RCRA CLOSURE CERTIFICATION REPORT

DFCI SOLUTIONS, INC.
425 UNION BOULEVARD
WEST ISLIP, NEW YORK 11795
EPA ID# NYD002043701

APRIL 13, 2018, REV 1

Prepared for:

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H2M Project No.: DFCI1701

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1.0 GENERAL INFORMATION

Facility Name:	DFCI Solutions, Inc.
Address:	425 Union Boulevard West Islip, New York 11795
Facility Contact:	Stephen Meshover President
Telephone No.:	(631) 669-0494
Owner / Operator:	DFCI Solutions, Inc. 425 Union Boulevard West Islip, New York 11795
RCRA Status:	Large Quantity Generator

1.1 Location and Facility Description

The DFCI Solutions, Inc. (DFCI) facility was formerly utilized for the manufacturing of cam fasteners and small springs. Operations included manufacturing processes such as machining, assembling and plastic injection molding, and parts finishing processes such as tumbling, electroplating and heat treating. Wastes historically generated from the operations included oils, solvents and heavy metals. At this time, all operations have ceased and all equipment has been removed. The property is currently planned for redevelopment. This RCRA Closure cleanup will allow for commercial use of the property.

The DFCI facility is situated on a triangular-shaped property, encompassing approximately 4 acres. The property is generally bordered to the north by the Long Island Rail Road; to the south and east by Union Boulevard; and to the west by Beach Street and Prospect Avenue. The site consists of a Main Manufacturing Building in the middle of the property; a Plastics Manufacturing Building, recharge basin and parking area in the western portion of the property; a Hazardous Waste Storage Building, Power Distribution Room, former Heat Treatment Process Building and former Kerosene Tank Containment Area to the north of the Main Manufacturing Building; and parking area in the eastern portion of the property. A site location map is provided as **Figure 1** and facility site plan is provided as **Figures 2**, **2A and 2B.**

The DFCI property is listed as a New York State Inactive Hazardous Waste Disposal Site (Site No. 1-52-033). Based on an Operable Unit 1 Record of Decision (OU1 ROD) dated March 1995, the New York State Department of Environmental Conservation (NYSDEC) implemented a remedy on the eastern portion of the property. The remedy involved the in-situ stabilization/solidification of cadmium-contaminated soils, i.e., Treatment Cell Area. A June 2004 Declaration of Covenants and Restrictions requires maintenance of a topsoil/asphalt cap in this area and NYSDEC notification and approval should site work or redevelopment plan for a soil disturbance in the Treatment Cell Area. The Treatment Cell Area is shown on **Figure 2B**.

The general vicinity primarily comprises commercial and residential properties. Depth to groundwater at the subject property is approximately 6 to 11 feet below grade surface (bgs).

1.2 Scope

On behalf of DFCI, H2M architects + engineers (H2M) has prepared this Closure Certification Report to document and certify closure and remediation activities associated with former regulated waste generation, storage and disposal at the DFCI facility. This Closure Certification Report has been prepared pursuant to the requirements of NYSDEC 6 NYCRR Part 373-3.7, Closure and Post-Closure and NYSDEC DER-10 / Technical Guidance for Site Investigation and Remediation.

Closure activities were conducted in accordance with a New York State Department of Environmental Conservation (NYSDEC)-approved Closure Plan and Quality Assurance Project Plan (QAPP) that presented the actions and procedures for the sampling and analysis program. A copy of the Closure Plan and NYSDEC approval letter is provided on disc in **Appendix A**. Any deviations from the Closure Plan and QAPP are described in the sections below. H2M coordinated all sampling services during the closure activities. Subcontractor services were provided by AARCO Environmental Services Corp. of Lindenhurst, New York. Analytical laboratory services were provided by Phoenix Environmental Laboratories, Inc. of Manchester, Connecticut, a New York State Environmental Laboratory Approval Program (ELAP)-approved and Analytical Services Protocol (ASP)-certified laboratory (ELAP#11301).

The Closure Plan outlined remediation activities to address the findings of the following previous environmental investigations at the DFCI facility:

- Subsurface Investigation Report, dated November 8, 2007, prepared by FPM Group (FPM)
- Environmental Investigation, dated January 5, 2009, prepared by H2M
- Phase II Environmental Site Assessment (ESA), dated August 26, 2015, prepared by Impact Environmental Closures, Inc. (Impact)
- Soil vapor sampling conducted by H2M in August 2015

- Pre-Closure Limited Soil Investigation of the Hazardous Waste Storage Area (HWSA) and Pad-Mounted Electrical Transformer, performed by H2M in October 2015

Based on these reports and subsequent investigative activities, the primary contaminants of concern included:

- Cadmium exceedances in subsurface soils in eleven (11) soil boring locations throughout the property
- Metal exceedances in soils beneath a sump within the former Heat Treatment Process Building and in subsurface soils in the vicinity of the former Kerosene Tank Containment Area
- Trichloroethene in sub-slab soil vapor in the Product/Raw Stock Storage Area and Screw Machinery Fabrication Department of the Main Manufacturing Building
- Cadmium, copper and silver exceedances in sanitary leaching pool CP-1
- Chlorinated volatile organic compound exceedances in sanitary leaching pool CP-2
- Mercury, cadmium and copper exceedances in the former Plastics Manufacturing Building sanitary leaching pool

2.0 CLOSURE ACTIVITIES

A RCRA Closure Plan and Quality Assurance Project Plan (QAPP) that addressed closure activities at the DFCI facility were submitted to the NYSDEC in accordance with 6 NYCRR Part 373-3.7, Closure and Post-Closure and DER-10 / Technical Guidance for Site Investigation and Remediation. The Closure Plan and QAPP were approved by the NYSDEC on October 28, 2016. A copy of the Closure Plan and QAPP along with the NYSDEC approval letter are provided on disc in **Appendix A**.

The general closure procedure for the DFCI facility included the decontamination and washing of the building floors, excavation and removal of contaminated soils, installation and operation of a soil vapor extraction system, and remediation and closure of contaminated leaching pools.

During facility operations, all hazardous materials and/or wastes were stored in a Hazardous Waste Storage Building located along the north side of the property. After the facility ceased operations in 2015, all hazardous wastes were removed and disposed of at Veolia ES Technical Solutions in Flanders, New Jersey. The implementation of the closure activities as part of the RCRA Closure Plan generated additional wastes, such as decontamination rinse waters and metal-contaminated soils. These wastes were either containerized in 55-gallon drums or stockpiled on-site on polyethylene sheeting prior to being transported and disposed of off-site at disposal facilities. Waste characterization samples were collected and analyzed in accordance with the disposal facility protocols and 6 NYCRR 371 *Identification and Listing of Hazardous Wastes*.

The activities performed as part of the RCRA Closure at the DFCI property, as well as the sampling results, are summarized in the following sections. A photographic log of the site activities is provided as **Appendix B**. As stated, all samples were submitted to Phoenix Environmental Laboratories, Inc. of Manchester, Connecticut, a NYS ELAP-approved and ASP-certified laboratory.

2.1 Closure Performance Standard

All RCRA closure activities were performed in accordance with the NYSDEC-approved RCRA Closure Plan and QAPP, dated October 28, 2016. The closure activities were performed pursuant to the requirements set forth in the following Closure Performance Standards:

- NYSDEC DER-10 Technical Guidance for Site Investigation and Remediation
- NYSDEC 6 NYCRR Part 375 Commercial Use and Protection of Groundwater Soil Cleanup Objectives (SCOs)
- NYSDEC Technical and Operational Guidance Series (TOGS) 1.1.1 Class GA Ambient Water Quality Standards and Guidance Values
- NYSDOH Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York, October 2006, updated May 2017
- Suffolk County Department of Health Services (SCDHS) Article 12 SOP No. 9-95 Pumpout and Soil Cleanup Criteria

Confirmatory sampling was conducted as part of the closure activities to document that no hazardous materials remain that can adversely impact public health or the environment, and consisted of surface rinsate sampling, endpoint soil sampling and soil vapor sampling. Rinsate sampling results were compared with the NYSDEC TOGS Class GA Standards. The site-specific Soil Cleanup Objectives were the lower of either the NYSDEC Part 375 Commercial Use SCOs or the Part 375 Protection of Groundwater SCOs. Endpoint soil samples collected from the leaching pool remediation were compared with the more stringent of the SCDHS SCOs, Part 375 Commercial Use SCOs and Part 375 Protection of Groundwater SCOs. Soil vapor sampling results were evaluated against the May 2017 NYSDOH Soil Vapor/Indoor Air decision matrices.

2.2 Community Air Monitoring Plan (CAMP)

During all ground intrusive activities, a Community Air Monitoring Plan (CAMP) and odor monitoring were implemented in conformance with the New York State Department of Health (NYSDOH) Generic CAMP, presented as Appendix 1A of NYSDEC DER-10 / Technical Guidance for Site Investigation and Remediation. The CAMP included real-time monitoring of volatile organic compounds (VOCs) and particulates. Two (2) monitoring stations were set up along the perimeter of the work area, with one (1)

placed at an upwind location and one (1) at a downwind location. The locations of the monitoring stations were chosen based on wind direction, which were typically placed on the eastern and western ends of the property. Both the upwind and downwind stations included a TSI DustTRAK dust monitor that continuously measured particulate (PM-10) concentrations. The downwind station also included a MiniRAE 3000 photoionization detector (PID) that continuously monitored VOCs. A portable PID was utilized at the upwind location at the beginning of each workday to establish background conditions, and periodically thereafter as wind direction changed.

The response levels and actions for VOC and particulate exceedances were followed in accordance with the NYSDOH Generic CAMP. No 15-minute average VOC readings above the 5 ppm action level were detected at either the downwind station PID or the portable PID throughout the entire duration of the RCRA Closure project. However, 15-minute average particulate readings were detected above the 100 µg/m^3 action level on two days during the entire project. On January 10, 2017, the downwind station DustTrak recorded particulate levels exceeding 100 µg/m^3, but below the stop-work threshold of 150 µg/m^3. Dust suppression was subsequently implemented and the particulate levels steadily decreased. On January 17, 2017, particulate exceedances were recorded on both the downwind and upwind stations. These exceedances were attributed to the rainy weather and high humidity for that day, which are suspected to have caused false readings.

Based on the minor exceedances of VOCs detected in the on-site soils during prior environmental investigations, odor monitoring was performed based on olfactory screening. During soil excavation, stockpiling and removal, no significant odors were detected within or migrating from the immediate work areas.

2.3 Decontamination of Building Floors

Decontamination of the building floors was conducted from January 4 to January 9, 2017 by AARCO Environmental Services Corp. of Lindenhurst, New York. The floors of the Main Manufacturing Building, raw material storage areas of the Plastics Manufacturing Building, Hazardous Waste Storage Building, and former Heat Treatment Process Building were cleaned utilizing a Hotsy Pressure Washer and a non-solvent based degreasing agent (i.e., BioSolve). For the Main Manufacturing Building, the areas that were pressure washed included the Product/Raw Stock Storage Area, Parts Assembly Area, Tumbling Department, Sand Blasting Department, Screw Machinery/Fabrication Department, Metal Stamping Department and Metal Forming Department.

Following the decontamination, rinsate sampling was conducted on January 11, 2017 in accordance with the rinsate sample collection protocol provided in **Appendix C**. A temporary containment area was created on the surface of the sampling location using an inert, pre-cleaned sampling container (i.e., a 5-

gallon bucket with the bottom removed). A minimum of 1 gallon of deionized water was then poured into the temporary collection area. Following a contact time of 10 minutes, the samples were transferred from the temporary collection area into sample bottles utilizing pre-cleaned food-grade basters.

A total of twelve (12) rinsate samples, identified as Rinsate 1 through Rinsate 12, were collected. Additional QA/QC samples, including one equipment blank, one field duplicate and spike samples, were also collected. The sampling locations are shown in **Figure 3**. The rinsate samples were analyzed for RCRA metals (arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver) via EPA Method 6010/7471. The analytical results, summarized in **Table 1**, were compared with the NYSDEC TOGS 1.1.1 Class GA Ambient Water Quality Standards and Guidance Values. As shown in **Table 1**, five (5) of the rinsate samples, including Rinsate 1, Rinsate 3, Rinsate 4, Rinsate 8 and the field duplicate, exceeded the Class GA standard for cadmium. Rinsate 3 also detected an exceedance in lead above the Class GA standard. The field duplicate was collected from the Rinsate 2 sampling location.

Due to exceedances in cadmium and lead detected in multiple rinsate samples, subsequent floor cleaning was performed on January 23, 2017. The areas that were re-cleaned included the Product/Raw Stock Storage Area, Tumbling Department, Sand Blasting Department and Parts Assembly Area. On January 24, 2017, the five rinsate locations were sampled again and analyzed for RCRA metals. The sampling results are included in **Table 1**. No exceedances were detected in any of the samples collected during the second rinsate sampling event.

Full copies of the ASP Category B Data Packages for the January 11, 2017 and January 24, 2017 sampling events are provided on disc as **Appendix D**.

Wastewater generated during the floor decontamination was collected and containerized into a 1,600-gallon poly storage tank, which was temporarily staged indoors within the facility. A total of 1,100 gallons of wastewater was collected. The wastewater was characterized, pumped into a vacuum truck and transported to Cycle Chem, Inc. of Elizabeth, New Jersey for disposal. Copies of the analytical laboratory report and waste manifest for the wastewater is provided in **Appendix E**.

2.4 Contaminated Soil Excavation

Based on Impact's 2015 Phase II ESA report, cadmium was identified at concentrations exceeding the NYSDEC Part 375 Protection of Groundwater SCO in twelve (12) soil borings performed throughout the property. The soil boring locations, shown in **Figure 4**, included SB-5, SB-7, SB-8, SB-18, SB-19, SB-20, SB-22, SB-31, SB-36, SB-38, SB-46 and SB-47. Soil boring SB-19, not originally included in the RCRA Closure Plan, was added because metal exceedances were also detected in the soil boring. Soil boring

SB-20 also exhibited VOC (i.e., 1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene) exceedances at the depth interval of 6 to 8 feet below grade surface (bgs). FPM's 2007 Subsurface Investigation Report and H2M's 2009 Environmental Investigation report identified metal exceedances in soil samples collected beneath a sump within the former Heat Treatment Process Building and within the vicinity of the former Kerosene Tank Containment Area. As directed by the NYSDEC, the site-specific Soil Cleanup Objectives (SCOs) for metal contamination are the lower of either the NYSDEC Part 375 Commercial Use SCOs or the Part 375 Protection of Groundwater SCOs.

In order to remediate the metal contamination identified in the previous investigations, soils in the vicinity of the twelve soil boring locations, the sump within the former Heat Treatment Process Building, and the former Kerosene Tank Containment Area were excavated. The excavations were performed from January 9 to January 24, 2017 and on February 17, 2017 utilizing a combination of an excavator, backhoe, mini excavator and bobcat. The approximate areas of each excavation and endpoint sampling locations are shown in **Figure 4**. Each area of concern was excavated, at a minimum, in accordance to the dimensions that were estimated in the Closure Plan. **Table 2** summarizes the final approximate dimensions and volumes of each excavation. During excavation, the soils were field screened for cadmium and chromium utilizing an X-Ray Fluorescence (XRF) Spectrometer. The field screening results were compared with the lower of the Part 375 Commercial Use and Protection of Groundwater SCOs. The XRF screening was performed to qualitatively determine the final extents of the excavations and whether additional excavation was necessary. As a reference, the final XRF field screening results for select metals compared with the laboratory results for each endpoint sampling location are provided in **Table 3**.

Confirmatory endpoint soil samples were subsequently collected from the bottom and sidewalls of each completed excavation in accordance with DER-10 Technical Guidance for Site Investigation and Remediation. At a minimum, one bottom sample was collected for every 900 square feet of bottom area and one sample from each sidewall for every 30 linear feet of sidewall. The soil samples were analyzed for RCRA metals via EPA Method 6010/7471. Samples collected from the SB-20 excavation also included analysis for 1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene via EPA Method 8260. Additional QA/QC samples, including equipment blanks, field duplicates and spike samples, were also collected at a frequency of one per 20 field samples collected. The endpoint sampling results, summarized in **Table 4**, were compared with the Part 375 Commercial Use and Protection of Groundwater SCOs. Full copies of the ASP Category B Data Packages for the confirmatory soil samples are provided on disc as **Appendix F**.

Provided below are summaries of the excavations conducted in each of the areas of concern:

- **SB-5:** Located northwest of Main Manufacturing Building near former industrial process wastewater leaching structure. Excavation was performed around the former leaching structure. The approximate dimensions of the final excavation were 10 feet long by 20 feet wide by 4 feet deep. Soils on the sidewalls and bottom of the excavation were screened with the XRF prior to sampling. Four sidewall samples and one bottom sample were collected, and analyzed for RCRA metals. As shown in **Table 4**, no RCRA metal exceedances were detected in any of the samples.

- **SB-7:** Located at northwest corner of Western Site Parking Lot. The SB-7 excavation was originally proposed to be combined with SB-22. However, based on the distance between the two soil boring locations, these two excavations were performed separately. The excavated area of SB-7 was approximately 10 feet long by 5 feet wide by 4 feet deep. The sidewall and bottom soils were screened with the XRF. A total of 5 endpoint samples were collected from the four excavation sidewalls and bottom, and analyzed for RCRA metals. No RCRA metal exceedances were detected in any of the endpoint samples.

- **SB-8:** Located to the northeast of the Plastics Manufacturing Building. Soils along the sidewalls and excavation bottom were screened with the XRF. Final dimensions of excavation were approximately 10 feet long by 10 feet wide by 4 feet deep. A total of 5 endpoint samples were collected from the north, south, west and east sidewalls, and the bottom. The samples were analyzed for RCRA metals, and no exceedances were detected in any of the samples.

- **SB-22/18/19:** Located south of the Plastics Manufacturing Building and north of the Western Site Parking Lot. Petroleum-like impacted soil was encountered while excavating SB-18, SB-19 and SB-22. The impacted soil was observed to be dark gray to black with petroleum-like odors. Upon screening with a PID, the impacted soil exhibited peak concentrations of 10-12 ppm. In accordance with the New York State Navigation Law Article 12 – Oil Spill Prevention, Control, and Compensation, a spill was subsequently reported to the NYSDEC and spill number 1610169 was assigned. Due to their proximity and extent of the impacted soil, the excavations for SB-18, SB-19 and SB-22 were combined. The impacted soil was removed until visually clean soils were observed. In addition, the soils were field screened with a PID and XRF. At SB-18/19, the impacted soil was observed to be confined between approximately 0.5-2 feet bgs. The final excavation area of SB-18/19 was approximately 130 feet long by 40 feet wide by 4 feet deep. At SB-22, impacted soil was encountered at approximately 5-7 feet bgs, and was excavated to a final depth of 8 feet bgs. The final remedial dimensions for SB-22 were approximately 15 feet long by 15 feet wide by 8 feet deep. The excavated soil was stockpiled

separately for waste characterization. Based on the waste characterization results, the soils excavated from SB-18, SB-19 and SB-22 were disposed of alongside the non-hazardous soils.

SB-18, SB-19 and SB-22 were sampled as one excavation. A total of 22 samples were collected, including five (5) from the north wall, five (5) from the south wall, two (2) from the east wall, two (2) from the west wall and eight (8) from the bottom. The endpoint samples were analyzed for RCRA metals. As shown in **Table 4**, all samples, except for one south sidewall sample, were either non-detect or detected below the Part 375 Commercial Use and Protection of Groundwater SCOs. Endpoint sample SB-22/18/19-S2 on the south sidewall detected a cadmium exceedance above the SCO of 7.5 mg/kg. Therefore, this location was further remediated and a secondary endpoint sample was subsequently collected. The secondary endpoint sample was non-detect for cadmium.

A spill closure report summarizing the remedial excavation of the petroleum-like impacted soils was submitted to NYSDEC Region 1 on February 12, 2018. NYSDEC Region 1 personnel indicated that closure of the spill number should be included as part of the RCRA closure.

- **SB-20:** Located northwest of the Western Site Parking Lot, in the West Recharge Basin. The trees and shrubs in the vicinity of the recharge basin were removed to facilitate the excavation and provide accessibility. This excavation was performed utilizing an excavator. The top 6 feet of impacted soil was initially removed with an area of 20 feet by 40 feet. Groundwater was encountered in the excavation at approximately 5 feet bgs. In order to excavate deeper and prevent the soil from collapsing, the sidewalls were cut back further at a 45 degree slope, and the soil was stockpiled separately for reuse. The impacted saturated soil was then temporarily stockpiled on polyethylene sheeting placed on the sloped sidewall in order to drain the excess water. Once the excess water drained out, the soil was moved to a polyethylene-lined waste stockpile. The final excavation dimensions were approximately 30 feet long by 50 feet wide by 10 feet deep. The soils on the sidewalls and bottom were screened with the XRF prior to sample collection. A total of seven (7) endpoint samples were collected, including two (2) from the north wall, two (2) from the south wall, one (1) from the east wall, one (1) from the west wall and one (1) from the bottom. The samples were analyzed for RCRA metals, 1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene. No metal or VOC exceedances were detected in any of the samples above the Part 375 Commercial Use and Protection of Groundwater SCOs.

- **SB-31:** Located in the Product/Raw Stock Storage Area inside the Main Manufacturing Building. The cement slab was saw-cut and removed, and the soil was excavated utilizing a mini excavator. The approximate dimensions were 10.5 feet wide by 22 feet long by 4 feet deep.

After screening with the XRF, soil endpoint samples were subsequently collected from the north, south, west and east sidewalls, and the bottom. The samples were analyzed for RCRA metals, and no exceedances were detected in any of the samples above the Part 375 SCOs. Following endpoint sampling, the excavation was covered with polyethylene sheeting in order to create a surface seal for the implementation of the soil vapor extraction (SVE) system.

- **SB-36:** Located in the Tumbling Department inside the Main Manufacturing Building. The concrete slab was first removed prior to excavation. During excavation, an oil-water separator filled with oil and a buried drum filled with clean sand were encountered. The oil from the oil-water separator was sampled for PCBs and total halides (i.e., toxicity) for waste characterization, and containerized in a 55-gallon drum. The sampling results did not detect any PCBs and total halides were less than 1,000 ppm. The oil-water separator and buried drum were subsequently removed from the excavation, and disposed of off-site. Copies of the analytical laboratory report and waste manifest are provided in **Appendix G**. The excavation extended to the building walls bordering to the north and east, and all soil was removed up to the building walls and foundation. Therefore, no endpoint samples were collected from the north and east sidewalls. Endpoint samples were collected from the south sidewall, west sidewall and bottom, which were analyzed for RCRA metals. The sample from the west sidewall detected an exceedance in cadmium at a concentration above the Part 375 SCO of 7.5 mg/kg. The excavation, therefore, extended further westward and the west sidewall was resampled for cadmium only. The subsequent west sidewall sample did not detect cadmium above the Part 375 SCO. The final dimensions of SB-36 were approximately 10.5 feet long by 11 feet wide by 4 feet deep.

- **SB-38:** Located in the Sand Blasting Department inside the Main Manufacturing Building. The concrete slab was removed prior to excavation. Based on XRF screening, the excavation progressed towards the building wall to the north and all the soil was removed, so no endpoint sample was collected from the north sidewall. Endpoint samples were collected from the south, east and west sidewalls, and the bottom of the excavation, which were analyzed for RCRA metals. While the sidewall samples did not detect any exceedances, the bottom endpoint sample detected an exceedance in cadmium above the Part 375 SCO. Therefore, additional soil was removed from the excavation bottom until the XRF screening indicated no exceedances. A secondary bottom endpoint was subsequently collected for cadmium analysis only. Cadmium was detected below the Part 375 SCO in the secondary sample. The final dimensions of the SB-38 excavation were approximately 9 feet long by 10.5 feet wide by 4 feet deep.

- **SB-46/47:** Located north of the Main Manufacturing Building. This excavation encompasses two soil borings: SB-46 and SB-47. The concrete slab was broken up and removed, and the soil was excavated with a mini excavator. Due to exceedances detected on the XRF, additional soil was removed from this excavation. The final approximate dimensions were 14.5 feet wide by 43 feet long by 4 feet deep. A total of seven (7) samples were collected, including two (2) from the north wall, two (2) from the south wall, one (1) from the east wall, one (1) from the west wall and one (1) from the bottom. The sampling results showed no RCRA metal exceedances when compared to the Part 375 Commercial Use and Protection of Groundwater SCOs. Soil samples were screened with the XRF before being collected.

- **Heat Treatment Building Sump:** Located inside the Heat Treatment Building to the north of the Main Manufacturing Building. The original dimensions of the sump prior to excavation were 19 feet long by 3 feet wide by 2 feet deep. The concrete at the bottom of the sump was removed and a mini excavator was used to begin the excavation to a depth of approximately 7 feet bgs. Soils were removed from the bottom and four sidewalls. The north, south, east and west sidewalls, and the bottom were screened with the XRF. All samples were detected below the Part 375 SCOs, except for the east sidewall. Therefore, endpoint samples were collected from the north, south, west and bottom of the excavation, and analyzed for RCRA metals. The concrete slab to the east of the sump within the building was saw-cut and removed. The soil along the east wall of the sump was then excavated eastward up to the building east wall and foundation, and to a depth of 10 feet bgs. The final dimensions of the sump excavation within the building were 25 feet long by 4 feet wide by 10 feet deep. An east sidewall endpoint was subsequently screened and collected. Cadmium was detected in the east sidewall sample at a concentration of 7.66 mg/kg, slightly exceeding the SCO of 7.5 mg/kg. Due to the slight exceedance, the soil outside the building east wall was excavated to a depth of approximately 4 feet at which tree roots were encountered. Due to safety and structural considerations limited by the trees surrounding the excavation and tree roots within the excavation, the soil could not be excavated further. Upon screening the outside east sidewall soil at 4 feet bgs with the XRF, cadmium was not detected and the excavation ceased. Results of the XRF screening, identified as Sump-E-Outside, are included in **Table 3**.

- **Heat Treatment Building Entrance:** Located inside the Heat Treatment Building to the north of the Main Manufacturing Building. In order to bring a mini excavator into the Heat Treatment Building to excavate the sump, the concrete slab in the entryway was removed to create additional space, exposing the soil underneath. As the sump was being excavated, soil from the sump was being transported over the exposed soil in the entryway. At the conclusion of the sump remediation, some of the soil in the entryway was also removed. At the request of the

NYSDEC, a soil sample was collected from the entrance and analyzed for RCRA metals. Cadmium and chromium both exceeded the Part 375 SCOs. Therefore, the bottom was excavated further and was screened with the XRF before collecting a sample. Cadmium and chromium were both below the Part 375 SCOs in the subsequent sample. The final dimensions of the excavation were 5 feet long by 6 feet wide by 1 foot deep.

- **Kerosene Tank Area:** Located just outside the Main Manufacturing Building, north of the Tumbling Department. The south sidewall of this excavation extended to the building foundation wall. Therefore, a south sidewall endpoint was not collected. Initial XRF screening results showed exceedances for cadmium on the west and north sidewalls, so the excavation continued to the north and west until clean endpoints were reached. A total of four (4) endpoint samples were collected from the north, east and west sidewalls, and the bottom. No RCRA metal exceedances were detected in any of the samples above the Part 375 SCOs. The final dimensions of the excavation were 9.5 feet long by 11 feet wide by 2 feet deep.

All excavated soils were stockpiled on-site on polyethylene sheeting. The stockpiles were covered with polyethylene sheeting when not actively used. Select areas of excavated soils were segregated based on cadmium concentrations detected from prior due diligence sampling. Excavated soils known to have cadmium concentrations greater than 20 mg/kg were separately stockpiled. These soils were excavated from areas SB-5, SB-7, SB-22, SB-38, SB-46, SB-47 and the sump within the former Heat Treatment Process Building. **Figure 10** shows a sketch of the approximate locations of each soil stockpile.

At the completion of soil excavations, waste characterization samples were collected from each stockpile for disposal purposes in accordance with the disposal facility sampling protocol. One 5-point composite sample was collected per 600 tons of excavated soil and analyzed for Total Petroleum Hydrocarbons (TPH) / Extractable Petroleum Hydrocarbons (EPH). In addition, one 5-point composite sample was collected per 1,200 tons of excavated soil and analyzed for Target Compound List (TCL) volatile organic compounds (VOCs) + 30 Tentatively Identified Compounds (TICs), TCL semi-volatile organic compounds (SVOCs) + 30 TICs, Target Analyte List (TAL) metals, TCLP metals, polychlorinated biphenyls (PCBs), herbicides, pesticides, and paint filter. A copy of the analytical laboratory report for the waste characterization sampling is provided on disc as **Appendix H**.

Following completion of ground intrusive activities, the stockpiles remained on-site awaiting waste characterization results and disposal facility approval. During this time, the NYSDEC received multiple reports that the covers had blown off the stockpiles due to high winds. H2M was notified and was requested by the NYSDEC to remedy the issue. At this time, no on-site activity was occurring. However, H2M subsequently conducted daily site visits from February 27, 2017 to March 13, 2017 until the soil

stockpiles were removed to maintain the polyethylene covers, and ensure the stockpiles were properly covered and all sheeting was weighed down. A CAMP station with a TSI DustTRAK particulate monitor was also set up at a location downwind from the stockpiles during these site visits in order to collect representative particulate readings that may migrate from the stockpiles. The particulate monitor ran for the duration of the site visits, which was approximately one hour. During these days, the highest recorded particulate reading was 39.7 µg/m^3, which is below the NYSDOH-established CAMP threshold of 100 µg/m^3. Based on the sampling results, it is H2M's opinion that the site activity did not adversely affect human health or the environment.

A total of 1,472.44 tons of non-hazardous soils were disposed of at Hazleton Creek Properties located in Hazleton, Pennsylvania (Permit# WMGR096NE001). Copies of the non-hazardous waste manifests are provided on disc as **Appendix I**. A total of 268.62 tons of impacted soils classified as hazardous waste were disposed of at Clean Earth of North Jersey located in Kearny, New Jersey (Permit# NJD991291105). Copies of the hazardous waste manifests are provided on disc as **Appendix J**. Concrete that had been removed from the excavations were also sampled and analyzed for disposal purposes. A total of 54.58 tons of concrete were disposed of at Dale Transfer Corp. of West Babylon, New York. Copies of the analytical laboratory reports and waste manifests for the concrete are included on disc as **Appendix K**.

2.5 Soil Vapor Remediation

Elevated levels of chlorinated volatile organic compounds (VOCs) (i.e., 1,1,1-trichloroethane, trichloroethene and tetrachloroethene) were first identified and documented in FPM's 2007 Subserface Investigation Report. Soil vapor contamination was detected in sub-slab samples collected within the Product/Raw Stock Storage Area and Screw Machinery Fabrication Department in the Main Manufacturing Building, and within the Plastic Injection Forming Machinery Area in the Plastics Manufacturing Building. In 2008, H2M conducted an investigation of the soil vapor contamination identified in the Product/Raw Stock Storage Area, which was summarized in H2M's 2009 Environmental Investigation report. Nine (9) soil borings were advanced in the raw materials storage area to a depth of 8 feet bgs. In three of the nine borings, field screening with a PID detected VOC readings up to 550 ppm. However, analytical laboratory results did not detect any VOCs in the soil samples that were collected and, therefore, did not definitively identify the presence or potential presence of a soil vapor contamination source area. In 2015 during Impact's Phase II ESA investigation, soil borings were advanced at locations either within or in close proximity to the soil vapor areas of concern. Soil samples from those locations were collected from depths just above the water table. No VOCs were identified in any of the soil samples at concentrations exceeding the NYSDEC Part 375 Unrestricted Use SCOs.

In June 2015, concrete slabs in the vicinity of those sampling locations were removed. Subsequent sampling performed in August 2015 by H2M detected elevated levels of trichloroethene in three soil vapor samples collected within the Main Manufacturing Building, but at significantly lower concentrations than previous sampling results. **Table 5** shows the sampling results for vapor samples collected in August 2015. The soil vapor areas of concern and sampling points from August 2015 are shown in **Figure 5**.

In order to address residual soil vapors, a temporary Soil Vapor Extraction (SVE) system was installed on-site and operated while the field work component of the RCRA Closure was conducted. The SVE system began operating on January 20, 2017. The system was configured to address the two soil vapor areas of concern within the Main Manufacturing Building, i.e., in the Product/Raw Stock Storage Area and next to the Screw Machinery Fabrication Department. **Figure 6** shows the SVE system configuration. The system was comprised of ten (10) extraction wells, a moisture separator/demister, a rotary regenerative blower (GeoTech 10hp, 180CFM), and a 55-gallon activated carbon drum. Six extraction wells were installed in the area next to the Product/Raw Stock Storage Area and four extraction wells were installed next to the Screw Machinery Fabrication Department. The extraction wells were constructed from 20-slot perforated, Schedule 40 PVC piping advanced to a depth of four feet below the elevation of the floor slab. The exposed soil areas were covered and secured with polyethylene sheeting. Wells situated within the exposed soil areas were properly sealed through the poly sheeting. The ten extraction wells were interconnected with the blower with aboveground piping running across the floor. The discharge from the system (i.e., after the carbon drum) was piped outside through an exterior window. A sampling port was installed in the discharge from the carbon drum and the outflow was periodically monitored for VOCs with a PID. PID readings of the outflow were always non-detectable.

Operation of the SVE system began on January 20, 2017 and was turned off on February 13, 2017 after approximately three weeks. The soil vapor was allowed to equilibrate for a period of seven days. On February 20, 2017, three (3) soil vapor, two (2) sub-slab, two (2) indoor air and one (1) outdoor air samples were collected in conformance with the NYSDOH Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York. Two (2) soil vapor samples were collected from the poly-covered exposed soil area within the Product/Raw Stock Storage Area, and one (1) soil vapor sample was collected from the poly-covered exposed soil area within the Screw Machinery Fabrication Department. These vapor points were manually installed to a depth of approximately 5 feet below grade surface utilizing the KVA Macho Vapor Probe System. A sampling implant connected to inert, polyethylene tubing was placed at the sampling depth. The depth of 5 feet was chosen based on the depth of the foundation footings, and the depth to groundwater at the subject property, which is approximately 6 to 11 feet bgs. The inert tubing penetration in the polyethylene sheeting was sealed with tape. In addition, one (1) sub-slab soil vapor sample was collected from just beneath the existing concrete slabs approximately 10 feet

east of each open floor areas in the Product/Raw Stock Storage Area and the Screw Machinery Fabrication Department. The soil vapor sampling locations are shown on **Figure 6**.

A helium tracer gas was utilized as a QA/QC measure to verify the integrity of the surface seal for all soil vapor and sub-slab sampling locations. After installation of the probes and prior to sample collection, approximately three volumes (volume of the sample probe and tubing) were purged from each vapor point.

Concurrent with the soil vapor and sub-slab samples, two (2) indoor air and one (1) outdoor air samples were collected. The indoor air samples were collected within the Main Manufacturing Building in proximity to the Product/Raw Stock Storage Area and the Screw Machinery Fabrication Department. All soil vapor and air samples were collected over a period of approximately two hours with a flow rate of <0.2 L/min utilizing Summa® vacuum canisters. All samples were analyzed for VOCs via EPA Method TO-15.

Upon receipt and evaluation of the soil vapor and air samples, the analytical laboratory informed H2M that the wrong Summa® canisters had been delivered to H2M for the February 20th sampling. H2M was supplied with canisters and regulators meant to run for a period of 24 hours, rather than two hours. Therefore, all soil vapor and air samples were re-sampled on February 28, 2017. All sampling implants had been left in place and undisturbed after the previous sampling event. Sampling was conducted following the same procedure as the February 20th sampling event.

The February 28th sampling results, evaluated utilizing the May 2017 NYSDOH Soil Vapor/Indoor Air decision matrices, are summarized in **Table 6**. All soil vapor and sub-slab samples, except for sub-slab sample SV-8, were characterized as no further action. Sub-slab sample SV-8, collected from the Product/Raw Storage Area, had elevated concentrations of cis-1,2-dichloroethene and trichloroethene (TCE), which triggered the monitor and mitigate actions, respectively.

As a result of the exceedances in SV-8, the SVE system was reconfigured on March 22, 2017 to focus the radius of influence of the extraction wells around SV-8, shown on **Figure 7**. Three (3) new extraction wells were installed approximately 10 feet east of the three existing eastern wells that were installed through the concrete floor slab. The three western extraction wells located in the poly-covered exposed soil area were abandoned with concrete and the polyethylene cover was re-sealed. The SVE system was started again on March 23, 2017. After operating for three weeks, the system was turned off on April 13, 2017 and the soil vapor was allowed to equilibrate for a period of four days. On April 17, 2017, a sub-slab vapor sample was collected from SV-8, as well as one indoor air and one outdoor air sample. As shown on **Table 7**, the concentrations of cis-1,2-dichloroethene and TCE decreased significantly from the

February sampling event. Cis-1,2-dichloroethene was characterized as no further action. However, TCE continued to have a mitigate status.

Based on the decrease in TCE concentration as a result of focusing the SVE system around the SV-8 sample location, the system was once again started on April 24, 2017. After operating for approximately three weeks, the system was turned off on May 16, 2017. On May 19, 2017, SV-8 was sampled again, along with one indoor air and one outdoor air sample. The concentration of TCE, shown on **Table 7**, continued to decrease, but still triggered the mitigate action.

Upon evaluating the sampling results, H2M altered the SVE system again on June 13, 2017 in order to focus remedial efforts in the area surrounding SV-8, shown on **Figure 8**. The two northern extraction wells located furthest away from SV-8 were removed from the system and capped off, leaving four wells that surrounded SV-8 in place. On July 11, 2017, the SVE system was turned off and the soil vapor was allowed to equilibrate. On July 26, 2017, a sample was collected from SV-8, along with an indoor air and an outdoor air sample. As shown on **Table 7**, TCE once again showed an elevated concentration, which triggered the mitigate action.

Full copies of the ASP Category B Data Packages for all soil vapor sampling events are provided on disc as **Appendix L**.

On August 30, 2017, the SVE system was dismantled, and all remaining extraction wells were capped and sealed. Due to the soil vapor issue, the NYSDEC was contacted and a deed restriction was drafted to address the residual soil vapor contamination. A Declaration of Covenants and Restrictions, included in **Appendix M**, was executed on November 17, 2017. The Declaration states that the owner of the property shall evaluate the potential for vapor intrusion for any existing or new buildings developed on the property prior to occupancy. The owner shall also monitor or mitigate any identified potential soil vapor impacts in accordance with the NYSDOH Guidance for Evaluating Soil Vapor Intrusion in the State of New York, October 2006 (and subsequent revisions) and shall implement the actions recommended to address exposures related to soil vapor intrusion. An exception to this is while the existing building(s) remains unoccupied, the owner does not have to monitor or mitigate. In addition, the owner of the property shall provide monitoring results and an annual certification that any necessary mitigation system is operating properly to the NYSDEC, or “Relevant Agency.” This covenant shall be binding upon all future owners of the property. The owner may petition the NYSDEC to modify or terminate this Declaration of Covenants and Restrictions by certifying that reliance upon the covenants and restrictions is no longer required to meet the goals of the Remedial Program. The certification must be made by a Professional Engineer. Any deed of conveyance of the property is subject to this Declaration of Covenants and Restrictions, unless it has been terminated by the NYSDEC or “Relevant Agency.”

2.6 Leaching Pool Remediation

Based on FPM's Subsurface Investigation Report and H2M's 2009 Environmental Investigation report, metal exceedances were detected in sanitary leaching pool CP-1, chlorinated VOC exceedances were detected in sanitary leaching pool CP-2, and metal exceedances were detected in the former Plastics Manufacturing Building (Plastics) sanitary leaching pool. Leaching pools CP-1 and CP-2 were previously backfilled with clean fill material from 0 to 7 feet below grade surface during their abandonment in 1985. The locations of the leaching pools are highlighted in **Figures 9A and 9B**. An Application for Review of Environmental Site Assessment was submitted to the Suffolk County Department of Health Services (SCDHS), requesting remediation oversight. A Notice to Remediate letter, dated January 20, 2017 and included on disc in **Appendix N**, was issued by the SCDHS. Remediation of the leaching pools was performed in conformance with SCDHS Article 12 SOP No. 9-95 Pumpout and Soil Cleanup Criteria, and a No Further Action (NFA) was subsequently issued for the site. Copies of the SCDHS NFA letter, dated January 17, 2018, and H2M's sanitary cesspool remediation summary report submitted to the SCDHS, which includes sampling results summary tables, analytical laboratory reports and waste manifests, are included on disc as **Appendix N**.

Remediation of the three leaching pools, identified as CP-1, CP-2 and Plastics CP, was conducted from January 11, 2017 through January 16, 2017. For CP-1 and CP-2 which had been previously backfilled, the top 0 to 7 feet of clean fill material was excavated and stockpiled separately for reuse. Contaminated soils within the leaching pools were then excavated utilizing a backhoe, mini excavator and/or guzzler truck until clean soils were encountered. The soils were field screened based on visual and olfactory observations, with an XRF Spectrometer, and with a photoionization detector (PID). On January 17, 2017, endpoint soil samples were collected from the three leaching pools in the presence of a SCDHS representative. One endpoint sample was collected from each leaching pool utilizing a decontaminated hand auger. The samples were analyzed for the SCDHS lists of VOCs via EPA Method 8260, SVOCs via EPA Method 8270 and metals via EPA Method 6010/7471. Silver was detected in CP-1 at a concentration of 19.4 mg/kg and cadmium was detected in CP-2 at a concentration of 8.18 mg/kg, both above their respective soil cleanup objectives. No VOC, SVOC or metal exceedances were detected in Plastics CP.

Due to the detected exceedances in silver and cadmium, leaching pools CP-1 and CP-2 were further remediated. On January 26, 2017, an additional three feet of bottom sediments were excavated each from CP-1 and CP-2 with a backhoe. Endpoint soil samples were subsequently collected from the leaching pools utilizing a decontaminated hand auger and analyzed for SCDHS metals only. No metal

exceedances were detected above the SCOs in the subsequent samples collected from either CP-1 or CP-2.

Following receipt of clean endpoint samples and approval from SCDHS, the leaching pools were backfilled with certified clean fill material and properly abandoned. The clean fill material that was stockpiled from CP-1 and CP-2 were also used to backfill the leaching pools. A total of approximately 24 cubic yards of impacted sediment were removed from the three sanitary leaching structures and disposed of at Dale Transfer Corp. located in West Babylon, New York. Copies of the manifests are included as part of the summary report submitted to the SCDHS, provided on disc in **Appendix N**.

3.0 QUALITY ASSURANCE / DATA VALIDATION

The analytical laboratory, Phoenix Environmental Services, Inc., processed the rinsate, soil and air samples collected as part of the closure sampling program under NYSDEC ASP Category B Data Packages. The sampling program and data packages also included trip blanks, equipment blanks, matrix spikes, and matrix spike duplicates. The analytical results for the QA/QC samples are summarized within the data tables.

An independent data validation was performed on all of the analytical data generated as part of the closure activities. Analytical data packages GBX22686, GBX22709, GBX33094, GBX39244, GBX39265, GBX39290, GBX43635, GBX72664, GBX77895, GBY05388, GBY27943 and GBY73936 were submitted to Ms. Judy Harry of Data Validation Services located in North Creek, New York for third-party review. Copies of the data usability summary report (DUSR) and data validation summary spreadsheets, prepared by Ms. Harry, are included on disc as **Appendix O**. The DUSR includes a quality review of the sampling conducted at the DFCI facility.

In summary, the data usability report had the following comments:

- Sample results are usable either as reported, or with minor qualifications or edit.
- The adjusted reporting limit for mercury in one sample falls just above the Protection of Groundwater SCO.
- Data completeness, comparability, sensibility, accuracy, precision, and representativeness are acceptable.

Chain of Custody/Sample Receipt

- The laboratory field custody forms do not have fields for relinquish dates and times.
- No year was present on the collection date on the custody for samples reported in SDG GBX72664.

- The year was omitted from the final laboratory receipt entry on the custody for samples reported in SDG GBY27943.
- The year was omitted from the transfer entries for SDG GBY73936.
- The custody associated with samples reported in GBY05388 does not have a final relinquish entry.
- The laboratory receipt date entry on GBY05388 is two days before the samples were collected.
- The request for hexavalent chromium analysis for HT-Entrance Bottom was made after sample receipt. Other discrepancies and adjustments to requested analyses were resolved at sample receipt.
- A slash was reported in place of a dash in some of the sample identifications in SDG GBX39244.
- Some of the custody forms are not relinquished in the final transfer by the same individual that previously received the samples.

Blind Field Duplicates

- Field duplicate evaluations were performed on SB-31-N, Rinsate 2, Rinsate 2-B, SB-5-N, SB-20-Bottom, and SB-22/18/19-N1, and show correlations within the validation guidelines, with the following exceptions, results for which are qualified in the indicated parent sample and its duplicate:
    - Barium in SB-31-N.
    - Barium, cadmium, and lead in Rinsate 2, with the parent showing no detections above the reporting limits, and the field duplicate showing higher concentrations. This rinsate and its duplicate were recollected and reanalyzed with acceptable correlations, matching the initial parent sample.

TCL and SCDHS Volatile Analyses by EPA8260C

- The detections of acetone and 2-butanone in the samples reported in SDG GBX33094 are considered external contamination and edited to non-detection due to responses in the associated equipment blank.
- Calibration standards show acceptable responses, with the exception of bromomethane in the calibration verification associated with equipment and trip blanks reported in SDG GBX33094. The results for bromomethane in those blanks have been qualified as estimated in value.
- Chloromethane and bromomethane results in the equipment and trip blanks reported in GBX33094 are qualified as estimated due to low recoveries in the associated LCSs.
- The matrix spikes of SB-20-Bottom show acceptable recoveries and duplicate correlations.
- Surrogate and internal standard recoveries are compliant with analytical requirements.

Volatile Analyses by TO-15

- SV-7 was received at ambient pressure, and results for that sample are therefore qualified as estimated in value.
- The detection of dichlorodifluoromethane in SV-4 is edited to reflect non-detection due to very poor mass spectral quality.
- The laboratory duplicate of SV-1 shows acceptable correlations to the parent sample.
- Holding times and instrument tunes are acceptable. The LCS recoveries are within laboratory and validation guidelines. Surrogate and internal standard responses fall within required ranges.
- Calibration standard responses are compliant with analytical protocol and the validation requirements, with the following exceptions, results for which are qualified as estimated in the associated samples, with a possible low bias:
    - 1,2,4-Trichlorobenzene in samples reported in SDG GBY27943.
    - Benzyl chloride and 1,2,4-trichlorobenzene in samples reported in SDG GBX77895.
    - Ethanol in the samples reported in SDG GBY05388.
- The following detections are considered external contamination and edited to non-detection due to responses in the associated canister blanks:
    - Ethanol in SV-6.
    - Ethanol and acetone in SV-2, SV-3, SV-4, SV-5, SV-7, Sub-Slab (7/17), Indoor Air (7/17), and Outdoor Air (7/17).
    - 2-Butanone in Indoor Air (7/17).
- The laboratory reports their MDLs are being exactly the same as their LOD/RLs. Those limits are supported by the raw data as being RLs, but no documentation is present to show actual statistical MDLs.

PAHs by EPA8270D

- The matrix spikes of Discharge 1 show acceptable recoveries and duplicate correlations.
- Surrogate and internal standard recoveries are compliant with analytical requirements. Calibration standards show acceptable responses. Blanks show no contamination.

RCRA Metals, Cadmium and Chromium Analyses by EPA 6010C, 7470 and 7471B

- Due to presence in the associated equipment blank, all of the detections of mercury in the soil boring samples reported in SDG GBX22686 are considered external contamination and edited to reflect non-detection at elevated reporting limits corresponding to originally reported concentrations. For all samples except Kerosene-SW-E, the adjusted reporting limit is below the project RCRA Closure Plan requirement of the NYSDEC Part 375 Protection of Groundwater SCO of 0.7 mg/kg. The adjusted reporting limit for Kerosene-SW-E on a wet weight basis is just below that SCO, but after adjustment for solids content is just above the SCO limit, at 0.8 mg/kg.

- Matrix spikes/duplicates were performed for RCRA metals on SB-31-N, SB-7-N, SB-22/18/19-S5, Duplicate #4, Rinsate 7, Duplicate B, Discharge 1, SB-5-W, SB-20-Bottom, SB-22/18/19-N5, SB-46/47-S2, Rinsate 11 (mercury only), and Kerosene-SW-E (mercury only). Accuracy and precision are acceptable, with the following exceptions, results for which are qualified as estimated in the indicated parent sample:
    - Barium in SP-22/18/19-S5.
    - Lead and barium in SB-31-N.
- The result for nickel in Discharge 1 is qualified as estimated, with a low bias, due to low recovery in the associated low concentration standard.
- The ICP serial dilution evaluations of SB-31-N, SB-7-N, SB-22/18/19-S5, Duplicate #4, Rinsate 7, Discharge 1, SB-5-W, SB-20-Bottom, and SB-22/18/19-N5 are acceptable.
- Results for mercury in samples reported in SDG GBX39290 are qualified as estimated due to low recovery in the associated low level standard.
- Raw data for the solids determinations were not provided in the data packages.
- The provided metals instrument output is more limited than those required for laboratory deliverables. Because the laboratory programs the solids content weight and volume into the instrument output, which then produces a mean quantitative result, the individual absorbance readings should have been reported. The algorithm cannot be verified.

Hexavalent Chromium and Redox Potential Analyses by EPA7196

- Review was conducted for method compliance, holding times, transcription, calculations, standard and blank acceptability, accuracy and precision, etc., as applicable to each procedure. All were found acceptable for the validated samples, unless noted specifically within the text.
- The soluble and insoluble matrix spikes of hexavalent chromium in SB-38-Bottom and SB-5-Bottom show acceptable recoveries and correlations.

4.0 CLOSURE PERFORMANCE GUIDELINES AND SUMMARY

This closure was implemented to document and certify closure activities associated with the remediation of the DFCI Solutions, Inc. facility in West Islip, New York. The closure activities were intended to minimize threats to human health and the environment. Performance guidelines utilized for this closure were based on NYSDEC DER-10 Technical Guidance for Site Investigation and Remediation, NYSDEC TOGS 1.1.1 Class GA Standards, NYSDEC 6 NYCRR Part 375 Soil Cleanup Objectives (SCOs), NYSDOH Final Guidance for Evaluating Soil Vapor Intrusion, and SCDHS Article 12 SOP No. 9-95 Pumpout and Soil Cleanup Criteria. Remedial activities and results from the closure sampling program were summarized and presented in Sections 2.2 through 2.5. The closure activities included

decontamination of the building floors, excavation of contaminated soils, installation of a soil vapor extraction system and remediation of contaminated leaching pools.

Rinsate samples were collected following the decontamination of the building floors to ensure that the floors were properly cleaned. A total of twelve (12) rinsate samples were collected throughout the facility's buildings, and analyzed for RCRA metals. Five (5) of the twelve rinsate samples detected cadmium and lead at concentrations exceeding the NYSDEC TOGS 1.1.1 Class GA standards. Therefore, the areas in which the exceedances occurred were re-cleaned and subsequent rinsate samples were collected. No exceedances were detected in any of the samples collected during the second rinsate sampling event.

Soil excavations were performed at locations throughout the DFCI property where metal and VOC contamination was identified during previous site investigations. The areas of concern included twelve (12) soil boring locations, the Heat Treatment Building sump and the former Kerosene Tank Containment Area. Petroleum-like impacted soil was also encountered during the SB-22/18/19 excavation and NYSDEC spill number 1610169 was assigned. The soil in these areas of concern were excavated until clean soils were encountered based on field screening with an X-Ray Fluorescence (XRF) Spectrometer and PID. Confirmatory endpoint soil samples were collected from the bottom and sidewalls of each completed excavation in accordance with DER-10 Technical Guidance for Site Investigation and Remediation. The soil samples were analyzed for RCRA metals and VOCs, and compared with the Part 375 Commercial Use and Protection of Groundwater SCOs. Five (5) out of a total of seventy-three (73) endpoint soil samples collected from the various excavations detected exceedances in cadmium and chromium above the Part 375 SCOs. These five locations were further excavated, screened with the XRF and re-sampled. No exceedances were detected in any of the subsequent samples.

A soil vapor extraction (SVE) system was installed and implemented to remediate elevated levels of trichloroethene (TCE) detected in the soil vapors beneath the Main Manufacturing Building. The SVE system consisted of ten extraction wells, a moisture separator/demister, a rotary regenerative blower and a 55-gallon activated carbon drum. Following three weeks of operation, soil vapor and sub-slab vapor samples were collected, concurrent with indoor air and outdoor air samples in accordance with the NYSDOH Soil Vapor Intrusion Guidance. The vapor and air samples were analyzed for VOCs, and the sampling results were evaluated against the May 2017 NYSDOH Soil Vapor/Indoor Air decision matrices. All soil vapor and sub-slab samples, except for sub-slab sample SV-8, were characterized as no further action. Elevated concentrations of cis-1,2-dichloroethene and TCE were detected in the sub-slab sample SV-8, which triggered the monitor and mitigate actions, respectively. Therefore, the SVE system was reconfigured to focus the radius of influence of the extraction wells around SV-8. Following another three weeks of operation of the newly configured system, a sample was collected from SV-8 along with indoor

air and outdoor air samples. Cis-1,2-dichloroethene was characterized as no further action. The concentration of TCE showed a significant decrease, but continued to have a mitigate status. Therefore, the SVE system was turned on again for another three weeks of operation. Subsequent sampling of SV-8 detected TCE at a lower concentration, but still triggered the mitigate action. The SVE system was altered again to focus the extraction wells around SV-8, and operated for four weeks. The subsequent sample collected from SV-8 once again showed an elevated TCE concentration. A Declaration of Covenants and Restrictions was executed, placing an institutional control on the property, in order to address this soil vapor issue. According to the Declaration, while the existing building(s) remains unoccupied, no monitoring or mitigating is necessary. However, the property owner must evaluate the potential for vapor intrusion for any existing or new buildings prior to occupancy.

Three (3) on-site sanitary leaching pools were remediated due to VOC and metal exceedances identified during prior site investigations. The remediation was performed in accordance with SCDHS Article 12 SOP No. 9-95 Pumpout and Soil Cleanup Criteria. Contaminated soils within the leaching pools were removed until clean soils were encountered based on visual and olfactory observations, and screening with the XRF and PID. Endpoint soil samples were collected from each leaching pool, and analyzed for the SCDHS lists of VOCs, SVOCs and metals. Silver and cadmium were detected in two of the three leaching pools at concentrations exceeding their respective SCOs. Therefore, additional soil was removed from the two structures and endpoint samples were collected again. No exceedances were detected above the SCOs in the subsequent samples. Based on the successful remediation and endpoint sampling results, the SCDHS issued a No Further Action letter.

It is H2M's professional opinion that the closure activities conducted at the DFCI Solutions, Inc. facility were completed in accordance with the NYSDEC-approved Closure Plan and the sampling results summarized herein satisfy the closure performance guidelines, and that no further action is warranted. In addition, H2M believes that the petroleum-like impacted soil encountered during the excavation of SB-22/18/19 was successfully remediated, and recommends closure of NYSDEC spill number 1610169.

5.0 ENGINEER'S CERTIFICATION

I certify that to the best of my knowledge the information contained within this report is accurate and correct. I further certify that hazardous waste operations have been closed and remediation has been performed at the DFCI Solutions, Inc. facility in accordance with 6 NYCRR Part 373-3.7, Closure and Post-Closure, DER-10 / Technical Guidance for Site Investigation and Remediation, and with the guidelines specified in the NYSDEC-approved Closure Plan.

Independent Professional Engineer

Signature: _____

Name/Title: PAUL LAGERAAEN

Date: 4/13/2018

6.0 FACILITY OWNER'S CERTIFICATION

I certify that to the best of my knowledge the information contained within this report is accurate and correct. I further certify that hazardous waste operations have been closed and remediation has been performed at the DFCI Solutions, Inc. facility in accordance with 6 NYCRR Part 373-3.7, Closure and Post-Closure, DER-10 / Technical Guidance for Site Investigation and Remediation, and with the guidelines specified in the NYSDEC-approved Closure Plan.

Facility Owner

Signature: _____

Name/Title: STEPHEN MESSINESE / PRESIDENT

Date: 8/13/2018

FIGURES

CLIENT

DFCI SOLUTIONS, INC.

425 UNION BOULEVARD
WEST ISLIP, NY 11795

SCALE: 1" = 2750'

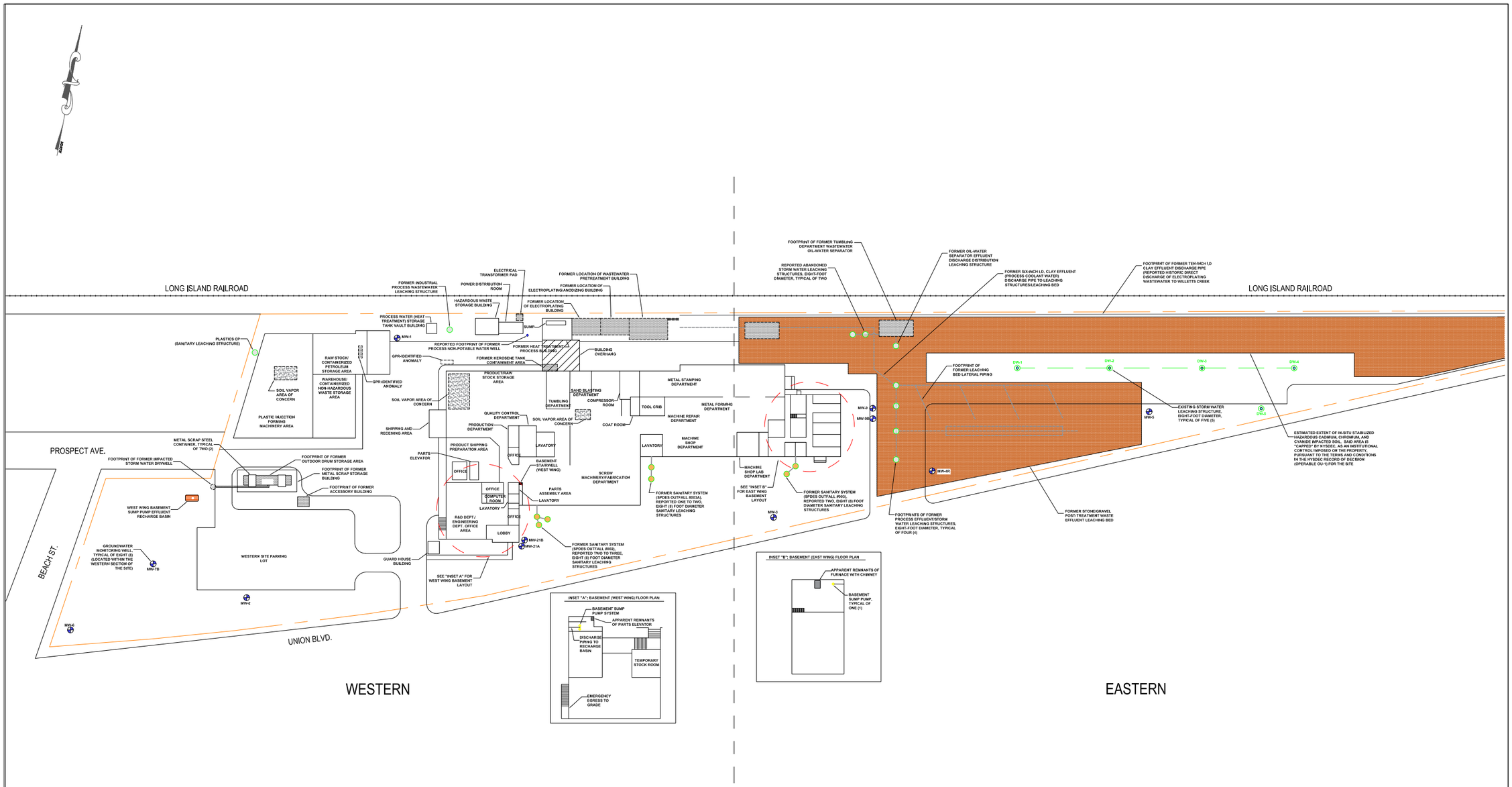
PROJECT #: DFCI1701

DATE: 12/19/2017

H2M architects + engineers

Melville, NY · New City, NY · Albany, NY · Parsippany, NJ

X:\DFCI (DFCI Solutions)\DFCI1701 (RCRA Closure)\01-REPORTS\DRAFT\Figures\2017-12-11 Site Plan_JMM rev.dwg Last Modified: Dec 19, 2017 - 1:43pm Plotted on: Dec 19, 2017 - 1:46pm By jspinelli



NOTE: SEE FIGURES 2A AND 2B, FACILITY SITE PLAN WESTERN AND FACILITY SITE PLAN EASTERN, FOR MORE ZOOMED IN/DETAILED VIEWS

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Parsippany, NJ 07054
Howell, NJ 07731

NOTES:

BASE MAP OBTAINED FROM FIGURE 1: SOIL, SEDIMENT AND GROUNDWATER SAMPLING LOCATIONS: WESTERN SITE AREA, DATED MARCH 14, 2015, AND FIGURE 2: SOIL, SEDIMENT AND GROUNDWATER SAMPLING LOCATIONS: EASTERN SITE AREA, DATED MARCH 14, 2015, FIGURES 1 AND 2 OBTAINED FROM PHASE II ENVIRONMENTAL SITE ASSESSMENT, PREPARED BY IMPACT ENVIRONMENTAL, DATED AUGUST 26, 2015.

LEGEND:

MW-1 MONITORING WELL ID
MONITORING WELL LOCATION

SPDES OUTFALL LOCATION

LEACHING STRUCTURE LOCATION

CLIENT

DFCI SOLUTIONS, INC.

**425 UNION BOULEVARD
WEST ISLIP, NY 11795**

PROJECT

RCRA CLOSURE CERTIFICATION REPORT

SHEET NO.

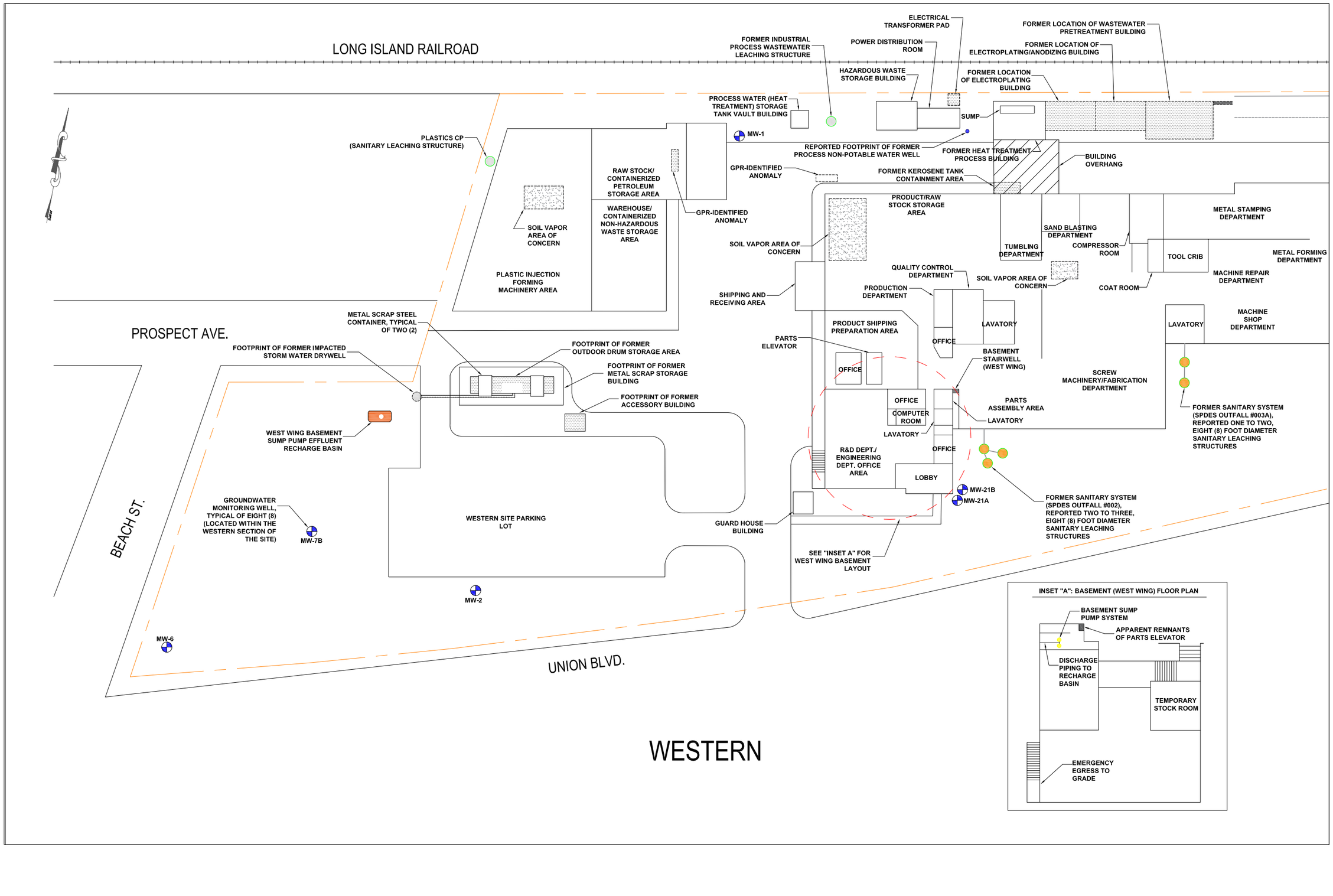
FIGURE 2

SHEET TITLE

FACILITY SITE PLAN OVERVIEW

H2M PROJECT NO.

DFCI 1701



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Parsippany, NJ 07054
Howell, NJ 07731

NOTES:
BASE MAP OBTAINED FROM FIGURE 1: SOIL, SEDIMENT AND GROUNDWATER SAMPLING LOCATIONS: WESTERN SITE AREA, DATED MARCH 14, 2015, AND FIGURE 2: SOIL, SEDIMENT AND GROUNDWATER SAMPLING LOCATIONS: EASTERN SITE AREA, DATED MARCH 14, 2015, FIGURES 1 AND 2 OBTAINED FROM PHASE II ENVIRONMENTAL SITE ASSESSMENT, PREPARED BY IMPACT ENVIRONMENTAL, DATED AUGUST 26, 2015.

LEGEND:
- MW-1 — MONITORING WELL ID / MONITORING WELL LOCATION
- SPDES OUTFALL LOCATION
- LEACHING STRUCTURE LOCATION

CLIENT
DFCI SOLUTIONS, INC.

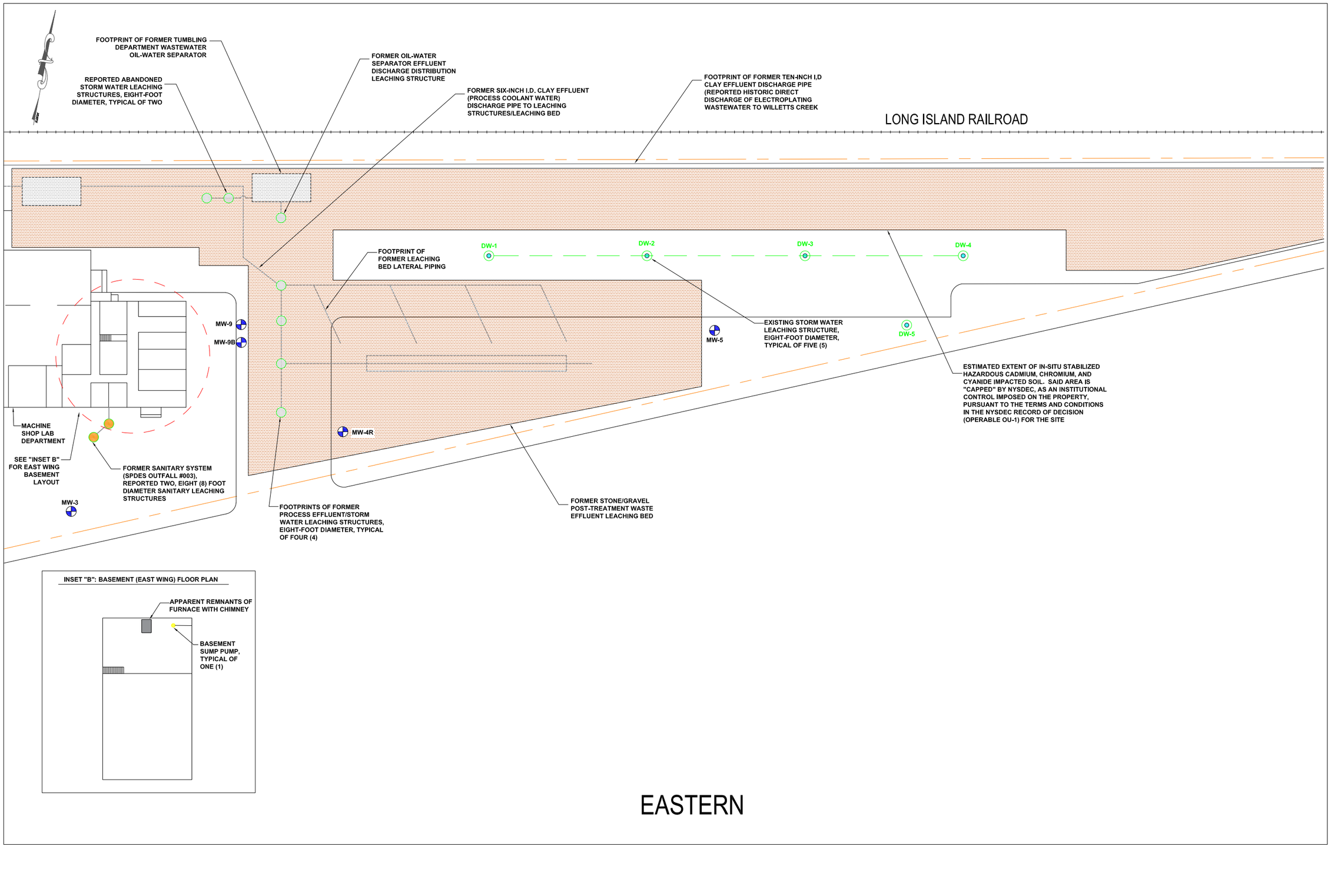
425 UNION BOULEVARD
WEST ISLIP, NY 11795

PROJECT
RCRA CLOSURE CERTIFICATION REPORT

SHEET NO.
FIGURE 2A

SHEET TITLE
FACILITY SITE PLAN WESTERN

H2M PROJECT NO.
DFCI 1701



EASTERN

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NOTES:
BASE MAP OBTAINED FROM FIGURE 1: SOIL, SEDIMENT AND GROUNDWATER SAMPLING LOCATIONS; WESTERN SITE AREA, DATED MARCH 14, 2015, AND FIGURE 2: SOIL, SEDIMENT AND GROUNDWATER SAMPLING LOCATIONS; EASTERN SITE AREA, DATED MARCH 14, 2015. FIGURES 1 AND 2 OBTAINED FROM PHASE II ENVIRONMENTAL SITE ASSESSMENT, PREPARED BY IMPACT ENVIRONMENTAL, DATED AUGUST 26, 2015.

LEGEND:
MW-1 MONITORING WELL ID
MONITORING WELL LOCATION
SPDES OUTFALL LOCATION
LEACHING STRUCTURE LOCATION

CLIENT
DFCI SOLUTIONS, INC.

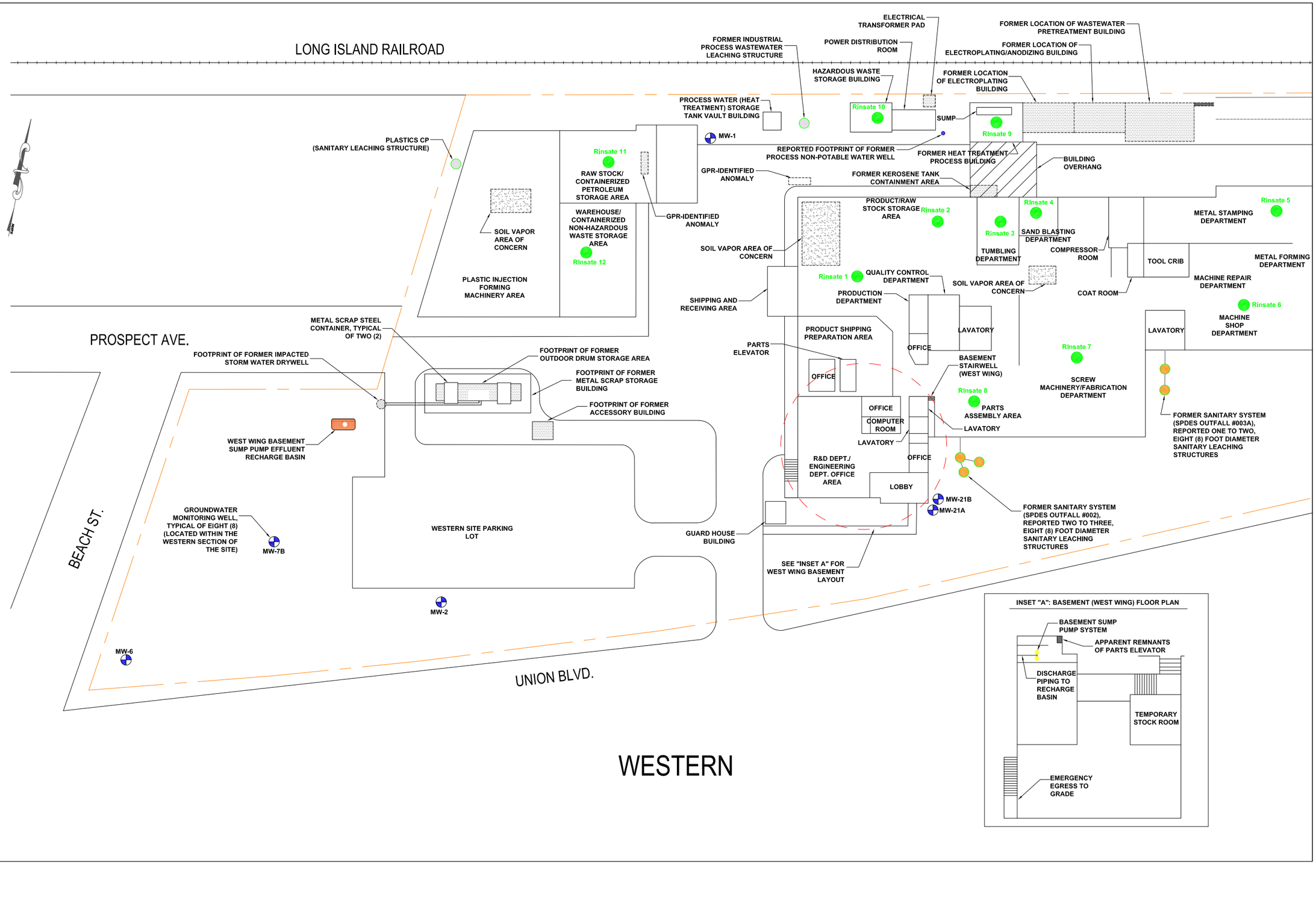
**425 UNION BOULEVARD
WEST ISLIP, NY 11795**

PROJECT
RCRA CLOSURE CERTIFICATION REPORT

SHEET NO.
FIGURE 2B

SHEET TITLE
FACILITY SITE PLAN EASTERN

H2M PROJECT NO.
DFCI 1701



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NOTES:
BASE MAP OBTAINED FROM FIGURE 1: SOIL, SEDIMENT AND GROUNDWATER SAMPLING LOCATIONS WESTERN SITE AREA, DATED MARCH 14, 2015, AND FIGURE 2: SOIL, SEDIMENT AND GROUNDWATER SAMPLING LOCATIONS EASTERN SITE AREA, DATED MARCH 14, 2015, FIGURES 1 AND 2 OBTAINED FROM PHASE II ENVIRONMENTAL SITE ASSESSMENT, PREPARED BY IMPACT ENVIRONMENTAL, DATED AUGUST 26, 2015.

LEGEND:
- MW-1 — MONITORING WELL ID / MONITORING WELL LOCATION
- RINSATE SAMPLING LOCATION
- SPDES OUTFALL LOCATION
- LEACHING STRUCTURE LOCATION

CLIENT
DFCI SOLUTIONS, INC.

425 UNION BOULEVARD
WEST ISLIP, NY 11795

PROJECT
RCRA CLOSURE CERTIFICATION REPORT

SHEET NO.
FIGURE 3

SHEET TITLE
RINSATE SAMPLING LOCATIONS

H2M PROJECT NO.
DFCI 1701

EXCAVATION ID	CUBIC YDS REMOVED
SB-20	666.7
SB-7	7.4
SB-22/18/19	1167.4
SB-8	14.8
SB-5	29.6
Sump	14.6
H.T. Entrance	1.0
SB-46/47	92.4
Kerosene	7.7
SB-38	14.0
SB-36	17.1
SB-31	34.2

LONG ISLAND RAILROAD

PROSPECT AVE.

BEACH ST.

UNION BLVD.

WESTERN

PLASTICS CP (SANITARY LEACHING STRUCTURE)

SOIL VAPOR AREA OF CONCERN

RAW STOCK/ CONTAINERIZED PETROLEUM STORAGE AREA

WAREHOUSE/ CONTAINERIZED NON-HAZARDOUS WASTE STORAGE AREA

GPR-IDENTIFIED ANOMALY

PLASTIC INJECTION FORMING MACHINERY AREA

METAL SCRAP STEEL CONTAINER, TYPICAL OF TWO (2)

FOOTPRINT OF FORMER IMPACTED STORM WATER DRYWELL

FOOTPRINT OF FORMER OUTDOOR DRUM STORAGE AREA

WEST WING BASEMENT SUMP PUMP EFFLUENT RECHARGE BASIN

FOOTPRINT OF FORMER METAL SCRAP STORAGE BUILDING

FOOTPRINT OF FORMER ACCESSORY BUILDING

WESTERN SITE PARKING LOT

GROUNDWATER MONITORING WELL, TYPICAL OF EIGHT (8) (LOCATED WITHIN THE WESTERN SECTION OF THE SITE)

MW-7B

MW-2

MW-6

FORMER INDUSTRIAL PROCESS WASTEWATER LEACHING STRUCTURE

PROCESS WATER (HEAT TREATMENT) STORAGE TANK VAULT BUILDING

ELECTRICAL TRANSFORMER PAD

POWER DISTRIBUTION ROOM

HAZARDOUS WASTE STORAGE BUILDING

FORMER HEAT TREATMENT PROCESS BUILDING

FORMER LOCATION OF ELECTROPLATING BUILDING

FORMER LOCATION OF ELECTROPLATING/ANODIZING BUILDING

FORMER LOCATION OF WASTEWATER PRETREATMENT BUILDING

BUILDING OVERHANG

MW-1

REPORTED FOOTPRINT OF FORMER PROCESS NON-POTABLE WATER WELL

H.T. Entrance

GPR-IDENTIFIED ANOMALY

FORMER KEROSENE TANK CONTAINMENT AREA

SUMP

SOIL VAPOR AREA OF CONCERN

PRODUCT/RAW STOCK STORAGE AREA

SHIPPING AND RECEIVING AREA

PRODUCTION DEPARTMENT

PRODUCT SHIPPING PREPARATION AREA

PARTS ELEVATOR

OFFICE

QUALITY CONTROL DEPARTMENT

LAVATORY

BASEMENT STAIRWELL (WEST WING)

OFFICE

COMPUTER ROOM

LAVATORY

R&D DEPT./ ENGINEERING DEPT. OFFICE AREA

LOBBY

OFFICE

PARTS ASSEMBLY AREA

LAVATORY

SCREW MACHINERY/FABRICATION DEPARTMENT

SAND BLASTING DEPARTMENT

TUMBLING DEPARTMENT

COMPRESSOR ROOM

TOOL CRIB

COAT ROOM

METAL STAMPING DEPARTMENT

METAL FORMING DEPARTMENT

MACHINE REPAIR DEPARTMENT

MACHINE SHOP DEPARTMENT

LAVATORY

FORMER SANITARY SYSTEM (SPDES OUTFALL #003A), REPORTED ONE TO TWO, EIGHT (8) FOOT DIAMETER SANITARY LEACHING STRUCTURES

FORMER SANITARY SYSTEM (SPDES OUTFALL #002), REPORTED TWO TO THREE, EIGHT (8) FOOT DIAMETER SANITARY LEACHING STRUCTURES

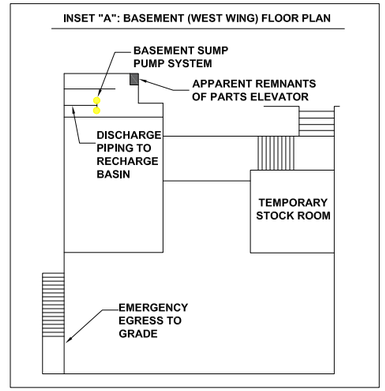
GUARD HOUSE BUILDING

SEE "INSET A" FOR WEST WING BASEMENT LAYOUT

MW-21B

MW-21A

INSET "A": BASEMENT (WEST WING) FLOOR PLAN



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NOTES:

BASE MAP OBTAINED FROM FIGURE 1; SOIL, SEDIMENT AND GROUNDWATER SAMPLING LOCATIONS: WESTERN SITE AREA, DATED MARCH 14, 2015, AND FIGURE 2: SOIL, SEDIMENT AND GROUNDWATER SAMPLING LOCATIONS: EASTERN SITE AREA, DATED MARCH 14, 2015. FIGURES 1 AND 2 OBTAINED FROM PHASE II ENVIRONMENTAL SITE ASSESSMENT, PREPARED BY IMPACT ENVIRONMENTAL, DATED AUGUST 26, 2015.

SOIL BORING CONCENTRATIONS FROM A PHASE II ESA PERFORMED BY IMPACT ENVIRONMENTAL, REPORT DATED AUGUST 26, 2015.

LEGEND:

- SB-4 — SOIL BORING ID / SOIL BORING SAMPLING LOCATION
- SB-7-N — SOIL SAMPLE ID / ENDPOINT SOIL SAMPLING LOCATION
- MW-1 — MONITORING WELL ID / MONITORING WELL LOCATION
- SPDES OUTFALL LOCATION
- LEACHING STRUCTURE LOCATION

*NOT DRAWN TO SCALE

CLIENT

DFCI SOLUTIONS, INC.

425 UNION BOULEVARD WEST ISLIP, NY 11795

PROJECT

RCRA CLOSURE CERTIFICATION REPORT

SHEET NO.

FIGURE 4

SHEET TITLE

SOIL EXCAVATION LOCATIONS

H2M PROJECT NO.

DFCI 1701

ISLAND RAILROAD

FORMER INDUSTRIAL PROCESS WASTEWATER LEACHING STRUCTURE

POWER DISTRIBUTION ROOM

FORMER LOC ELECTROPLA

PROCESS WATER (HEAT TREATMENT) STORAGE TANK VAULT BUILDING

HAZARDOUS WASTE STORAGE BUILDING

FORMER HEAT TREATMENT PROCESS BUILDING

FC PR

SUMP

PLASTICS CP
ITARY LEACHING STRUCTURE)

MW-1

BUILDING OVERHANG

REPORTED FOOTPRINT OF FORMER PROCESS NON-POTABLE WATER WELL

GPR-IDENTIFIED ANOMALY

FORMER KEROSENE TANK CONTAINMENT AREA

RAW STOCK/ CONTAINERIZED PETROLEUM STORAGE AREA

SV-1

SOIL VAPOR AREA OF CONCERN

WAREHOUSE/ CONTAINERIZED NON-HAZARDOUS WASTE STORAGE AREA

GPR-IDENTIFIED ANOMALY

SV-3

PRODUCT/RAW STOCK STORAGE AREA

SAND BLASTING DEPARTMENT

SV-2

SOIL VAPOR AREA OF CONCERN

TUMBLING DEPARTMENT

COMPRESSOR ROOM

SV-4

TOOL CRIB

PLASTIC INJECTION FORMING MACHINERY AREA

SOIL VAPOR AREA OF CONCERN

COAT ROOM

SHIPPING AND RECEIVING AREA

PRODUCTION DEPARTMENT

QUALITY CONTROL DEPARTMENT

PRODUCT SHIPPING PREPARATION AREA

LAVATORY

LAVATORY

PARTS ELEVATOR

OFFICE

OFFICE

BASEMENT STAIRWELL (WEST WING)

SCREW MACHINERY/FABRICATION DEPARTMENT

L SCRAP STEEL
AINER, TYPICAL
OF TWO (2)

ED
LL

FOOTPRINT OF FORMER OUTDOOR DRUM STORAGE AREA

OFFICE

PARTS ASSEMBLY AREA

COMPUTER ROOM

LAVATORY

LAVATORY

FOOTPRINT OF FORMER ACCESSORY BUILDING

FOOTPRINT OF FORMER METAL SCRAP STORAGE BUILDING

R&D DEPT./ ENGINEERING DEPT. OFFICE AREA

OFFICE

LOBBY

MW-21B

MW-21A

FORMER SANITARY SYSTEM (SPDES OUTFALL #002), REPORTED TWO TO THREE, EIGHT (8) FOOT DIAMETER SANITARY LEACHING STRUCTURES

WESTERN SITE PARKING LOT

GUARD HOUSE BUILDING

SEE "INSET A" FOR WEST WING BASEMENT

H2M architects + engineers

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NOTES:
BASE MAP OBTAINED FROM FIGURE 1: SOIL, SEDIMENT AND GROUNDWATER SAMPLING LOCATIONS: WESTERN SITE AREA, DATED MARCH 14, 2015, AND FIGURE 2: SOIL, SEDIMENT AND GROUNDWATER SAMPLING LOCATIONS: EASTERN SITE AREA, DATED MARCH 14, 2015, FIGURES 1 AND 2 OBTAINED FROM PHASE II ENVIRONMENTAL SITE ASSESSMENT, PREPARED BY IMPACT ENVIRONMENTAL, DATED AUGUST 26, 2015.

SUB-SLAB VAPOR SAMPLES COLLECTED BY H2M IN AUGUST 2015.

LEGEND:
MW-1 — MONITORING WELL ID / MONITORING WELL LOCATION
SV-2 — SUB-SLAB VAPOR SAMPLE ID / SUB-SLAB VAPOR SAMPLE LOCATION
SPDES OUTFALL LOCATION
LEACHING STRUCTURE LOCATION
SV-1 — SAMPLED ON 8/20/2015

*NOT DRAWN TO SCALE

CLIENT
DFCI SOLUTIONS, INC.

425 UNION BOULEVARD
WEST ISLIP, NY 11795

PROJECT
RCRA CLOSURE CERTIFICATION REPORT

SHEET NO.
FIGURE 5

SHEET TITLE
AUGUST 2015 SOIL VAPOR SAMPLING LOCATIONS

H2M PROJECT NO.
DFCI 1701

ISLAND RAILROAD

FORMER INDUSTRIAL PROCESS WASTEWATER LEACHING STRUCTURE

POWER DISTRIBUTION ROOM

FORMER LOC ELECTROPLA

PROCESS WATER (HEAT TREATMENT) STORAGE TANK VAULT BUILDING

HAZARDOUS WASTE STORAGE BUILDING

FORMER HEAT TREATMENT PROCESS BUILDING

FC PR

SUMP

PLASTICS CP
ITARY LEACHING STRUCTURE)

MW-1

BUILDING OVERHANG

REPORTED FOOTPRINT OF FORMER PROCESS NON-POTABLE WATER WELL

GPR-IDENTIFIED ANOMALY

FORMER KEROSENE TANK CONTAINMENT AREA

RAW STOCK/ CONTAINERIZED PETROLEUM STORAGE AREA

SV-6

GPR-IDENTIFIED ANOMALY

WAREHOUSE/ CONTAINERIZED NON-HAZARDOUS WASTE STORAGE AREA

PRODUCT/RAW STOCK STORAGE AREA

SV-2

SOIL VAPOR AREA OF CONCERN

SOIL VAPOR AREA OF CONCERN

SV-1

SV-8

SV-5

TUMBLING DEPARTMENT

SAND BLASTING DEPARTMENT

COMPRESSOR ROOM

TOOL CRIB

SV-4

SV-7

PLASTIC INJECTION FORMING MACHINERY AREA

COAT ROOM

SHIPPING AND RECEIVING AREA

PRODUCTION DEPARTMENT

QUALITY CONTROL DEPARTMENT

LAVATORY

SOIL VAPOR AREA OF CONCERN

LAVATORY

L SCRAP STEEL
AINER, TYPICAL
OF TWO (2)

PRODUCT SHIPPING PREPARATION AREA

PARTS ELEVATOR

OFFICE

BASEMENT STAIRWELL (WEST WING)

SCREW MACHINERY/FABRICATION DEPARTMENT

SV-3

FOOTPRINT OF FORMER OUTDOOR DRUM STORAGE AREA

OFFICE

OFFICE

PARTS ASSEMBLY AREA

COMPUTER ROOM

LAVATORY

LAVATORY

FOOTPRINT OF FORMER ACCESSORY BUILDING

FOOTPRINT OF FORMER METAL SCRAP STORAGE BUILDING

R&D DEPT./ ENGINEERING DEPT. OFFICE AREA

OFFICE

LOBBY

MW-21B

MW-21A

FORMER SANITARY SYSTEM (SPDES OUTFALL #002), REPORTED TWO TO THREE, EIGHT (8) FOOT DIAMETER SANITARY LEACHING STRUCTURES

WESTERN SITE PARKING LOT

GUARD HOUSE BUILDING

SEE "INSET A" FOR WEST WING BASEMENT

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NOTES:
BASE MAP OBTAINED FROM FIGURE 1: SOIL, SEDIMENT AND GROUNDWATER SAMPLING LOCATIONS: WESTERN SITE AREA, DATED MARCH 14, 2015, AND FIGURE 2: SOIL, SEDIMENT AND GROUNDWATER SAMPLING LOCATIONS: EASTERN SITE AREA, DATED MARCH 14, 2015, FIGURES 1 AND 2 OBTAINED FROM PHASE II ENVIRONMENTAL SITE ASSESSMENT, PREPARED BY IMPACT ENVIRONMENTAL, DATED AUGUST 26, 2015.

SUB-SLAB VAPOR SAMPLES COLLECTED BY H2M IN AUGUST 2015.

LEGEND:
MW-1 MONITORING WELL ID / MONITORING WELL LOCATION
SV-2 SUB-SLAB VAPOR SAMPLE ID / SUB-SLAB VAPOR SAMPLE LOCATION
SPDES OUTFALL LOCATION
LEACHING STRUCTURE LOCATION
SV-1 SAMPLED ON 2/28/2017

*NOT DRAWN TO SCALE

CLIENT
DFCI SOLUTIONS, INC.

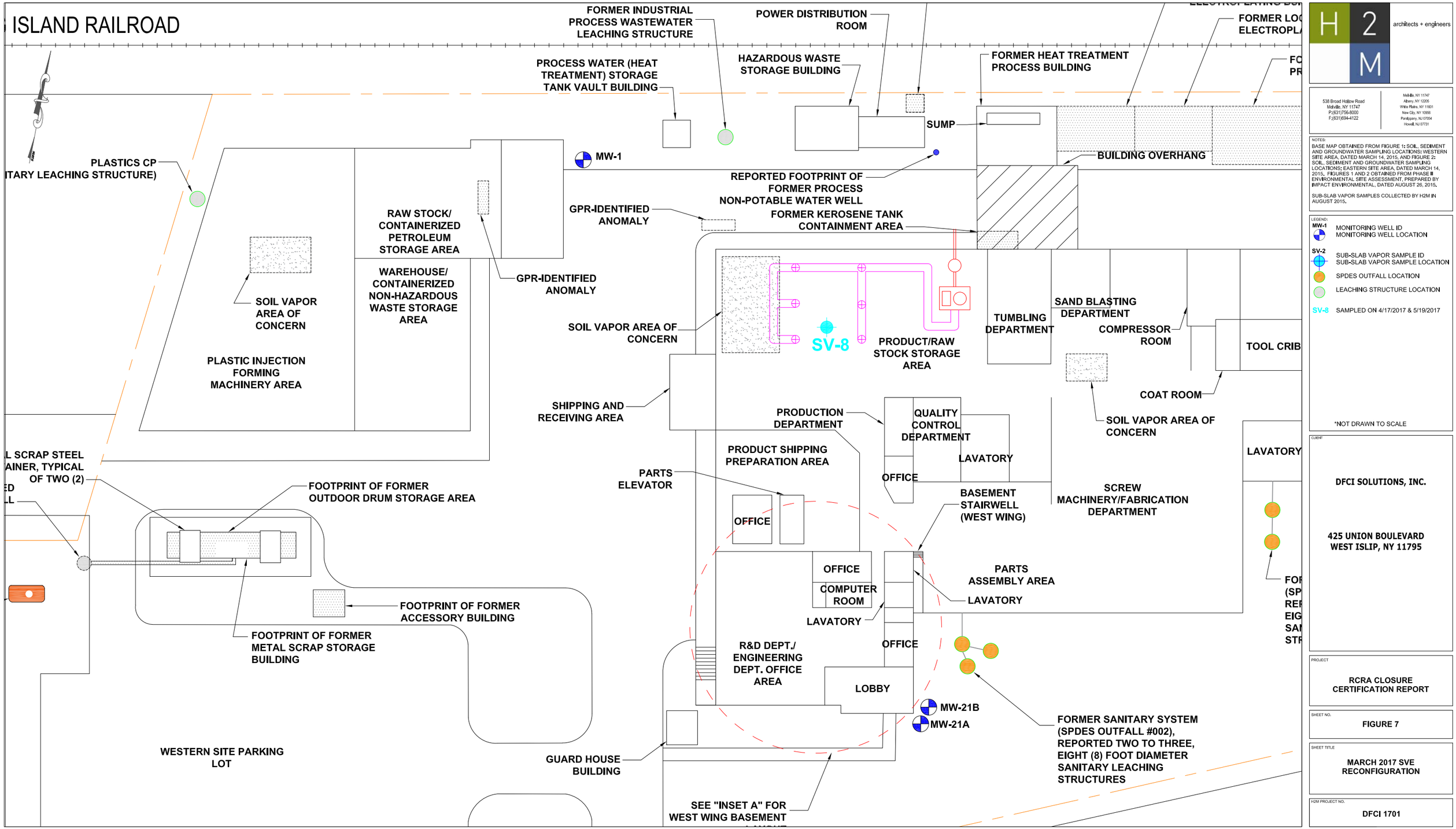
425 UNION BOULEVARD
WEST ISLIP, NY 11795

PROJECT
RCRA CLOSURE CERTIFICATION REPORT

SHEET NO.
FIGURE 6

SHEET TITLE
FEBRUARY 2017 SOIL VAPOR SAMPLING LOCATIONS & SVE CONFIGURATION

H2M PROJECT NO.
DFCI 1701



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NOTES:
BASE MAP OBTAINED FROM FIGURE 1: SOIL, SEDIMENT AND GROUNDWATER SAMPLING LOCATIONS: WESTERN SITE AREA, DATED MARCH 14, 2015, AND FIGURE 2: SOIL, SEDIMENT AND GROUNDWATER SAMPLING LOCATIONS: EASTERN SITE AREA, DATED MARCH 14, 2015, FIGURES 1 AND 2 OBTAINED FROM PHASE II ENVIRONMENTAL SITE ASSESSMENT, PREPARED BY IMPACT ENVIRONMENTAL, DATED AUGUST 26, 2015.

SUB-SLAB VAPOR SAMPLES COLLECTED BY H2M IN AUGUST 2015.

LEGEND:
MW-1 MONITORING WELL ID / MONITORING WELL LOCATION
SV-2 SUB-SLAB VAPOR SAMPLE ID / SUB-SLAB VAPOR SAMPLE LOCATION
SPDES OUTFALL LOCATION
LEACHING STRUCTURE LOCATION
SV-8 SAMPLED ON 4/17/2017 & 5/19/2017

*NOT DRAWN TO SCALE

CLIENT
DFCI SOLUTIONS, INC.

425 UNION BOULEVARD
WEST ISLIP, NY 11795

PROJECT
RCRA CLOSURE CERTIFICATION REPORT

SHEET NO.
FIGURE 7

SHEET TITLE
MARCH 2017 SVE RECONFIGURATION

H2M PROJECT NO.
DFCI 1701

ISLAND RAILROAD

FORMER INDUSTRIAL PROCESS WASTEWATER LEACHING STRUCTURE

POWER DISTRIBUTION ROOM

PROCESS WATER (HEAT TREATMENT) STORAGE TANK VAULT BUILDING

HAZARDOUS WASTE STORAGE BUILDING

FORMER HEAT TREATMENT PROCESS BUILDING

FORMER LOC ELECTROPLA

FO PR

SUMP

BUILDING OVERHANG

PLASTICS CP
ITARY LEACHING STRUCTURE)

MW-1

REPORTED FOOTPRINT OF FORMER PROCESS NON-POTABLE WATER WELL

GPR-IDENTIFIED ANOMALY

FORMER KEROSENE TANK CONTAINMENT AREA

RAW STOCK/ CONTAINERIZED PETROLEUM STORAGE AREA

GPR-IDENTIFIED ANOMALY

WAREHOUSE/ CONTAINERIZED NON-HAZARDOUS WASTE STORAGE AREA

SOIL VAPOR AREA OF CONCERN

SOIL VAPOR AREA OF CONCERN

SV-8

PRODUCT/RAW STOCK STORAGE AREA

TUMBLING DEPARTMENT

SAND BLASTING DEPARTMENT

COMPRESSOR ROOM

TOOL CRIB

PLASTIC INJECTION FORMING MACHINERY AREA

SHIPPING AND RECEIVING AREA

PRODUCTION DEPARTMENT

QUALITY CONTROL DEPARTMENT

LAVATORY

COAT ROOM

SOIL VAPOR AREA OF CONCERN

LAVATORY

L SCRAP STEEL
AINER, TYPICAL
OF TWO (2)

FOOTPRINT OF FORMER OUTDOOR DRUM STORAGE AREA

PRODUCT SHIPPING PREPARATION AREA

PARTS ELEVATOR

OFFICE

OFFICE

BASEMENT STAIRWELL (WEST WING)

SCREW MACHINERY/FABRICATION DEPARTMENT

OFFICE

COMPUTER ROOM

PARTS ASSEMBLY AREA

LAVATORY

LAVATORY

FOOTPRINT OF FORMER ACCESSORY BUILDING

FOOTPRINT OF FORMER METAL SCRAP STORAGE BUILDING

R&D DEPT./ ENGINEERING DEPT. OFFICE AREA

OFFICE

LOBBY

MW-21B

MW-21A

FORMER SANITARY SYSTEM (SPDES OUTFALL #002), REPORTED TWO TO THREE, EIGHT (8) FOOT DIAMETER SANITARY LEACHING STRUCTURES

WESTERN SITE PARKING LOT

GUARD HOUSE BUILDING

SEE "INSET A" FOR WEST WING BASEMENT

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NOTES:
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SUB-SLAB VAPOR SAMPLES COLLECTED BY H2M IN AUGUST 2015.

LEGEND:
MW-1 MONITORING WELL ID / MONITORING WELL LOCATION
SV-2 SUB-SLAB VAPOR SAMPLE ID / SUB-SLAB VAPOR SAMPLE LOCATION
SPDES OUTFALL LOCATION
LEACHING STRUCTURE LOCATION
SV-8 SAMPLED ON 7/26/2017

*NOT DRAWN TO SCALE

CLIENT
DFCI SOLUTIONS, INC.

425 UNION BOULEVARD
WEST ISLIP, NY 11795

PROJECT
RCRA CLOSURE CERTIFICATION REPORT

SHEET NO.
FIGURE 8

SHEET TITLE
JUNE 2017 SVE RECONFIGURATION

H2M PROJECT NO.
DFCI 1701

LONG ISLAND RAILROAD

PROSPECT AVE.

BEACH ST.

UNION BLVD.

PLASTICS CP (SANITARY LEACHING STRUCTURE)

PLASTIC INJECTION FORMING MACHINERY AREA

SOIL VAPOR AREA OF CONCERN

RAW STOCK/ CONTAINERIZED PETROLEUM STORAGE AREA

WAREHOUSE/ CONTAINERIZED NON-HAZARDOUS WASTE STORAGE AREA

GPR-IDENTIFIED ANOMALY

MW-1

FORMER INDUSTRIAL PROCESS WASTEWATER LEACHING STRUCTURE

ELECTRICAL TRANSFORMER PAD

POWER DISTRIBUTION ROOM

PROCESS WATER (HEAT TREATMENT) STORAGE TANK VAULT BUILDING

HAZARDOUS WASTE STORAGE BUILDING

FORMER HEAT TREATMENT PROCESS BUILDING

FORMER LOCATION OF ELECTROPLATING BUILDING

FORMER LOCATION OF ELECTROPLATING/ANODIZING BUILDING

FORMER LOCATION OF WASTEWATER PRETREATMENT BUILDING

SUMP

BUILDING OVERHANG

REPORTED FOOTPRINT OF FORMER PROCESS NON-POTABLE WATER WELL

FORMER KEROSENE TANK CONTAINMENT AREA

SOIL VAPOR AREA OF CONCERN

SHIPPING AND RECEIVING AREA

PRODUCT/RAW STOCK STORAGE AREA

TUMBLING DEPARTMENT

SAND BLASTING DEPARTMENT

COMPRESSOR ROOM

TOOL CRIB

METAL STAMPING DEPARTMENT

METAL FORMING DEPARTMENT

MACHINE REPAIR DEPARTMENT

COAT ROOM

SOIL VAPOR AREA OF CONCERN

PRODUCTION DEPARTMENT

QUALITY CONTROL DEPARTMENT

LAVATORY

OFFICE

PRODUCT SHIPPING PREPARATION AREA

PARTS ELEVATOR

OFFICE

BASEMENT STAIRWELL (WEST WING)

SCREW MACHINERY/FABRICATION DEPARTMENT

LAVATORY

MACHINE SHOP DEPARTMENT

CP-2

FORMER SANITARY SYSTEM (SPDES OUTFALL #003A), REPORTED ONE TO TWO, EIGHT (8) FOOT DIAMETER SANITARY LEACHING STRUCTURES

OFFICE

COMPUTER ROOM

LAVATORY

PARTS ASSEMBLY AREA

LAVATORY

OFFICE

R&D DEPT./ ENGINEERING DEPT. OFFICE AREA

LOBBY

MW-21B

MW-21A

FORMER SANITARY SYSTEM (SPDES OUTFALL #002), REPORTED TWO TO THREE, EIGHT (8) FOOT DIAMETER SANITARY LEACHING STRUCTURES

GUARD HOUSE BUILDING

SEE "INSET A" FOR WEST WING BASEMENT LAYOUT

METAL SCRAP STEEL CONTAINER, TYPICAL OF TWO (2)

FOOTPRINT OF FORMER IMPACTED STORM WATER DRYWELL

FOOTPRINT OF FORMER OUTDOOR DRUM STORAGE AREA

FOOTPRINT OF FORMER ACCESSORY BUILDING

FOOTPRINT OF FORMER METAL SCRAP STORAGE BUILDING

WEST WING BASEMENT SUMP PUMP EFFLUENT RECHARGE BASIN

GROUNDWATER MONITORING WELL, TYPICAL OF EIGHT (8) (LOCATED WITHIN THE WESTERN SECTION OF THE SITE)

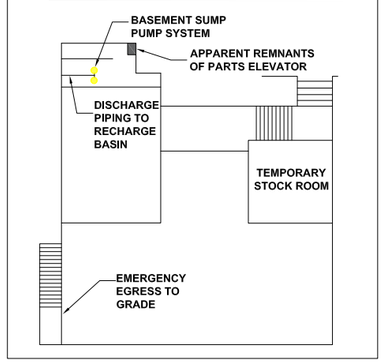
MW-7B

WESTERN SITE PARKING LOT

MW-2

MW-6

INSET "A": BASEMENT (WEST WING) FLOOR PLAN



WESTERN

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NOTES:
BASE MAP OBTAINED FROM FIGURE 1: SOIL, SEDIMENT AND GROUNDWATER SAMPLING LOCATIONS: WESTERN SITE AREA, DATED MARCH 14, 2015, AND FIGURE 2: SOIL, SEDIMENT AND GROUNDWATER SAMPLING LOCATIONS: EASTERN SITE AREA, DATED MARCH 14, 2015, FIGURES 1 AND 2 OBTAINED FROM PHASE II ENVIRONMENTAL SITE ASSESSMENT, PREPARED BY IMPACT ENVIRONMENTAL, DATED AUGUST 26, 2015.

CONTAMINATED LEACHING POOLS DETERMINED FROM H2M'S ENVIRONMENTAL INVESTIGATION, REPORT DATED JANUARY 5, 2009.

LEGEND:
MW-1 MONITORING WELL ID
MONITORING WELL LOCATION
SPDES OUTFALL LOCATION
LEACHING STRUCTURE LOCATION

CLIENT
DFCI SOLUTIONS, INC.

425 UNION BOULEVARD WEST ISLIP, NY 11795

PROJECT
RCRA CLOSURE CERTIFICATION REPORT

SHEET NO.
FIGURE 9A

SHEET TITLE
LEACHING POOL LOCATIONS WESTERN

H2M PROJECT NO.
DFCI 1701

FOOTPRINT OF FORMER TUMBLING DEPARTMENT WASTEWATER OIL-WATER SEPARATOR

REPORTED ABANDONED STORM WATER LEACHING STRUCTURES, EIGHT-FOOT DIAMETER, TYPICAL OF TWO

FORMER OIL-WATER SEPARATOR EFFLUENT DISCHARGE DISTRIBUTION LEACHING STRUCTURE

FORMER SIX-INCH I.D. CLAY EFFLUENT (PROCESS COOLANT WATER) DISCHARGE PIPE TO LEACHING STRUCTURES/LEACHING BED

FOOTPRINT OF FORMER TEN-INCH I.D CLAY EFFLUENT DISCHARGE PIPE (REPORTED HISTORIC DIRECT DISCHARGE OF ELECTROPLATING WASTEWATER TO WILLETTS CREEK

LONG ISLAND RAILROAD

FOOTPRINT OF FORMER LEACHING BED LATERAL PIPING

DW-1

DW-2

DW-3

DW-4

DW-5

MW-9

MW-9B

MW-5

EXISTING STORM WATER LEACHING STRUCTURE, EIGHT-FOOT DIAMETER, TYPICAL OF FIVE (5)

ESTIMATED EXTENT OF IN-SITU STABILIZED HAZARDOUS CADMIUM, CHROMIUM, AND CYANIDE IMPACTED SOIL. SAID AREA IS "CAPPED" BY NYSDEC, AS AN INSTITUTIONAL CONTROL IMPOSED ON THE PROPERTY, PURSUANT TO THE TERMS AND CONDITIONS IN THE NYSDEC RECORD OF DECISION (OPERABLE OU-1) FOR THE SITE

MACHINE SHOP LAB DEPARTMENT

CP-1

SEE "INSET B" FOR EAST WING BASEMENT LAYOUT

FORMER SANITARY SYSTEM (SPDES OUTFALL #003), REPORTED TWO, EIGHT (8) FOOT DIAMETER SANITARY LEACHING STRUCTURES

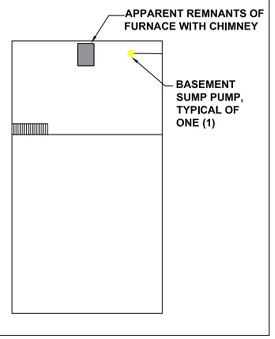
MW-4R

MW-3

FOOTPRINTS OF FORMER PROCESS EFFLUENT/STORM WATER LEACHING STRUCTURES, EIGHT-FOOT DIAMETER, TYPICAL OF FOUR (4)

FORMER STONE/GRAVEL POST-TREATMENT WASTE EFFLUENT LEACHING BED

INSET "B": BASEMENT (EAST WING) FLOOR PLAN



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NOTES:
BASE MAP OBTAINED FROM FIGURE 1: SOIL, SEDIMENT AND GROUNDWATER SAMPLING LOCATIONS: WESTERN SITE AREA, DATED MARCH 14, 2015, AND FIGURE 2: SOIL, SEDIMENT AND GROUNDWATER SAMPLING LOCATIONS: EASTERN SITE AREA, DATED MARCH 14, 2015. FIGURES 1 AND 2 OBTAINED FROM PHASE II ENVIRONMENTAL SITE ASSESSMENT, PREPARED BY IMPACT ENVIRONMENTAL, DATED AUGUST 26, 2015.

CONTAMINATED LEACHING POOLS DETERMINED FROM H2M'S ENVIRONMENTAL INVESTIGATION, REPORT DATED JANUARY 5, 2009.

LEGEND:

MW-1 MONITORING WELL ID
MONITORING WELL LOCATION

SPDES OUTFALL LOCATION

LEACHING STRUCTURE LOCATION

CLIENT

DFCI SOLUTIONS, INC.

**425 UNION BOULEVARD
WEST ISLIP, NY 11795**

PROJECT

RCRA CLOSURE CERTIFICATION REPORT

SHEET NO.

FIGURE 9B

SHEET TITLE

LEACHING POOL LOCATIONS EASTERN

H2M PROJECT NO.

DFCI 1701

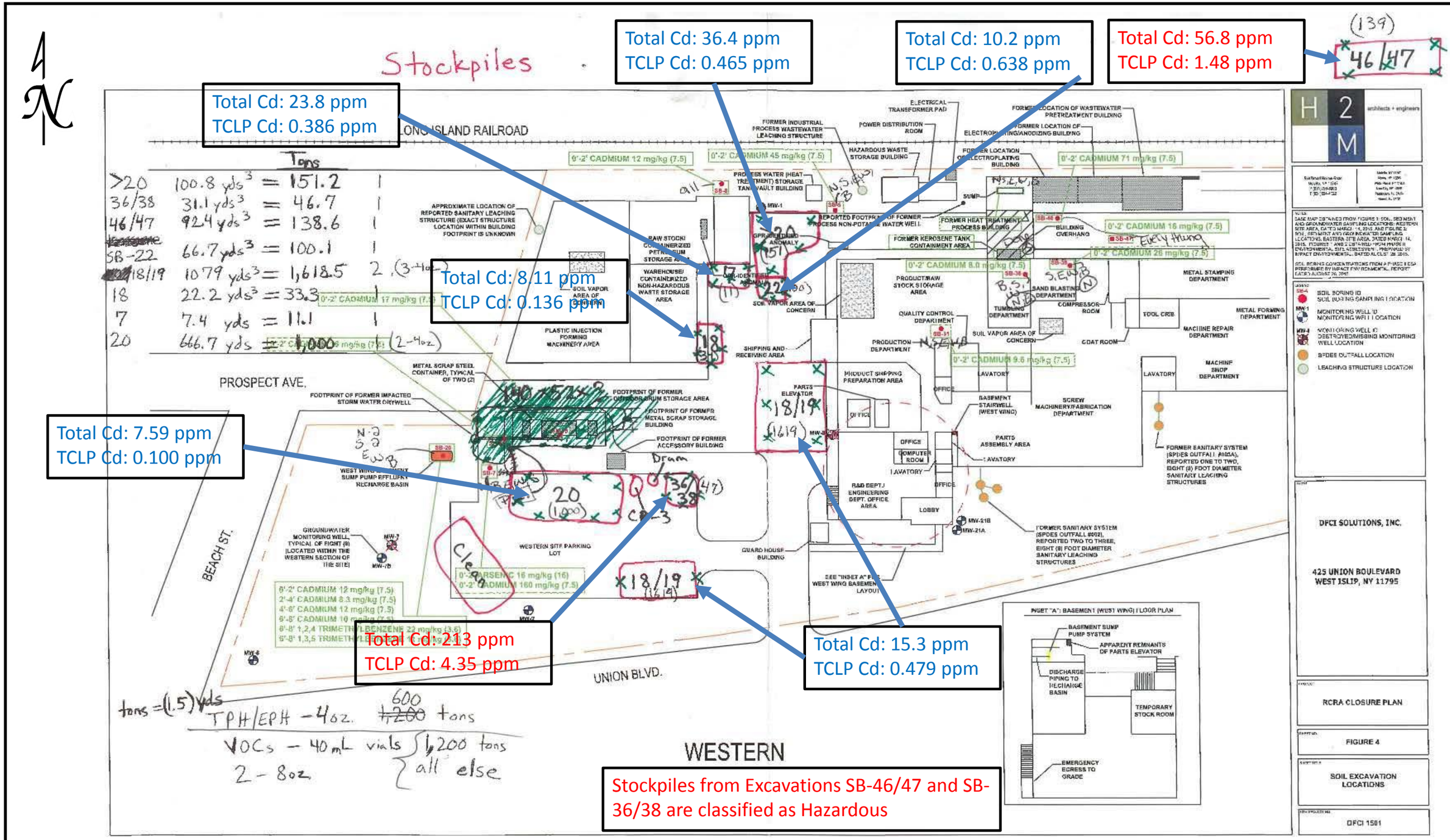

Figure 10. **Stockpile Locations and Cadmium Concentrations**
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TABLES

APPENDIX A (disc)

RCRA CLOSURE PLAN, QAPP & NYSDEC APPROVAL

APPENDIX B

PHOTOGRAPH LOG

APPENDIX C

RINSATE SAMPLE COLLECTION PROTOCOL

APPENDIX D (disc)

ASP CATEGORY B DATA PACKAGES – RINSATE SAMPLES

GBX22709 & GBX39290

APPENDIX E

WASTEWATER DISPOSAL –
ANALYTICAL LABORATORY REPORT & MANIFEST

APPENDIX F (disc)

ASP CATEGORY B DATA PACKAGES – CONFIRMATORY SOIL SAMPLES

GBX22686, GBX33094, GBX39244, GBX39265, GBX43635 & GBX72664

APPENDIX G

TUMBLING DEPARTMENT OIL DISPOSAL –
ANALYTICAL LABORATORY REPORT & MANIFEST

APPENDIX H (disc)

SOIL DISPOSAL –
ANALYTICAL LABORATORY REPORT

APPENDIX I (disc)

NON-HAZARDOUS SOIL WASTE MANIFESTS

APPENDIX J (disc)

HAZARDOUS SOIL WASTE MANIFESTS

APPENDIX K (disc)

CONCRETE DISPOSAL –

ANALYTICAL LABORATORY REPORTS & MANIFESTS

APPENDIX L (disc)

ASP CATEGORY B DATA PACKAGES – SOIL VAPOR SAMPLES

GBX77895, GBY05388, GBY27943 & GBY73936

APPENDIX M

DELCARATION OF COVENANTS AND RESTRICTIONS

APPENDIX N (disc)

SCDHS NOTICE TO REMEDIATE, NO FURTHER ACTION LETTER &
H2M SANITARY CESSPOOL REMEDIATION SUMMARY REPORT

APPENDIX O (disc)

DATA USABILITY SUMMARY REPORT (DUSR) &
DATA VALIDATION SUMMARY SPREADSHEETS