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INTERIM REMEDIAL MEASURE PRE-DESIGN INVESTIGATION WORK PLAN

FORMER SPERRY REMINGTON SITE
1051 SOUTH MAIN STREET
CITY OF ELMIRA, CHEMUNG COUNTY, NY
NYSDEC SITE I.D 808043

Prepared for
New York State Department of Environmental Conservation
Division of Environmental Remediation, Region 8
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1. INTRODUCTION

1.1 Background

On behalf of Unisys Corporation (Unisys), Geosyntec Consultants, Inc. and its New York affiliate Beech and Bonaparte Engineering, P.C. (collectively Geosyntec) are submitting this Interim Remedial Measure (IRM) Pre-Design Investigation (PDI) Work Plan for the Former Sperry Remington Site (Site #808043) (Site) in Elmira, New York. In accordance with the Order on Consent and Administrative Settlement (AOC) (Index #B8-0815-09-10) with the New York State Department of Environmental Conservation (NYSDEC or agency) approved by NYSDEC on 30 March 2010, Unisys is conducting a Remedial Investigation (RI) to determine the nature and extent of constituents of concern (COCs) that may have discharged from the Site, determining if residual sources of COCs still exist, and identifying both current and potential routes of human exposure, if any, to COCs. The proposed PDI will collect data needed to select and design an IRM to address potential sources for migration of COCs from OS2 to the environment.

The Site is located at 1051 South Main Street in Elmira, Chemung County, New York (see **Figure 1**). The Site is a 185' x 65' rectangular area (0.28 acres) as shown on **Figure 2** that includes an eight to twelve (8 to 12) foot diameter covered concrete culvert (Site Culvert) and historic oil skimmer #2 (OS2). The Site Culvert extends from a former holding pond (immediately to the west and adjacent of the Site) to a discharge point to the east northeast and off-site. The Site Culvert discharges into a 580 feet long Drainage Swale, which subsequently drains into an approximate 3.5 acre Wetlands Area and Coldbrook Creek at two outfall locations (the Off-Site Areas). It is approximately 275 feet long and extends beneath a railroad line owned by Norfolk Southern. OS2 is a concrete rectangular structure measuring approximately sixteen (16) feet wide and forty-two (42) feet long and aligned parallel to the Site Culvert (**Figure 2**) with a shared wall. The Site and Off-Site areas are currently owned by multiple parties. The 0.28 acre Site is currently owned by the Southern Tier Commerce Center (STCC). Elmira High School (EHS) is the adjacent property to the north. Samples collected in 2006 by NYSDEC indicated that there were polychlorinated biphenyls (PCBs) and inorganic constituents present in sediments in the Drainage Swale, Wetlands Area and Coldbrook Creek.

Phase 1 RI results have been presented previously in the Remedial Investigation Phase 1 Data Report (Phase 1 Data Report) dated 18 November 2011. Information presented in the Phase 1 Data Report identified the Site Culvert, the OS2 structure, and their respective subsurface connections as potential sources of COCs in sediments of off-Site wetlands, and may warrant IRM implementation. Unisys conducted an IRM PDI at the Site in July 2012 to characterize hydraulic connections to OS2 and culvert structures, and evaluate applicability and effectiveness of potential IRM alternatives. A summary of the IRM PDI and other previous investigations is presented in the following section.

1.2 Summary of Previous Investigations

Potential hydraulic connections to OS2 and the Site Culvert, as well as connections between the two structures, and other potential sources were evaluated during the 2012 IRM PDI and Site Characterization of the Former Sperry Remington Site – North Portion (NYSDEC #808022) located on the EHS property and the Former Scott Technologies Site (NYSDEC #808049) located on the STCC property. Findings of those investigations have been presented previously in the following reports:

- Remedial Investigation Phase 1 Data Report, Former Sperry Remington Site, 18 November 2011
- Revised Interim Remedial Measure Pre-Design Investigation Data Report, Former Sperry Remington Site, 19 February 2013;
- Site Characterization Data Report, Former Sperry Remington Site – North Portion, 6 February 2015; and
- Site Characterization Data Report, Former Scott Technologies Site, 13 May 2016.

Figure 3 presents plan and cross-sectional depictions of OS2. The top of OS2 has been observed to be 12 to 36 inches below the ground surface. Observed inlet and outlet connections to OS2 include:

- A concrete-encased eighteen-inch (18-inch) pipe traverses the Site Culvert from the south and connects to OS2 in a manner that partially obstructs flow within the Site Culvert. The encased pipe is approximately 88 feet from the western end of the Site Culvert and is approximately three (3) feet tall by three (3) feet thick and was observed to be two-thirds (2/3) submerged in water inside the Site Culvert, approximately three (3) feet from the crown of the Site Culvert. The bottom of the Site Culvert drops several feet to bypass beneath the concrete encased pipe (see the Site Culvert profile in Appendix A);
- An approximate five-foot (5-ft) box culvert enters the bottom of OS2 at the eastern end;
- A twelve inch (12-in) high by fifty-two (52-in) wide rectangular opening is present on the north side of the Site Culvert approximately fifty-seven (57) feet from its western end opening directly to OS2. The rectangular opening is approximately three and one-half (3.5) feet above the base of the Site Culvert and was observed to be approximately three (3) feet above the water line in the Site Culvert during the 2012 IRM PDI;
- Four (4) 12-in diameter pipes penetrate the south side of OS2 at the water line in the Site Culvert below the rectangular opening then turn downward below the observed water line inside OS2; and
- Two (2) three-inch (3-in) diameter steel connections on the north side approximately three (3) feet below the top of OS2.

The current understanding of connections between OS2 and existing storm water infrastructure on the STCC and EHS properties on **Figure 4**. Based on historical map depictions, the 5-ft box culvert that enters OS2 from the northeast may be connected to the thirty-inch (30-in) diameter reinforced concrete pipe (RCP) exiting catch basin CB-6 on the eastern side of the EHS property. This connection was observed to be dry during the 2012 IRM PDI. The location and integrity of upstream connections to the 5-ft box culvert are data gaps that need to be addressed prior to IRM design.

During Site Characterization of the Former Sperry Remington Site – North Portion, a piping connection to the south southeast of CB-6 was observed to branch approximately twenty-seven (27) feet downstream of CB-6. The eastern branch is closed off with a brick bulkhead (i.e., a wall built to block flow) and the western branch was not accessible approximately fifteen (15) feet south of the branching. The 30-in RCP is former combined industrial sewer line that runs along the eastern edge of the EHS property and was observed to be blocked and/or compromised in several areas. The compromised structural integrity of that combined industrial sewer line suggests that it is currently not in operation. The location and integrity of downstream connections from CB-6 are data gaps that need to be addressed prior to IRM design.

A 18-in clay pipe connects to the Site Culvert on the north side approximately 180 feet from the western end of the Site Culvert. No flow was observed entering the Site Culvert from this line during the 2012 IRM PDI. Based on historical map depictions, the 30-in RCP on the eastern edge of the EHS property may also be connected to the Site Culvert at this location. The location and integrity of upstream connections to the 18-in clay pipe area data gaps that need to be addressed prior to IRM design.

The concrete-encased 18-in clay pipe that enters OS2 from the southeast appears to be connected to CB-10. This connection was also observed to be dry during the IRM PDI. During Site Characterization of the Former Scott Technologies Site, CB-10 was observed to be connected to a subsurface structure at a distance of approximately one hundred thirty-two (132) feet northeast of CB-10 at which point the 18-in pipe turned toward the north. Water was observed at the base of the structure and in the pipe as it continued to the north but no rocks or fine-grained material. The pipe continued a further distance of approximately twenty-three (23) feet at which point the pipe opening was reduced in size. A larger structure containing water was observed through the opening and was identified as OS2. The location of the subsurface structure connecting to OS2 is a data gap that need to be addressed prior to IRM design.

The two (2) steel pipe connections on the north side of OS2 appear to be associated with historical Site operations rather than storm water infrastructure and are considered to be inactive. The four (4) 12-in diameter pipes on the south side of OS2 appear to be discharge pipes from OS2 to the Site Culvert.

Fine-grained material was collected from OS2 during Phase 1 of the RI and during the IRM PDI for analyses for COCs. Sample locations are shown on **Figure 4**. Total PCB concentrations ranged from sixteen to two hundred thirty-four (16 to 234) milligrams per kilogram (mg/kg) as shown on

Table 1. Soils around the perimeter of OS2 have been sampled during previous investigations. **Table 2** presents a summary of the soil analytical results from the Site. COC concentrations in soil at depths above two (2) feet below ground surface (bgs) are compared to Industrial Soil Cleanup Objectives (SCOs) presented in 6 NYCRR Subpart 375. Total PCB concentrations are also compared to the limit of fifty (50) mg/kg for PCB remediation wastes as defined in 40 CFR §761.3 Toxic Substances Control Act (TSCA). TSCA limits are considered in PCB delineation for identification of those soils that may be classified as hazardous waste containing PCBs as defined in 6 NYCRR Part 371.4 (e). Sample locations are shown on **Figure 4**. Soils from the Former Sperry Remington Site had detections of total PCBs above Industrial SCOs on the north side of OS2 but total PCB concentrations did not exceed TSCA limits. Detections of metals and SVOCs did not exceed Industrial SCOs. Previous sampling of soils adjacent to OS2 for waste characterization did not indicate characteristics of hazardous waste. These data will be used to develop a soil management program during the IRM.

Samples of fine-grained material were collected from catch basins closest to OS2 on the EHS and STCC properties on 28 May 2015. COCs detected included PCBs, metals, and SVOCs as summarized on **Table 3**. Removal of fine-grained material from upstream catch basins may be included in IRM to be proposed.

Evaluations of other potential sources of COCs identified former Skimmer #1 (OS1), as shown on **Figure 4**. Historical records suggest that a bypass was constructed across OS1 and the drain lines from this oil skimmer were eliminated to preclude the possibility of caked waste deposits entering into drainage lines. IRM PDI test pitting in the vicinity of the presumed location of OS1 confirmed its location in 2012. Observations made during test pitting along the exterior of that structure did not identify outlet pipes or demonstrate characteristics of non-native material and were, therefore, not sampled. No active connections from former OS1 to OS2 or the Site Culvert were identified. Former OS1 has been determined not to be a potential active source of COCs to OS2 or the Site Culvert. The location and integrity of the bypass of OS1 as it relates to connections downstream of CB-6 are data gaps that need to be addressed prior to IRM design. The Site Culvert remains an active part of the Site storm water sewer system receiving flows from both the STCC and EHS properties, as well as from the City of Elmira captured along South Main Street. On the EHS property, storm water from the north and combined storm water and cooling water discharge from the west flow combine at catch basin CB-5 and discharge to the Site Culvert. On the STCC property, storm water from the south of Building 88 and from South Main Street flow through the 5-ft RCP connecting to catch basin CB-2 and the Site Culvert. A plan view and profile of the Site Culvert, as previously presented in the Phase 1 Data Report, are included in Appendix A.

1.3 Purpose

Unisys has identified that there are COC concentrations of total PCBs within OS2 that exceed New York State hazardous waste disposal criteria. A non-emergency IRM at OS2 is applicable to mitigate environmental or human exposures before the completion of the RI. Unisys proposed an IRM for closure of OS2 in place on 24 April 2014. In response to 23 June 2014 NYSDEC comments, Unisys proposed an IRM to clean but not close OS2 on 12 September 2014.

Unisys is proposing to conduct an IRM in 2018 to address OS2 and upstream connections as potential sources for COC migration to adjacent wetlands and surface water. IRM options may include removal of fine-grained material from OS2 and upstream storm water connections, closure of OS2, or modification of existing STCC storm water infrastructure. This IRM PDI Work Plan presents a scope of work to collect the following data needed to evaluate IRM options and complete an IRM design:

1. Identification of storm sewer connections to 5-ft box culvert;
2. Identification of subsurface structure connecting to 18-in inlet for future abandonment;
3. Identification of possible subsurface structures downstream of CB-6; and
4. Survey of existing STCC storm water infrastructure for potential modification.

1.4 Report Organization

The remainder of this report is organized into the following sections:

- Section 2 – Scope of Work;
- Section 3 – Access and Temporary Controls;
- Section 4 – Health and Safety;
- Section 5 –Schedule and Deliverables.

2. SCOPE OF WORK

The scope of work for IRM PDI will include test pitting, inline camera survey and post-investigation survey. A summary of the activities to be conducted to collect data to meet the PDI objectives identified in Section 1.3 is presented in **Table 3**. The following sections present the scope of work in greater detail.

2.1 Test Pitting Program

Unisys will conduct a test pitting program in the areas shown on **Figure 5** to identity the alignment of inlet connections and potential subsurface structures. Clearing of brush and temporary fence removal may be required in some locations. A geophysical survey will be conducted prior to invasive activities in order to identify potential subsurface utilities or structures.

Due to potential interference from overhead lines and subsurface utilities, air excavation may be used in some locations. Proposed test pit locations are shown on **Figure 5**. Test pit extent and direction may be modified based on field observations. Spoils generated during test pitting activities will be placed on four (4) mil. polyethylene sheeting adjacent to the test pit for characterization. Existing data from previous investigations will also be used to determine if test pit spoils should be segregated. The extent of COCs in soil from previous reports are included as Appendix B.

Geologic features will be recorded with descriptions of subsurface soil texture, composition, color, consistency, moisture content, odor, and staining documented using the Unified Soil Classification System (USCS). Test pit excavations will be screened utilizing a photoionization detector (PID). Areas that exhibit visual or olfactory impacts or that exhibited elevated PID readings will be documented and flagged for post-investigation survey. Soil samples will be collected from the test pit excavation at depths less than four (4) feet and analyzed for PCBs, SVOCs, VOCs, and metals in accordance with the Quality Assurance Project Plan/Field Sampling Plan (QAPP/FSP) included with the RI/FS Work Plan. Observations at depths greater than four (4) will addressed in future investigations.

Field documentation of test pitting activities will include Site sketches, photo logs, description of location, visual observations, dimensions and description of any subsurface feature encountered, and other pertinent information as determined by field personnel. In addition, test pit limits will be field staked for post investigation survey.

Previously unidentified subsurface structures encountered during test pitting will be inspected for potential connections and the presence of water and fine-grained material if accessible. Field documentation will include the direction and depth of potential connections, size (if observable) and the depth of water and fine-grained material (if present). Structures will be field staked for post investigation survey. Structures will not be entered for inspection or collection of samples during the test pitting program but will be evaluated for potential confined-space entry for inspection and sampling.

If subsurface structures are not identified during test pitting to verify the alignment of piping connections to OS2, Unisys may install observation ports by cutting into pipe structures.

Samples of test pit spoils will be collected for characterization as part of the remedial investigation and potential soil management during the IRM. Samples will be submitted to the fixed laboratory for analyses for PCBs, SVOCs, and metals in accordance with the QAPP/FSP. Test pits will be backfilled with a demarcation layer (e.g. geotextile), test pit spoils, a second demarcation layer, and one (1) to two (2) feet of imported fill based on current land use. The thickness of imported fill will be two (2) feet of the EHS property and one (1) foot on the STCC property.

2.2 Camera Survey Program

Subsurface structures identified by the test pitting program will be inspected using in-line camera survey equipment approximately one (1) week following completion of test pitting. The in-line camera survey will be used to inspect for structural integrity and identify potential upstream and downstream connections to the former combined industrial sewer system, OS2 and the Site Culvert.

Subsurface structure will be inspected for accumulated fine-grained material. The depth of material will be measured, to the extent practical, and recorded. If an adequate volume of material is present, a composite sample, collected across the entire material depth, will be collected for analyses for PCBs, SVOCs, and metals in accordance with the QAPP/FSP prior to the in-line camera survey.

If piping connections to OS2 cannot be accessed through subsurface structures, observation ports installed in piping connections will be used to access pipes and inspect potential upstream and downstream connections.

Other methods to evaluate structural integrity and identify potential upstream and downstream connections, such as smoke testing, may also be considered.

2.3 Post-Investigation Survey

A licensed New York State surveyor will conduct a location survey of the test pits and identified subsurface structures. Existing structures that are part of the STCC storm water infrastructure will be surveyed for location and invert elevation of storm sewer connections for potential storm sewer modification as part of the IRM. Those structures are:

- CB-10 – catch basin on STCC property near holding pond; connected to 18-in OS2 inlet; formerly connected to holding pond
- CB-11 – catch basin on STCC property upstream of CB-10; potentially active
- CB-2 – catch basin on STCC property connected to 5-ft RCP that connects to Site Culvert

3. ACCESS AND TEMPORARY CONTROLS

Unisys has obtained access from the existing property owners of the STCC and EHS properties to conduct IRM PDI activities. Temporary fencing will be installed around work areas to limit access to those areas by others during IRM PDI activities.

4. HEALTH AND SAFETY

4.1 Health and Safety Plans

All Site activities will be performed in such a manner as to ensure the safety and health of all personnel and the surrounding community. All Site activities shall be conducted in accordance with all pertinent general industry (29 CFR 1910) and construction (29 CFR 1926) Occupational Health and Safety Administration (OSHA) standards, as well as any other applicable New York State and municipal codes or ordinances. All Site activities will comply with those requirements set forth in OSHA's final rule entitled Hazardous Waste Operation and Emergency Response (HAZWOPER), 29 CFR 1910.120, Subpart H. Entry into OS2 and other storm water structures will be evaluated for confined space entry requirements in accordance with 29 CFR 1910.146.

To ensure that all Site activities are in compliance, each contractor will prepare a Health and Safety Plan (HASP) in accordance with the aforementioned regulations. The HASP shall conform to the requirements of 29 CFR 1910.120 and all applicable state, federal, local, and other health and safety requirements and safe construction practices not specifically identified in these requirements.

4.2 Community Air Monitoring

New York State Department of Health's (NYSDOH's) Generic Community Air Monitoring Plan (CAMP) will be implemented during the IRM. The CAMP will be implemented at the start of each new ground intrusive activities to establish an air monitoring database. Continuous real-time particulate and VOC monitoring will be conducted at the upwind and downwind perimeter of the exclusion zone using portable monitors. A minimum of one (1) upwind and four (4) downwind locations shall be monitored. The four (4) downwind locations shall be equally distributed along the perimeter of the work area. Air monitoring shall be conducted during test pitting, backfilling or other activities which may generate fugitive dust. A copy of the CAMP is included in Appendix C.

5. SCHEDULE AND DELIVERABLES

5.1 Schedule

The proposed schedule for the IRM PDI is presented in **Figure 6**. Unisys will commence IRM PDI activities upon written notice to proceed from NYSDEC. Completion of the work will be dependent on weather conditions and access. Geosyntec and the test pitting contractor will mobilize to the Site, weather permitting, within one (1) week of notice to proceed conduct clearing and geophysical survey prior to commencing with the test pitting program. The test program will take approximately two (2) weeks to complete. The inline camera survey contractor will mobilize to the Site approximately one (1) week following completion of test pitting to inspect and access identified subsurface structures. The camera survey program will take three (3) days to complete. NYSDEC will be notified at least two (2) days in advance of mobilization for the test pitting and camera survey programs. The post-investigation survey will be conducted coincident with the camera survey program.

5.2 Deliverables

Upon completion of IRM PDI activities, an IRM Work Plan for OS2 will be prepared for submittal to NYSDEC by 30 November 2016. Data collected during the IRM PDI will be presented in the IRM Work Plan with the IRM design.

TABLES

TABLE 1
TOTAL PCB CONCENTRATIONS IN OS2 FINE-GRAINED MATERIAL

Former Sperry Remington Site
Elmira, New York

Sample Location	**OS-1**	**OS-2**	**OS2-3**	**OS2-4**
Sample Depth	*11.5'-12'*	*11.5'-12'*	*Composite*	*Composite*
Sample Date	*8/24/2011*	*8/24/2011*	*7/31/2012*	*7/31/2012*
Total PCBs (mg/kg)	22	16	59 J	234 J

Notes:

PCB - Polychlorinated biphenyl

mg/Kg - milligrams per kilogram

J - Estimated

TABLE 2
Summary of Soil Analytical Results

Former Sperry Remington Site
Elmira, New York

				Location	TP-1	TP-2	TP-3	TP-4	OS-SB-01	OS-SB-02
				Sample Date	8/24/2011	8/24/2011	8/24/2011	8/24/2011	7/27/2012	7/30/2012
				Depth Interval (ft bgs)	3.5-4	12-12.5	9-9.5	6.5-7	0-11.5	0-9.5
				Industrial SCO						
Analytical Group	**Constituent of Concern**	**Units**	**EQL**							
Polychlorinated Biphenyls	Arochlor 1016	mg/kg	0.00021		<0U	<0U	<0U	<0U	<0UJ	<0UJ
	Arochlor 1221	mg/kg	0.00034		<0U	<0U	<0U	<0U	<0UJ	<0UJ
	Arochlor 1232	mg/kg	0.00012		<0U	<0U	<0U	<0U	<0UJ	<0UJ
	Arochlor 1242	mg/kg	0.00017		<0U	<0U	<0U	<0U	<0UJ	<0UJ
	Arochlor 1248	mg/kg	0.00011		7.7	0.96	0.058	0.15	26J	9.9J
	Arochlor 1254	mg/kg	0.00018		<0U	<0U	<0U	0.15	22J	8.3J
	Arochlor 1260	mg/kg	0.00016		<0U	<0U	<0U	<0U	<0UJ	<0UJ
	Arochlor 1268	mg/kg	0.000087		<0U	<0U	<0U	<0U	<0UJ	<0UJ
	Arochlor 1262	mg/kg	0.00014		<0U	<0U	<0U	<0U	<0UJ	<0UJ
	Total PCBS	mg/kg		25	7.7	0.96	0.058	0.3	48	18.2
Metals	Arsenic	mg/kg	0.39	16	27	140	330J	11	-	-
	Barium	mg/kg	7.9	10000	130J	250J	240J	77J	-	-
	Beryllium	mg/kg	0.16	2700	0.47	0.52	0.92	<0U	-	-
	Cadmium	mg/kg	0.058	60	0.91J	1J	0.55J	0.18J	-	-
	Chromium (III+VI)	mg/kg	0.2	800	11	16	26J	7.5	-	-
	Copper	mg/kg	0.99	10000	51J	81J	68J	20J	-	-
	Lead	mg/kg	0.39	3900	65	41	110J	8.1	-	-
	Manganese	mg/kg	0.59	10000	100J	79J	34J	130J	-	-
	Nickel	mg/kg	1.6	10000	33	20	31J	8.1	-	-
	Selenium	mg/kg	0.39	6800	2.7	5.6	4.3J	1.2J	-	-
	Silver	mg/kg	0.066	6800	<0U	<0U	0.48J	<0U	-	-
	Zinc	mg/kg	0.79	10000	61J	40J	36J	27J	-	-
	Mercury	mg/kg	0.013	5.7	-	-	-	-	-	-
	Chromium (hexavalent)	mg/kg	0.45	800	<0UJ	<0UJ	<0UJ	<0UJ	-	-
SVOCs	1,4-Dioxane	mg/kg	0.0022	250	<0U	<0U	<0U	<0U	-	-
	2-methylphenol	mg/kg	0.0013	1000	<0U	<0U	<0U	<0U	-	-
	4-methylphenol	mg/kg	0.0019	1000	-	-	-	-	-	-
	Acenaphthene	mg/kg	0.00036	1000	<0U	<0U	<0U	<0U	-	-
	Acenaphthylene	mg/kg	0.00043	1000	<0U	<0U	<0U	<0U	-	-
	Anthracene	mg/kg	0.00037	1000	<0UJ	<0UJ	<0UJ	<0UJ	-	-
	Benz(a)anthracene	mg/kg	0.00048	11	<0U	<0U	<0U	<0U	-	-
	Benzo(a) pyrene	mg/kg	0.00038	1.1	<0U	<0U	<0U	<0U	-	-
	Benzo(b)fluoranthene	mg/kg	0.0006	11	<0UJ	<0UJ	<0UJ	<0UJ	-	-
	Benzo(g,h,i)perylene	mg/kg	0.00038	1000	<0U	<0U	<0U	<0U	-	-
	Benzo(k)fluoranthene	mg/kg	0.00077	110	<0U	<0U	<0U	<0U	-	-
	Chrysene	mg/kg	0.00045	110	0.15	<0U	<0U	<0U	-	-
	Dibenz(a,h)anthracene	mg/kg	0.00042	1.1	0.1	<0U	<0U	<0U	-	-
	Dibenzofuran	mg/kg	0.0019	1000	<0U	<0U	<0U	<0U	-	-
	Fluoranthene	mg/kg	0.00041	1000	<0U	<0U	<0U	<0U	-	-
	Fluorene	mg/kg	0.0005	1000	<0U	<0U	<0U	<0U	-	-
	Hexachlorobenzene	mg/kg	0.0004	12	<0U	<0U	<0U	<0U	-	-
	Indeno(1,2,3-c,d)pyrene	mg/kg	0.00039	11	<0U	<0U	<0U	<0U	-	-
	Naphthalene	mg/kg	0.00033	1000	<0U	<0U	<0U	<0U	-	-
	Pentachlorophenol	mg/kg	0.0017	55	<0U	<0U	<0U	<0U	-	-
	Phenanthrene	mg/kg	0.0006	1000	<0U	<0U	<0U	<0U	-	-
	Phenol	mg/kg	0.00045	1000	<0UJ	<0UJ	<0UJ	<0UJ	-	-
	Pyrene	mg/kg	0.00038	1000	<0U	<0U	<0U	<0U	-	-

Notes:
J - estimated value
U - non-detect
ND - non-detect
- - not analyzed
mg/kg - milligram per kilogram
ft bgs - feet below ground surface
PCBs - polychlorinated biphenyls
Concentrations detectedin surfarce and shallow subsurface (above 2 ft bgs) above restricted use Soil Cleanup Objectives (SCOs) presented in 6 NYCRR Subpart 375 are presented in light grey.

TABLE 3
RESULTS OF CATCH BASIN SAMPLING

Former Sperry Remington Site
Elmira, New York

				Location	CB-1	CB-9	CB-10	CB-11	CB-4	CB-5	CB-6
				Sample Date	7/24/2012	5/28/2015	5/28/2015	5/28/2015	5/28/2015	5/28/2015	5/28/2015
Analyte Group	**Constituent of Concern**	**Units**	**EQL**	NYSDEC SGV Class C							
Polychlorinated Biphenyls	Arochlor 1016	mg/kg	0.00053		<0U	<0.0052U	<0.0007U	<0.003U	<0.0028U	<0.00053U	<0.033U
	Arochlor 1221	mg/kg	0.00065		<0U	<0.0063U	<0.00086U	<0.0036U	<0.0034U	<0.00065U	<0.041U
	Arochlor 1232	mg/kg	0.0009		<0U	<0.0088U	<0.0012U	<0.005U	<0.0048U	<0.0009U	<0.056U
	Arochlor 1242	mg/kg	0.00066		<0U	<0.0064U	<0.00087U	<0.0037U	<0.0035U	<0.00066U	<0.041U
	Arochlor 1248	mg/kg	0.00065		<0U	<0.0063U	<0.00086U	<0.0036U	1.2J	<0.00065U	12 - 18J
	Arochlor 1254	mg/kg	0.0026		0.65	1.1J	0.24J	0.32J	0.49J	0.024J	6 - 7.4J
	Arochlor 1260	mg/kg	0.0026		<0U	0.55J	0.067J	0.12J	0.095J	0.0045J	0.85 - 1J
	Arochlor 1268	mg/kg	0.00053		<0U	<0.0051U	<0.00069U	<0.0029U	<0.0028U	<0.00053U	<0.033U
	Arochlor 1262	mg/kg	0.00096		<0U	<0.0094U	<0.0013U	<0.0054U	<0.0051U	<0.00096U	<0.06U
	Total PCBs	mg/kg		1	0.65	1.65	0.307	0.44	1.785	0.0285	18.85 - 26.4
Metals	Aluminum	mg/kg	11		8100B	6000	9200	5800	4200	3900	10,000
	Antimony	mg/kg	0.13		2B	4.9J	0.73J	3.5	<0.13U	0.38J	1.5 - 2.2
	Arsenic	mg/kg	0.56	33	24	12	15	27	8.2	4.8	19 - 22
	Barium	mg/kg	11		130B	120J	140B	240B	29B	31B	3000B
	Beryllium	mg/kg	0.22		0.55B	0.33	0.54	0.37	0.16J	0.095J	1 - 1.2
	Cadmium	mg/kg	0.28	5	2.2	2.5J	2.8	16	0.093J	0.15J	1.8 - 2.2
	Calcium	mg/kg	280		46,000B	1500B	26,000B	4000B	54,000B	150,000B	23,000 - 28,000B
	Chromium (III+VI)	mg/kg	0.28	110	66	290F2	26	210	7.6	24	120 - 140
	Cobalt	mg/kg	2.8		14	8.1	13	14	3.8	3.8J	25 - 30
	Copper	mg/kg	1.4	150	240	210F2	120	250	27	56	450 - 550
	Iron	mg/kg	5.6		30,000B	29,000B	29,000B	88,000B	14,000B	21,000B	55,000 - 72,000B
	Lead	mg/kg	0.66	130	140	200F2	94	380	19	29	630 - 860
	Magnesium	mg/kg	280		17,000B	1300	2700	2400	5300	14,000	2800 - 6900
	Manganese	mg/kg	0.84		420	350J	450	410	190	210	550 - 560
	Nickel	mg/kg	2.2	49	43	760	37	270	18	17	200 - 210
	Potassium	mg/kg	280		780	300	710	500	410	270J	370 - 540J
	Selenium	mg/kg	0.34		0.95	0.63	1.4	1.8	0.68	0.88	1.2 - 1.6J
	Silver	mg/kg	0.025	2.2	<0U	4.8J	0.067J	0.26J	<0.027U	<0.025U	0.38 - 0.61J
	Sodium	mg/kg	78		23J	85J	250J	190J	600	130J	430 - 450J
	Thallium	mg/kg	0.089		<0U	<0.089U	<0.12U	0.15J	<0.099U	<0.45U	<0.11U
	Vanadium	mg/kg	2.8		24	21J	18B	29B	10B	15B	26 - 34B
	Zinc	mg/kg	1.2	460	1100B	420B	460B	880B	58B	160B	790 - 970B
	Mercury	mg/kg	0.0073	1	0.057	0.066J+	0.082	0.11	<0.0073U	0.13	0.24 - 0.38

TABLE 3
RESULTS OF CATCH BASIN SAMPLING

Former Sperry Remington Site
Elmira, New York

				Location	CB-1	CB-9	CB-10	CB-11	CB-4	CB-5	CB-6
				Sample Date	7/24/2012	5/28/2015	5/28/2015	5/28/2015	5/28/2015	5/28/2015	5/28/2015
Analyte Group	**Constituent of Concern**	**Units**	**EQL**	NYSDEC SGV Class C							
SVOCs	1,1-Biphenyl	mg/kg	0.012		<0U	<0.073U,F1	<0.098U	<0.33U	<0.078U	<0.075U	0.46 - 0.64J
	1,2,4,5-tetrachlorobenzene	mg/kg	0.01	14	<0U	<0.062U	<0.083U	<0.28U	<0.067U	<0.064U	<0.079U
	1,4-Dioxane	mg/kg	0.016		-	<0.093U	<0.13U	<0.43U	<0.1U	<0.096U	<0.12U
	2,3,4,6-tetrachlorophenol	mg/kg	0.0089		<0U	-	<0.07U	<0.24U	<0.057U	<0.054U	<0.067U
	2,4,5-trichlorophenol	mg/kg	0.015		<0U	-	<0.12U	<0.4U	<0.094U	<0.089U	<0.11U
	2,4,6-trichlorophenol	mg/kg	0.021		<0U	-	<0.16U	<0.56U	<0.13U	<0.13U	<0.16U
	2,4-dichlorophenol	mg/kg	0.0028		<0U	-	<0.022U	<0.074U	<0.018U	<0.017U	<0.021U
	2,4-dimethylphenol	mg/kg	0.022		<0U	<0.13U,F1	<0.17U	<0.58U	<0.14U	<0.13U	<0.16U
	2,4-dinitrophenol	mg/kg	0.16		<0U	<0.97U	<1.3U	<4.4U	<1U	<1U	<1.2U
	2,4-Dinitrotoluene	mg/kg	0.011		<0U	-	<0.088U	<0.3U	<0.071U	<0.068U	<0.084U
	2,6-dinitrotoluene	mg/kg	0.014		<0U	<0.084U,F1	<0.11U	<0.38U	<0.091U	<0.086U	<0.11U
	2-chloronaphthalene	mg/kg	0.0029		<0U	-	<0.023U	<0.077U	<0.018U	<0.017U	<0.022U
	2-chlorophenol	mg/kg	0.011		<0U	<0.067U	<0.089U	<0.3U	<0.072U	<0.069U	<0.085U
	2-methylnaphthalene	mg/kg	0.012		<0U	3.1	0.2J	0.47J	<0.016U	0.2	0.69 - 0.9
	2-methylphenol	mg/kg	0.0096		<0U	<0.057U	<0.076U	<0.26U	<0.061U	<0.059U	<0.073U
	2-nitroaniline	mg/kg	0.062		<0U	-	<0.49U	<1.7U	<0.39U	<0.38U	<0.47U
	2-nitrophenol	mg/kg	0.015		<0U	<0.09U,F2	<0.12U	<0.41U	<0.097U	<0.092U	<0.11U
	3,3-Dichlorobenzidine	mg/kg	0.015		<0U	-	<0.12U	<0.39U	<0.093U	<0.089U	<0.11U
	3-nitroaniline	mg/kg	0.057		<0U	-	<0.45U	<1.5U	<0.36U	<0.35U	<0.43U
	4,6-Dinitro-2-methylphenol	mg/kg	0.055		<0U	-	<0.44U	<1.5U	<0.35U	<0.34U	<0.42U
	4-bromophenyl phenyl ether	mg/kg	0.012		<0U	-	<0.095U	<0.32U	<0.077U	<0.073U	<0.091U
	4-chloro-3-methylphenol	mg/kg	0.013		<0U	-	<0.1U	<0.34U	<0.081U	<0.077U	<0.096U
	4-chloroaniline	mg/kg	0.011		<0U	-	<0.088U	<0.3U	<0.07U	<0.067U	<0.083U
	4-chlorophenyl phenyl ether	mg/kg	0.015		<0U	<0.09U,F1,F2	<0.12U	<0.41U	<0.098U	<0.093U	<0.12U
	4-methylphenol	mg/kg	0.055		-	<0.08U,F1	0.22J	<0.36U	0.2J	<0.082U	<0.1U
	4-nitroaniline	mg/kg	0.056		<0U	-	<0.44U	<1.5U	<0.36U	<0.34U	<0.42U
	4-nitrophenol	mg/kg	0.05		<0U	-	<0.4U	<1.4U	<0.32U	<0.31U	<0.38U
	Acenaphthene	mg/kg	0.0026		<0U	<0.016U,F1	0.15J	0.84	<0.017U	0.91	0.69 - 0.84
	Acenaphthylene	mg/kg	0.0032		0.41J	0.39	0.44	0.49J	<0.02U	0.9	0.28 - 0.57J
	Acetophenone	mg/kg	0.011		<0U	<0.067U,F1	<0.09U	<0.3U	<0.072U	<0.069U	<0.086U
	Anthracene	mg/kg	0.0027		0.51J	0.58J	0.82	2	<0.017U	5.4	1 - 1.1
	Atrazine	mg/kg	0.013		<0UJ	<0.079U,F1	<0.11U	<0.36U	<0.086U	<0.082U	<0.1U
	Benz(a)anthracene	mg/kg	0.028		1.9J	0.77J	1.4	3.2	0.22	12	2.5 - 3.2
	Benzaldehyde	mg/kg	0.021		<0U	<0.12UJ	<0.16UJ	<0.56UJ	<0.13UJ	<0.13UJ	<0.16UJ
	Benzo(a) pyrene	mg/kg	0.028		1.9J	0.72J	1.1	2.5	0.28	11	2.4 - 2.6

TABLE 3
RESULTS OF CATCH BASIN SAMPLING

Former Sperry Remington Site
Elmira, New York

				Location	CB-1	CB-9	CB-10	CB-11	CB-4	CB-5	CB-6
				Sample Date	7/24/2012	5/28/2015	5/28/2015	5/28/2015	5/28/2015	5/28/2015	5/28/2015
Analyte Group	**Constituent of Concern**	**Units**	**EQL**	NYSDEC SGV Class C							
SVOCs	Benzo(b)fluoranthene	mg/kg	0.028		2.7	0.87J	1.3	3.5	0.37	13	2.9 - 3.2
	Benzo(g,h,i)perylene	mg/kg	0.028		2J	0.8J	1	2.4	0.32	11	2.5
	Benzo(k)fluoranthene	mg/kg	0.026		<0U	0.46	0.59	0.79	0.14J	5.5	1.2
	Bis(2-chloroethoxy) methane	mg/kg	0.0091		<0U	<0.054U,F1	<0.072U	<0.24U	<0.058U	<0.055U	<0.069U
	Bis(2-chloroethyl)ether	mg/kg	0.0037		<0U	<0.022U	<0.029U	<0.1U	<0.024U	<0.022U	<0.028U
	Bis(2-chloroisopropyl) ether	mg/kg	0.003		<0U	<0.018U	<0.024U	<0.08U	<0.019U	<0.018U	<0.022U
	Bis(2-ethylhexyl) phthalate	mg/kg	0.022		<0U	0.43J	<0.18U	<0.6U	<0.14U	2.8	0.31 - 0.68J
	Butyl benzyl phthalate	mg/kg	0.019		<0U	0.3J	<0.15U	<0.51U	<0.12U	<0.11U	<0.14U
	Caprolactam	mg/kg	0.1		<0U	<0.61U	<0.83U	<2.8U	<0.66U	<0.63U	<0.79U
	Carbazole	mg/kg	0.0025		<0U	<0.015U,F1	0.32	0.87	<0.016U	2.2	0.87 - 1.1
	Chrysene	mg/kg	0.028		1.7J	0.92J	1.4	3.2	0.39	13	2.9 - 3.5
	Dibenz(a,h)anthracene	mg/kg	0.0031		0.24J	0.19	0.26	0.63J	<0.02U	2.3	0.53 - 0.61
	Dibenzofuran	mg/kg	0.014		<0U	<0.08U,F1	0.17J	0.62J	<0.087U	0.58J	1.1 - 1.2
	Diethylphthalate	mg/kg	0.015		<0U	<0.089U,F1,F2	<0.12U	<0.41U	<0.096U	<0.091U	<0.11U
	Dimethyl phthalate	mg/kg	0.015		<0U	<0.089U,F1,F2	<0.12U	<0.4U	<0.096U	<0.091U	<0.11U
	Di-n-butyl phthalate	mg/kg	0.017		<0U	0.19J	<0.14U	<0.46U	<0.11U	<0.1U	<0.13U
	Di-n-octyl phthalate	mg/kg	0.015		<0U	<0.086U,F1	<0.12U	<0.39U	<0.093U	<0.088U	<0.11U
	Fluoranthene	mg/kg	0.028		3.1	1.7	3.2	7	0.91	33	6.8 - 8.1
	Fluorene	mg/kg	0.0036		<0U	0.88J	0.36	1	<0.023U	1.6	0.7 - 0.75
	Hexachlorobenzene	mg/kg	0.0029		<0U	<0.017UJ	<0.023UJ	<0.079UJ	<0.019UJ	<0.018UJ	<0.022UJ
	Hexachlorobutadiene	mg/kg	0.0031	12	<0U	<0.018UJ	<0.024UJ	<0.083UJ	<0.02UJ	<0.019UJ	<0.023UJ
	Hexachlorocyclopentadiene	mg/kg	0.015	8.1	<0U	-	<0.12U	<0.4U	<0.095U	<0.09U	<0.11U
	Hexachloroethane	mg/kg	0.0099		<0U	-	<0.079U	<0.27U	<0.063U	<0.06U	<0.075U
	Indeno(1,2,3-c,d)pyrene	mg/kg	0.028		1.5J	0.65J	0.87	2	0.26	9	1.9 - 2
	Isophorone	mg/kg	0.01		<0U	<0.061U,F1	<0.083U	<0.28U	<0.066U	<0.063U	<0.079U
	Naphthalene	mg/kg	0.0097		<0U	0.5J	0.21J	0.73J	<0.015U	0.17	0.59 - 0.61
	Nitrobenzene	mg/kg	0.011		<0U	<0.068U,F1	<0.091U	<0.31U	<0.073U	<0.07U	<0.087U
	N-nitrosodi-n-propylamine	mg/kg	0.0032		<0U	<0.019U,F1	<0.026U	<0.087U	<0.021U	<0.02U	<0.024U
	n-Nitrosodiphenylamine	mg/kg	0.013		<0U	-	<0.1U	<0.34U	<0.081U	<0.078U	<0.096U
	Pentachlorophenol	mg/kg	0.012	19	<0U	-	<0.098U	<0.33U	<0.079U	<0.075U	<0.093U
	Phenanthrene	mg/kg	0.0044		1.6J	1.8	2.2	5.6	0.51	19	5.1 - 6.9
	Phenol	mg/kg	0.0033		<0U	<0.019U	<0.026U	<0.088U	<0.021U	<0.02U	<0.025U
	Pyrene	mg/kg	0.028		2.4	1.7	2	4.1	0.61	20	4 - 5.3

Notes

1. Analytes with no detections are not shown. See analytical reports for complete results.

mg/kg milligrams per kilogram

U Non-Detect

F1 MS and/or MSD Recovery is outside acceptance limits.

F2 MS/MSD RPD exceeds control limits

B Compound was found in the blank and sample.

NYSDEC SGV NYSDEC Sediment Guidance Values (SGVs) for freshwater sediments from Table 5 of *Screening and Assessment of Contaminated Sediment* , NYSDEC, 24 June 2014.

TABLE 4
OS2 IRM PDI PROGRAM

FORMER SPERRY REMINGTON SITE
ELMIRA, NEW YORK

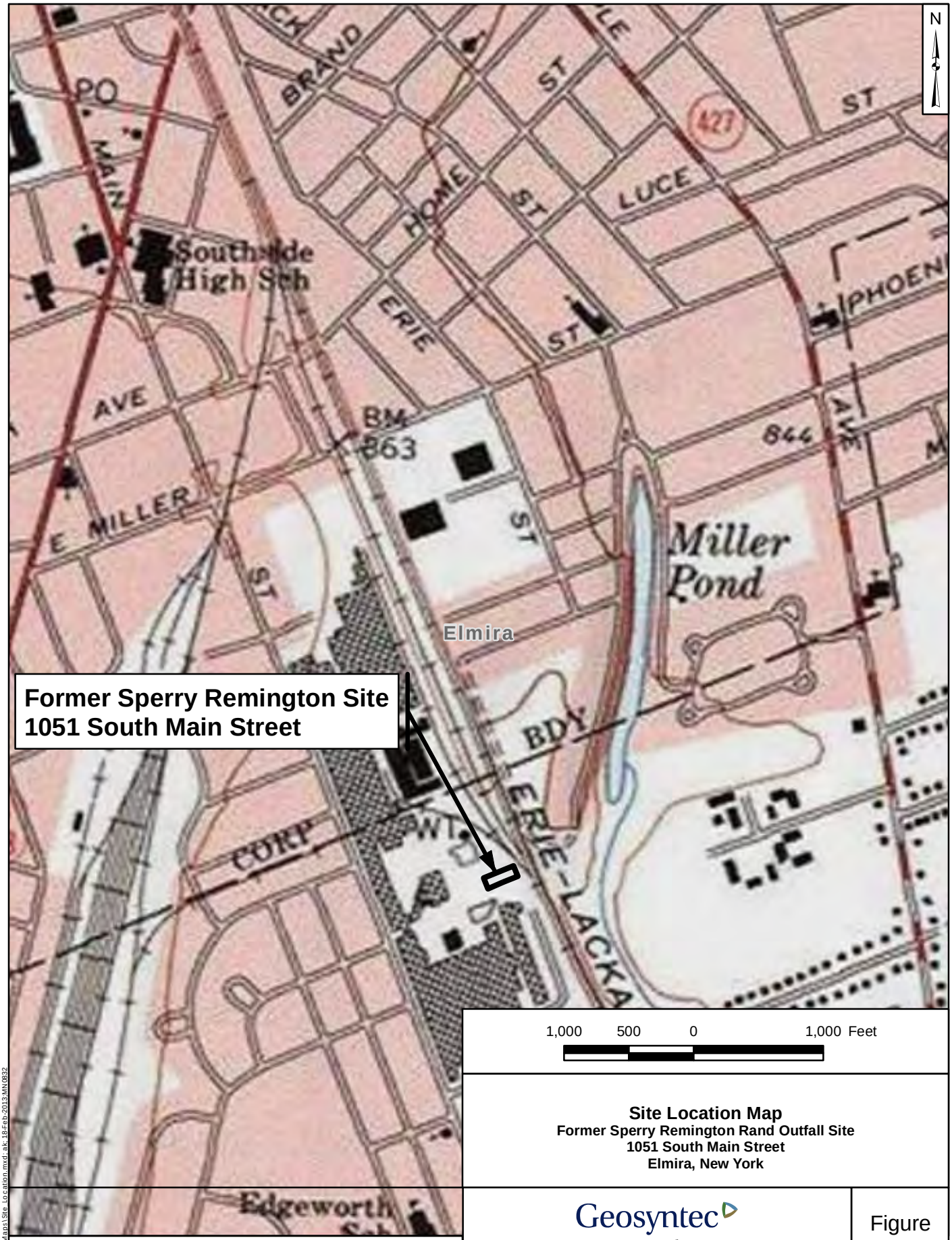
IRM Design Data Need	Test Pitting Program	Camera Survey Program	Post-Investigation Survey
Identify subsurface structure connecting to 18-in inlet for future abandonment	• Test Pit TP-1 from 18-in inlet connection to visually identify/verify the alignment of the inlet connection and subsurface structure(s)	• Inline camera survey to inspect connection to OS2 if accessible	• Test pit location • Subsurface structure location
Identify storm sewer connections to 5-ft box culvert inlet to OS2	• Test pit TP-2 from 5-ft box culvert toward 18-in clay pipe in SE corner of EHS to visually identify/verify the alignment of the inlet connection and subsurface structure(s)	• Inspect identified subsurface structure for integrity and the presence of fine-grained material. • Inline camera survey to identify potential upstream and downstream connections and inspect for structural integrity	• Test pit location • Subsurface structure location
Identify possible subsurface structures downstream of CB-6	• Test pit TP-3 south of CB-6 to identify/verify alignment of downstream connections. Test pit extent may be extended based on initial findings. • Test pit TP-4 from18-in clay pipe in SE corner of EHS toward eastern edge of south parking lot	• Inspect identified subsurface structure for integrity and the presence of fine-grained material. • Inline camera survey to identify potential upstream and downstream connections and inspect for structural integrity	• Test pit locations • Subsurface structure location

TABLE 4
OS2 IRM PDI PROGRAM

FORMER SPERRY REMINGTON SITE
ELMIRA, NEW YORK

IRM Design Data Need	Test Pitting Program	Camera Survey Program	Post-Investigation Survey
Invert elevations of existing storm water structure for potential modification of storm sewer system	• None	• None	• Invert of storm water connections to CB-2, CB-10 and CB-11

FIGURES



Site Location Map
Former Sperry Remington Rand Outfall Site
1051 South Main Street
Elmira, New York

Geosyntec consultants

Columbia, Maryland | February 2013

Figure **1**

Notes
USGS 7.5' Quadrangle Elmira (1976)

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Site Map
Former Sperry Remington Site
1051 South Main Street
Elmira, New York

Notes
2010 imagery in Chemung County, NYS Digital Ortho-imagery Program (NYSDOP), NYS Office of Cyber Security (2010)

Geosyntec consultants

Columbia, Maryland | October 2017

Figure 2

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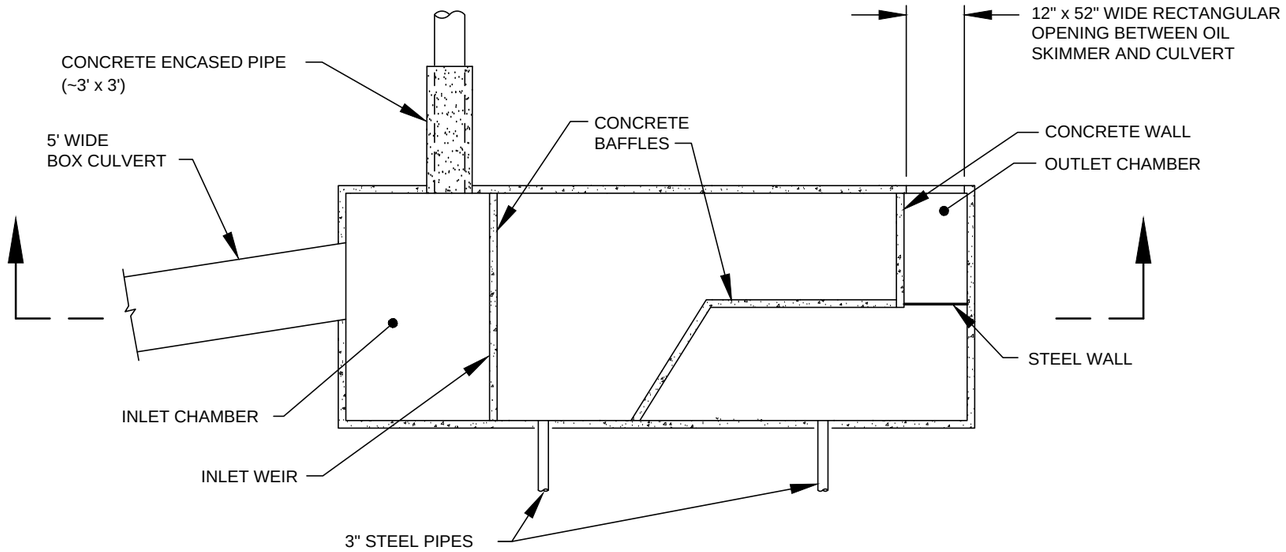
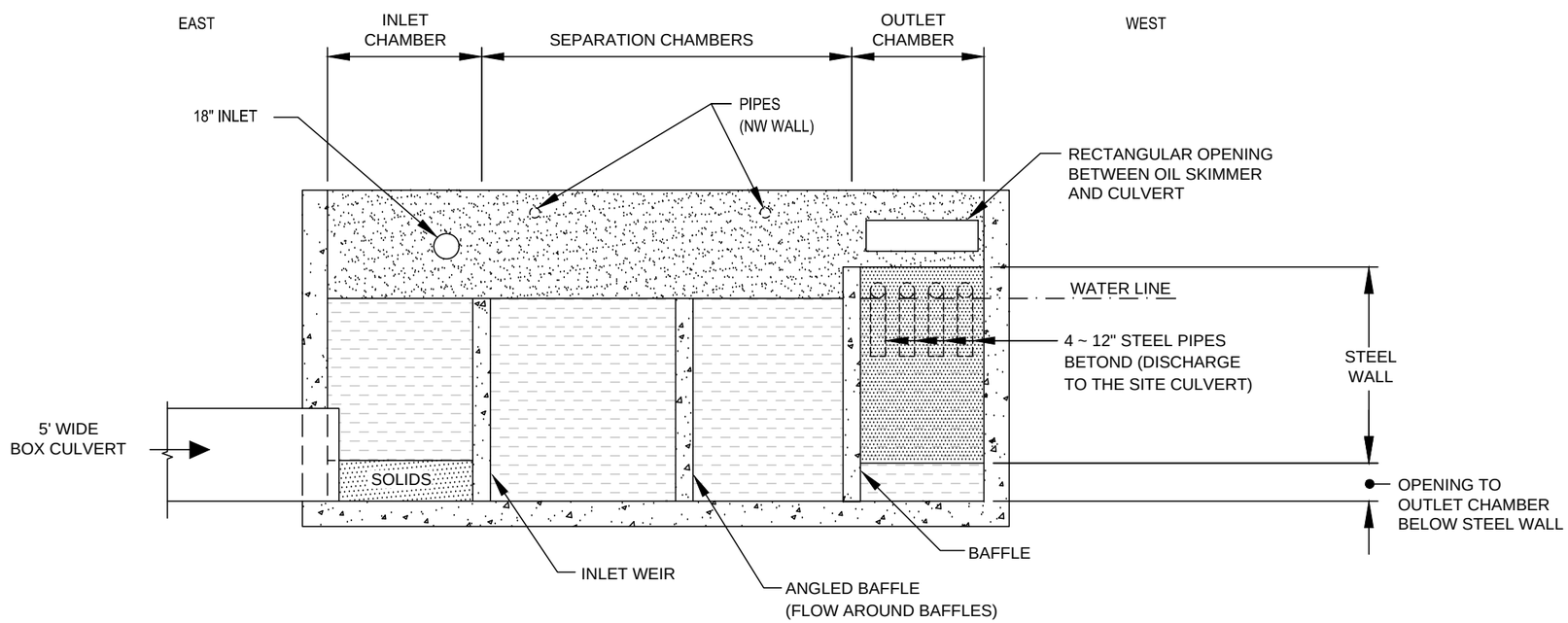


OIL SKIMMER #2 PLAN

SCALE: 1" = 10'



OIL SKIMMER #2 SECTION

SCALE: NTS

NOTE:
SITE PLAN DEVELOPED FROM AN AUTOCAD FILE (OIL SKIMMER.DWG) OBTAINED FROM ADVANCED GEOSERVICES ENGINEERING, P.C., FEBRUARY 2013.

10 5 0 10
SCALE: 1" = 10'

OIL SKIMMER #2

FORMER SPERRY REMINGTON RAND OUTFALL SITE
1051 SOUTH MAIN STREET
ELMIRA, NEW TORK

Geosyntec consultants
COLUMBIA, MARYLAND

DATE:	APRIL 2014
PROJECT NO.	MR0832
DOCUMENT NO.	MD14033
FILE NO.	0832f002
FIGURE NO.	3

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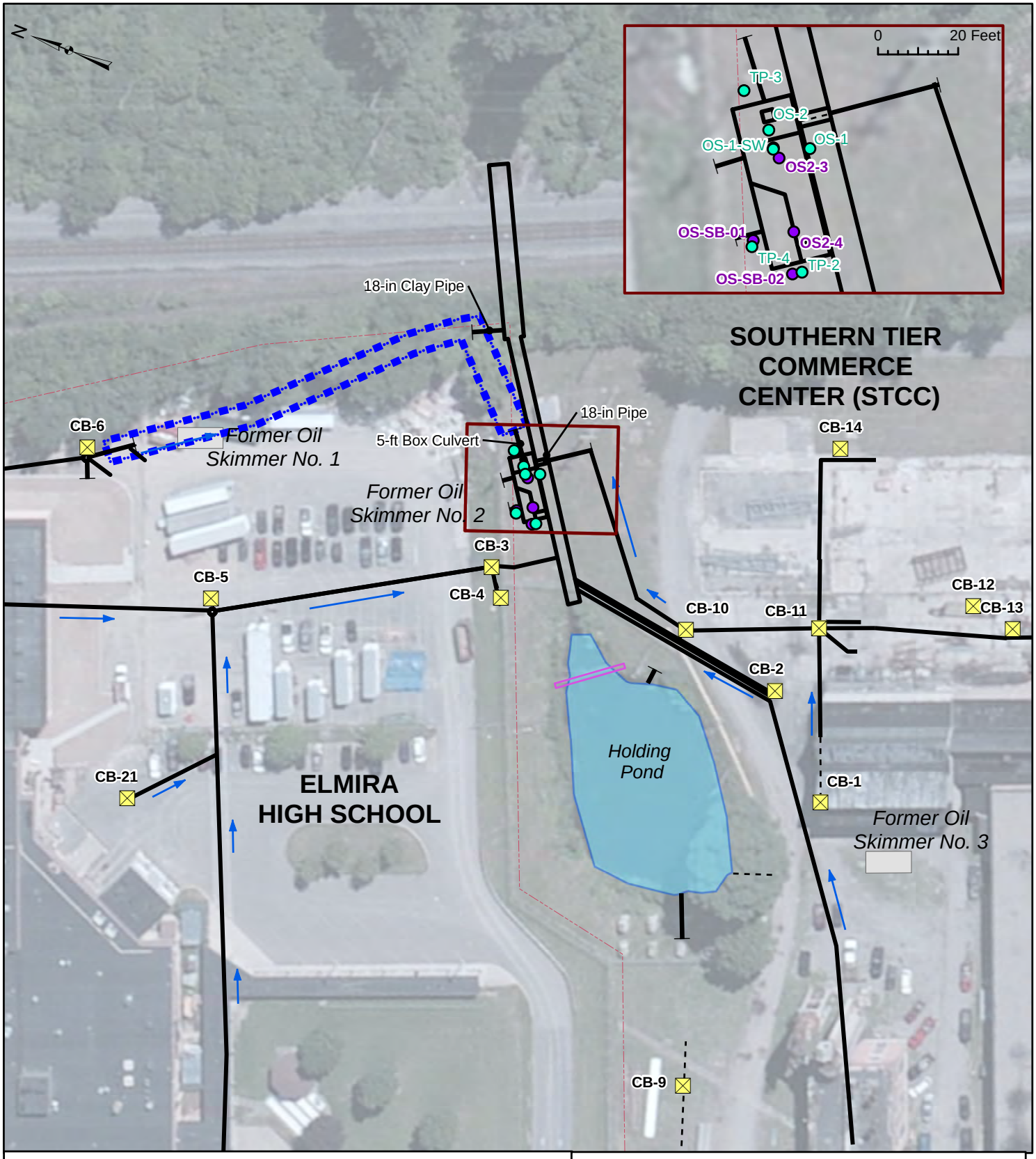

Legend

- Known
- Inferred
- Sealed
- Walkway
- Catch Basin
- Property Boundary
- FlowDirection
- Data Gap
- Oil Skimmer
- Holding Pond
- 2012 IRM PDI Sample Location
- Phase 1 RI Sample Location

0 100 Feet

Stormwater Infrastructure

Former Sperry Remington Site
Elmira, New York

Geosyntec consultants

Columbia, Maryland | October 2017

Figure 4

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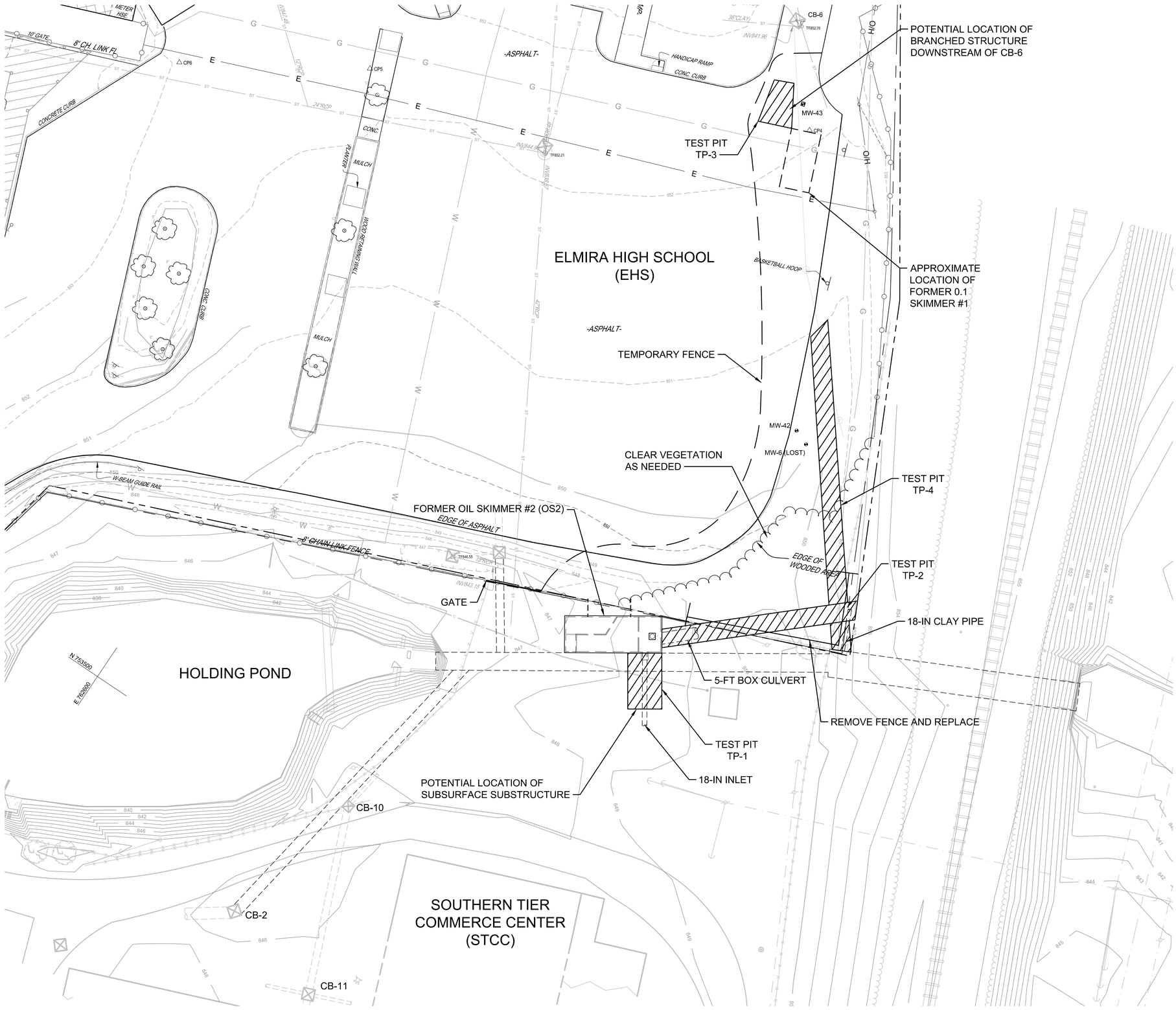


LEGEND

- PROPERTY BOUNDARY
- EXISTING GRADE CONTOUR (FEET-MSL)
- EXISTING BUILDING
- EXISTING CONCRETE/CONCRETE PAD
- EXISTING PAVEMENT/ROAD
- EXISTING TREELINE
- EXISTING FENCE
- EXISTING RAILROAD TRACK
- EXISTING CATCH BASIN
- EXISTING UNDERGROUND FEATURE
- EXISTING UNDERGROUND GAS LINE
- EXISTING UTILITY POLE (AND GUY WIRE)
- EXISTING WATER METER
- EXISTING WATER VALVE
- EXISTING HYDRANT
- MONITORING WELL
- TEST PIT
- TEMPORARY FENCE

GENERAL NOTES:

1. EXISTING CONDITIONS FROM CAD FILES OF DRAWING ENTITLED "TOPOGRAPHIC SURVEY OF FORMER REMINGTON RAND SITE" BY WEILER ASSOCIATES, DATED 27 APRIL 2011 AND "SITE UTILITY PLAN, HIGH SCHOOL 2018 ALTERATIONS PROJECT, ELMIRA CITY SCHOOL DISTRICT" BY HUNT ENGINEERS ARCHITECTS SURVEYORS, DATED 1 AUGUST 2017.
2. LOCATION OF BURIED STRUCTURES AND PIPES IS APPROXIMATE.
3. TEMPORARY CONSTRUCTION FENCING WILL BE INSTALLED AROUND THE WORK AREA ON EHS PROPERTY AS SHOWN.
4. PERIMETER FENCING WILL BE REMOVED AS NEEDED AND REPLACED UPON COMPLETION OF THE WORK.

0 20' 40'
SCALE IN FEET

TEST PITTING PROGRAM
FORMER SPERRY REGIMEN SITE
ELMIRA, NEW YORK

Geosyntec consultants

FIGURE 5

PROJECT NO: PRJ-NO | OCTOBER 2017

P:\cadd\gcs-mmcnapolis\0832-2000\0832-3024.dwg, 2.10\13/2017 7:46:33 PM, bkenick

Former Sperry Remington Site
NYSDEC Site No. 808043

ID	Task Name	Duration	Start	Finish
1	**Former Sperry Remington Site OS2 IRM**	**63 days**	**Tue 10/17/17**	**Thu 1/11/18**
2	**IRM Pre-Design Investigation (PDI)**	**24 days**	**Tue 10/17/17**	**Fri 11/17/17**
3	IRM PDI Work Plan Submittal	0 days	Tue 10/17/17	Tue 10/17/17
4	NYSDEC Review	5 days	Tue 10/17/17	Mon 10/23/17
5	NYSDEC Approval	0 days	Mon 10/23/17	Mon 10/23/17
6	Test Pitting Program	10 days	Mon 10/30/17	Fri 11/10/17
7	Camera Survey Program	3 days	Wed 11/15/17	Fri 11/17/17
8	Post-Investigation Survey	3 days	Wed 11/15/17	Fri 11/17/17
9	**IRM Work Plan**	**30 days**	**Thu 11/30/17**	**Thu 1/11/18**
10	IRM Work Plan Submittal	0 days	Thu 11/30/17	Thu 11/30/17
11	NYSDEC Review	30 days	Fri 12/1/17	Thu 1/11/18
12	NYSDEC Approval	0 days	Thu 1/11/18	Thu 1/11/18

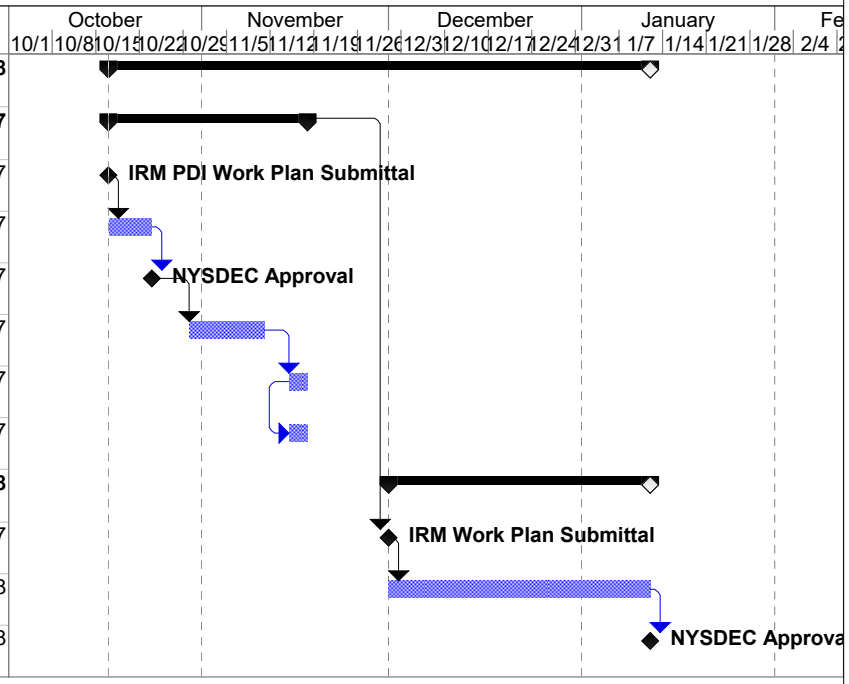
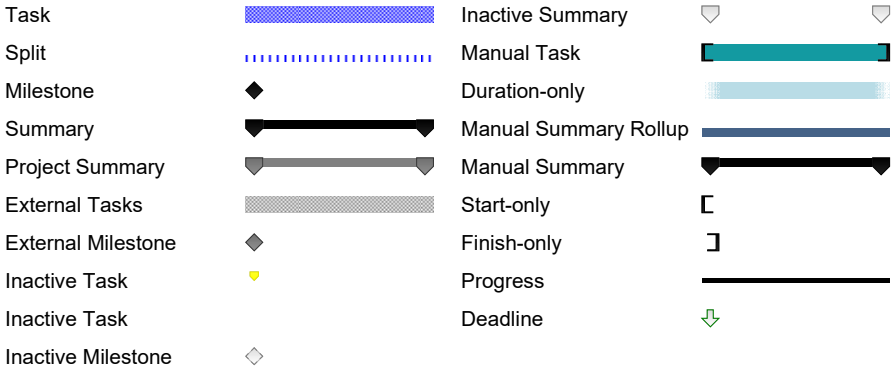
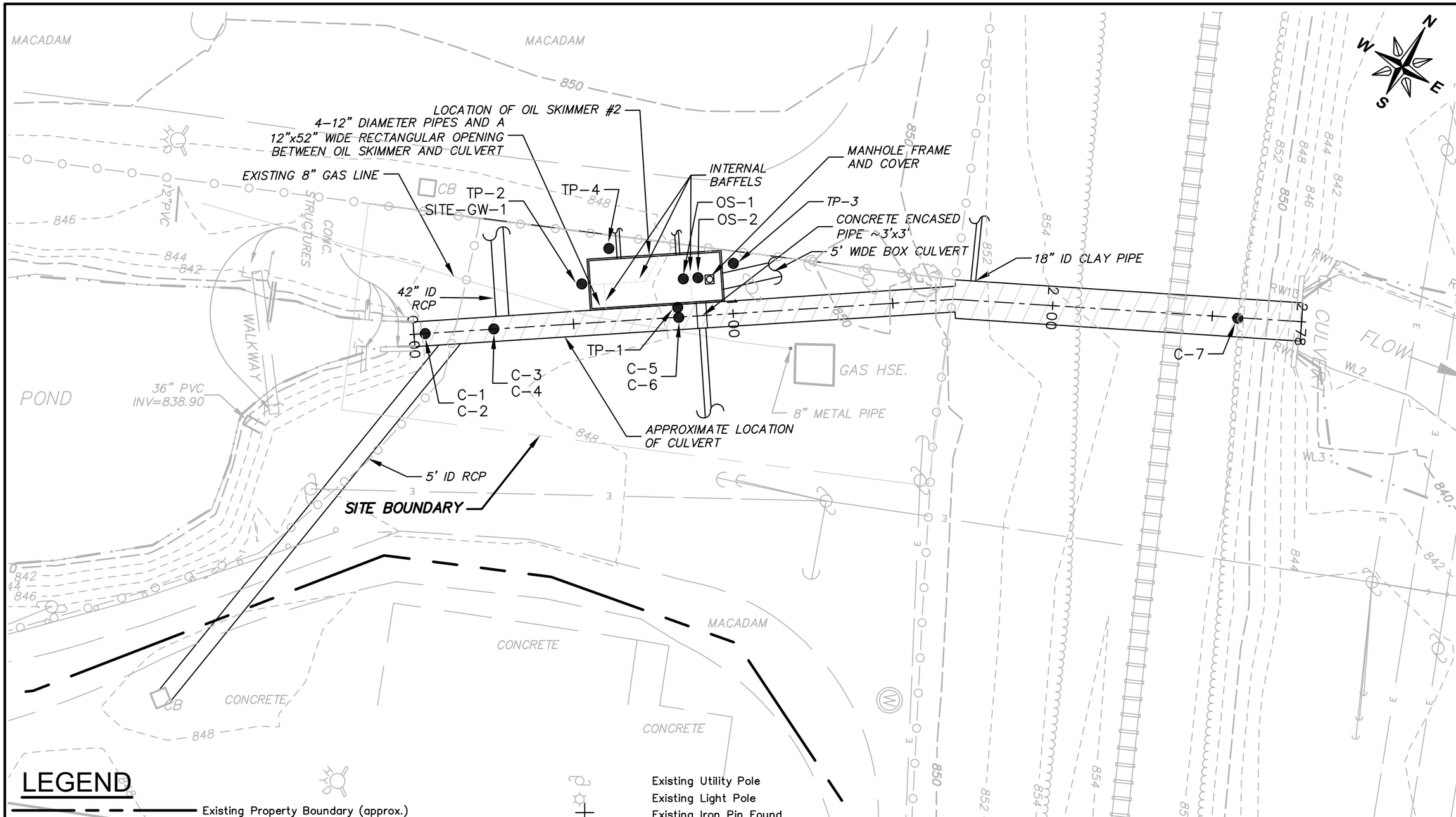


Figure 6

Project Schedule
Former Sperry Remington Site



Appendix A
Site Culvert Plan View and Profile
(Phase 1 Data Report, AGC, 2011)



OIL SKIMMER #2 AND SITE CULVERT SAMPLING LOCATIONS MAP

PROJECT MANAGER:	S.W.K.	SCALE:	1" = 30'
CHECKED BY:	M.J.P.	PROJECT NUMBER:	NY09–2480
DRAWN BY:	RA	DATE:	

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tel 610.840.9100 fax 610.840.9199 www.advancedgeoservices.com

FORMER SPERRY
REMINGTON RAND OUTFALL SITE
1051 SOUTH MAIN STREET, ELMIRA, NY

Figure
1

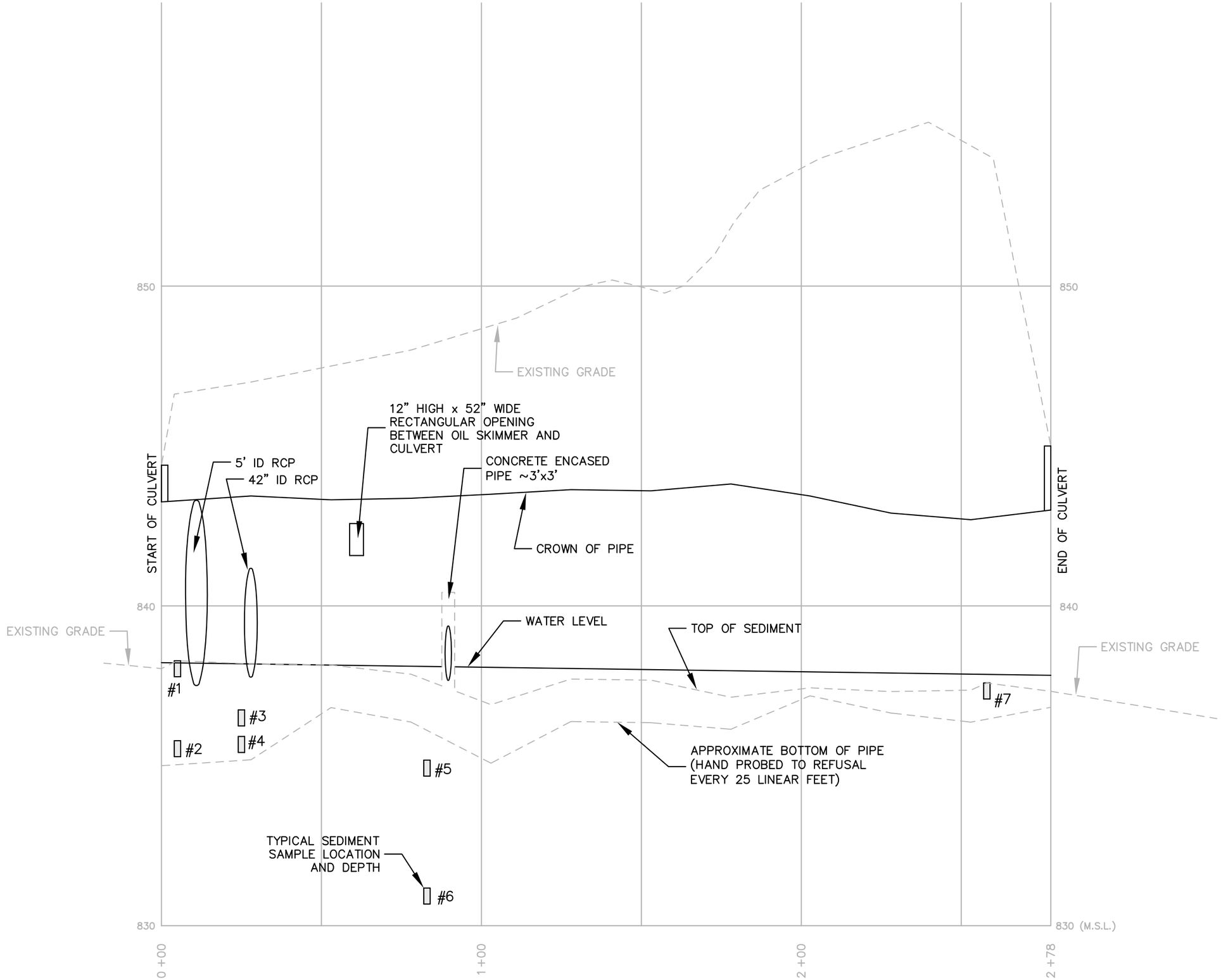
LEGEND

- Existing Property Boundary (approx.)
- 180 Existing Contour
- Existing Building
- Existing Edge of Paving
- Existing Tree Line
- Existing Brush Line
- Existing Wetland/Regulated Water Limit Line
- Property Line
- Existing Sanitary Sewer
- Existing Storm Sewer
- E Existing Electric Line/O'Head Wires
- Existing Water Body/Stream
- Existing Utility Pole
- Existing Light Pole
- Existing Iron Pin Found
- Existing Chain Link Fence
- Existing Tree
- Existing Guy Anchor
- WV Existing Sign Post
- Existing Water Valve
- Existing Hydrant
- Existing Well
- Existing Manhole
- CB Existing Catch Basin
- Existing Rail Road
- C–7 Sample Location

SAMPLE DEPTH TABLE

SEDIMENT SAMPLE ID	DEPTH OF SAMPLE BELOW CEILING	SOIL/WATER SAMPLE ID	DEPTH FROM TOP OF OIL SKIMMER
OS–1	11.5'–12.0'	TP–1	1.0'
OS–2	11.5'–12.0'	TP–2	11.5'
C–1	5.0'–5.5'	TP–3	6.0'
C–2	7.5'–8.0'	TP–4	6.0'
C–3	6.67'–7.7'	SITE–GW–1(WATER)	8.0'
C–4	7.5'–8.0'		
C–5	6.0'–6.5'		
C–6	10.0'–10.5'		
C–7	5.17'–5.67'		

J:\NY092480 Sperry Remington\dwg\OIL SKIMMER.dwg



J:\NY092480 Sperry Remington\dwg\OIL SKIMMER.dwg

OIL SKIMMER #2
SITE CULVERT AND SAMPLING LOCATIONS PROFILE

PROJECT MANAGER:	S.W.K.	SCALE:	1" = 30'
CHECKED BY:	M.J.P.	PROJECT NUMBER:	NY09-2480
DRAWN BY:	RA	DATE:	

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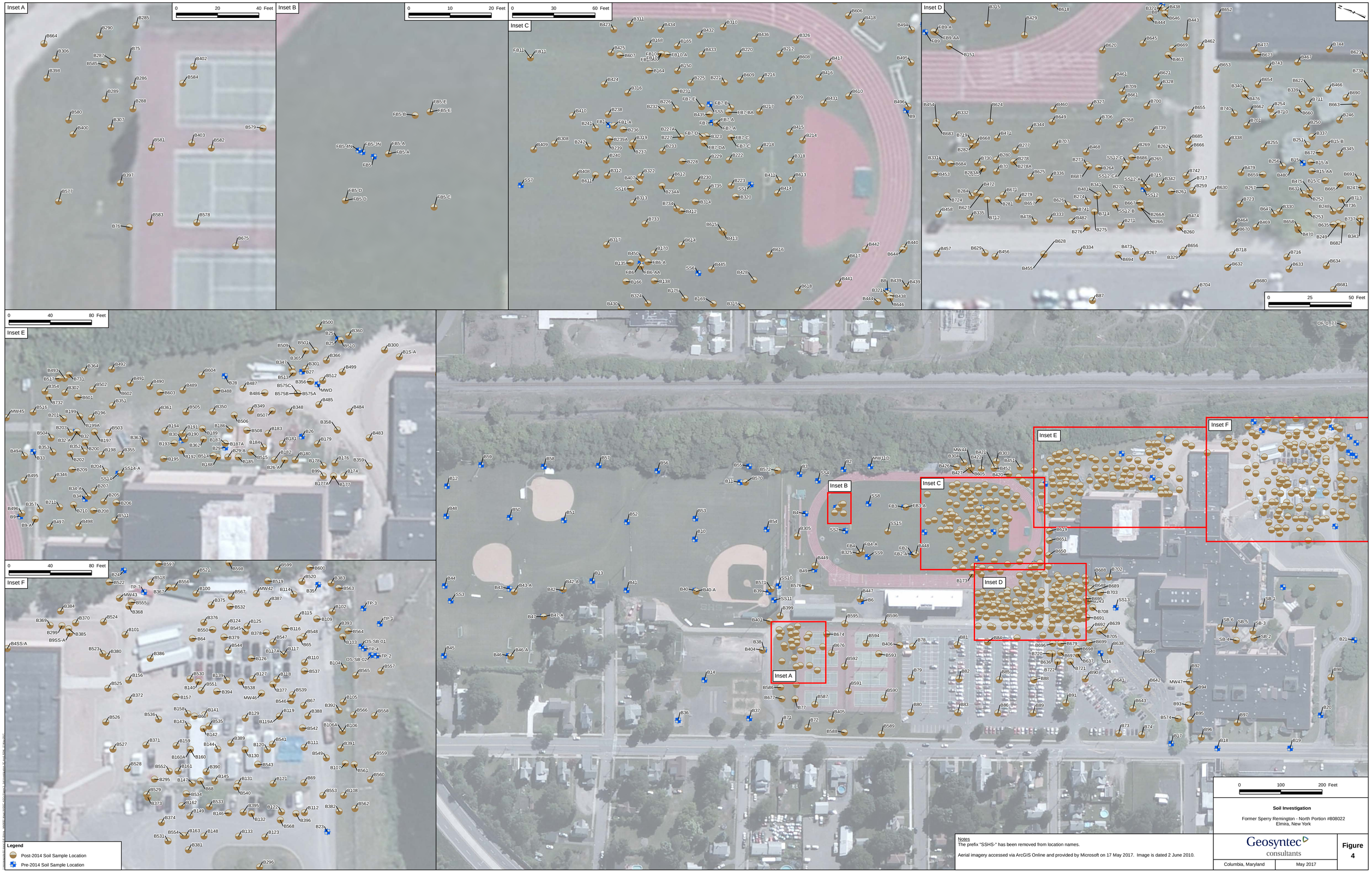
tel 610.840.9100 fax 610.840.9199 www.advancedgeoservices.com

FORMER SPERRY
REMINGTON RAND OUTFALL SITE
1051 SOUTH MAIN STREET, ELMIRA, NY

Figure
2

Appendix B
Extent of COCs in Soils
(Site Characterization Report, Geosyntec, 2017)



Notes
The prefix "SSHS-" has been removed from location names.

Aerial imagery accessed via ArcGIS Online and provided by Microsoft on 17 May 2017. Image is dated 2 June 2010.

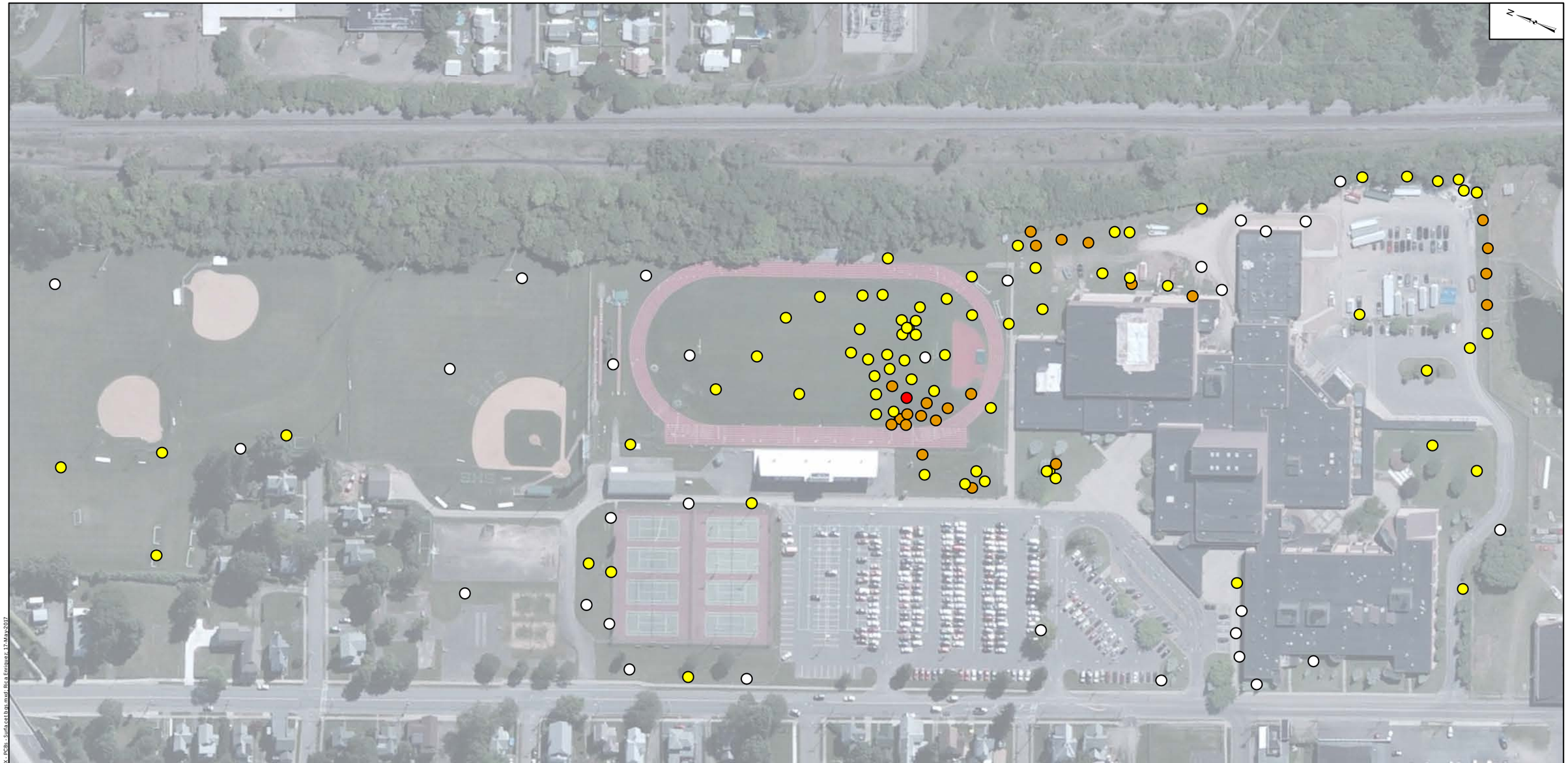
Soil Investigation

Former Sperry Remington - North Portion #808022
Elmira, New York

Geosyntec consultants

Columbia, Maryland | May 2017

Figure 4



Legend

Total PCB Concentration

- Non-Detect
- >0 to 1 mg/kg
- >1 to 10 mg/kg
- >10 to 50 mg/kg
- >50 mg/kg

Notes
PCB - Polychlorinated Biphenyl
ft bgs - Feet below ground surface
mg/kg - milligram per kilogram

Screening criteria of soil above 2 feet bgs is the Restricted Residential Soil Cleanup Objective of 1 mg/kg (6 NYCRR Part 375)

Aerial imagery accessed via ArcGIS Online and provided by Microsoft on 17 May 2017. Image is dated 2 June 2010.

150 75 0 150 Feet

Extent of PCBs in Surface Soil (0-0.17 ft bgs)

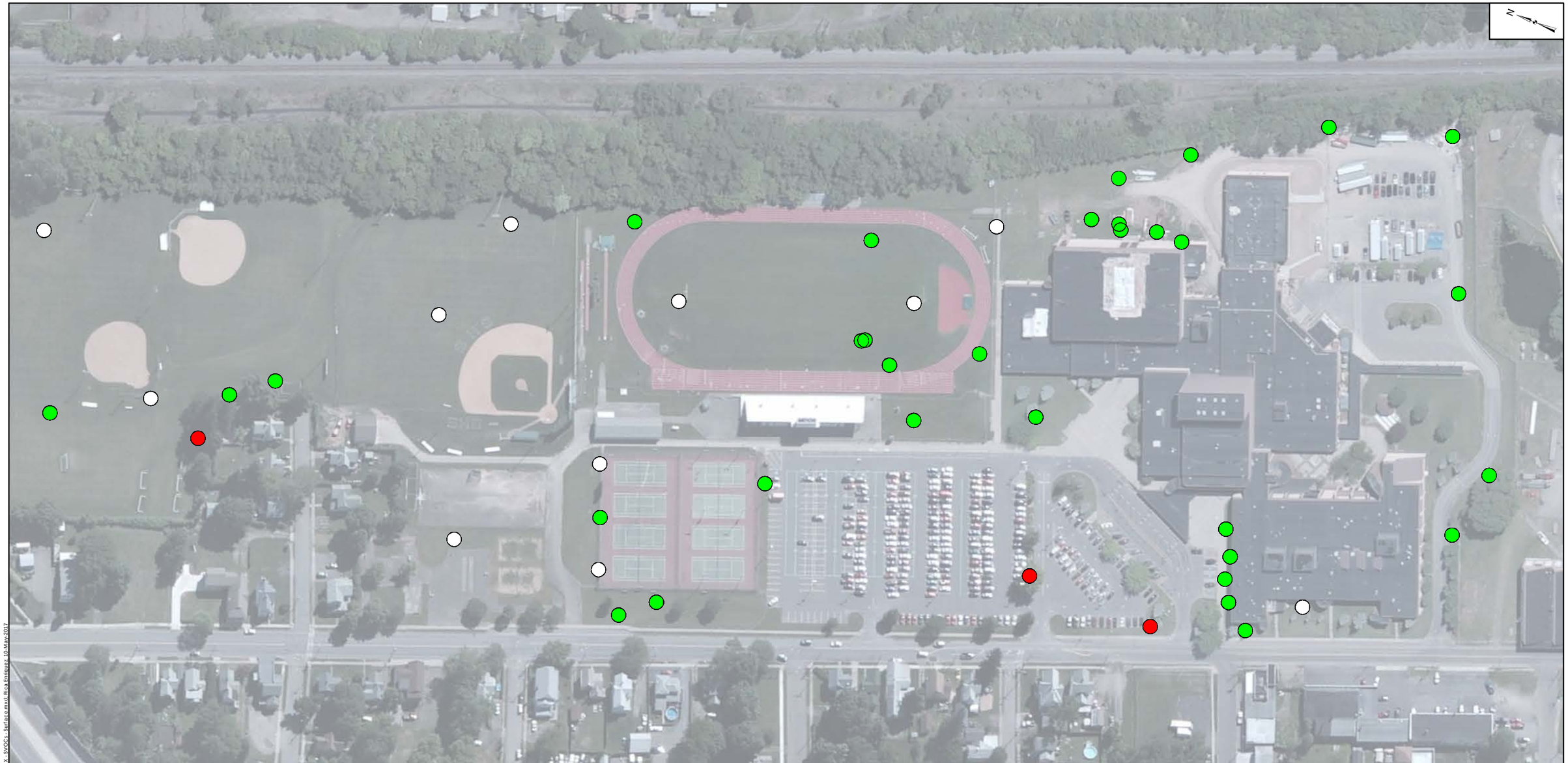
Former Sperry Remington - North Portion #808022
Elmira, New York

Geosyntec consultants

Columbia, Maryland | May 2017

Figure **10**

\\minneapolis-01\data\GIS\Elmira - MN0832\Maps\NYDEC AOCs\SC Report\Figure X - PCBs - Surface t bgs.mxd; Rica Enriquez; 17-May-2017



Legend

SVOC Concentration in Soil

- Exceeds SCO
- Detected, does not exceed SCO
- Not Detected

Notes
ft bgs - Feet below ground surface
SCO - Soil Cleanup Objective
SVOCs - Semivolatile organic compounds

Screening criteria of soil within Elmira High School Property is the Restricted Residential Soil Cleanup Objective. Screening criteria of soil within the Former Scott Technologies Site is the Industriall Soil Cleanup Objective. (6 NYCRR Part 375)

Aerial imagery accessed via ArcGIS Online and provided by Microsoft on 10 May 2017. Image is dated 2 June 2010.

150 75 0 150 Feet

Extent of SVOCs in Surface Soil (0-0.17 ft bgs)

Former Sperry Remington - North Portion #808022
Elmira, New York

Geosyntec consultants

Columbia, Maryland | May 2017

Figure **11**

\\minneapolis-01\DATA\GIS\Elmira - MN0821\Maps\NYDEC AOCs\SC Report\Figure X - SVOCs - Surface.mxd; Rica Enriquez; 10-May-2017

Legend

VOC Concentration in Soil

- Exceeds SCO
- Detected, does not exceed SCO
- Not Detected

Notes
ft bgs - Feet below ground surface
SCO - Soil Cleanup Objective
VOCs - Volatile organic compounds

Screening criteria of soil within Elmira High School Property is the Restricted Residential Soil Cleanup Objective. Screening criteria of soil within the Former Scott Technologies Site is the Industriall Soil Cleanup Objective. (6 NYCRR Part 375)

Aerial imagery accessed via ArcGIS Online and provided by Microsoft on 10 May 2017. Image is dated 2 June 2010.

150 75 0 150 Feet

Extent of VOCs in Surface Soil (0-0.17 ft bgs)

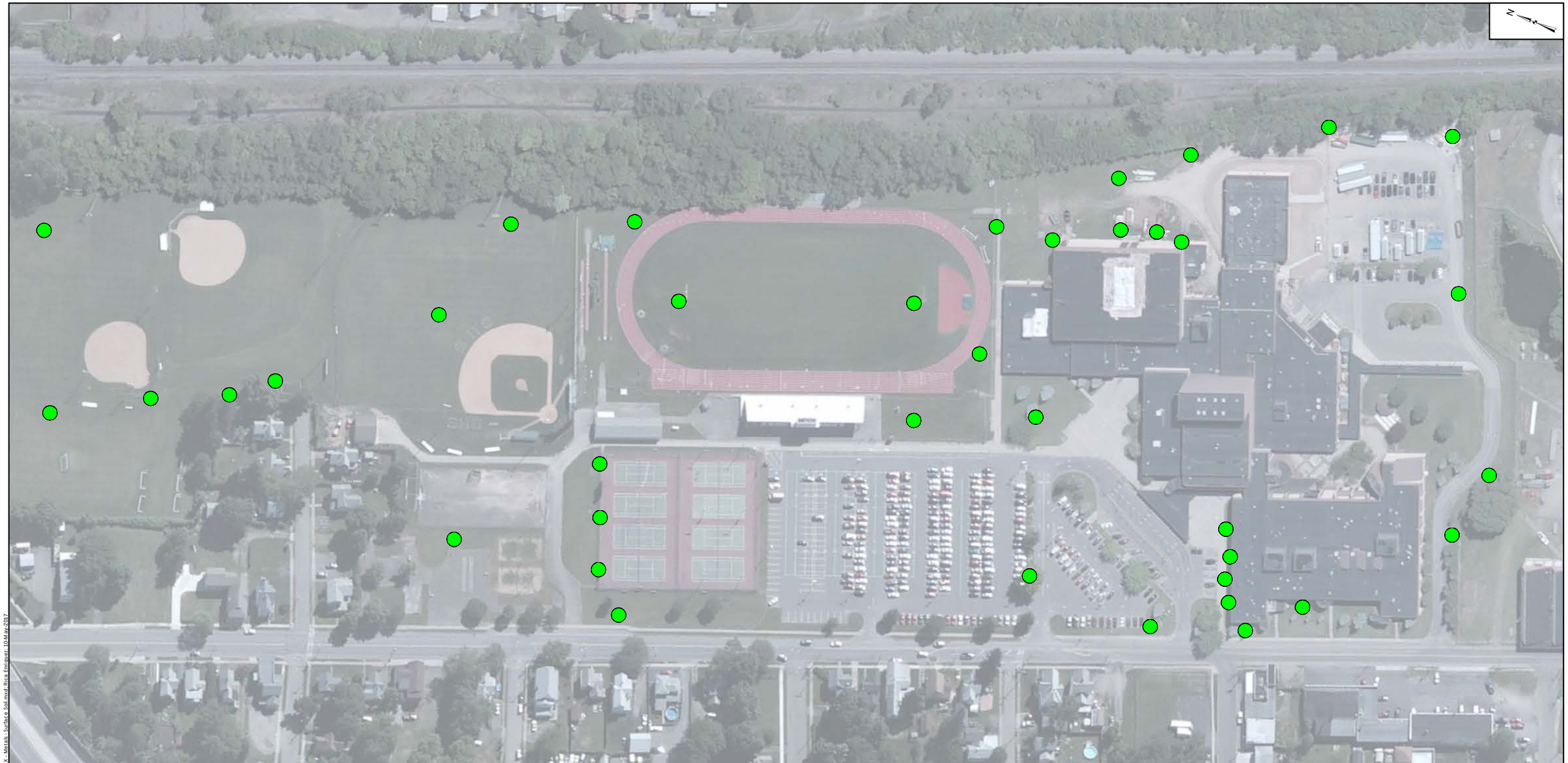
Former Sperry Remington - North Portion #808022
Elmira, New York

Geosyntec consultants

Columbia, Maryland | May 2017

Figure **12**

\\minneapolis-011\DATA\GIS\Elmira - MN0832\Maps\NYDEC AOCs\SC Report\Figure X - VOC - Surface.mxd; Rica Enriquez; 10-May-2017



Legend

Metal Concentration in Soil

- Exceeds SCO
- Detected, does not exceed SCO
- Not Detected

Notes
ft bgs - Feet below ground surface
SCO - Soil Cleanup Objective

Screening criteria of soil above 2 feet bgs is the Restricted Residential Soil Cleanup Objective (6 NYCRR Part 375)

Aerial imagery accessed via ArcGIS Online and provided by Microsoft on 10 May 2017. Image is dated 2 June 2010.

150 75 0 150 Feet

Extent of Metals in Soill (0-0.17 ft bgs)

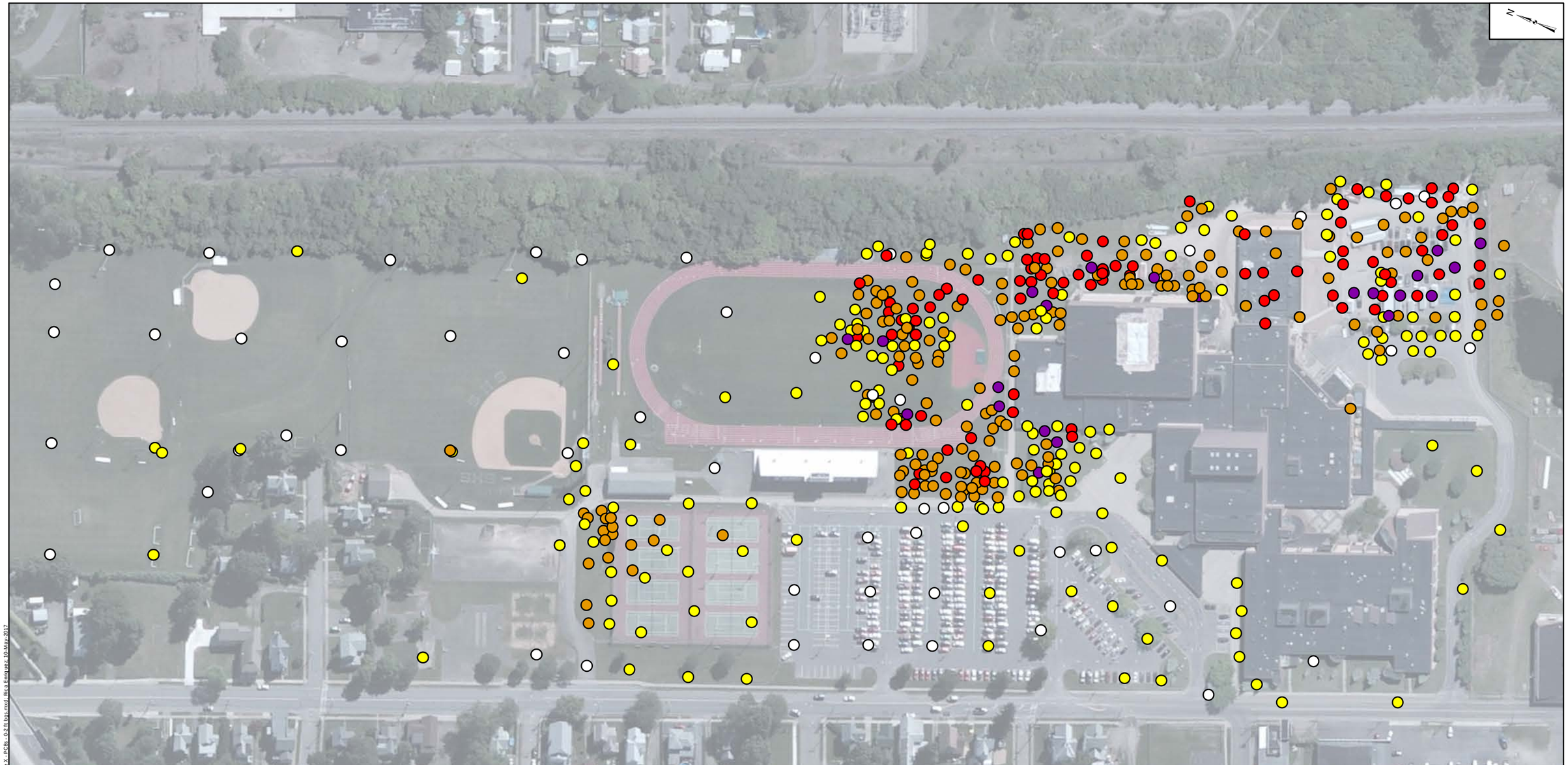
Former Sperry Remington - North Portion #808022
Elmira, New York

Geosyntec consultants

Columbia, Maryland | May 2017

Figure **13**

\\minneapolis-011\DATA\GIS\Elmira - MN0821\Maps\NYDEC AOCs\SC Report\Figure X - Metals - Surface Soil.mxd; Rica Enriquez; 10-May-2017



Legend

Total PCB Concentration

- Non-Detect
- >0 to 1 mg/kg
- >1 to 10 mg/kg
- >10 to 50 mg/kg
- >50 mg/kg

Notes
PCB - Polychlorinated Biphenyl
ft bgs - Feet below ground surface
mg/kg - milligram per kilogram

Screening criteria of soil above 2 feet bgs is the Restricted Residential Soil Cleanup Objective of 1 mg/kg (6 NYCRR Part 375)

Aerial imagery accessed via ArcGIS Online and provided by Microsoft on 10 May 2017. Image is dated 2 June 2010.

150 75 0 150 Feet

Extent of PCBs in Soil (0-2 ft bgs)

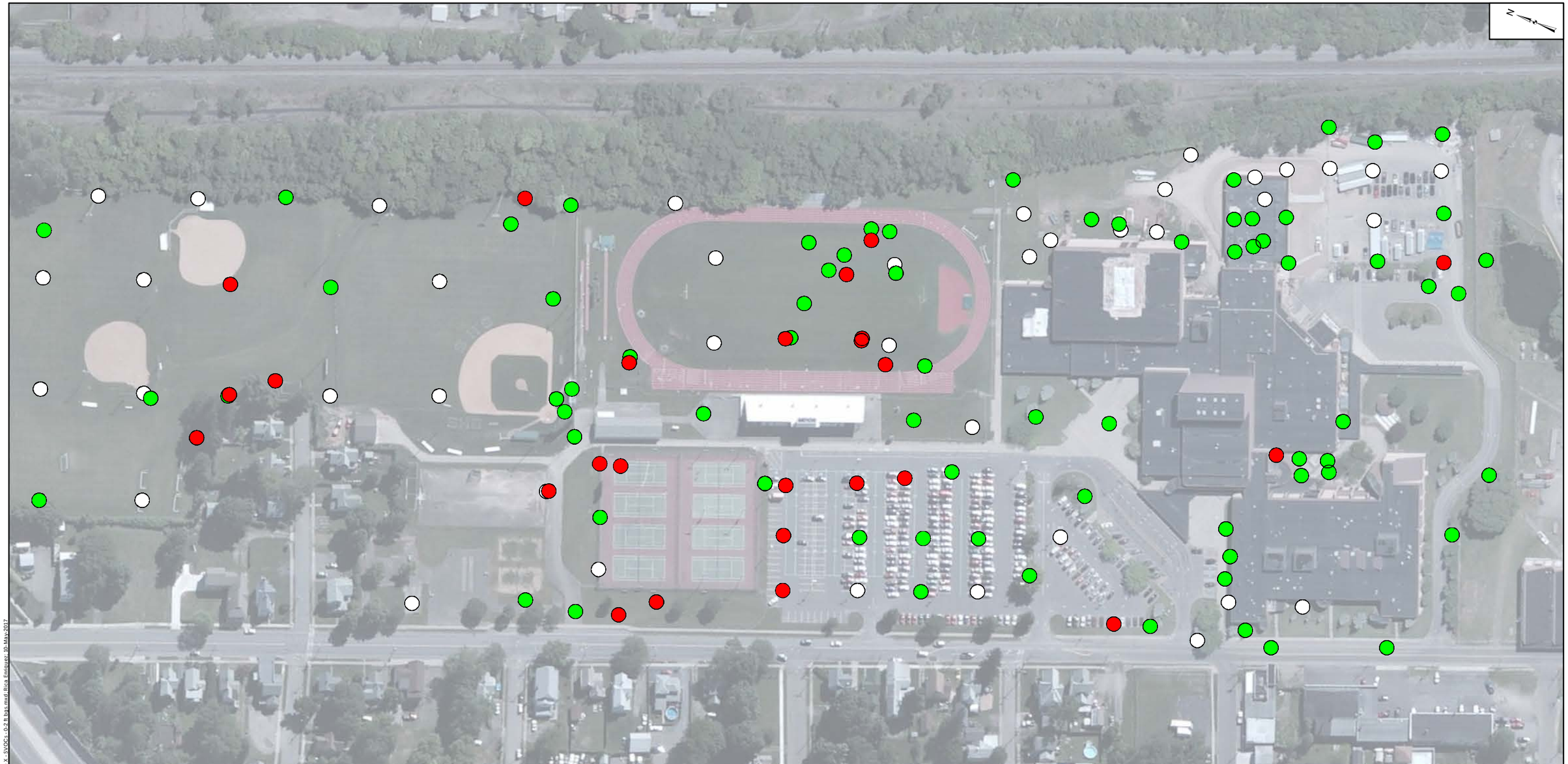
Former Sperry Remington - North Portion #808022
Elmira, New York

Geosyntec consultants

Columbia, Maryland | May 2017

Figure 14

\\minneapolis-01\DATA\GIS\Elmira - MN0822\Maps\NYDEC AOC\1SC Report\Figure X - PCBs - 0-2 ft bgs.mxd; Rica Enriquez; 10-May-2017



Legend

SVOC Concentration in Soil

- Exceeds SCO
- Detected, does not exceed SCO
- Not Detected

Notes
ft bgs - Feet below ground surface
SCO - Soil Cleanup Objective
SVOCs - Semivolatile organic compounds

Screening criteria of soil within Elmira High School Property is the Restricted Residential Soil Cleanup Objective. Screening criteria of soil within the Former Scott Technologies Site is the Industriall Soil Cleanup Objective. (6 NYCRR Part 375)

Aerial imagery accessed via ArcGIS Online and provided by Microsoft on 10 May 2017. Image is dated 2 June 2010.

150 75 0 150 Feet

Extent of SVOCs in Soil (0-2 ft bgs)

Former Sperry Remington - North Portion #808022
Elmira, New York

Geosyntec consultants

Columbia, Maryland | May 2017

Figure **15**

\\minneapolis01\DATA\GIS\Elmira - MN0832\Maps\NYDEC AOCs\SC Report\Figure X - SVOCs - 0-2 ft bgs.mxd; Rica Enriquez; 10-May-2017

Legend

VOC Concentration in Soil

- Exceeds SCO
- Detected, does not exceed SCO
- Not Detected

Notes
ft bgs - Feet below ground surface
SCO - Soil Cleanup Objective
VOCs - Volatile organic compounds

Screening criteria of soil within Elmira High School Property is the Restricted Residential Soil Cleanup Objective. Screening criteria of soil within the Former Scott Technologies Site is the Industriall Soil Cleanup Objective. (6 NYCRR Part 375)

Aerial imagery accessed via ArcGIS Online and provided by Microsoft on 10 May 2017. Image is dated 2 June 2010.

150 75 0 150 Feet

Extent of VOCs in Soil (0-2 ft bgs)

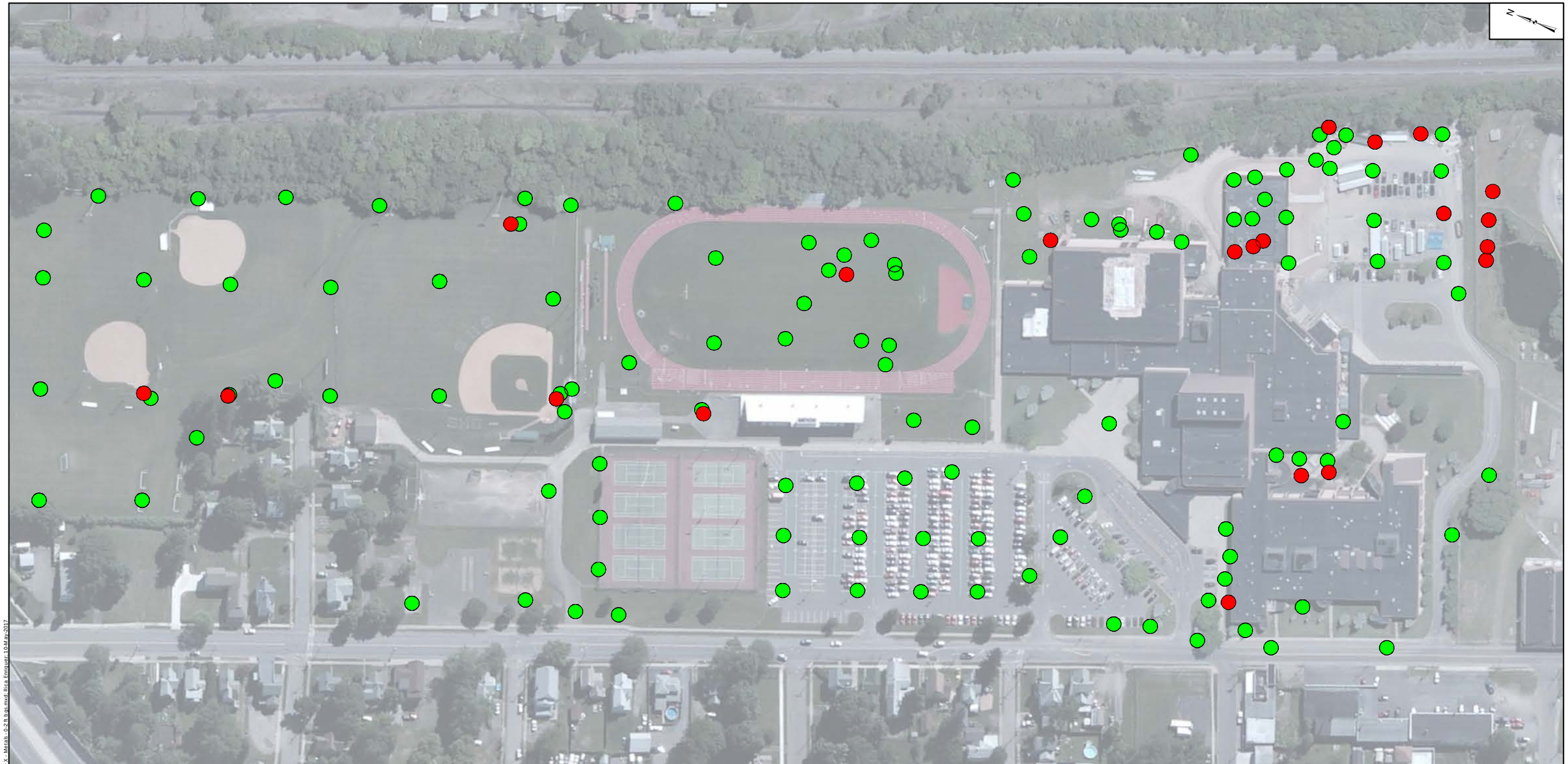
Former Sperry Remington - North Portion #808022
Elmira, New York

Geosyntec consultants

Columbia, Maryland | May 2017

Figure **16**

\\minneapolis-01\DATA\GIS\Elmira - MN0821\Maps\NYDEC AOCs\SC Report\Figure X - VOCs -0-2 ft bgs.mxd; Rica Enriquez; 10-May-2017



Legend

Metal Concentration in Soil

- Exceeds SCO
- Detected, does not exceed SCO
- Not Detected

Notes
ft bgs - Feet below ground surface
SCO - Soil Cleanup Objective

Screening criteria of soil within Elmira High School Property is the Restricted Residential Soil Cleanup Objective. Screening criteria of soil within the Former Scott Technologies Site is the Industriall Soil Cleanup Objective. (6 NYCRR Part 375)

Aerial imagery accessed via ArcGIS Online and provided by Microsoft on 10 May 2017. Image is dated 2 June 2010.

150 75 0 150 Feet

Extent of Metals in Soill (0-2 ft bgs)

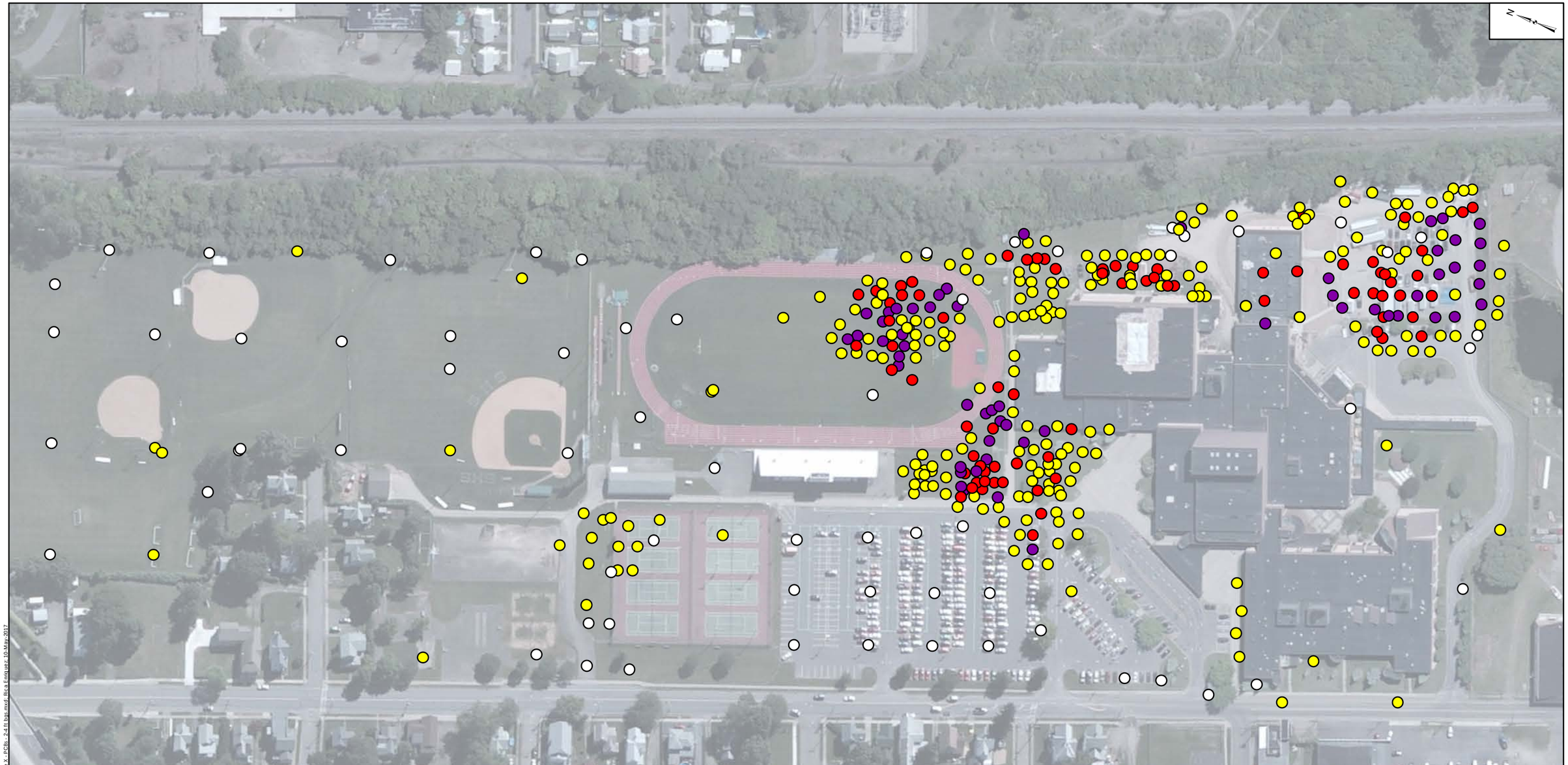
Former Sperry Remington - North Portion #808022
Elmira, New York

Geosyntec consultants

Columbia, Maryland | May 2017

Figure **17**

\\minneapolis01\DATA\GIS\Elmira - MN0832\Maps\NYDEC AOC\15C Report\Figure X - Metals - 0-2 ft bgs.mxd; Rica Enriquez; 10-May-2017



Legend

Total PCB Concentration

- Non-Detect
- >0 to 10 mg/kg
- >10 to 50 mg/kg
- >50 mg/kg

Notes
PCB - Polychlorinated Biphenyl
ft bgs - Feet below ground surface
mg/kg - milligram per kilogram

Proposed Cleanup Level – Total PCB concentration of ten (10) mg/kg

Aerial imagery accessed via ArcGIS Online and provided by Microsoft on 10 May 2017. Image is dated 2 June 2010.

150 75 0 150 Feet

Extent of PCBs in Soil (2-4 ft bgs)

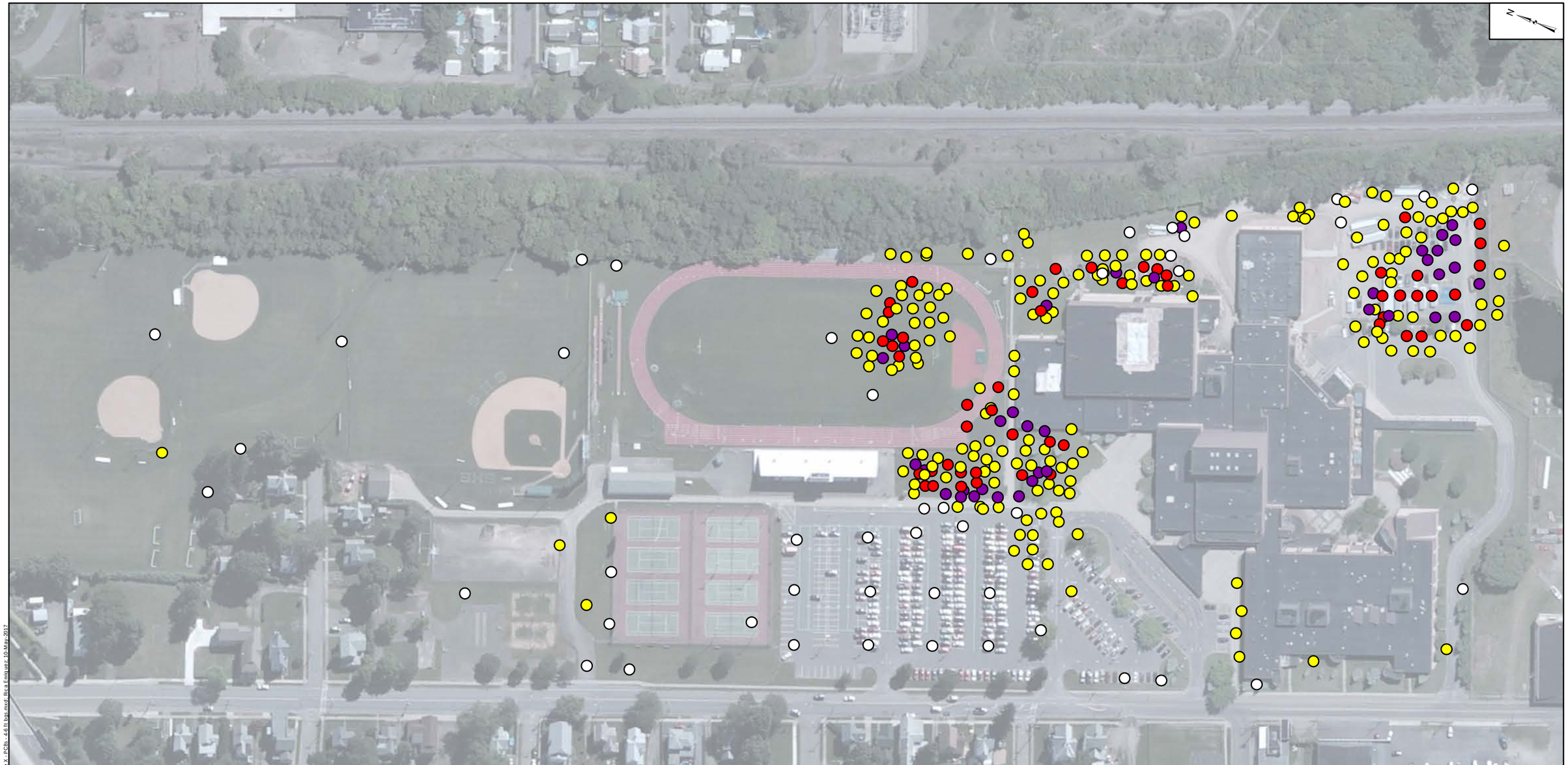
Former Sperry Remington - North Portion #808022
Elmira, New York

Geosyntec consultants

Columbia, Maryland | May 2017

Figure 18

\\minneapolis-01\DATA\GIS\Elmira - MN0822\Maps\NYDEC AOC\1SC Report\Figure X - PCBs - 2-4 ft bgs.mxd; Rica Enriquez; 10-May-2017



Legend

Total PCB Concentration

- Non-Detect
- >0 to 10 mg/kg
- >10 to 50 mg/kg
- >50 mg/kg

Notes
PCB - Polychlorinated Biphenyl
ft bgs - Feet below ground surface
mg/kg - milligram per kilogram

Proposed Cleanup Level – Total PCB concentration of ten (10) mg/kg

Aerial imagery accessed via ArcGIS Online and provided by Microsoft on 10 May 2017. Image is dated 2 June 2010.

150 75 0 150 Feet

Extent of PCBs in Soil (4-6 ft bgs)

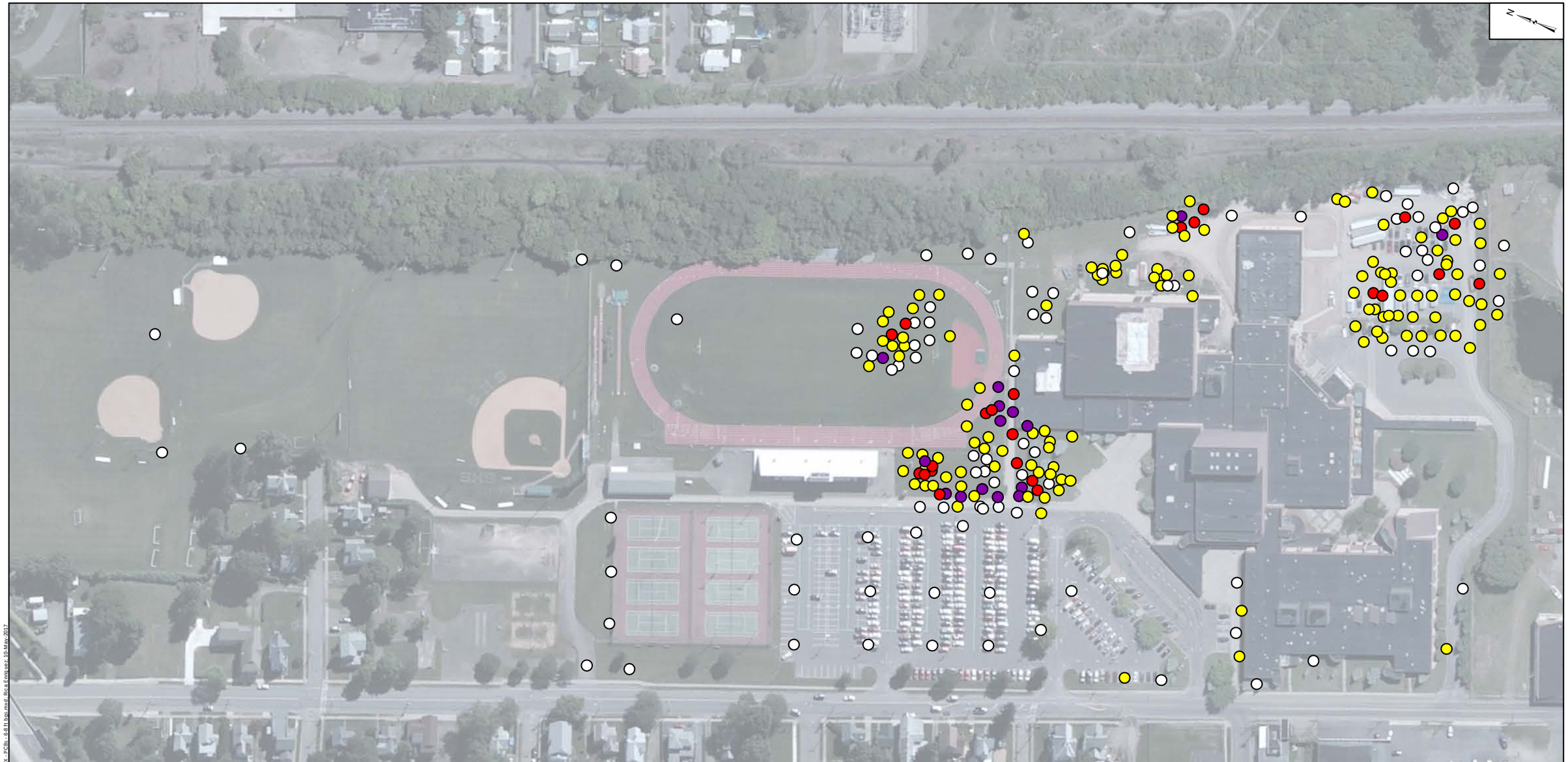
Former Sperry Remington - North Portion #808022
Elmira, New York

Geosyntec consultants

Columbia, Maryland | May 2017

Figure 19

\\minneapolis-01\DATA\GIS\Elmira - MN0822\Maps\NYDEC AOC\SC Report\Figure X - PCBs - 4-6 ft bgs.mxd; Rica Enriquez; 10-May-2017



Legend

Total PCB Concentration

- Non-Detect
- >0 to 10 mg/kg
- >10 to 50 mg/kg
- >50 mg/kg

Notes
PCB - Polychlorinated Biphenyl
ft bgs - Feet below ground surface
mg/kg - milligram per kilogram

Proposed Cleanup Level – Total PCB concentration of ten (10) mg/kg

Aerial imagery accessed via ArcGIS Online and provided by Microsoft on 10 May 2017. Image is dated 2 June 2010.

150 75 0 150 Feet

Extent of PCBs in Soil (6-8 ft bgs)

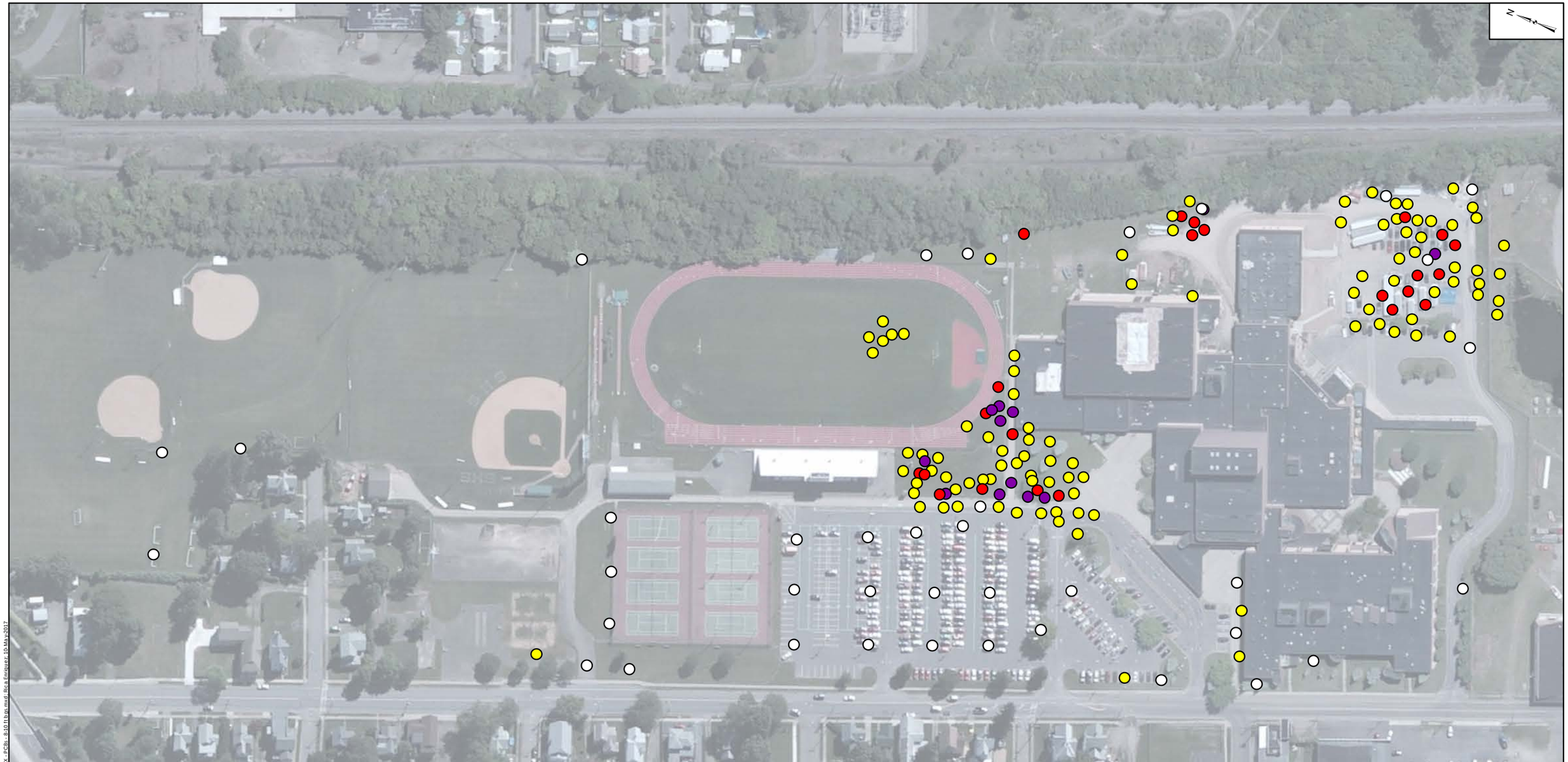
Former Sperry Remington - North Portion #808022
Elmira, New York

Geosyntec consultants

Columbia, Maryland | May 2017

Figure 20

\\minneapolis011\DATA\GIS\Elmira - MN0832\Maps\NYDEC AOC\SC Report\Figure X - PCBs - 6-8 ft bgs.mxd, Rice Enriquez; 10-May-2017



Legend

Total PCB Concentration

- Non-Detect
- >0 to 10 mg/kg
- >10 to 50 mg/kg
- >50 mg/kg

Notes
PCB - Polychlorinated Biphenyl
ft bgs - Feet below ground surface
mg/kg - milligram per kilogram

Proposed Cleanup Level – Total PCB concentration of ten (10) mg/kg

Aerial imagery accessed via ArcGIS Online and provided by Microsoft on 10 May 2017. Image is dated 2 June 2010.

150 75 0 150 Feet

Extent of PCBs in Soil (8-10 ft bgs)

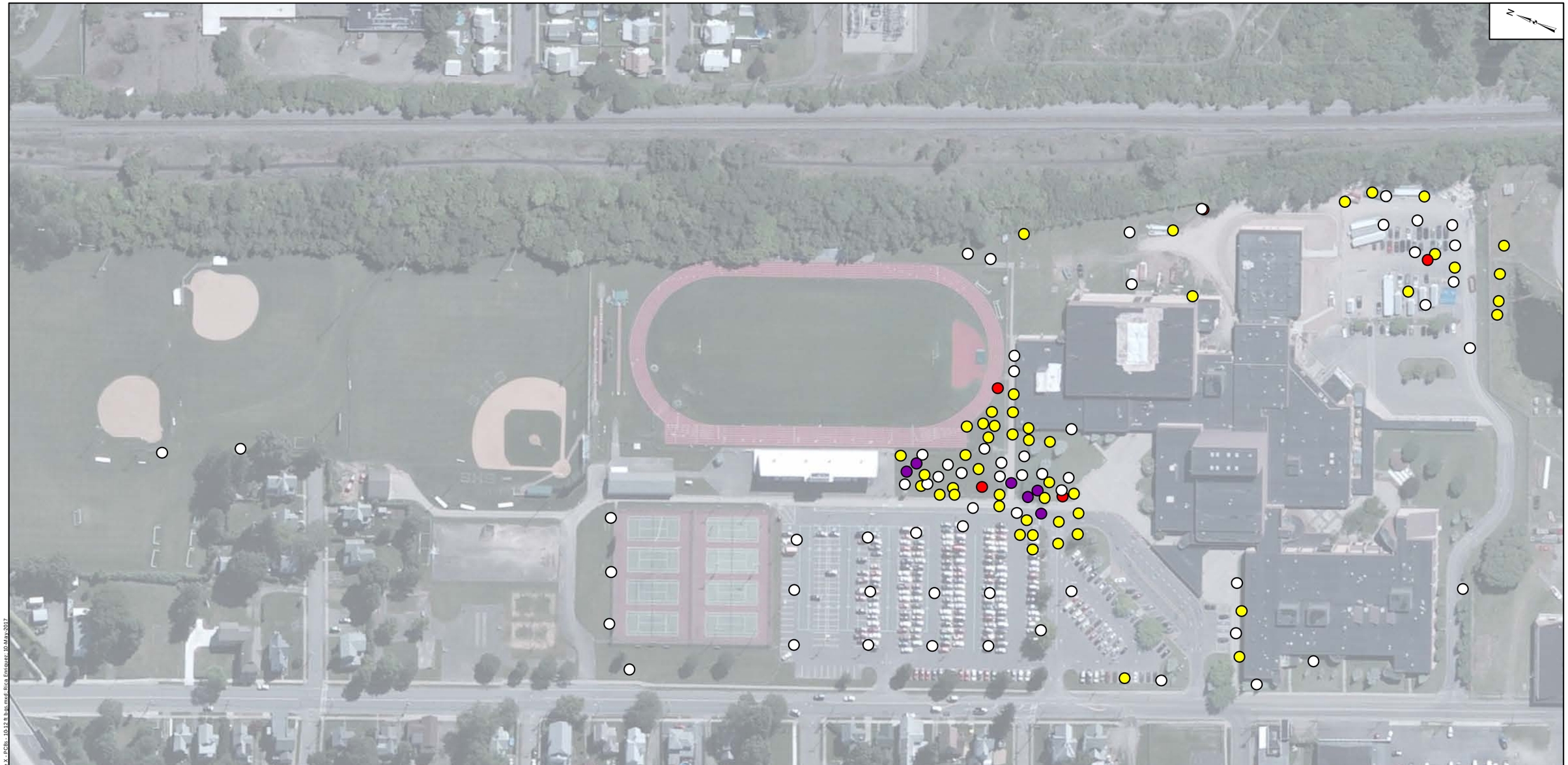
Former Sperry Remington - North Portion #808022
Elmira, New York

Geosyntec consultants

Columbia, Maryland | May 2017

Figure 21

\\minneapolis011\DATA\GIS\Elmira - MN0832\Maps\NYDEC AOC\SC Report\Figure X - PCBs - 8-10 ft bgs.mxd; Rica Enriquez; 10-May-2017



Legend

Total PCB Concentration

- Non-Detect
- >0 to 10 mg/kg
- >10 to 50 mg/kg
- >50 mg/kg

Notes
PCB - Polychlorinated Biphenyl
ft bgs - Feet below ground surface
mg/kg - milligram per kilogram

Proposed Cleanup Level – Total PCB concentration of ten (10) mg/kg

Aerial imagery accessed via ArcGIS Online and provided by Microsoft on 10 May 2017. Image is dated 2 June 2010.

150 75 0 150 Feet

Extent of PCBs in Soil (10-12 ft bgs)

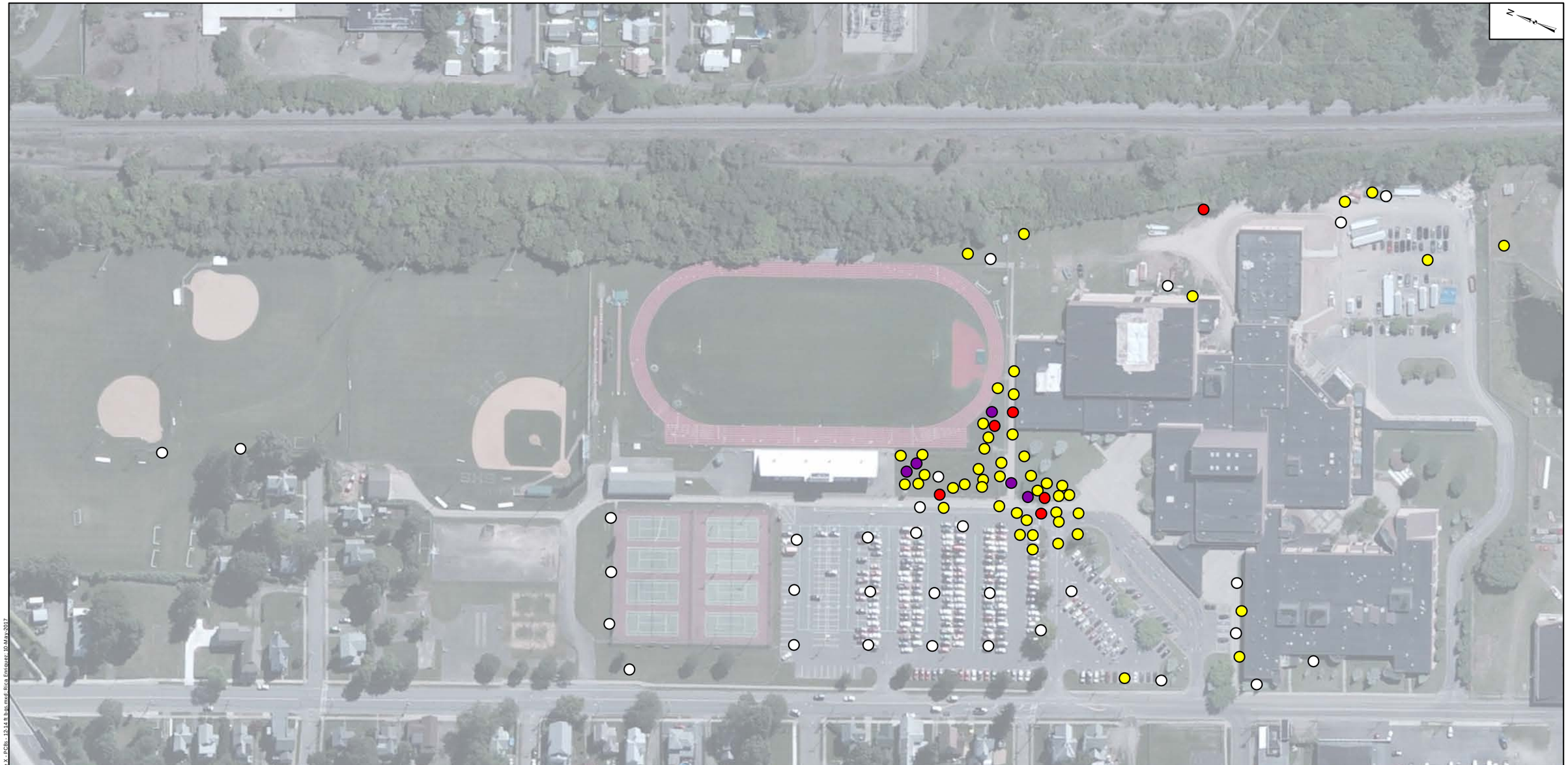
Former Sperry Remington - North Portion #808022
Elmira, New York

Geosyntec consultants

Columbia, Maryland | May 2017

Figure 22

\\minneapolis-01\DATA\GIS\Elmira - MN0822\Maps\NYDEC AOCs\SC Report\Figure X - PCBs - 10-12 ft bgs.mxd: Rica Enriquez; 10-May-2017



Legend

Total PCB Concentration

- Non-Detect
- >0 to 10 mg/kg
- >10 to 50 mg/kg
- >50 mg/kg

Notes
PCB - Polychlorinated Biphenyl
ft bgs - Feet below ground surface
mg/kg - milligram per kilogram

Proposed Cleanup Level – Total PCB concentration of ten (10) mg/kg

Aerial imagery accessed via ArcGIS Online and provided by Microsoft on 10 May 2017. Image is dated 2 June 2010.

150 75 0 150 Feet

Extent of PCBs in Soil (12-14 ft bgs)

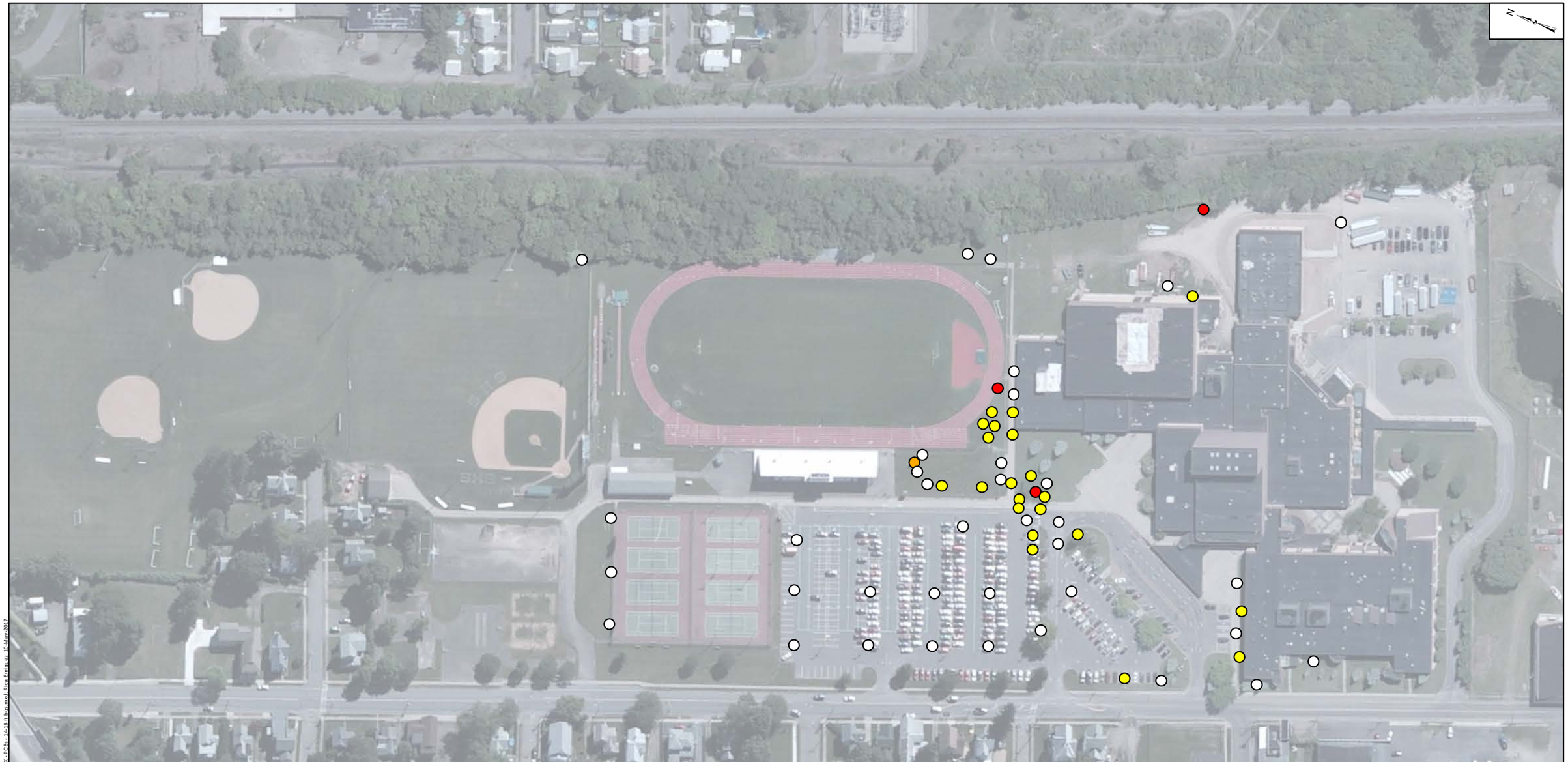
Former Sperry Remington - North Portion #808022
Elmira, New York

Geosyntec consultants

Columbia, Maryland | May 2017

Figure 23

\\minneapolis-01\DATA\GIS\Elmira - MN0822\Maps\NYDEC AOCs\SC Report\Figure X - PCBs - 12-14 ft bgs.mxd: Rica Enriquez; 10-May-2017



Legend

Total PCB Concentration

- Non-Detect
- >0 to 3.2 mg/kg
- >3.2 to 10 mg/kg
- >10 to 50 mg/kg
- >50 mg/kg

Notes
PCB - Polychlorinated Biphenyl
ft bgs - Feet below ground surface
mg/kg - milligram per kilogram

Protection of Groundwater Soil Cleanup Objective of 3.2 mg/kg (6 NYCRR Part 375)

Aerial imagery accessed via ArcGIS Online and provided by Microsoft on 10 May 2017. Image is dated 2 June 2010.

150 75 0 150 Feet

Extent of PCBs in Soil (14-16 ft bgs)

Former Sperry Remington - North Portion #808022
Elmira, New York

Geosyntec consultants

Columbia, Maryland | May 2017

Figure **24**

\\minneapolis01\DATA\GIS\Elmira - MN0832\Maps\NYDEC AOCs\SC Report\Figure X - PCBs - 14-16 ft bgs.mxd: Rica Enriquez; 10-May-2017

Legend

Total PCB Concentration

- Non-Detect
- >0 to 3.2 mg/kg
- >3.2 to 10 mg/kg
- >10 to 50 mg/kg
- >50 mg/kg

Notes
PCB - Polychlorinated Biphenyl
ft bgs - Feet below ground surface
mg/kg - milligram per kilogram

Protection of Groundwater Soil Cleanup Objective of 3.2 mg/kg (6 NYCRR Part 375)

Aerial imagery accessed via ArcGIS Online and provided by Microsoft on 10 May 2017. Image is dated 2 June 2010.

150 75 0 150 Feet

Extent of PCBs in Soil (16-18 ft bgs)

Former Sperry Remington - North Portion #808022
Elmira, New York

Geosyntec consultants

Columbia, Maryland | May 2017

Figure **25**

\\minneapolis-011\DATA\GIS\Elmira - MN0832\Maps\NYDEC AOCs\SC Report\Figure X - PCBs - 16-18 ft bgs.mxd; Rica Enriquez; 10-May-2017

Legend

Total PCB Concentration

- Non-Detect
- >0 to 3.2 mg/kg
- >3.2 to 10 mg/kg
- >10 to 50 mg/kg
- >50 mg/kg

Notes
PCB - Polychlorinated Biphenyl
ft bgs - Feet below ground surface
mg/kg - milligram per kilogram

Protection of Groundwater Soil Cleanup Objective of 3.2 mg/kg (6 NYCRR Part 375)

Aerial imagery accessed via ArcGIS Online and provided by Microsoft on 10 May 2017. Image is dated 2 June 2010.

150 75 0 150 Feet

Extent of PCBs in Soil (18-20 ft bgs)

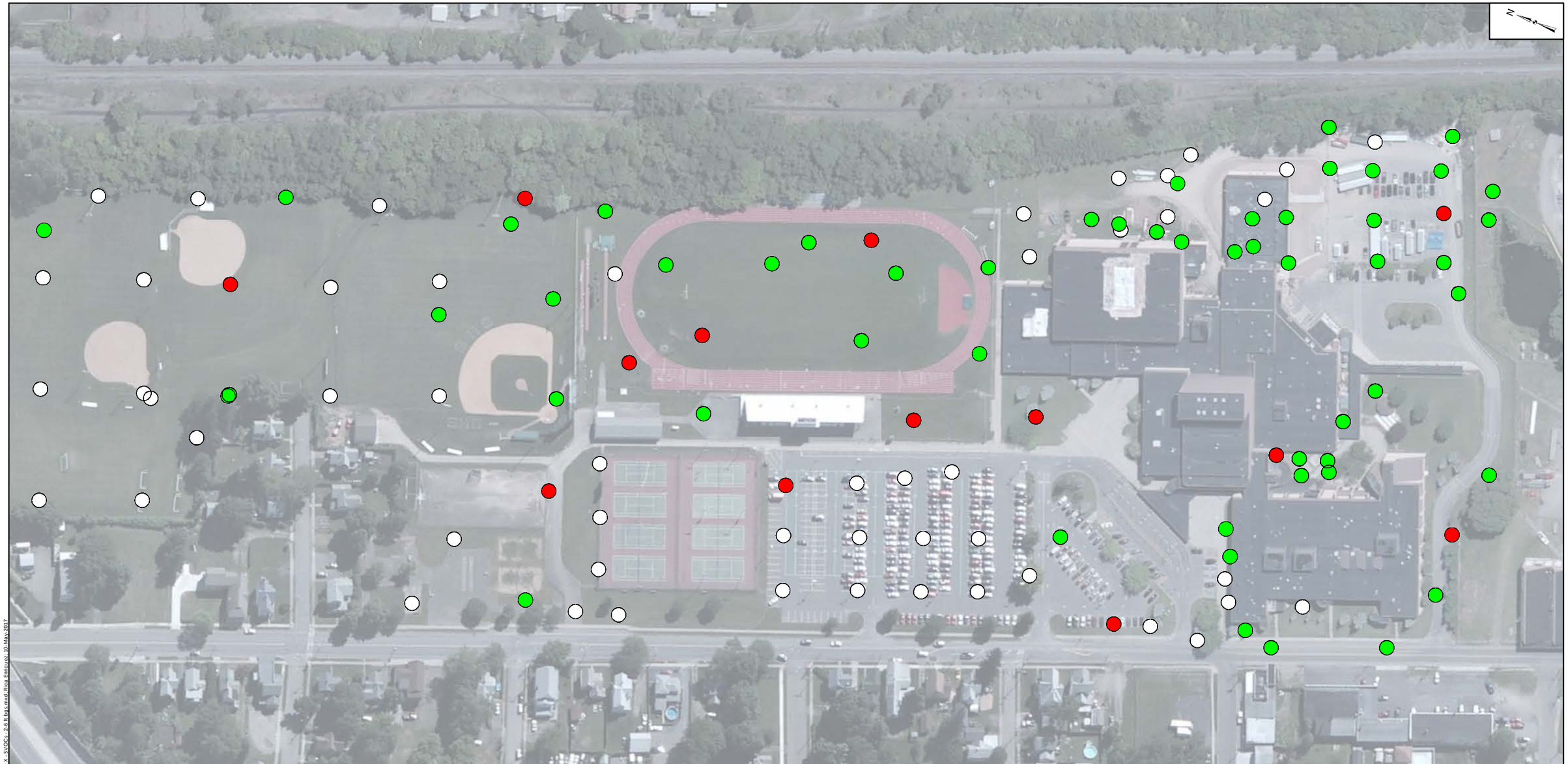
Former Sperry Remington - North Portion #808022
Elmira, New York

Geosyntec consultants

Columbia, Maryland | May 2017

Figure **26**

\\minneapolis-01\DATA\GIS\Elmira - MN0832\Maps\NYDEC AOCs\SC Report\Figure X - PCBs - 18-20 ft bgs.mxd:Rica Enriquez; 10-May-2017



Legend

SVOC Concentration in Soil

- Exceeds SCO
- Detected, does not exceed SCO
- Not Detected

Notes
ft bgs - Feet below ground surface
SCO - Soil Cleanup Objective
SVOCs - Semivolatile organic compounds

Screening criteria of soil within Elmira High School Property is the Restricted Residential Soil Cleanup Objective. Screening criteria of soil within the Former Scott Technologies Site is the Industriall Soil Cleanup Objective. (6 NYCRR Part 375)

Aerial imagery accessed via ArcGIS Online and provided by Microsoft on 10 May 2017. Image is dated 2 June 2010.

150 75 0 150 Feet

Extent of SVOCs in Soil (2-6 ft bgs)

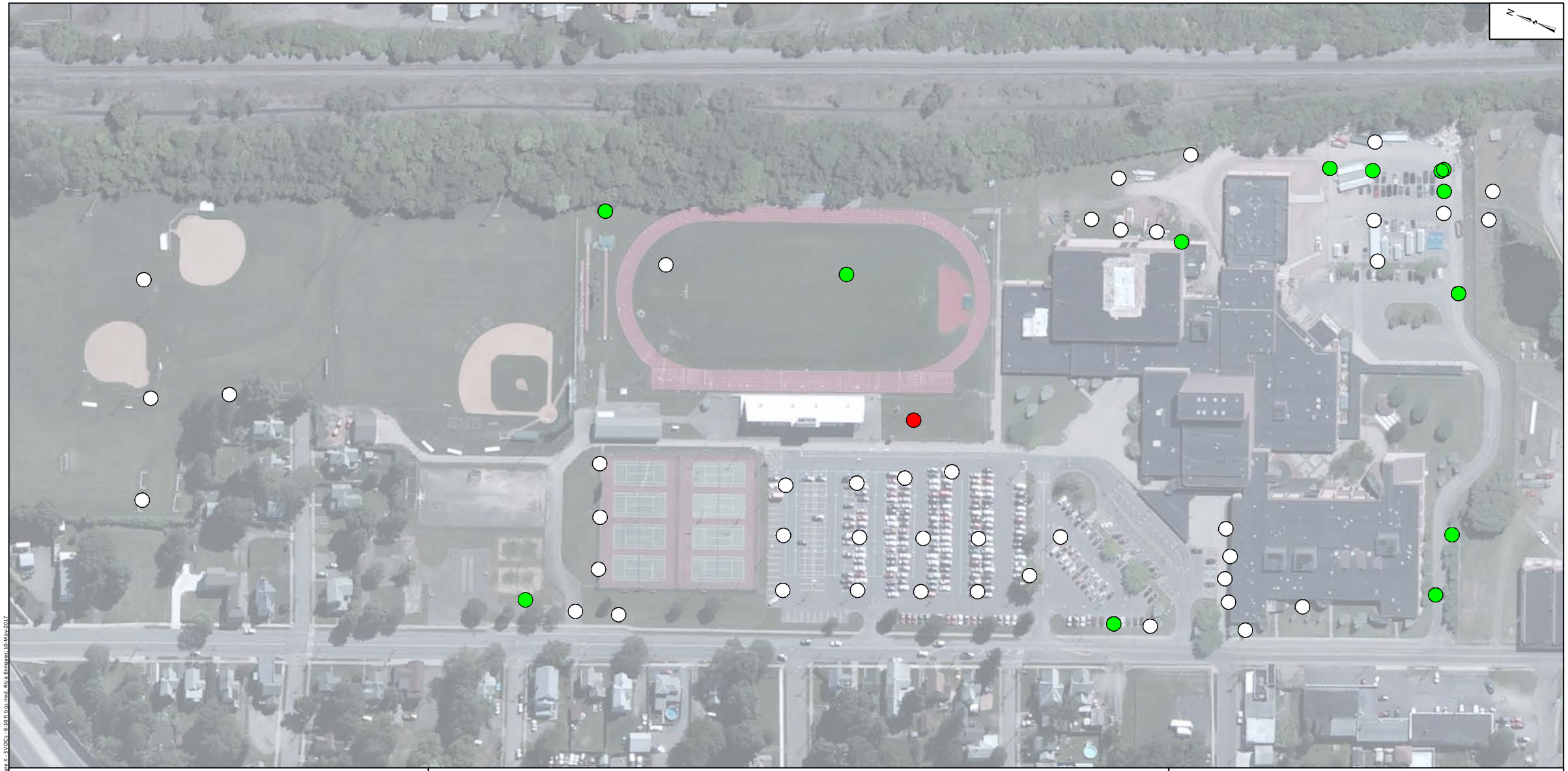
Former Sperry Remington - North Portion #808022
Elmira, New York

Geosyntec consultants

Columbia, Maryland | May 2017

Figure 27

\\minneapolis01\DATA\GIS\Elmira - MN0832\Maps\NYDEC AOCs\SC Report\Figure X - SVOCs - 2-6 ft bgs.mxd; Rica Enriquez; 10-May-2017



Legend

SVOC Concentration in Soil

- Exceeds SCO
- Detected, does not exceed SCO
- Not Detected

Notes
ft bgs - Feet below ground surface
SCO - Soil Cleanup Objective
SVOCs - Semivolatile organic compounds

Screening criteria of soil within Elmira High School Property is the Restricted Residential Soil Cleanup Objective. Screening criteria of soil within the Former Scott Technologies Site is the Industriall Soil Cleanup Objective. (6 NYCRR Part 375)

Aerial imagery accessed via ArcGIS Online and provided by Microsoft on 10 May 2017. Image is dated 2 June 2010.

150 75 0 150 Feet

Extent of SVOCs in Soil (6-10 ft bgs)

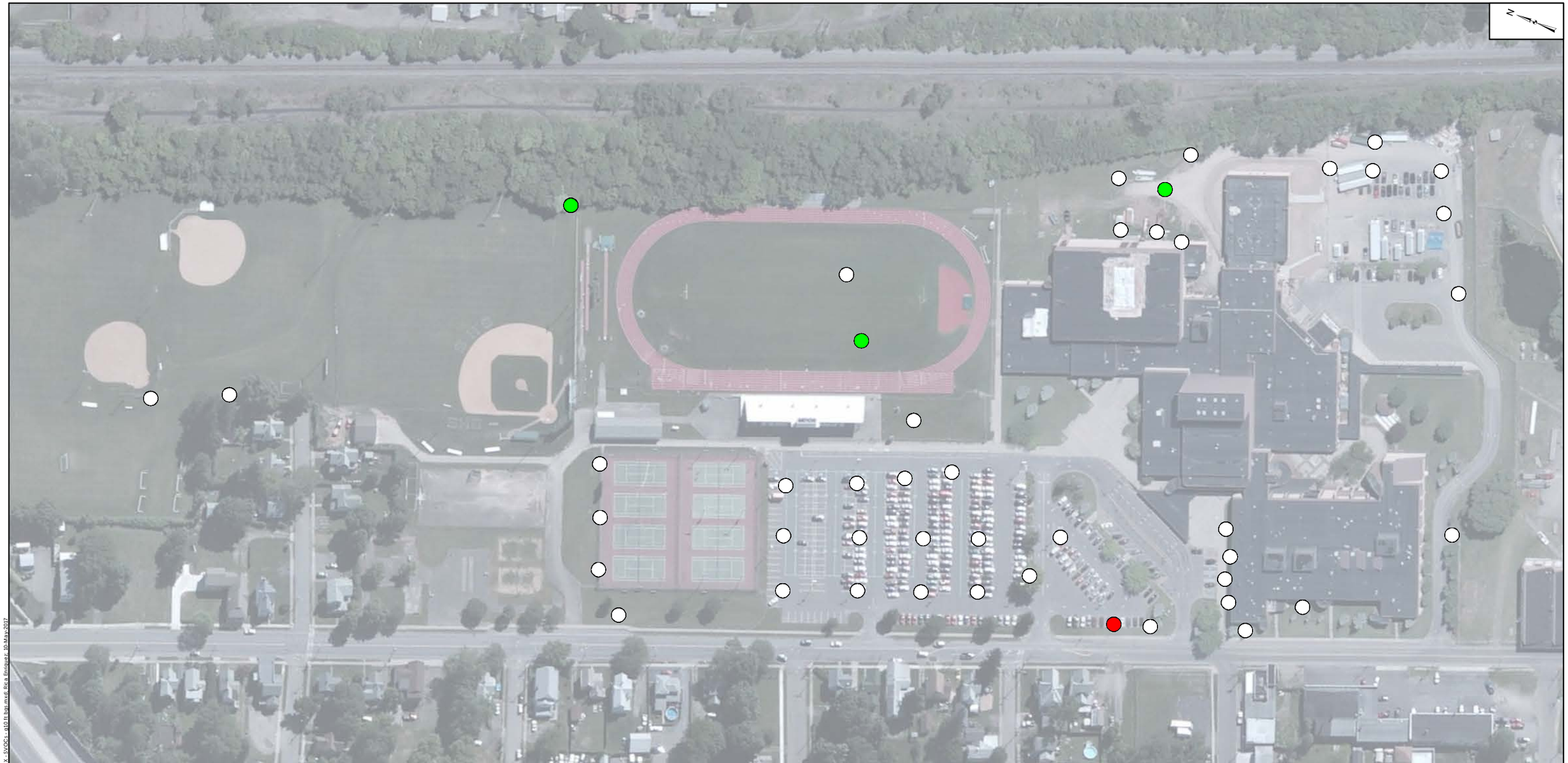
Former Sperry Remington - North Portion #808022
Elmira, New York

Geosyntec consultants

Columbia, Maryland | May 2017

Figure **28**

\\minneapolis-01\DATA\GIS\Elmira - MN0822\Maps\NYDEC AOC\15C Report\Figure X - SVOCs - 6-10 ft bgs.mxd; Rica Enriquez; 10-May-2017



Legend

SVOC Concentration in Soil

- Exceeds SCO
- Detected, does not exceed SCO
- Not Detected

Notes
ft bgs - Feet below ground surface
SCO - Soil Cleanup Objective
SVOCs - Semivolatile organic compounds

Screening criteria of soil within Elmira High School Property is the Restricted Residential Soil Cleanup Objective. Screening criteria of soil within the Former Scott Technologies Site is the Industriall Soil Cleanup Objective. (6 NYCRR Part 375)

Aerial imagery accessed via ArcGIS Online and provided by Microsoft on 10 May 2017. Image is dated 2 June 2010.

150 75 0 150 Feet

Extent of SVOCs in Soil (10 ft bgs to the Water Table)

Former Sperry Remington - North Portion #808022
Elmira, New York

Geosyntec consultants

Columbia, Maryland | May 2017

Figure 29

\\minneapolis-01\DATA\GIS\Elmira - MN0821\Maps\NYDEC AOCs\SC Report\Figure X - SVOCs - g10 ft bgs.mxd; Rica Enriquez; 10-May-2017

Legend

VOC Concentration in Soil

- Exceeds SCO
- Detected, does not exceed SCO
- Not Detected

Notes
ft bgs - Feet below ground surface
SCO - Soil Cleanup Objective
VOCs - Volatile organic compounds

Screening criteria of soil within Elmira High School Property is the Restricted Residential Soil Cleanup Objective. Screening criteria of soil within the Former Scott Technologies Site is the Industriall Soil Cleanup Objective. (6 NYCRR Part 375)

Aerial imagery accessed via ArcGIS Online and provided by Microsoft on 10 May 2017. Image is dated 2 June 2010.

150 75 0 150 Feet

Extent of VOCs in Soil (2-6 ft bgs)

Former Sperry Remington - North Portion #808022
Elmira, New York

Geosyntec consultants

Columbia, Maryland | May 2017

Figure **30**

\\minneapolis-01\DATA\GIS\Elmira - MN0821\Maps\NYDEC AOCs\SC Report\Figure X - VOCs - 2-6 ft bgs.mxd; Rica Enriquez; 10-May-2017

Legend

VOC Concentration in Soil

- Exceeds SCO
- Detected, does not exceed SCO
- Not Detected

Notes
ft bgs - Feet below ground surface
SCO - Soil Cleanup Objective
VOCs - Volatile organic compounds

Screening criteria of soil within Elmira High School Property is the Restricted Residential Soil Cleanup Objective. Screening criteria of soil within the Former Scott Technologies Site is the Industriall Soil Cleanup Objective. (6 NYCRR Part 375)

Aerial imagery accessed via ArcGIS Online and provided by Microsoft on 10 May 2017. Image is dated 2 June 2010.

150 75 0 150 Feet

Extent of VOCs in Soil (6-10 ft bgs)

Former Sperry Remington - North Portion #808022
Elmira, New York

Geosyntec consultants

Columbia, Maryland | May 2017

Figure **31**

\\minneapolis-01\DATA\GIS\Elmira - MN0821\Maps\NYDEC AOCs\SC Report\Figure X - VOCs - 6-10 ft bgs.mxd; Rica Enriquez; 10-May-2017

Legend

VOC Concentration in Soil

- Exceeds SCO
- Detected, does not exceed SCO
- Not Detected

Notes
ft bgs - Feet below ground surface
SCO - Soil Cleanup Objective
VOCs - Volatile organic compounds

Screening criteria of soil within Elmira High School Property is the Restricted Residential Soil Cleanup Objective. Screening criteria of soil within the Former Scott Technologies Site is the Industriall Soil Cleanup Objective. (6 NYCRR Part 375)

Aerial imagery accessed via ArcGIS Online and provided by Microsoft on 10 May 2017. Image is dated 2 June 2010.

150 75 0 150 Feet

Extent of VOCs in Soil (10 ft bgs to the Water Table)

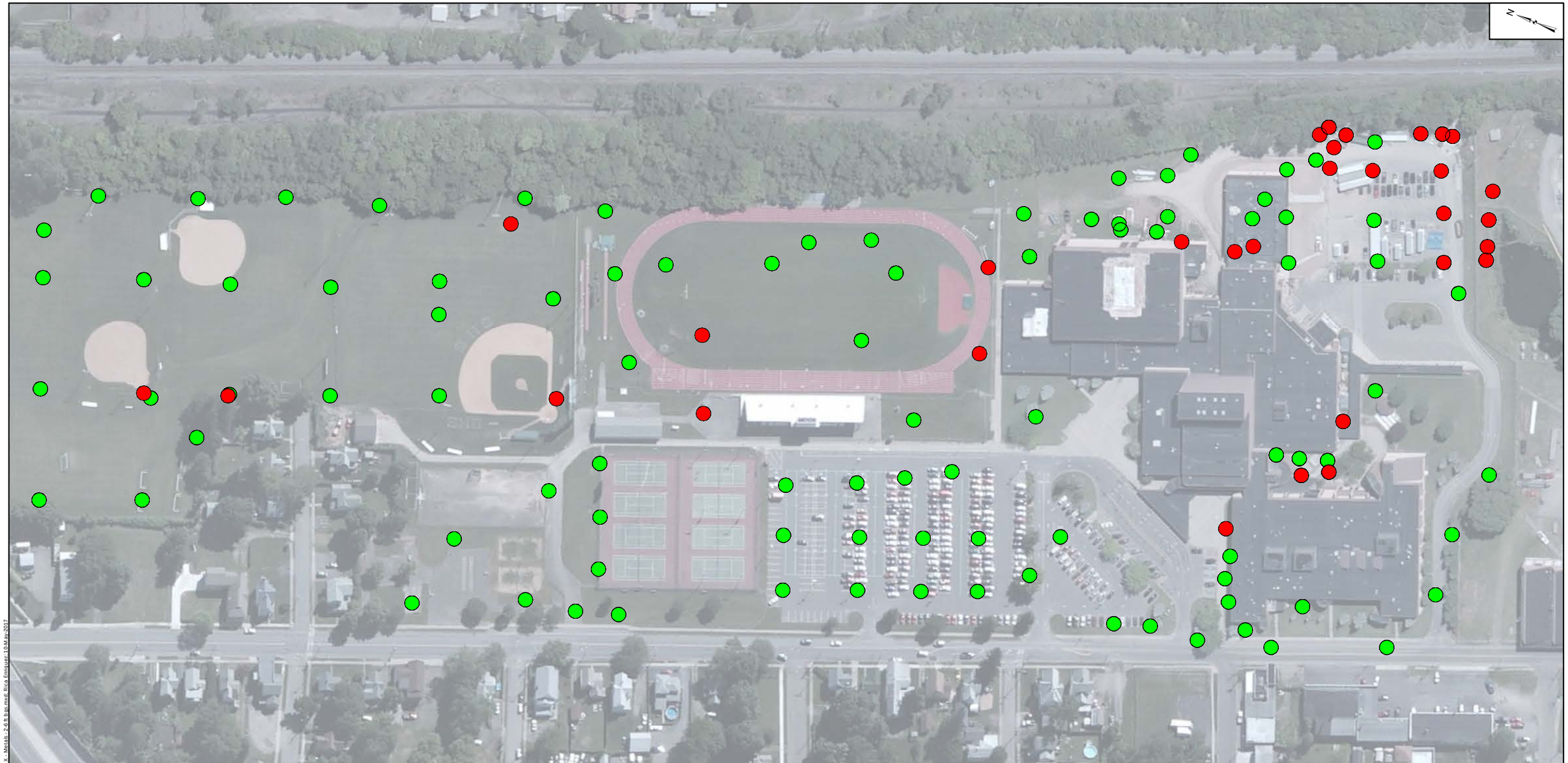
Former Sperry Remington - North Portion #808022
Elmira, New York

Geosyntec consultants

Columbia, Maryland | May 2017

Figure **32**

\\minneapolis-011\DATA\GIS\Elmira - MN0821\Maps\NYDEC AOCs\SC Report\Figure X - VOCs - @10 ft bgs.mxd; Rica Enriquez; 10-May-2017



Legend

Metal Concentration in Soil

- Exceeds SCO
- Detected, does not exceed SCO
- Not Detected

Notes
ft bgs - Feet below ground surface
SCO - Soil Cleanup Objective

Screening criteria of soil within Elmira High School Property is the Restricted Residential Soil Cleanup Objective. Screening criteria of soil within the Former Scott Technologies Site is the Industriall Soil Cleanup Objective. (6 NYCRR Part 375)

Aerial imagery accessed via ArcGIS Online and provided by Microsoft on 10 May 2017. Image is dated 2 June 2010.

150 75 0 150 Feet

Extent of Metals in Soill (2-6 ft bgs)

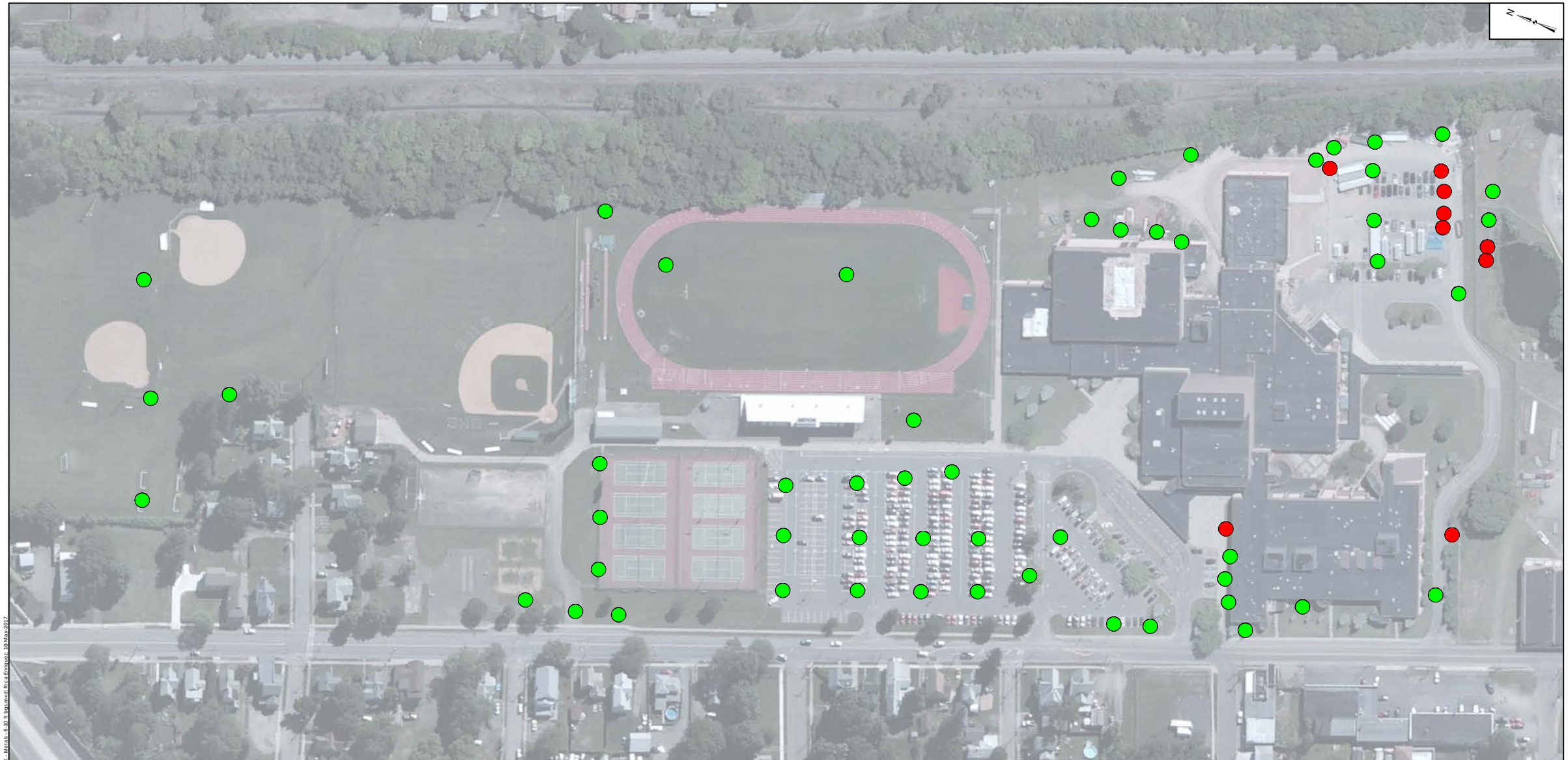
Former Sperry Remington - North Portion #808022
Elmira, New York

Geosyntec consultants

Columbia, Maryland | May 2017

Figure 33

\\minneapolis01\DATA\GIS\Elmira - MN0832\Maps\NYDEC AOC\13C Report\Figure X - Metals - 2-6 ft bgs.mxd; Rica Enriquez; 10-May-2017



Legend

Metal Concentration in Soil

- Exceeds SCO
- Detected, does not exceed SCO
- Not Detected

Notes
ft bgs - Feet below ground surface
SCO - Soil Cleanup Objective

Screening criteria of soil within Elmira High School Property is the Restricted Residential Soil Cleanup Objective. Screening criteria of soil within the Former Scott Technologies Site is the Industriall Soil Cleanup Objective. (6 NYCRR Part 375)

Aerial imagery accessed via ArcGIS Online and provided by Microsoft on 10 May 2017. Image is dated 2 June 2010.

150 75 0 150 Feet

Extent of Metals in Soill (6-10 ft bgs)

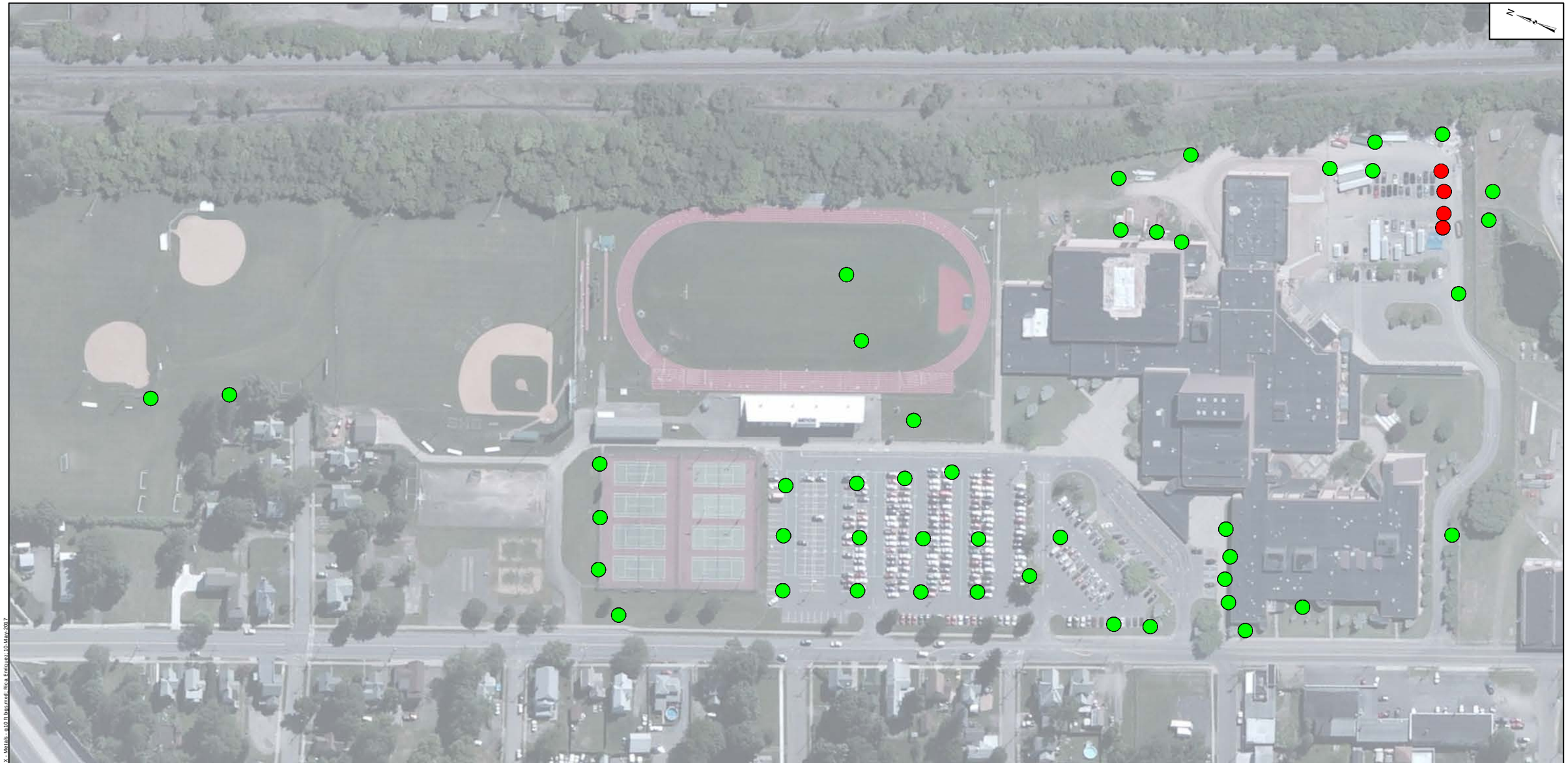
Former Sperry Remington - North Portion #808022
Elmira, New York

Geosyntec consultants

Columbia, Maryland | May 2017

Figure 34

\\minneapolis-01\DATA\GIS\Elmira - MN0822\Maps\NYDEC AOC\15C Report\Figure X - Metals - 6-10 ft bgs.mxd; Rica Enriquez; 10-May-2017



Legend

Metal Concentration in Soil

- Exceeds SCO
- Detected, does not exceed SCO
- Not Detected

Notes
ft bgs - Feet below ground surface
SCO - Soil Cleanup Objective

Screening criteria of soil within Elmira High School Property is the Restricted Residential Soil Cleanup Objective. Screening criteria of soil within the Former Scott Technologies Site is the Industriall Soil Cleanup Objective. (6 NYCRR Part 375)

Aerial imagery accessed via ArcGIS Online and provided by Microsoft on 10 May 2017. Image is dated 2 June 2010.

150 75 0 150 Feet

Extent of Metals in Soill (10 ft bgs to Water Table)

Former Sperry Remington - North Portion #808022
Elmira, New York

Geosyntec consultants

Columbia, Maryland | May 2017

Figure **35**

\\minneapolis-011\DATA\GIS\Elmira - MN0832\Maps\NYDEC AOCs\SC Report\Figure X - Metals - g10 ft bgs.mxd; Rica Enriquez; 10-May-2017

Appendix C
Community Air Monitoring Plan

Appendix 1A
New York State Department of Health
Generic Community Air Monitoring Plan

Overview

A Community Air Monitoring Plan (CAMP) requires real-time monitoring for volatile organic compounds (VOCs) and particulates (i.e., dust) at the downwind perimeter of each designated work area when certain activities are in progress at contaminated sites. The CAMP is not intended for use in establishing action levels for worker respiratory protection. Rather, its intent is to provide a measure of protection for the downwind community (i.e., off-site receptors including residences and businesses and on-site workers not directly involved with the subject work activities) from potential airborne contaminant releases as a direct result of investigative and remedial work activities. The action levels specified herein require increased monitoring, corrective actions to abate emissions, and/or work shutdown. Additionally, the CAMP helps to confirm that work activities did not spread contamination off-site through the air.

The generic CAMP presented below will be sufficient to cover many, if not most, sites. Specific requirements should be reviewed for each situation in consultation with NYSDOH to ensure proper applicability. In some cases, a separate site-specific CAMP or supplement may be required. Depending upon the nature of contamination, chemical- specific monitoring with appropriately-sensitive methods may be required. Depending upon the proximity of potentially exposed individuals, more stringent monitoring or response levels than those presented below may be required. Special requirements will be necessary for work within 20 feet of potentially exposed individuals or structures and for indoor work with co-located residences or facilities. These requirements should be determined in consultation with NYSDOH.

Reliance on the CAMP should not preclude simple, common-sense measures to keep VOCs, dust, and odors at a minimum around the work areas.

Community Air Monitoring Plan

Depending upon the nature of known or potential contaminants at each site, real-time air monitoring for VOCs and/or particulate levels at the perimeter of the exclusion zone or work area will be necessary. Most sites will involve VOC and particulate monitoring; sites known to be contaminated with heavy metals alone may only require particulate monitoring. If radiological contamination is a concern, additional monitoring requirements may be necessary per consultation with appropriate DEC/NYSDOH staff.

Continuous monitoring will be required for all ground intrusive activities and during the demolition of contaminated or potentially contaminated structures. Ground intrusive activities include, but are not limited to, soil/waste excavation and handling, test pitting or trenching, and the installation of soil borings or monitoring wells.

Periodic monitoring for VOCs will be required during non-intrusive activities such as the collection of soil and sediment samples or the collection of groundwater samples from existing monitoring wells. “Periodic” monitoring during sample collection might reasonably consist of taking a reading upon arrival at a sample location, monitoring while opening a well cap or

overturning soil, monitoring during well baling/purging, and taking a reading prior to leaving a sample location. In some instances, depending upon the proximity of potentially exposed individuals, continuous monitoring may be required during sampling activities. Examples of such situations include groundwater sampling at wells on the curb of a busy urban street, in the midst of a public park, or adjacent to a school or residence.

VOC Monitoring, Response Levels, and Actions

Volatile organic compounds (VOCs) must be monitored at the downwind perimeter of the immediate work area (i.e., the exclusion zone) on a continuous basis or as otherwise specified. Upwind concentrations should be measured at the start of each workday and periodically thereafter to establish background conditions, particularly if wind direction changes. The monitoring work should be performed using equipment appropriate to measure the types of contaminants known or suspected to be present. The equipment should be calibrated at least daily for the contaminant(s) of concern or for an appropriate surrogate. The equipment should be capable of calculating 15-minute running average concentrations, which will be compared to the levels specified below.

1. If the ambient air concentration of total organic vapors at the downwind perimeter of the work area or exclusion zone exceeds 5 parts per million (ppm) above background for the 15-minute average, work activities must be temporarily halted and monitoring continued. If the total organic vapor level readily decreases (per instantaneous readings) below 5 ppm over background, work activities can resume with continued monitoring.

2. If total organic vapor levels at the downwind perimeter of the work area or exclusion zone persist at levels in excess of 5 ppm over background but less than 25 ppm, work activities must be halted, the source of vapors identified, corrective actions taken to abate emissions, and monitoring continued. After these steps, work activities can resume provided that the total organic vapor level 200 feet downwind of the exclusion zone or half the distance to the nearest potential receptor or residential/commercial structure, whichever is less - but in no case less than 20 feet, is below 5 ppm over background for the 15-minute average.

3. If the organic vapor level is above 25 ppm at the perimeter of the work area, activities must be shutdown.

4. All 15-minute readings must be recorded and be available for State (DEC and NYSDOH) personnel to review. Instantaneous readings, if any, used for decision purposes should also be recorded.

Particulate Monitoring, Response Levels, and Actions

Particulate concentrations should be monitored continuously at the upwind and downwind perimeters of the exclusion zone at temporary particulate monitoring stations. The particulate monitoring should be performed using real-time monitoring equipment capable of measuring particulate matter less than 10 micrometers in size (PM-10) and capable of integrating over a period of 15 minutes (or less) for comparison to the airborne particulate action level. The equipment must be equipped with an audible alarm to indicate exceedance of the action level. In addition, fugitive dust migration should be visually assessed during all work activities.

1. If the downwind PM-10 particulate level is 100 micrograms per cubic meter (mcg/m^3) greater than background (upwind perimeter) for the 15-minute period or if airborne dust is observed leaving the work area, then dust suppression techniques must be employed. Work may continue with dust suppression techniques provided that downwind PM-10 particulate levels do not exceed 150 mcg/m^3 above the upwind level and provided that no visible dust is migrating from the work area.

2. If, after implementation of dust suppression techniques, downwind PM-10 particulate levels are greater than 150 mcg/m^3 above the upwind level, work must be stopped and a re-evaluation of activities initiated. Work can resume provided that dust suppression measures and other controls are successful in reducing the downwind PM-10 particulate concentration to within 150 mcg/m^3 of the upwind level and in preventing visible dust migration.

3. All readings must be recorded and be available for State (DEC and NYSDOH) and County Health personnel to review.

December 2009