipped to WM/AL under manifest No. 367497 and four dumpsters were shipped to EQ for disposal under manifest Nos. 00110, 00111, 00117, and 00118. Refer to Appendix A, Table 6: Summary of Radioactive Material Disposal and Appendix D2: GES Waste Manifests.

4.6.7 Powder Database (Inventory)

After the powder inventory, HazCat field screening, and classification of unknown materials in super-sacks, bags (synthetic and/or paper), cubic-yard boxes, and some drums were completed (Refer to Appendix B2: Powder Inventory Data Base), ERRS commenced the disposal of containers of hazardous and/or non-hazardous materials. Containerized materials of similar physical and chemical characteristics were placed under the same composite number for disposal. Once the powder inventory was categorized, a single profile representing all the non-hazardous material in the powder list was created. This was made possible by the collaborative efforts of ERRS and representatives from the disposal facilities, who were onsite to inspect the various waste categories and advise accordingly. However, for hazardous powdered material, multiple profiles were generated. Based on the lists subsequently generated, ERRS procured the services of a trucking company to pick up and deliver the powder materials, both non-hazardous and hazardous, to the designated disposal facility. Each truckload was accompanied by a manifest which listed the entire contents of the load and the total estimated weight. Upon receipt of the material, the disposal facility endorsed a copy of the manifest which was mailed back to ERRS with the updated actual weight of the load. Refer to Appendix A, Table 7: Summary of Powder Material Shipped by GES for Offsite Disposal and Appendix D2: GES Waste Manifests.

4.6.8 Used and Unused Filters

Throughout the Facility, several palletized boxes were discovered. The boxes contained unused filters (72 pieces) and used filters (63 pieces). The dust on the used filters were field tested and found to contain materials similar to some of the powder material onsite; therefore, EPA decided to sample the dust on the used filters for laboratory analysis.

On March 8, 2018, ERRS submitted six samples of the dust from the used filters (Comp 322 through Comp 327) under COC Record No. 480-132490 to TestAmerica in Amherst, New York for TCLP analysis. The analytical results indicated that barium was present in the samples and the used filters were properly disposed at a designated facility.

Since barium is considered a hazardous material, all used filters were cut to smaller pieces and then packed into six cubic-yard boxes (MP003321 through MP003324, MP003395 and MP003396) which were shipped under manifest No. 012744687 JJK to EQ for disposal (Refer to Appendix B, Table 2: Summary of Drummed Material Shipped for Disposal by GES on behalf of the EPA and Appendix D2: GES Waste Manifests). In addition to the cut up used filters, powder material found in bins (MP003332 through MP003334), which also contained barium, were placed in the six cubic-yard boxes for disposal. The unused filters were left onsite.

4.6.9 Small Containers Inventory (Laboratory Pack)

The small containers inventory comprised of materials found in containers that were equal to or smaller than a 5-gallon bucket. Small containers were scattered throughout the Facility (Refer to Attachment C: Site Photographic Documentation Log, photographs 51 and 52). Most of the small containers inventory was focused in the Facility's laboratory and analytical room. The containers inventoried include items such as cleaning products, solvents, oils, degreasers, spray paint, bleach, enamels, glue, acids, etc. (Refer to Attachment A, Table 8: Summary of Small Containers Laboratory Pack Inventory). Utilizing the EPA waste classification codes, the small containers inventory was segregated into 37 categories for disposal (Refer to Appendix I: Hazardous Waste Codes). Based on the container categories, the small containers inventory was placed into 19 containers, including drums and cubic-yard boxes (MMD-005107 through MD-005122 and MDD-005152 through MDD-005154), for transportation and disposal. In addition, sample jars and bags which were generated from the drum and powder sampling event were included as part of the small containers inventory. Refer to Section 4.6.11 below for details.

On May 4, 2018, containers MMD-005107 through MMD-005122 from the small containers inventory were shipped for disposal under manifest No. 016845811 to Cycle Chem Inc. (Cycle Chem) in Lewisberry, Pennsylvania. On June 16, 2018, containers MDD-005152 through MDD-005154 from the small containers inventory were shipped for disposal under manifest No. 019084737 JJK to Cycle Chem. Refer to Appendix A, Table 2: Summary of Drummed Material Shipped by GES for Offsite Disposal and Appendix D2: GES Waste Manifests.

4.6.10 HAZCAT Material and Samples

After all sampling and HazCat field screening activities were completed, the remaining field samples and used sample containers were disposed of by ERRS. ERRS separated the sample

containers and their contents into groups of similar DOT hazard classifications, i.e., flammables, acids, oxidizers, etc. Refer to Appendix A, Table 8A: Summary of Leftover Material from Sample Collection Laboratory Pack.

Once all the jars had been sorted into grouped categories, ERRS placed the jars into drums and packed them with vermiculite for disposal to the designated facility (Refer to Attachment C: Photographic Documentation Log, Photograph 71). Since samples from all the jars were previously submitted for laboratory analysis, the necessary profiles were available for immediate submission to the disposal facility for approval. The sample jars and bags were divided into similar categories based on their composite numbers and then placed into 21 steel drums (MMD-005040 through MMD-005061) with vermiculate for safe transportation and disposal.

On April 20, 2018, all the non-hazardous materials from the drum and powder sampling were shipped for disposal under manifest Nos. 00250 and 00253 to Vexor Technologies (Vexor) in Medina, Ohio for disposal. On May 4, 2018, all the hazardous materials from the drum and powder sampling were shipped under manifest No. 018381804 JJK to Cycle Chem for disposal. Refer to Appendix A, Table 2: Summary of Drummed Material Shipped by GES for Offsite Disposal and Appendix D2: GES Waste Manifests.

4.6.11 Debris and Personal Protective Equipment

As removal activities progressed at the Site, debris and trash were generated and needed to be disposed off-site. Most of the debris generated onsite were from empty containers such as drums, totes, wooden boxes, cardboard, paper bags, and synthetic bags. In addition, used Personal Protective Equipment (PPE) and field expendables such as synthetic rubber, metal and plastic band, pieces of wood, tape, and strings, were generated during removal activities and also needed to be disposed off-site. Debris and PPE disposal was managed by procuring roll-off containers as needed to store the debris and PPE until it was full and ready for transportation and disposal. Empty containers previously containing non-hazardous materials, were cut into manageable sizes and disposed along with the debris.

Due to the packing and condition of synthetic rubber as non-hazardous, the material could not be disposed together with the drums or the powder inventory. At the discretion of EPA, the synthetic rubber was disposed as part of debris. On January 26 and 29, 2018, a total of 65,000 lbs. of synthetic rubber under manifest Nos. 00114, 00115, and 00116, were shipped to Modern Corporation (Modern Corp.) in Model City, New York for disposal.

A total of 22 roll-off containers were delivered to the Site for the disposal of debris and used PPE. All the debris were made up of non-hazardous materials. A total 157,920 lbs. of debris were transported by Modern Corp. for disposal. Refer to Appendix A, Table 10: Summary of Debris Disposal from Site and Appendix D: GES Waste Manifests.

4.6.11.1 Drum/Tote Cutting Operation

At the outset of the Removal Action, EPA had planned to leave-in-place all empty and decontaminated containers (metal, poly and/or fiber and totes) at the Site for disposal by the

Facility owner. However, due to concerns of potential vandalism and security at the Facility post-removal activities, EPA addressed the disposal of all the empty drums and totes as part of the Removal Action. Prior to cutting of any storage containers (drums and totes) into manageable sizes, the containers were inspected to determine if any material was remaining inside. Any remaining material was removed prior to cutting, and then containerized into a drum for testing and subsequent disposal.

Once emptied, the poly drums and totes were cut to a manageable size using chainsaws and circular saws. At the discretion of the EPA OSC, metal and fiber drums were eventually added to the list and cut. Refer to Attachment C: Photographic Documentation Log, Photographs 30 through 34. During the container cutting operations, all ERRS and RST 3 personnel donned the appropriate PPE, including safety glasses, and ambient air was monitored throughout the operation. Approximately 1,149 drums, comprising 55-gallon steel drums, 55- and 95-gallon poly drums, 10- and 20-gallon fiber drums, and 85-gallon steel drum and totes, were cut, placed on dumpsters, and disposed of at the designated disposal facility.

4.6.12 Vacuuming of Loose Material and Dry Decontamination

Finally, after offsite disposal of all containers (drums, bags, super-sacks, totes, cubic-yard boxes) that contained material was completed, the focus at the Site was shifted to the removal of loose left-over materials on the floor of the Facility. Each room throughout the warehouses was first cleared of large and small debris such as pallets, pieces of wood, plastic, metal, loose paper, bags, and trash. ERRS utilized a vacuum to remove any remaining loose materials from the floor.

The vacuuming process began on March 28, 2018, from the Tote Room (first room that was emptied), and as the rooms were emptied, the vacuuming process continued to the Far Back Room, other connecting rooms, and ending in Warehouse C. Refer to Attachment A: Figure 2: Facility Layout Map and Attachment C: Photographic Documentation Log, photograph 73 and 74.

The vacuuming process throughout the different sections of the Facility generated super-sacks of vacuumed material, which were disposed of at the designated disposal facility. The vacuumed contents of each super-sack from each section of the Facility were sampled, composited into fewer samples, and shipped for laboratory analysis. Based upon the analytical results, each super-sack was categorized and shipped to the designated facility for disposal.

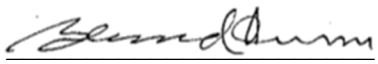
After the vacuuming operations in the facility's warehouses was completed, and all the vacuumed material were stored in super-sacks, EPA began to wind down removal activities at the Site. On May 10, 2018, RST3 demobilized from the Site. On May 12, 2018, ERRS began demobilizing from the Site, and on June 14, 2018, the last shipment of material left onsite was completed.

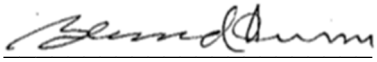
5.0 TOTAL MATERIAL REMOVED FROM SITE

A total of 38 manufacturers and/or companies volunteered to assist with the removal of material from the Site. A total of approximately 10,488,802 lbs. of material contained in drums, super-sacks, totes, and/or bags (synthetic or paper) were removed from the Site by volunteer manufacturers and/or companies. Refer to Appendix A, Table 1: List of Volunteer Companies and the Materials Recovered from Site.

A total of approximately 5,942,431 lbs. of material stored in drums, super-sacks, totes, and/or bags (synthetic or paper) were shipped by ERRS for offsite disposal. Refer to Appendix A, Table 2: Summary of Drummed Material Shipped by GES for Offsite Disposal, Table 5: Summary of Radioactive Material Discovered Onsite, and Table 7: Summary of Powder Material Shipped by GES for Offsite Disposal.

A grand total of approximately 16,431,233 lbs. of materials were removed from the Site and disposed of at the designated facilities following the guidelines established by EPA for identification (*i.e.,* labels, HAZ-CAT, sampling, and profiling) and proper documentation (*i.e.,* manifests, and/or bills of Lading) of materials for disposal.

Report prepared by:  05/25/2021
Bernard Nwosu Date
START V Site Project Manager

Report reviewed by:  05/25/2021
Bernard Nwosu Date
START V Group Leader

APPENDECIES (On Disc)

Appendix A – Tables

Appendix B – Inventory Summary Database

Appendix C – Initial Inventory and HAZCAT Data Sheets

Appendix D – Waste Manifests

Appendix E – Air Monitoring Data

Appendix F – Removal Action Air Sampling Report

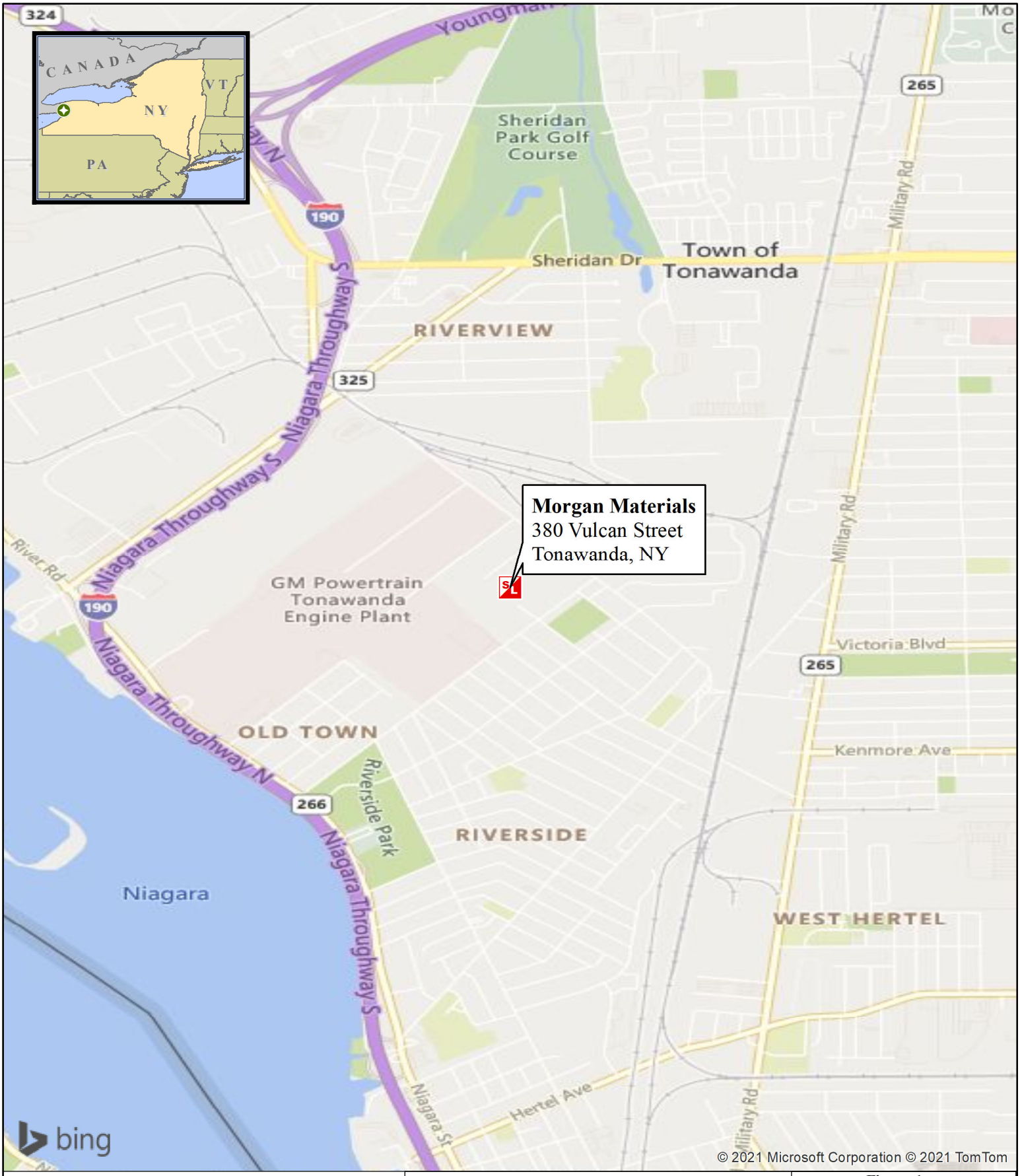
Appendix G – Laboratory Data Reports

Appendix H – Hazardous Waste Codes

Appendix I – Logbook Documentation

ATTACHMENT A

Figures



Legend

Site Location

N

0 0.125 0.25 0.5 0.75 1 Miles

Weston Solutions, Inc.
Federal East Division

In Association With
Eco-Risk; Avatar Environmental, LLC;
Pro-West & Associates, Inc.;
On-Site Environmental, Inc.;
and Sovereign Consulting, Inc.

Figure 1:
Site Location Map

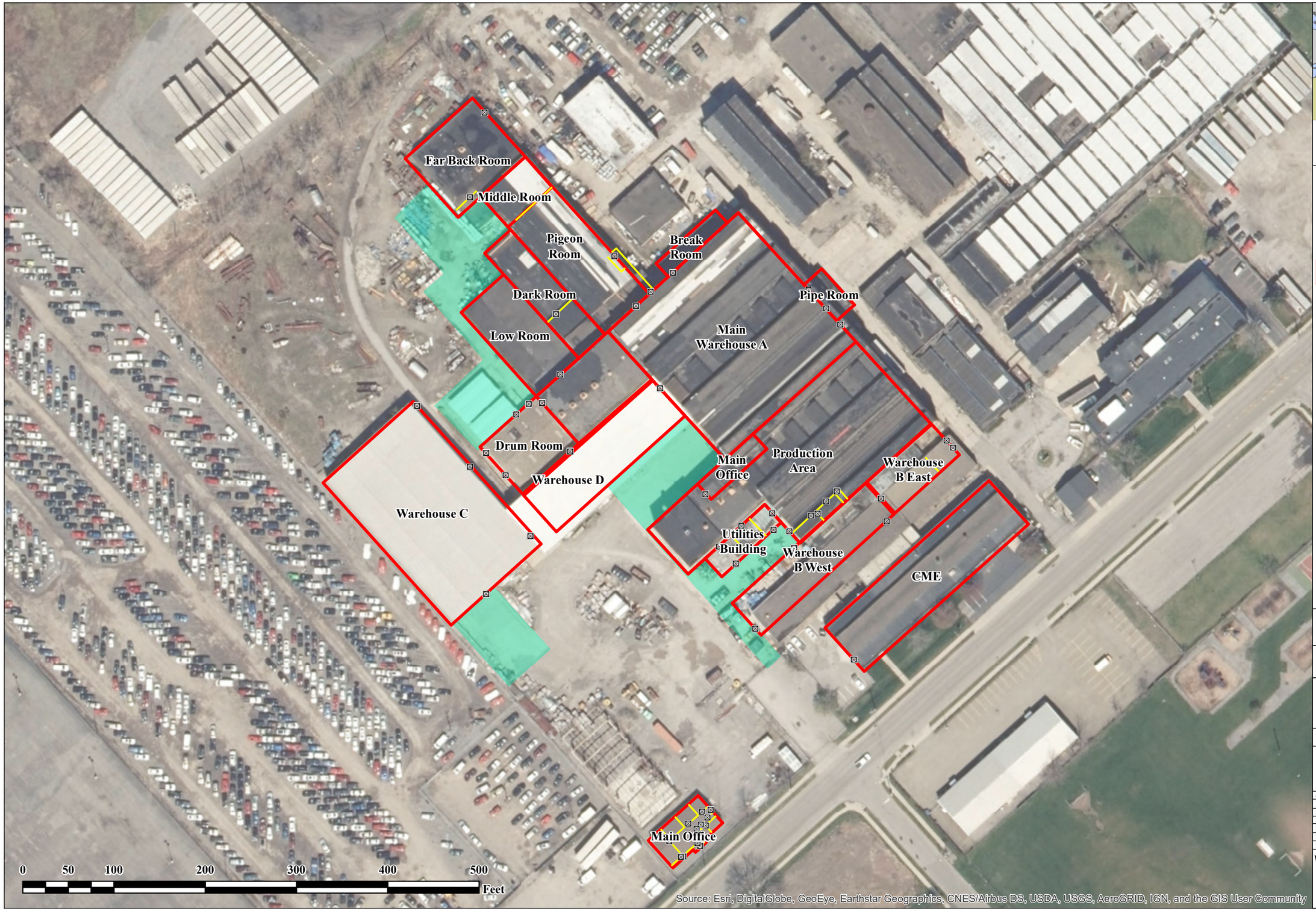
Morgan Materials
Tonawanda, New York

U.S. ENVIRONMENTAL PROTECTION AGENCY
SUPERFUND TECHNICAL ASSESSMENT & RESPONSE TEAM V
CONTRACT # 68HE0319D0004

GIS ANALYST:	M. LANG
EPA OSC:	G. BUSHRA
START V SPM:	B. NWOSU
CHARGE #::	40200.021.036.2031

DATE MODIFIED: 4/14/2021

Y:\START_V\00360031\MXD\MORGAN_SITELOCATIONMAP.MXD



SCALE
1:1,200

LEGEND

- Doorway
- Walls
- Rooms
- Concrete Pad

N

Figure 2: Site Overview Map

Morgan Materials Site
Tonawanda, New York

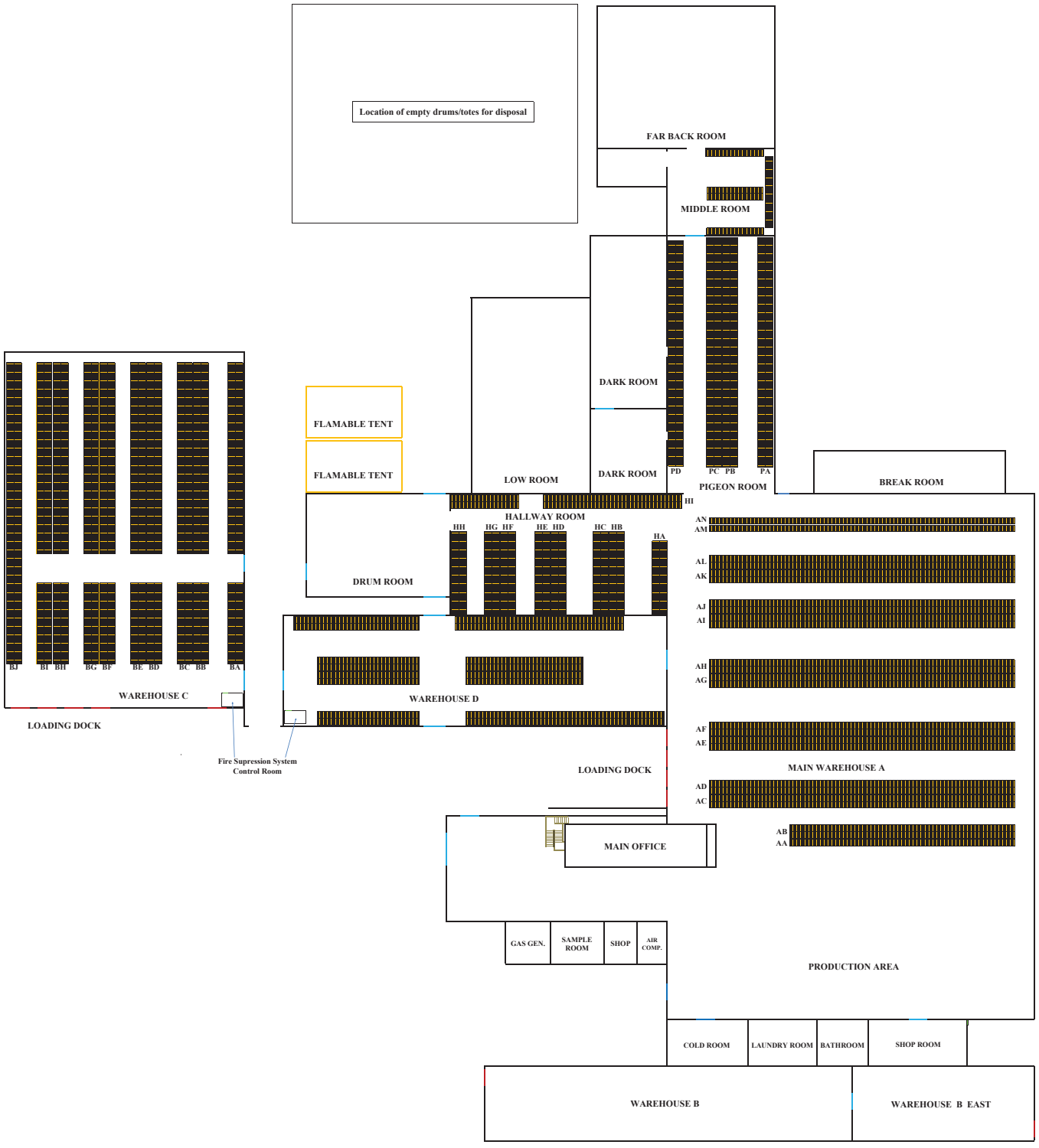
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
SUPERFUND TECHNICAL ASSESSMENT & RESPONSE TEAM V
CONTRACT # 68HE0319D0004

Weston Solutions, Inc.

In Association With
Eco-Risk; Avatar Environmental, LLC;
Pro-West & Associates, Inc.;
On-Site Environmental, Inc.;
and Sovereign Consulting, Inc.

GIS ANALYST:	M. LANG
EPA OSC:	G. BUSHRA
START V SPM:	B. NWOSU
FILENAME:	210414_Morgan_SiteMap
FIGURE	2
REVISION	0
DATE MODIFIED	4/14/2021

WESTON SOLUTIONS



Legend:

- Walls
- Doors
- Truck Loading Bay Doors
- Bay Doors
- Items on Pallets (stacked 3 High and 2 Deep)

North

50 100 150 200 Feet

Weston Solutions, Inc.
Federal East Division

In Association With
Eco-Risk Environmental, LLC.,
Pro-West & Associates, Inc.,
On-Site Environmental, Inc., and
Sovereign Consulting, Inc.

Figure 3: Facility Layout Map

MORGAN MATERIALS SITE

U.S. ENVIRONMENTAL PROTECTION AGENCY
Superfund Technical Assessment & Reasponse Team V
CONTRACT # 68HE0319D0004

EPA OSC:	Gezahegne Bushra
START V SPM	Bernard Nwosu
PROJECT #:	40200.021.036.2031

ATTACHMENT B

Agency Documents

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Environmental Remediation, Office of the Director
625 Broadway, 12th Floor, Albany, New York 12233-7011
P: (518) 402-9706 | F: (518) 402-9020
www.dec.ny.gov

November 10, 2016

Mr. Walter Mugdan, Director
Emergency & Remedial Response Division
United States Environmental Protection Agency
Region II
290 Broadway
New York, NY 10007-1866

RE: Morgan Materials, 380 Vulcan Street
Tonawanda, NY 14207

Dear Mr. Mugdan:

The New York State Department of Environmental Conservation (DEC) hereby formally requests the United States Environmental Protection Agency (EPA) perform an appropriate time-critical removal action at the above referenced properties. These properties have been previously discussed with Joe Rotola and Eric Wilson of your Removal Action Branch.

This request encompasses several adjacent properties where a warehousing/repackaging operation involving off-spec chemical materials has resulted in a vast accumulation of chemical material (approximately 18 million pounds) including hazardous liquid flammables and substantial quantities of uncharacterized waste. A recent multi-agency inspection at 380 Vulcan Street, which technically includes four parcels 380, 400, 408 and 416 Vulcan Street (collectively “Vulcan Street”), in which EPA participated, revealed substantial quantities of incompatible waste, flammables, and uncharacterized waste stored together. Many containers were observed to be in unsatisfactory condition and stored in an unsecured manner. As observed, conditions at the site warrant immediate action.

The principal threat at the Vulcan Street location is a potential for explosion and/or fire at a facility which is in close proximity to the surrounding community (see enclosed area map), including two schools. A release from such an incident at these facilities may result in a significant threat to public health and/or the environment.

On November 3, 2016, DEC verbally requested EPA consider implementing Site security as an interim measure at this Site should it become necessary. As discussed, DEC plans to issue a summary abatement order (SAO) to Donald Sadkin, Morgan Materials Inc. Morgan Chemcial (*sic*), Inc., Morgan Globex, Inc., and North Sea Mining & Minerals, Ltd. on or about November 16, 2016, which will be effective immediately upon issuance. This SAO names EPA as one of the entities allowed access to the

property pursuant to the order. DEC is also requesting EPA assume implementing the necessary Site security measures from DEC upon issuance of the SAO.

In addition, DEC has identified three industrial clients of Morgan Materials willing to retrieve and dispose of up to 2,000 of the drums of flammable material, as well as other materials present at this location. In addition, DEC has been contacted by a fourth entity, which is investigating the situation before determining their next step. EPA's offer to evaluate these entities and determine their viability to retrieve Site materials is also appreciated, and DEC will work with your office on this matter as well.

DEC appreciates the timely response by EPA. Any questions or requests for additional information regarding this site should be directed to Peter Reuben, at (716) 851-7220.

Sincerely,

Robert W. Schick, P.E.
Director
Division of Environmental Conservation

ec: Joseph Rotola, EPA
Eric Wilson, EPA
Krista Anders, NYSDOH

Bec: A. Snyder
M. Ryan
J. Quinn
K.Lewandowski
J. Rasani
C. Staniszewski
M. Brady
P. Reuben
J. Dougherty

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION II
NEW YORK, NEW YORK 10007

ACTION MEMORANDUM: RV1

DATE: FEB 15, 2017

SUBJECT: Confirmation of Verbal Authorization, Request for a Ceiling Increase, 12-Month Exemption and $2 Million Exemption for a Removal Action at the Morgan Materials Site in the Town of Tonawanda, Erie County, New York

FROM: Gezahegne Bushra, On-Scene Coordinator
Removal Action Branch

TO: John Prince, Acting Director
Emergency and Remedial Response Division

Site ID #: KL

I. PURPOSE

The purpose of this Action Memorandum is to confirm and document the verbal authorization granted by the Deputy Division Director of the U.S. Environmental Protection Agency ("EPA") Region 2 Emergency and Remedial Response Division to initiate a removal at the Morgan Materials Site ("Site") located at 380 Vulcan Street, Town of Tonawanda, Erie County, New York. This Action Memorandum further requests a ceiling increase, 12-month exemption and $2 million exemption to assess and dispose of more than 10,000 containers of chemical materials including liquid and solid flammables, liquid and solid corrosives, oxidizers, abrasive materials containing radioactives, resins, and unknowns. On November 11, 2016 the U.S. Environmental Protection Agency ("EPA") On-Scene Coordinator ("OSC") requested and was granted verbal authorization pursuant to the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended, 42. U.S.C. §§ 9601-9675 ("CERCLA") to initiate an emergency removal action. The total funding verbally authorized for this action was $250,000 of

which $200,000 is for mitigation contracting. The removal action was initiated on November 17, 2016 and included securing and stabilizing the Site. This Action Memorandum requests approval of an additional $5,340,000, of which $4,000,000 is for mitigation contracting to sample, categorize, transport and dispose of chemicals that are stockpiled on the Site. If approved the new project ceiling will be $5,590,000, of which $4,200,000 is for mitigation contracting.

The Site meets the criteria for a removal action under CERCLA as amended 42 U.S.C. § 9601-9675, as described in Section 300.415(b) of the National Oil and Hazardous Substances Pollution Contingency Plan ("NCP") 40 C.F.R. 300.415(b).

The Site is not on the National Priorities List ("NPL"). There are no nationally significant or precedent setting issues associated with the proposed removal action.

II. SITE CONDITIONS AND BACKGROUND

The Superfund Enterprise Management System identification number for the Site is NY0002190205. This removal action is considered time-critical.

A. Site Description

1. Removal Site Evaluation ("RSE")

Morgan Materials, Inc. ("Morgan Materials") is a broker of off-specification, excess and discontinued chemicals/ materials that were purchased for the purpose of resale by sorting, re-blending and repackaging. On July 26, 2016, EPA conducted a joint inspection of the Morgan Materials facility with officials from the Occupational Safety and Health Administration ("OSHA"), the New York State Department of Environmental Conservation ("NYSDEC"), the New York State Department of Homeland Security Emergency Services ("NYSDHSES") and the Town of Tonawanda. Morgan Materials was represented by the facility owner's son, the facility manager and an environmental consultant. The facility, located at 380 Vulcan Street, includes four lots, numbered 380, 400, 408, and 416, and a series of connected warehouse buildings. The building structures are in fair condition, although the roofs of some of the buildings are in need of maintenance. The inspection identified substantial quantities of known and unknown chemicals/materials (flammables, resins and other unknown) that were incompatibly stored together. The chemicals/ materials are contained in drums, boxes, super sacks and other assorted containers and are stored on racks up to four shelves high, and on pallets stacked two or three pallets high. It is estimated that 10,000 containers are on the Site. The condition of the containers varied, with many of them being open to the environment, and in some cases leaking. "Flammable" and "Corrosive" labels were observed on many of the drums throughout the facility. Many of the drums were stored above other incompatible materials. Odors were noted in some portions of the buildings, with MultiRAE gas monitor readings up to 1.2 ppm were recorded during the inspection. Secondary containment is present in sections of the facility, but is in disrepair.

On a November 3, 2016 conference call, NYSDEC requested assistance from the EPA to perform a removal action at the Site.

On November 10, 2016, the EPA Removal Action Branch ("RAB") received a formal referral letter from NYSDEC requesting assistance from EPA to perform a removal action at the Site. NYSDEC requested that EPA delay the action until after NYSDEC issued a Summary Abatement Order ("SAO") under state law to Morgan Materials and affiliated parties, including Donald Sadkin, the owner of Morgan Materials. On November 17, 2016, NYSDEC issued the SAO to Morgan Materials and asked that EPA initiate a removal action to initially provide for Site security and Site stabilization. The Site referral from NYSDEC is Attachment 1 to the Action Memorandum.

2. Physical location

The Site is located at 380 Vulcan Street in the Town of Tonawanda, New York (42.9659950 ºN, -78.9030200 ºW) and consists of four lots located at 380, 400, 408 and 416, with a series of connected warehouse buildings situated in a mixed residential and industrial area. The Site is approximately 300 feet from a park with a playground and athletic fields in the adjoining City of Buffalo. A charter school and an elementary school are located approximately 0.13 miles to the northeast and 0.4 miles to the southeast of the Site, respectively. Residential properties are situated within 1,000 feet to the south and south east of the Site (see Attachment 3, Figure 1).

3. Site characteristics

The Site was used by Morgan Materials to sort, re-blend, repackage, store and sell chemicals/materials purchased from manufacturing facilities as off-spec, expired or excess inventory. Morgan Materials began operating at the Site in 1963. The Site encompasses an 8-acre parcel covered by a complex of buildings that includes approximately 2.8 acres of warehousing and material processing space. The entire property is secured with chain link fence with one point of access. Surface areas of the Site are covered with a mix of asphalt and concrete; secondary containment is present in certain areas of the facility but it is in disrepair. The facility's surface water drainage and sanitary sewage discharges to the City of Buffalo's sewage system. Since the SAO, operations have effectively ceased. In November 2016, Morgan Materials discontinued payment of utility bills necessary to maintain safe material storage conditions, and also ended the presence of employees, including security personnel. As a result, the facility and its contents were effectively abandoned.

This is the first removal action undertaken by EPA at the Site.

4. Release or threatened release into the environment of a hazardous substance, or pollutant, or contaminant.

An inventory of chemicals/materials on the Site was obtained by EPA from Morgan Materials during the RSE. The inventory listed hundreds of containers, many of which contain CERCLA

hazardous substances as defined in Section 101(14), 42 U.S.C. §9601(14), including some listed as hazardous substances at 40 CFR Table 302.4. The Site is a facility within the meaning of Section 101(9) of CERCLA, 42 U.S.C. § 9601(9), and the presence of abandoned hazardous substances constitutes a "release" as defined in Section 101(22) of CERCLA, 42 U.S.C. §9601(22).

Materials identified to date at the Site include:

Material	Quantity (lb.)	Storage Method	Primary Hazard	Designation as a Hazardous Substance Under CERCLA
Organic and Inorganic Dyes, Phenolic Resins, Hydrocarbon Resins, Bisphenol A, Organic and Inorganic Pigments containing metals, solvents	2,000,000	Drums, Super sacks, 40-lb bags, & cubic yard boxes	Toxic by ingestion and inhalation, marine pollutants, poisonous, irritants.	Resource Conservation and Recovery Act ("RCRA") § 3001
Flammable Liquids and Solids including aluminum powder and methyl ethyl ketone, and, Acetophenone (U004), Isotron/Racon-II Trichlorofluoromethane(F002), Toluene (U220), Trichloroethylene(D040), oxidizers, corrosive liquids and solids	600,000	Drums and other containers type	Flammable, reactive, corrosive, poisonous by inhalation and ingestion, Corrosive, pH <2 and >12.5	Clean Air Act ("CAA") § 112, RCRA § 3001

Poisonous Solids including Maleic Anhydride (U147), Pthlalic Anhydride (1,3-Isobenzofurandione) (U190), Triethylene Glycol (Glycol ethers), Formic acid (U123), Vanadium pentoxide (P120)	50,000	Containers ranging in size from 5 gallons to 85 gallons	Toxic by ingestion, absorption and inhalation	Clean Water Act ("CWA") § 311(b)(2), CAA § 112, RCRA § 3001
Radioactive Materials (abrasive materials).	264,295	Containers ranging in size from 5 gallons to 85 gallons	Harmful if ingested and inhaled.	CAA § 112
Unknown chemical Materials	4,000,000	Drums, Super sacks and cubic yard boxes	Unknown hazards	

During the removal site evaluation, EPA conducted a review of the inventory provided by Morgan Materials. Label information on the containers at the Site indicates that they contain categories of hazardous substances: inorganic pigments, organic dyes, inks, inorganic salts, organic solvents, liquid and solid corrosives, poisonous materials, oxidizers, Bisphenol A, organic resins, and radioactive materials. It is estimated that 10,000 containers of chemicals/materials, many of which contain hazardous materials and/or substances, are on the Site. Many of the containers contain acutely and/or chronically toxic substances as noted on their labels and their respective Material Safety Data Sheets ("MSDSs"). A number of containers with unknown contents were also present. The environmental hazards posed by these materials should they release due to incompatibility, vandalism or fire would severely impact surface water and ambient air. A copy of the 2016 Inventory Summary submitted to NYSDEC by Morgan Materials is included as Attachment 2. Photographs taken of the Site are included as Attachment 4.

Conditions at the Site meet the requirements of Section 300.415(b) of the NCP for the undertaking of a CERCLA removal action.

5. NPL Status

The Site is currently not on the NPL and there are no known plans for its inclusion.

6. Maps, pictures and other graphic representations

Please see maps, figures and photographs in Attachment 3 of this Action Memorandum.

B. Other Actions to Date

1. Previous actions

A consent order under state law was issued in 2005 by NYSDEC requiring Morgan Materials to perform a complete inventory of chemicals/materials and their marketability within 180 days and to develop a report identifying any chemicals/materials that have been stored at the facility for 18 months and any chemicals/materials for which a market cannot be identified within 18 months of the cumulative storage date. The order required that the chemicals/materials meeting these criteria must be managed and disposed in accordance with state regulations. The order also required development of a plan to establish Best Management Practices for storage, management and disposal of materials and waste. After numerous visits and inspections at the facility by NYSDEC and officials from the Town of Tonawanda in 2015 and 2016 it was determined that the order was not fully complied with. In addition, the continued purchase of chemicals/materials added to the large accumulation of chemicals/materials currently at the facility.

In September 2016, Morgan Materials contacted several companies that previously sold chemicals/materials to the business, advising them that an enforcement action was likely and asked the companies to take back their chemicals/materials. Two chemical companies agreed to remove and dispose of all of their material.

On November 17, 2016, NYSDEC issued the SAO to Morgan Materials and affiliated parties, including company owner Donald Sadkin, to mitigate the imminent threats to public health resulting from poor storage practices of chemicals/materials, storage of incompatible chemicals/materials, a non-working fire suppression system and other violations identified during several facility inspections by the local, State, and federal agencies. After issuing the SAO, NYSDEC sought assistance from EPA in responding to conditions at the Site. The SAO required Morgan Materials to provide access for EPA to take an emergency removal action that included a 24-hour/7-day Site-security service and stabilization activities to mitigate the public health and the environment threats present. Morgan Materials has been complying with the SAO provision requiring the grant of access to EPA.

2. Current actions

On November 18, 2016, the NYSDEC Site Project Manager and the EPA OSC, with EPA's Emergency and Rapid Response Services ("ERRS") contractor, Guardian Environmental

Services ("GES"), as well as EPA's Removal Support Team contractor, conducted a Site reconnaissance and identified serious potential public health and environmental concerns. EPA observed between 8,000 and 10,000 drums and hundreds of sacks, boxes containing chemicals/materials including flammables, corrosives, oxidizers, radioactives, poisons, and unknowns at the Site. Some of the drums/containers were found to be corroding, deteriorating and/or threatening to topple over. Drums were primarily stacked on pallets two to three levels high, and on shelves four levels high, without adequate aisle space. There was evidence of spills of materials inside the warehouse building. Hundreds of super sacks containing Bisphenol A, hydrocarbon resins and rosin ester, thousands of drums of various construction and sizes containing pigments, lubricants, specialty oil, cellulose thickeners, flammables, corrosives, and oxidizers, were observed. Incompatible materials (flammables and oxidizers) were stored in close proximity to each other. Hundreds of unmarked drums or drums where original labels were not legible were found inside and outside of the building at the facility.

EPA's emergency action efforts at the Site since November 17, 2016 have included the following: subcontracted services for a 24-hour/7-day Site-security, segregation of incompatible chemicals/materials, isolation of corrosive chemicals/materials, relocation of flammable materials to an area of the warehouse believed to have an operational fire suppression system, stabilizing improperly stored containers (drums/sacks/boxes), preparation of a chemical inventory from discussions with the facility owner, and from prior inspection documentation, and preparation and distribution of an emergency contingency plan. On November 18, 2016, Morgan Materials advised EPA that the company was in arrears for its utility bills and had been sent a disconnect notice. Heat and electricity are necessary for fire suppression and proper material storage. The absence of these utilities increases the likelihood of a release and/or reduces the ability to respond to a release. During this time period, Morgan Materials also discontinued providing security for the facility, and workers were no longer regularly present, causing the Site to be functionally abandoned by Morgan Materials. In addition to security, EPA also assumed responsibility for continuing the utilities.

EPA continues to contact and coordinate with chemical companies to voluntarily remove and dispose of chemicals/materials that they previously sold to Morgan Materials. Thus far, this effort has been successful with many companies agreeing to remove/dispose of chemicals/ materials that they once owned. EPA will continue to inventory and reach out to companies that sold chemicals/materials to Morgan Materials. Orphan containers and unknowns will be segregated and disposed from the Site by EPA following sampling for characterization and disposal. This Action Memorandum is requesting funding for the efforts associated with accomplishing these tasks.

C. State and Local Authorities' Roles

1. State and local actions to date

The July 26, 2016 joint inspection of the Morgan Materials facility by officials from OSHA, NYSDEC, NYSDHSES, the Town of Tonawanda, and EPA, identified substantial quantities of

chemicals/materials (flammables, corrosives, oxidizers, resins, and unknown) stored at the facility.

After Morgan Materials. declined requests by NYSDEC in August 2016 and October 2016 to enter into a consent order to bring the facility into compliance, on November 17, 2016, NYSDEC issued the SAO requiring Morgan Materials to immediately discontinue, abate or alleviate any conditions or activity caused, engaged in or maintained by Morgan Materials which presented an imminent danger to the health or welfare of the people of the State of New York, or which is likely to result in irreversible or irreparable damage to natural resources of the State. On February 6, 2017, the Commissioner of the NYSDEC upheld the validity of the SAO issued to Morgan Materials, thereby requiring the company's continued compliance with the SAO.

2. Potential for continued State/local response

NYSDEC initially contacted some chemical companies that sold chemicals/materials to Morgan Materials and some agreed to remove such material. Those agreeing chemical companies are currently on-Site removing the chemicals/ materials that they once owned. NYSDEC has transferred the oversight responsibility for the removal of the chemicals/materials to EPA. NYSDEC will continue to support EPA's removal efforts at the Site. NYSDEC is also continuing its efforts to restrict Morgan Materials from operating in the future. No other actions are being taken by State or local government agencies to address the hazardous substances currently located at the Site.

III. THREATS TO PUBLIC HEALTH, OR WELFARE, OR THE ENVIRONMENT, AND STATUTORY AND REGULATORY AUTHORITIES

A. Threats to Public Health or Welfare

Hazardous substances, pollutants, or contaminants present at the Site pose a threat to the public health and environment, as defined by Section 300.415(b)(2) of the NCP, in that there will be airborne releases and contamination to surface water should there be a fire. The primary public health hazards for the chemicals/materials identified on the Site are noted in Section II A. 4. (see Table).

Factors that support conducting the removal action at the Site include:

i) Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances, or pollutants, or contaminants;

The Site contains many hazardous substances in hundreds of drums and other containers that present a threat to public health and welfare should they release. Numerous drums are corroded, damaged and/or threatening to topple from over-stacked pallets.

A release of hazardous substances will result in the exposure of the neighboring population to hazardous substances through direct contact, in ambient air and/or in surface water run-off in the

event of a fire. Morgan Materials, Inc. is unable to secure and stabilize the Site and buildings could easily be accessed by trespassers who could vandalize the buildings and damage containers of chemicals.

Once cooperating companies remove their chemical products, the remaining containers will continue to present a threat of release, which could result in actual or potential exposure.

iii) Hazardous substances, or pollutants, or contaminants in drums, barrels, tanks, or other bulk storage containers, that may pose a threat of release;

Actual releases of hazardous substances have occurred at the Site. Drums are corroded, sacks and boxes are damaged and have released their contents onto the building floors. Incompatible materials are stored in close proximity to each other; flammable materials are stored in areas lacking the appropriate safety controls. Materials are stored on shelves/pallets in many cases three or four high which could topple resulting in spillage and/or fire.

Hazardous substances have released from these containers into the warehouse. A concrete secondary containment is present but is in disrepair. Should materials release from the property they will migrate off-site and enter into the storm sewers which discharge to the Niagara River through the City of Buffalo's sewerage system.

v) Weather conditions that may cause hazardous substances, or pollutants, or contaminants to migrate or be released.

Roofs on the facility buildings are leaking from lack of maintenance. Some parts of the facility require heat to prevent freezing of containerized materials and for the continued operation of the fire suppression system. It is unlikely that these systems will be maintained or be operational during the upcoming winter months resulting in damage to containers and water pipes from freezing temperatures, as Morgan Materials appears to be insolvent.

Water enters the warehouse during rainfall/snow events and comes in contact with containers of chemicals/materials in the buildings. The contact with rain water/snow melt results in the continued deterioration of the containers, further adding the potential for the release of chemicals and mixing of incompatible materials.

(vi) Threat of fire or explosion; and

The Site contains over 10,000 containers of chemicals/materials including a substantial quantity of liquid flammables, oxidizers, corrosives, and poisons. These chemicals/materials are stored throughout the facility in close proximity to combustible materials. In addition, a large quantity of the containers contain unknown materials. Chemicals/materials are stacked on pallets three levels high and on shelving greater than 20 feet above the facility floor. If these materials should ignite a massive fire with explosions would occur. The smoke and fumes generated from the fire would threaten the residential neighborhood the Charter School adjacent to the Site and emergency responders. Due to the amount of unknown materials in the warehouse, any fire at the

Site could have unknown consequences to the surrounding community and a significant evacuation of the area would be required as a precaution. The existing fire suppression system may not continue to be operational due to damaged pipes from insufficient or no heat.

(vii) The availability of other appropriate federal or State response mechanisms to respond to the release.

No other federal or State response mechanism is available to respond to the significant threat to the environment that the Site presents.

IV. ENDANGERMENT DETERMINATION

Actual or threatened releases of hazardous substances from the Site, if not addressed by implementing the response action selected in this Action Memorandum, may present an imminent and substantial endangerment to public health, or welfare, or the environment.

V. EXEMPTION FROM STATUTORY LIMITS

A. Emergency Exemption

Conditions at the Site meet the criteria for an emergency exemption under CERCLA 104(c). Based on the hazardous characteristics and volume of chemicals/materials present on-site, the logistical difficulties in categorizing the materials, and the uncertainty of available, approved off-site disposal facilities, the Site warrants exemptions from the 12-month and $2 million statutory limits for a removal action. The threat to human health and the environment posed by the thousands of containers of chemicals/materials presents an immediate risk that needs to be mitigated without delay.

1. There is an immediate risk to public health, or welfare, or the environment.

Conditions at the Site present an immediate threat to the surrounding community due to the presence of flammable liquids, oxidizers, corrosive materials, radioactive materials, and unknowns. Incompatible chemicals/materials are stored next to each other, drums are stored outdoors being exposed to (rain, snow, ice), containers of materials are damaged with their contents spilling onto floor areas. The facility has been effectively abandoned by the company. The operation of the fire suppression system is uncertain and the facility heating system is unreliable. As indicated previously, the Site is situated within a residential neighborhood and two schools and a playground are within a 1/2-mile radius of the Site. A fire or explosion at the Site would have a direct impact on the surrounding community.

2. Continued response actions are immediately required to prevent, limit, or mitigate an emergency.

Immediate action is required due to the presence of 10,000 containers of chemicals/materials stored on-site. A large number of the drums are labeled flammable, oxidizer, corrosive, with

many other drums containing unknowns. Poisons and radioactive materials have been identified comingled with other drums. Drums and other storage containers are showing signs of deterioration and damage; some are spilling their contents onto the warehouse floor. The drums are not suitable containers for long-term storage and immediate actions are needed to remove these drums from the Site. Of particular concern is the residential neighborhood and schools located nearby. Actions must be taken immediately to prevent an emergency situation at the Site that would impact the public health of residents in the area and the environment.

3. Assistance will not otherwise be provided on a timely basis.

Neither the State or local government has the ability to undertake a removal action on a timely basis. Due to the magnitude and the immediacy of the work at the Site, EPA is the only governmental authority with the enforcement and contracting abilities to undertake a timely removal action at the Site. EPA will continue to conduct the necessary removal activities until the threats are mitigated.

VI. PROPOSED ACTIONS AND ESTIMATED COSTS

The actions noted below are proposed to mitigate the threats at the Site. Site-security and critical stabilization activities have been initiated and will continue through the action should this action memorandum be authorized.

A. Proposed Actions

1. Proposed action description

The removal of chemicals/materials by cooperating companies is expected to be completed within three to four months. Upon completion of the voluntary removal work by cooperating companies, EPA will address the disposal of the remaining drums/containers. It is believed that 6,000 drums/containers of chemicals/materials may remain on-site after the voluntary removal work is completed. EPA's mitigation work will include sampling, bulking, packaging, transporting, and disposing of chemicals/materials. These tasks will require nine to 13 months to complete. The following activities are proposed:

- Stabilization - All containers that are open or of questionable integrity will be overpacked or transferred into a new container. Incompatible materials will be segregated.
- Hazard Categorization – Field HazCat analysis of materials from damaged, deteriorated, unmarked drums, or drums where original labels were disfigured and difficult to identify and then bulk the materials to consolidate wastes with similar characteristics, if possible. The contents of damaged and deteriorated containers will be transferred to Department of Transportation shippable containers to prevent additional spillage of materials during transport.
- Sampling – Conduct sampling as necessary to coordinate the off-site disposal of all containers.

- Analysis - All samples will be evaluated for compatibility. A bulking scheme will be developed based on the results of the compatibility analysis. Test bulks will be composited and analyzed for disposal parameters. Many of the unknowns will require extensive testing to determine contents and suitability for disposal.
- Recycling - Materials that are potentially recyclable will be identified. Solvent recyclers, waste exchanges and/or raw chemical manufacturers will be contacted in an effort to identify companies that can beneficially use these materials that would otherwise require off-site treatment and/or disposal.
- Return to Manufacturers - Companies that refused to cooperate for the return of the chemicals to their location will again be encouraged by EPA to cooperate with the disposal or recycling of these chemicals.
- Disposal - Disposal of materials will be conducted following HazCat of all container contents, bulking of materials, collection of composite samples, and receipt of analytical results of the bulked materials. All disposal and transportation of contents to off-site facilities will be conducted in accordance with the CERCLA Off-Site Rule.
- Radioactive Materials - Elevated radiation readings, 17 micro roentgen per hour (μR/hr) and 18 μR/hr respectively, approximately three times (3x) above background, were observed at two locations where abrasive materials were stored in drums in the warehouse. These drums will be stabilized on-site and sent to a specially suited disposal facility.
- Upon completion of the removal of all chemicals from the warehouse, the flooring of the warehouse will be evaluated and decontaminated as necessary. The decontamination methods will depend on the type of flooring.
- Post removal Site controls will not be necessary following the completion of the removal action.

2. Contribution to remedial performance

The removal action at the Site is consistent with the requirement of Section 104(a)(2) of CERCLA, which states, "any removal action undertaken . . . should . . . to the extent practicable, contribute to the efficient performance of any long-term remedial action with respect to the release or the threatened release concerned." Since any remedial action undertaken would encompass the elements in this response, this removal action is consistent with any future remedial work.

3. Description of alternative technologies

Due to the time-critical nature of this removal action, an Engineering Evaluation/Cost Analysis ("EE/CA") was not prepared.

4. EE/CA

Because of the quantities and types of the hazardous substances and/or chemicals/materials at the Site, on-site treatment and/or incineration is not appropriate. The selected removal action

includes the characterization of hazardous substances found at the Site and the transportation of all hazardous substances off-site for treatment and/or disposal. The selected removal action has been determined to be the appropriate response action for the Site based upon the criteria of effectiveness, implementability, and cost.

Recycling will be employed to the maximum extent practical considering the timeliness of the response and protection of human health and the environment.

5. Applicable or relevant and appropriate requirements ("ARARs")

ARARs that are within the scope of this removal action will be met to the extent practicable. Federal ARARs determined to be applicable for the proposed scope of work include RCRA and the Hazardous Materials Transportation Uniform Safety Act.

6. Project schedule

It is anticipated that the project will be completed within nine to thirteen months. Upon completion of the removal of the drums from the Site, the warehouse may be decontaminated as a result of the numerous spills that have occurred for over 50 years of sorting, re-blending repackaging and storing of chemical products.

Response actions at the Site commenced on November 17, 2016 and are continuing with the 24hour/7-day Site-security. Staging of the drums and containers to facilitate access, collection of aliquots from each container and HazCat of the samples is expected to continue through May 2017. Setup for bulking activities as well as the bulking/consolidation itself is expected to span more than four months. Sampling and laboratory analysis of bulked waste streams will be required to properly characterize waste materials for appropriate treatment and disposal. Following receipt of waste stream analytical results, shipment of materials off-site is expected to be completed in December 2017.

B. Estimated Costs

The estimated costs for the completion of this project are summarized below. A detailed confidential independent government cost estimate is included as Appendix B.

Direct Extramural Costs	**Verbal Funding Authorized for this Action**	**Additional Funding requested for this Action**	**Total Funding Authorized and Requested**
Regional Removal Allowance Costs:			
Estimated Total Cleanup Contractor costs (including labor, equipment, materials and subcontractors).	$200,000	$4,000,000	$4,200,000

Other Extramural Costs Not Funded from the Regional Allowance:			
Total RST Cost, including all sampling and analytical services.	$50,000	$450,000	$500,000
Subtotal, Extramural Costs	$250,000	$4,450,000	$4,700,000
Extramural Cost (20% of Subtotal, Extramural Costs, rounded to nearest 1,000) Contingency	$0.00	$890,000	$890,000
Total Removal Action Project Ceiling	$250,000	$5,340,000	$5,590,000

VII. EXPECTED CHANGE IN THE SITUATION SHOULD ACTION BE DELAYED OR NOT TAKEN

A delay in action or no action at the Site would increase the actual and potential threats to public health and the environment.

VIII. OUTSTANDING POLICY ISSUES

There are no known outstanding policy issues associated with the Site at the present time.

IX. ENFORCEMENT

On November 17, 2016, the NYSDEC issued a SAO to Morgan Materials and affiliated parties, including owner Donald Sadkin, ordering these respondents to mitigate the imminent danger presented as a result of improper accumulation of hazardous and nonhazardous products, storage of incompatible products, a nonworking fire suppression system and other serious violations documented after several facility inspections by the local, State, and federal agencies.

After several postponements, the respondents were directed to appear in a NYSDEC administrative hearing on December 13, 2016. The respondents waived their appearance at the hearing while requesting a further delay in proceedings. The hearing was conducted without the respondents or their attorney present. On February 6, 2017, the Commissioner of the NYSDEC upheld the validity of the SAO issued to Morgan Materials, thereby requiring the company's continued compliance with the SAO.

Morgan Materials and Donald Sadkin have asserted that they are insolvent and lack the funds to address the conditions at the Site. EPA anticipates sending a Notice of Potential Liability and a 104(e) Request for Information to the company and its owner in the near future. EPA is continuing to contact companies with products at the Site requesting that they voluntarily remove

the materials associated with their company for off-site disposal. All drums which the companies are unwilling to address, or for which companies or contents are unknown, are subject to this removal action. EPA will attempt to obtain the cooperation of any companies that refused to participate in the disposal or recycling of their chemicals under this removal action. EPA will also take such other enforcement action as is necessary to identify any additional potentially responsible parties.

EPA performed a similar removal action in 1997 and 1998 at the former Hertel Warehouse, Inc., located in the City of Buffalo. That facility leased space to Morgan Materials Inc. and another affiliated company, Morgan Chemical, Inc., all three of which are/were owned by the same individual, Donald Sadkin.

Based on full cost accounting practices, the total EPA costs for this removal action that will be eligible for cost recovery are estimated to be $9,012,591. The following chart describes the costs which EPA believes are eligible for cost recovery as part of this response action.

Cost Category	**Amount**
Direct Extramural Cost	$5,590,000
Direct Intramural Cost	$500,000
Subtotal Direct Cost	$6,090,000
Indirect costs (Indirect Regional Cost 47.99%)	$2,922,591
Estimated EPA Costs eligible for Cost Recovery*	$9,012,591

*This estimate includes direct costs, which include direct extramural costs and direct intramural costs, but does not include monies recovered through past settlements. Indirect costs are calculated based on an estimated indirect cost rate expressed as a percentage of site-specific direct costs, consistent with full cost accounting methodology which became effective on October 2, 2000. These estimates do not include prejudgment interest, do not take into account other enforcement costs, including Department of Justice costs, and may be adjusted during the course of the removal action. The estimates are for illustrative purposes only and their use in this Action Memorandum may not be relied upon by any third party as binding upon the EPA. Neither the lack of a total cost estimate nor deviation of actual costs from this estimate will affect the United States' right to cost recovery.

X. RECOMMENDATION

This decision document represents the selected removal action for the Morgan Materials Site, in the Town of Tonawanda, Erie County, New York and developed in accordance with CERCLA, as amended, and is not inconsistent with the NCP. This decision is based on the Administrative Record for the Site.

Conditions at the Site meet the NCP Section 300.415(b) criteria for a removal action and the CERCLA Section 104(c) emergency exemption from the $2 million and 12-month limitations. The total project ceiling verbally authorized to date is $250,000, of which $200,000 is for mitigation contracting. This Action Memorandum requests an additional $5,340,00, of which $4,000,000 is for mitigation contracting. Approval of this increase will raise the total project ceiling to $5,590,000, of which $4,200,000 is for mitigation contracting.

Since we are currently operating under a Continuing Resolution, the Site will be incrementally funded. There are currently sufficient monies in the Regional removal advice of allowance to partially fund this project.

Please indicate your approval and authorization of funding as per current Delegation of Authority, by signing below.

Approval: _____ **DATE:** 2/15/17
John Prince
Acting Director, ERRD

Disapproval: _____ **DATE:** _____
John Prince
Acting Director, ERRD

cc:
(after approval is obtained)

A. Carpenter, ERRD-ADD
J. Rotola, ERRD-RAB
D. Harkay, ERRD-RAB
T. Lieber, ORC-NYCSB
V. Capon, ORC-NYCSB-NYCSS
B. Carr, ORC-NYCSB-NYCSS
B. Grealish, ERRD-RAB
K. Giacobe, OPM-FMB
T. Grier, 5104A
R. Craig, RST
A. Raddant, USDOI
L. Rosman, NOAA
R. Schick, NYSDEC
B. Conlon, NYSDEC
C. Staniszewski, NYSDEC
J. Dougherty, NYSDEC

ATTACHMENT 1
NYSDEC REFERRAL

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Environmental Remediation, Office of the Director
625 Broadway, 12th Floor, Albany, New York 12233-7011
P: (518) 402-9706 | F: (518) 402-9020
www.dec.ny.gov

November 10, 2016

Mr. Walter Mugdan, Director
Emergency & Remedial Response Division
United States Environmental Protection Agency
Region II
290 Broadway
New York, NY 10007-1866

RE: Morgan Materials, 380 Vulcan Street
Tonawanda, NY 14207

Dear Mr. Mugdan:

The New York State Department of Environmental Conservation (DEC) hereby formally requests the United States Environmental Protection Agency (EPA) perform an appropriate time-critical removal action at the above referenced properties. These properties have been previously discussed with Joe Rotola and Eric Wilson of your Removal Action Branch.

This request encompasses several adjacent properties where a warehousing/repackaging operation involving off-spec chemical materials has resulted in a vast accumulation of chemical material (approximately 18 million pounds) including hazardous liquid flammables and substantial quantities of uncharacterized waste. A recent multi-agency inspection at 380 Vulcan Street, which technically includes four parcels 380, 400, 408 and 416 Vulcan Street (collectively “Vulcan Street”), in which EPA participated, revealed substantial quantities of incompatible waste, flammables, and uncharacterized waste stored together. Many containers were observed to be in unsatisfactory condition and stored in an unsecured manner. As observed, conditions at the site warrant immediate action.

The principal threat at the Vulcan Street location is a potential for explosion and/or fire at a facility which is in close proximity to the surrounding community (see enclosed area map), including two schools. A release from such an incident at these facilities may result in a significant threat to public health and/or the environment.

On November 3, 2016, DEC verbally requested EPA consider implementing Site security as an interim measure at this Site should it become necessary. As discussed, DEC plans to issue a summary abatement order (SAO) to Donald Sadkin, Morgan Materials Inc. Morgan Chemcial (*sic*), Inc., Morgan Globex, Inc., and North Sea Mining & Minerals, Ltd. on or about November 16, 2016, which will be effective immediately upon issuance. This SAO names EPA as one of the entities allowed access to the

property pursuant to the order. DEC is also requesting EPA assume implementing the necessary Site security measures from DEC upon issuance of the SAO.

In addition, DEC has identified three industrial clients of Morgan Materials willing to retrieve and dispose of up to 2,000 of the drums of flammable material, as well as other materials present at this location. In addition, DEC has been contacted by a fourth entity, which is investigating the situation before determining their next step. EPA's offer to evaluate these entities and determine their viability to retrieve Site materials is also appreciated, and DEC will work with your office on this matter as well.

DEC appreciates the timely response by EPA. Any questions or requests for additional information regarding this site should be directed to Peter Reuben, at (716) 851-7220.

Sincerely,

Robert W. Schick, P.E.
Director
Division of Environmental Conservation

ec: Joseph Rotola, EPA
Eric Wilson, EPA
Krista Anders, NYSDOH

Bec: A. Snyder
M. Ryan
J. Quinn
K.Lewandowski
J. Rasani
C. Staniszewski
M. Brady
P. Reuben
J. Dougherty

ATTACHMENT 2
MORGAN MATERIAL'S CHEMICAL INVENTORY

Morgan Materials Inc.

Inventory Summary

2016

Prepared by: NYS DEC R9

7/20/2016

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Morgan Material Warehouse Location	Page
380 Vulcan St.	1
Advanced Distribution Systems	2
Regional Logistics Group	3

Note: This inventory summary is based on information obtained from the current inventory system operated by Morgan Material. It is known by the facility that the quantities are inaccurate. This summary will give an estimate of the amount of materials at each site and the variety of materials stored at each facility.

Morgan Materials Inc.
380 Vulcan St.

Containters	Product Class	Quantity (lbs.)
20	**ABRASIVES**	264,295
1	**ALCOHOLS**	400
10	**AMINES**	68,650
439	**CELLULOSICS**	1,944,671
103	**CHEMICALS**	963,762
68	**COATING RESINS**	437,857
5	**DYES**	3,312
112	**EPOXY**	914,445
2	**FATTY ACIDS**	9,200
8	**FATTY ALCOHOLS**	21,440
4	**FIBER GLASS**	14,160
26	**FILLERS & FLOW AGENTS**	189,198
4	**FLAME RETARDANTS**	12,602
355	**HYDROCARBON RESIN**	2,426,614
46	**INK**	61,369
4	**INK DISPERSION**	60,351
7	**INTERMEDIATE**	34,380
1	**INTERMEDIATE, RUBBER CHEMICAL**	800
55	**LATEX**	627,539
17	**LATEX PAINT RAW MATERIALS**	31,207
2	**LUBRICANT**	2,725
5	**METALS**	13,850
14	**OIL ADDITIVES**	39,596
45	**PAINT**	177,684
176	**PIGMENT**	338,394
23	**PLASTICIZERS**	180,884
48	**PLASTICS**	365,477
1	**POLYBUTENE**	400
21	**POLYESTER RESIN**	159,663
14	**POLYMER**	36,000
23	**POLYOL**	307,380
57	**POLYVINYL ALCOHOL**	1,150,073
437	**POWDER COATING**	354,611
15	**REDISPERSIBLE POWDER**	434,731
22	**RUBBER**	88,930
13	**RUBBER ACCELERATORS/SOFTENERS ETC**	48,642
23	**SILICA FUMED**	32,013
165	**SILICONES**	929,167
17	**SOLVENTS**	61,832
17	**SURFACTANTS**	174,350
9	**TEXTILE CHEMICALS**	51,492
30	**WAX**	231,904
2464	**Total**	**13,266,450**

Data above is based on inventory submitted in July 2016.

Advanced Distribution Systems
2296 Kenmore Ave.

Containters	Product Class	Quantity (lbs.)
73	**ABRASIVES**	1,052,909
34	**CELLULOSICS**	727,212
4	**CHEMICALS[1]**	74,440
1	**COATING RESINS**	44,000
74	**HYDROCARBON RESIN**	590,935
2	**OIL ADDITIVES**	58,800
21	**PIGMENT**	135,874
5	**PLASTICIZERS**	50,440
3	**PLASTICS**	113,640
6	**POLYOL**	50,000
7	**POLYVINYL ALCOHOL**	251,357
181	**POWDER COATING**	497,517
2	**RESIN**	705
41	**SILICA FUMED**	46,793
1	**SURFACTANTS**	78,550
18	**WAX**	42,900
473	**Total**	**6,579,235**

Notes: 1. Sorbitol, Diol glycol, Butandiol

Data above is based on inventory submitted in July 2016.

Regional Logistics Group
120 Dart Street

Containters	Prodcut Class	Quantity (lbs.)
1	**HYDROCARBON RESIN**	44,000
5	**ABRASIVES**	70,149
75	**CELLULOSICS**	351,197
2	**CHEMICALS[1]**	24,900
4	**EPOXY[2]**	85,250
2	**HYDROCARBON RESIN**	34,250
29	**NUTRACEUTICALS**	61,995
1	**SILICA FUMED**	900
119[3]	**Total[4]**	**1,301,282**

Notes: 1. Alumina Trihydrate
2. Durite SC-233B, Rucote-powder resin
3. Approximately 100 containers are still at 120 Dart Street warehouse.
4. Majority of containers now located at 260 S. Niagara Street, Lockport warehouse. Warehouse representative said they have 620 containers onsite.

Data above is based on inventory submitted in July 2016.

Vulcan Street location product class details.

Product Class	Description	Container size (lbs)	Total amount (lbs)	Notes
Chemicals	Bisphenol A		300,446	
	ALUMINUM CHOLRIDE LIQUID		8,400	
	AMMONIUM CHLORIDE	200	200	
	FORMIC ACID	400	3,200	weak acid
	MALEIC ANHYDRIDE	50	2,750	U147
	PHTHALIC ANHYDRIDE	300	13,268	U190
	PHOSPHORIC ACID 75% (PHOS ACID)	50	50	weak acid
	CITRIC ACID ANHYDROUS	50	1,150	weak acid
	TARTARIC ACID	55	5,940	weak acid
Solvents	ACETOPHENONE 508 / 99	440	2,120	U004
	PAINT SOLVENT	400	1,600	unknown solvent
	ISOTRON/RACON-II TRICHLORO FLUOROMETHANE	100	800	F002
	ADHESIVE RESIN SOLUTIONS	317	25,769	unknown solvent
	DICHLORO METHANE CYCLONEXANONE	511	5,621	
	TOLUENE	382	4,966	U220
	TRICHLOROETHYLENE	567	11,340	D040
	TOLUENE	300	300	U220
	TRICHLOROETHYLENE	300	300	D040
	ADHESIVE CATTLE TAG - RUSCOE	392	9,016	unknown solvent
Amines	DODECYL DIMETHYLAMINE "CATIONIC"	350	12,950	
	2-ETHYLXYLAMINE	500	7,500	polyetheramine
	JEFFAMINE ED-900	500	11,000	polyetheramine
	RAPI-CURE	450	29,700	vinyl ether
	ALIPHATIC AMINE CURING AGENT-RETURNED	2500	7,500	base
Ink	Varnish	400	156,291	unknown solvent

ATTACHMENT 3
Figure 1

Figure 1 **Morgan Materials, Inc. Site**

ATTACHMENT C
Photographic Documentation of Site Activities

Photographic Documentation of Site Activities
Morgan Materials Site
Tonawanda, Erie County, New York
November 18 through 22, 2016

Photograph 1: View of the Flammable Tent Area.

Photograph 2: View of the Flammable Tent Area. Behind the orange wall is the Drum Room.

Photograph 3: View of the drums in Far Back Room.

Photograph 4: View of the Far Back Room. Note red/pink dye spilled on floor.

Photograph 5: View of drums belonging to Momentive which were stored in Far Back Room ready for offsite transport.

Photograph 6: View of transformer in Middle Room potentially containing transformer oil. Note spilled material of floor suspected to be transformer oil.

Photograph 7: View of damaged drum found in Far Back Room.

Photograph 8: View of drums in Middle Room. Note black paint covering markings on drums.

Photograph 9: View of repurposed drum outside of Pigeon Room.

Photograph 10: View of crowded aisle area between racks in Hallway.

Photograph 11: View of Ludlum 19 reading approximately 18 micro roentgen per hour (µR/hr) at one of two locations where abrasive materials were stored on racks in Hallway.

Photograph 12: View of spilled contents on floor found in Hallway.

Photograph 13: View of stacked drums in Hallway.

Photograph 14: View of totes found in Low Room.

Photograph 15: View of stacked totes in Low Room.

Photograph 16: View of drums found in Drum Room.

Photograph 17: View of drums stored along the east wall in Main Warehouse area.

Photograph 18: View of sacked materials on shelves in Main Warehouse area.

Photograph 19: View of damaged drums on pallets in Building D.

Photograph 20: View of drums stacked in Building D. Note blue drums belonging to Momentive are staged for offsite transportation.

Photograph 21: View of Clean Harbors preparing drums in Building C for offsite transport.

Photograph 22: View of flammable label on drums in Building C.

ATTACHMENT C

Photographic Documentation Log

Photographic Documentation Log
Morgan Materials Site,
Tonawanda, Erie County, New York
September 2016 through May 2018

Photograph 1: View of Warehouse A at the Morgan Materials Site (the Site).

Photograph 2: View of Warehouse B.

Photograph 3: View of Warehouse C.

Photograph 4: View inside the Production Area. Note super-sacks full of powder material.

Photograph 5: View of drums piled together (flamable, corrosive, etc.) in Warehouse D.

Photograph 6: View of the drums piled together (flamable, corrosive, etc.) in Far Back Room.

Photograph 7: View of overstacked drums (different chemicals) in Warehouse D.

Photograph 8: View of material in super-sacks (500 – 2,500 pounds [lbs.]) overstacked in isles in Pigeon Room.

Photograph 9: View of deteriorating drums in Far Back Room.

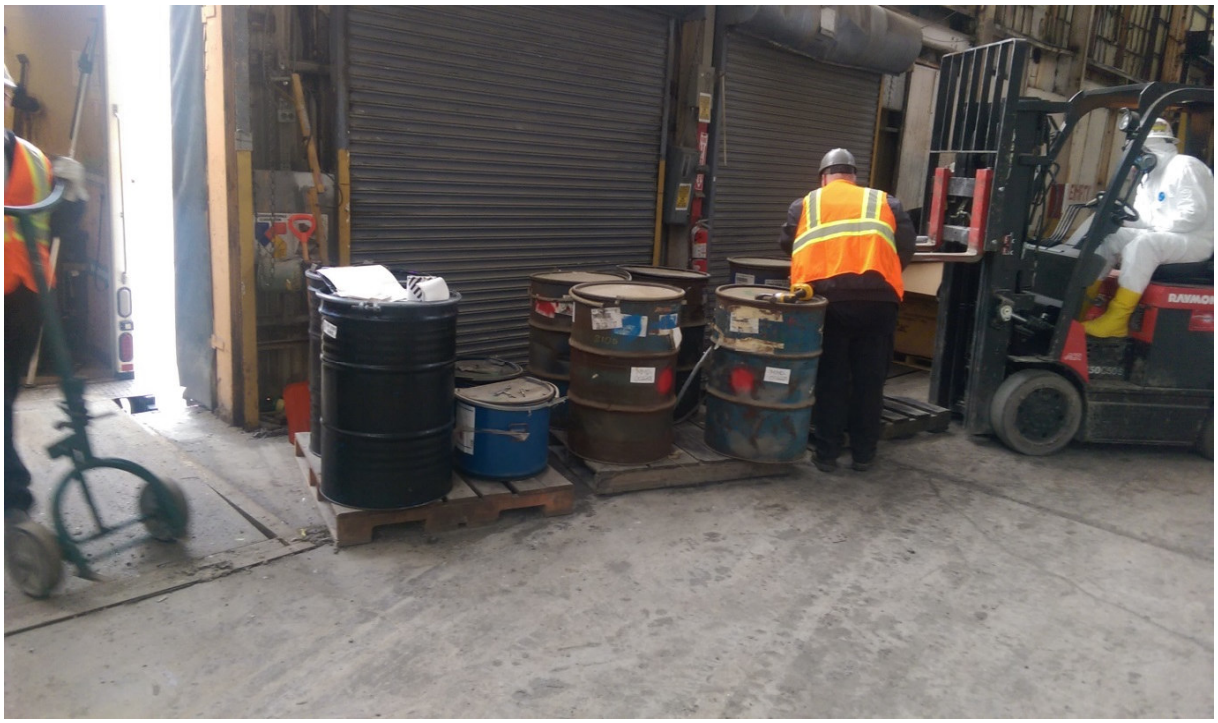
Photograph 10: View of the condition of drums in Warehouse C.

Photograph 11: View of material stored outside exposed to environmental elements.

Photograph 12: View of material stored outside, between Warehouse C and Drum Room

Photograph 13: View of material stored outside, behind property buildings.

Photograph 14: View of low radioactive material stored in Middle Room (Warehouse A)



Photograph 15: View of drums of material being staged and labeled for removal and disposal by Veolia on behalf of BASF (volunteer company) with the assitance of the U.S. Environmental Protection Agency's (EPA's) Emergency and Rapid Response Services (ERRS) contractor, Guardian Environmental Services (GES).

Photograph 16: View of drums been overpacked prior to loading by Veolia on behalf of BASF with the assistance of GES.

Photograph 17: View of material loaded on truck for disposal by Veolia on behalf of BASF with the assistance of GES.

Photograph 18: View of material being loaded on truck for disposal by Veolia on behalf of BASF.

Photograph 19: View air monitoring Station #1 comprising of a Dataram and AreaRAE in Warehouse A.

Photograph 20: View of air monitoring Station #2 comprising of a Dataram and AreaRAE in Warehouse A, entrance to Warehouse D.

Photograph 21: View of air monitoring Station #3 comprising of a Dataram and AreaRAE in Warehouse C.

Photograph 22: View of drum staging for data logging and sampling in Warehouse D.

Photograph 23: View of drum closing after data logging and sampling in Warehouse D.

Photograph 24: View of drums been taken back to shelves after labeling, data entry and sampling.

Photograph 25: View of GES personnel performing hazard categorization (HazCat) testing on-Site.

Photograph 26: View of of GES personnel performing HazCat testing.

Photograph 27: View of Weston Solutions, Inc., Removal Support Team 3 (RST 3) personnel logging data for powder inventory database.

Photograph 28: View of drum staging and labeling prior to loading in truck for disposal.

Photograph 29: View of material been loaded onto truck for transport to disposal facility.

Photograph 30: View of poly drums been cut prior to disposal.

Photograph 31: View of cut poly drums.

Photograph 32: View of poly totes been cut prior to disposal.

Photograph 33: View of metal drums been cut prior to disposal.

Photograph 34: View of dumpster staged for cut drums and totes for disposal.

Photograph 35: View of staged grit material Warehouse A prior to disposal.

Photograph 36: View of grit material being consolidated in lined dumpster staged in Warehouse A for disposal. Disposal facility specified that the grit material should not be containerized.

Photograph 37: View of different types of grit material found on-Site being consolidated for disposal.

Photograph 38: View of grit material been transported offsite to a disposal facility.

Photograph 39: View of used filters in Warehouse D.

Photograph 40: View of used filters in Warehouse D being cut to pieces for disposal.

Photograph 41: View of drums containing water and some debris found outside.

Photograph 42: View of water being pumped out of drum, prior to disposal of drums.

Photograph 43: View of water being pumped out of drums and into a drain connected to the city sewer system for treatment. Water was tested prior to been dumped down the drain.

Photograph 44: View of petroleum base material (8 drums) found in Warehouse B.

Photograph 45: View of powder material being transferred from poly drums to super-sacks.

Photograph 46: View of powder material being transferred from poly drums to super-sacks using a Vacuum Unit (Hurricane 500-0339 by Industrial Vacuum).

Photograph 47: View of totes stored outside, behind the property buildings, next to Far Back Room.

Photograph 48: View of poly drums stored outside, behind the property buildings.

Photograph 49: View of drums in Far Back Room containing aluminum paste.

Photograph 50: View of drums in Far Back Room containing aluminum paste.

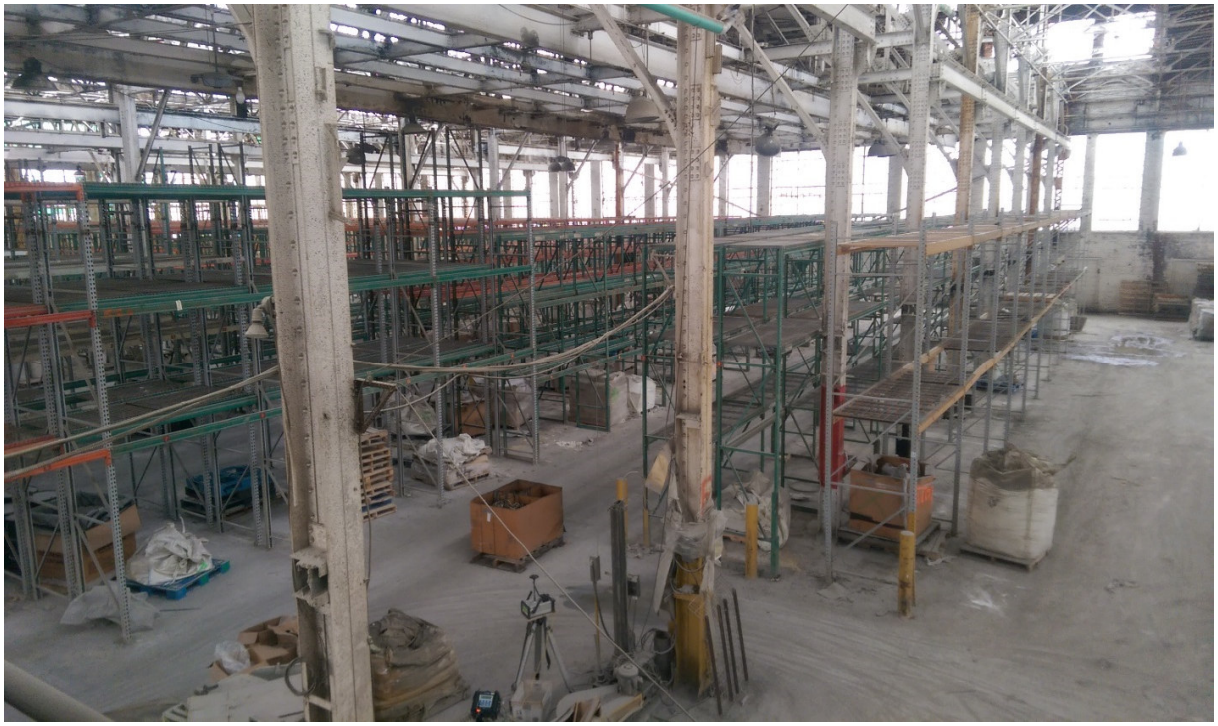
Photograph 51: View of mixed small containers staged for disposal.

Photograph 52: View of small containers packed in lined cardboard boxes for disposal.

Photograph 53: View of Ground Penetrating Radar (GPR) being setup for use.

Photograph 54: View of personnel from New York State Department of Environmental Conservation (NYSDEC) conducting GPR test in Warehouse D.

Photograph 55: View of Warehouse A on the first day of removal activities



Photograph 56: View of Warehouse A after removal and cleaup activities.

Photograph 57: View of super-sacks in the Hallway before removal activties.

Photograph 58: View of Hallway after removal and cleanup activities.

Photograph 59: View of Hallway during initial entry.

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Photograph 62: View of Warehouse A after removal and cleanup activities.

Photograph 63: View of Pigeon Room before removal activities.

Photograph 64: View of Pigeon Room after removal and cleanup activities.

Photograph 65: View of Warehouse C before removal activities.

Photograph 66: View of Warehouse C after removal and cleanup activities.

Photograph 67: View of Tote Room before removal activities.

Photograph 68: View of Tote Room after removal and cleanup activities.

Photograph 69: View of insulation being consiolidated in a lined dumpster for disposal.

Photograph 70: View of GES crew transfering phthalic anhydride into drums

Photograph 71: View of HazCat samples consolidated for disposal

Photograph 712: View of capacitors stored in drum for disposal.

Photograph 73: View of GES crew vacumming floor in Warehouse A.

Photograph 74: View of GES crew vacumming floor in Warehouse A.