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27 March 2025

Mr. Glenn May
New York State Department of Environmental Conservation
Division of Environmental Remediation
625 Broadway
Albany, New York 12233-7017

RE: Supplemental Remedial Investigation
Contract/Work Assignment No. D009806-16
5565 River Road Site Tonawanda, New York
Site No. 915239

This Letter Work Plan describes the activities proposed for performance supplemental remedial investigation (SRI) at the 5565 River Road Site in Tonawanda, New York. This work is being carried out by EA Engineering and Geology, P.C. and its affiliate EA Science and Technology (EA) under Work Assignment D009806-16. The SRI is being conducted to refine the extent of polychlorinated biphenyls (PCBs) and metals in soil and surface water, evaluate per- and polyfluoroalkyl substances (PFAS) in soil, and to determine if elevated radioactive materials are present at the site.

1. SITE DESCRIPTION AND BACKGROUND

The subject site is located at 5565 River Road in the Town of Tonawanda, Erie County, New York. The property is a single parcel consisting of approximately 37 acres. The site is defined as the northern 24-acre portion of this parcel (**Figure 1**). The property is bounded on the west by vacant, forested land and a subsurface crude oil pipeline; on the south by commercial property; on the east by a gravel road; and on the north by a truck terminal. Access to the 5565 River Road site is by a gravel drive on the adjacent property owned by the Town of Tonawanda.

Three creeks traverse the site – Rattlesnake Creek in the northern portion of the site, and two unnamed creeks in the central and southern portions of the site, which for the ease of identification are referred to as Middle Creek and South Creek, respectively. All three creeks discharge to Two Mile Creek to the east, which ultimately discharges to the Niagara River approximately 2,500 feet (ft) downstream of the site.

The 5565 River Road site was operated as a dump for industrial fill material (primarily fly ash and foundry sand) from the 1960s through the 1990s. Aerial photographs indicate that dumping at the site had ended sometime before 2005 and trees were present at the former disposal areas. The site is currently vacant and is zoned by the Town of Tonawanda as Waterfront Industrial District. Surrounding land use consists of commercial/industrial properties zoned Waterfront Business District and Waterfront Industrial District.

The remedial investigation determined that the primary constituents of concern at the site are PCBs, metals, and semivolatile organic compounds.[1] Volatile organic compounds are a secondary chemical of potential concern at the site.

On 30 April 2024, the NYSDEC Radioactive Materials Management Section (RMMS) performed a preliminary survey of the site to determine the potential for material with elevated activity and possible technologically enhanced naturally occurring radioactive materials (TENORM). The conclusions of the preliminary survey indicated that elevated material was encountered in areas known to contain fly ash and foundry sand. As a result, RMMS requested that further investigations be conducted to characterize and map the extent of elevated material on the site. The RMMS Trip Report from the preliminary survey is included as **Attachment A.**

A radiological surface scan was performed by Greater Radiological Dimensions (GRD) in November 2024. GRD is a NYSDOH licensed D&D contractor. The objective of the surface scan was to produce a gamma radiation map of the site and to characterize areas of elevated radiation within the boundaries of the site depicted on **Figure 2**. This area was subject to historical dumping operations of fly ash and foundry sand. The survey followed the requirements of DMM-5 / Management of Soils Contaminated with TENORM (**Attachment B**). The background screening area (shown on **Figure 2**) was selected because it represents background conditions in the vicinity of the site but is located outside of the area where historical dumping took place. Background screening levels were recorded in the same location each morning prior to screening at the Site, and are presented on **Table 1**. The average background level was 5,920 counts per minute (CPM). GRD utilized the RadScout gamma survey system coupled with a Ludlum model 3000 survey meter. The survey meter was paired with a Ludlum model 44-10 NaI scintillator external probe to collect gamma measurements. Radiological data were tied to a GPS coordinate (sub-meter accuracy) and stored in a binary file. Data was viewable in real time to identify areas of elevated gamma radiation while surveying. The coordinates of the locations that fail the screening were defined by readings that exceed 1.5 times background levels (greater than 8,880 CPM). Field locations that failed the screening were physically marked with stakes and flagging and will be used to confirm further investigation and soil sampling locations. The results of the survey were compiled for evaluation and selection of sampling locations (**Figure 3**).

2. SUPPLEMENTAL REMEDIAL INVESTIGATION

This SRI is being conducted to refine the extent of PCBs in soil; confirm background concentrations of PCBs and metals in surface water; evaluate PFAS in soil; determine whether TENORM materials are present; and to conduct a hydrologic study to help understand the interaction of surface water and shallow perched groundwater at the site. This SRI Letter Work Plan, in conjunction with EA's Generic Field Activities Plan,[2] will provide the basis for conducting field activities. The field sampling procedures and protocols, number of environmental samples to be collected from each media, as well as the quality assurance (QA)/quality control (QC)

[1] EA. 2020. *Remedial Investigation Report 5565 River Road Site (915239), Erie County, Tonawanda, New York*. April.
[2] EA. 2020. *Generic Field Activities Plan for Work Assignments under NYSDEC Contract D009806.* Revision 01. April.

procedures will be performed per EA's Generic Quality Assurance Project Plan[3]. In addition, field investigation activities will be conducted in a manner consistent with the EA Generic HASP developed for WAs conducted under Standby Contract No. D009806 (EA 2020)[4]. A site-specific HASP Addendum is included as **Attachment C**. Daily field reports will be completed for each day field activities are conducted and will be submitted to the NYSDEC Project Manager via e-mail. Field and sampling procedures will be photographically documented. The overall protocol and procedures for this SRI are in accordance with New York State Department of Environmental Conservation (NYSDEC) *Division of Environmental Remediation (DER)-10 Technical Guidance for Site Investigation and Remediation* (2010).[5]

The following tasks will be completed as part of this field investigation:

- Soil sampling (contaminant and radiological)
- Surface water sampling
- Hydrologic study.

2.1 CONTAMINANT SOIL SAMPLING

Soil samples will be collected from various locations across the site (**Figure 4**) to refine the extent of PCBs and metals, and to characterize PFAS concentrations. Boring locations along the eastern site boundary (SB-J03, SB-J07, SB-J08, SB-J09, SB-J15, and SB-J32) were selected due to the presence of PCB concentrations greater than 50ppm at the extent of sampling conducted during the RI. Soil boring locations adjacent to South Creek were selected to fill in gaps of PCB and metals data in that area. The soil borings for PFAS analysis were selected to correspond to the monitoring wells where elevated PFAS concentrations were observed in groundwater during previous sampling. The goal of the PFAS sampling in soil is to determine if there is an on-site source of PFAS that may be contributing to the groundwater concentrations. Note that two soil locations for PFAS analysis are located adjacent to MW-12 since that is the well that exhibited the highest PFAS concentrations in groundwater. Soil sample locations, sampling intervals, and laboratory analyses are summarized on **Table 2**.

A drilling subcontractor (Matrix), under the oversight of EA, will advance the borings using a track mounted Geoprobe® rig. The site is heavily vegetated, and the terrain is uneven. If needed, the vegetation at the locations of the proposed borings (and paths between) will be cleared by EA. Clearing will be conducted with a rented skid steer with brush cutter attachment. Clearing will be limited to the areas where sampling is taking place but will be expansive enough to allow unimpeded access by the drill rig and sampling crews. There are several boring locations that may not be accessible with the drill rig, even after clearing, specifically those along the northern side of South Creek. If the drill rig cannot access those areas, EA will attempt to collect samples using a hand auger.

[3] EA. 2020. *Generic Quality Assurance Project Plan for Work Assignments under NYSDEC Contract D009806.* April.
[4] EA. 2011. *Generic HASP for Work Assignments under NYSDEC Contract D007624.* October.
[5] NYSDEC. 2010. *DER-10 Technical Guidance for Site Investigation and Remediation*. May.

All recovered soil will be characterized by color, texture, and moisture content. Visible staining, sheens, and odors will also be noted if observed. The soil will be screened for volatile organic compounds using a photoionization detector. Soil borings will be backfilled with cuttings, with the remaining space completed to rough grade with hydrated bentonite chips. The drill tooling will be decontaminated between locations using the double wash/rinse method for decontaminating non-porous surfaces. Decontamination rinse water will be discharged to the ground surface immediately adjacent to each boring. PFAS free water will be used for decontamination during PFAS sampling activities. If lab-certified PFAS free water is not available, EA will collect a sample from the driller's water holding tank for analysis of PFAS by EPA Method 1633.

Soil samples will be submitted to ALS Group USA of Rochester, New York (ALS) and analyzed for PCBs via U.S. Environmental Protection Agency (EPA) Method 8082, metals by EPA Method 6010, and PFAS compounds by EPA Method 1633. Sampling for PFAS compounds will be conducted in conformance with EA's Standard Operating Procedure No. 073 for Sampling for Per- and Polyfluorinated Alkyl Substances. QA/QC samples for soil analysis will include the collection of blind field duplicates and matrix spike (MS)/matrix spike duplicate (MSD) pairs at a frequency of 5 percent. An equipment blank will be collected for each day that sampling takes place. Soil samples will be submitted for analysis on a standard 10-day turnaround time (TAT).

Community air monitoring will be performed per the requirements of the New York State Department of Health Generic Community Air Monitoring Plan (CAMP) (**Attachment D**). CAMP stations will be established upwind and downwind of the immediate work area. Due to the size of the site and the temporary nature of the immediate work areas, CAMP stations will be moved as appropriate as the work location changes, and due to changes in wind direction.

2.2 RADIOLOGICAL SOIL SAMPLING

A work plan was prepared by GRD (**Attachment E**) based on the results of the radiological surface scan. The selected soil sample locations were based on gamma radiation that exceeded 8,880 CPM (1.5 times background) during the surface scan and known locations of deeper fly ash and foundry sand piles at the site. Proposed sample locations are depicted on **Figure 3** and summarized in **Table 2**.

- RAD-1 and RAD-2 were selected to characterize areas of known foundry sand piles with gamma counts exceeding 1.5x background. Boring depths are approximately 15-18 feet.
- RAD-3 and RAD-4 were selected to characterize areas of known fly ash with gamma counts exceeding 1.5x background. The depth at RAD-3 is approximately 12 feet; the RAD-4 depth is approximately 9 feet.
- RAD-5 was selected for known fly ash and gamma counts in the southern area of the site exceeding 1.5 background. The boring depth at RAD-5 is approximately 6 feet. The collection of samples from this location are intended to be representative of
- RAD-6 was selected to characterize the wetland area near the northwest corner of the site with gamma counts exceeding 1.5x background. The boring depth at location 6 is approximately 3 feet.

The radiological sampling scope will include logging for gamma counts, and collection of soil samples for the following analyses:

- Gamma Spec including Radium-226 and radium-228 (DOE HASL 300, 4.5.2.3/Ga-01-R, 20 day in-growth)
- Gross Alpha/Beta (EPA 900.0/SW846 9310/SM 7110B Modified)
- Alpha Spec for Uranium (DOE EML HASL-300, U-02-RC Modified)
- Thorium (DOE EML HASL-300, Th-01-RC Modified).

The concentrations of radium-226 will dictate how TENORM is managed. Per section IV of DMM-5 there are different management requirements for the types of TENORM that may be discovered:

- TENORM (background-comparable, below 5 pCi/g of radium-226):
  - NYSDEC may grant a variance to allow the excavated TENORM to be returned to the excavation and will require an approved institutional control be put in place.
- TENORM fill (between 5 pCi/g and 15 pCi/g of radium-226):
  - NYSDEC may grant a variance to allow TENORM fill to be returned to the excavation if the following conditions are met:
    1. The site where the TENORM fill is found contains undisturbed TENORM fill;
    2. Excavated TENORM fill is handled in conformance with the submitted and approved TENORM management plan;
    3. An appropriate and approved institutional control is put in place; and
    4. The TENORM fill does not exceed 15 pCi/g of radium-226.
- TENORM waste (above 15 pCi/g of radium-226):
  - TENORM waste is considered a regulated waste per 6 NYCRR Part 380 and must be disposed of in accordance with appropriate regulatory requirements at an authorized disposal facility.

If the supplemental survey and sampling determine that TENORM is present at the site, a TENORM management plan will be developed and submitted for review and approval by RMMS. Details regarding performance of an equipment release survey to prevent the tracking of radiological material from the site are provided in Section 2 of **Appendix E**.

2.3 CONTAMINANT SURFACE WATER SAMPLING

The proposed locations of the surface water samples are presented on **Figure 5**. Surface water sample SW-53 was selected to supplement background conditions in Middle Creek. Samples DW-54 and SW-55 were selected to characterize background conditions in Two-Mile Creek. Field personnel will collect the surface water sample by wading into the stream (starting at the downstream location) to reach the desired sample location. If the water is sufficiently deep, surface water samples will be collected using the sample container itself. Otherwise, surface water samples will be collected with a dipper, beaker, or pond sampler. If needed, dedicated samplers will be used at each location to avoid cross contamination.

The approximate location of the sample will be noted in the field logbook. A high-precision global positioning system (GPS) unit will be utilized to collect the location of the surface water samples. Field measurement of pH, dissolved oxygen, temperature, turbidity, salinity, and specific conductivity will be obtained and recorded in the field logbook. Surface water sampling will be conducted in conformance with the Standard Operating Procedure No. 073 for Sampling for Per- and Polyfluorinated Alkyl Substances.

Surface water samples will be submitted to ALS and analyzed for metals by EPA Method 6010 and PCBs by EPA Method 8082. QA/QC samples for surface water analysis will include the collection of a blind field duplicate. Surface water samples will be submitted for analysis on a standard 10-day TAT.

2.4 HYDROLOGIC STUDY

Three surface water channels bisect the north, middle, and south sections of the site. The northern surface water channel is referred to as Rattlesnake Creek, the middle channel is called Middle Creek, and the southern channel is called South Creek. The three channels are thought to flow northwesterly across the site towards Two Mile Creek which is a tributary of the Niagara River. Rattlesnake Creek is shown on figures to be approximately 1,300-foot-long culvert pipe that transitions to an open channel then to a culvert pipe under Two Mile Creek Rd. draining to Two Mile Creek approximately 1,100 feet southeast of the Niagara River. Middle Creek is depicted as an open channel across the site that transitions to a 24-inch diameter culvert at the eastern site boundary. South Creek is depicted as culvert across the site that transitions to an open channel approximately 300 feet beyond the site boundary. South Creek flows approximately 900 feet as an open channel flow before entering the Middle Creek Culvert pipe under Two Mile Creek Rd. draining to Two Mile Creek approximately 2,500 feet southeast of the Niagara River.

Topographic maps prepared from previous site surveys indicate areas in which water may pond. Survey information of the various culvert pipes also indicates that site drainage may be more complicated than what is described above. Pressure transducer RC-01 will be installed within or proximally to known or suspected drainage infrastructure downstream of the site as shown on **Figure 6**.

Three piezometers (PZ-01, PZ-11, and PZ-13) will be installed in areas of ponded water adjacent to monitoring wells MW-01, MW-11, and MW-13 as shown on **Figure 6**. Transducers will be placed in each piezometer and corresponding monitoring well to determine the interaction of ponded surface water and the perched groundwater at the site. One pressure transducer will be placed onsite to measure and record atmospheric pressure.

Due to the complexity in site infrastructure and topography, EA anticipates that the investigation may be an iterative process where transducers are installed, the data is evaluated, site knowledge is acquired, and transducers are relocated to refine accuracy of the water balance.

3. PROJECT SCHEDULE

The schedule for the environmental sampling work, and radiological sampling is contingent upon approval of this work plan and coordination and scheduling with EA's subcontractors. The estimated timeframe for completion of the field work is during spring 2025. Laboratory results are anticipated within 30 days of receipt at the lab. Results of the SRI will be evaluated and compiled for discussion with NYSDEC.

Please contact Adam Etringer at aetringer@eaest.com or 315-565-6564 if you have any questions about the work described herein.

Sincerely,

EA ENGINEERING AND GEOLOGY, P.C.

Donald Conan, P.E., P.G.
Program Manager

EA SCIENCE AND TECHNOLOGY

Adam Etringer
Senior Project Manager

Figures

Table

Attachments

Figures

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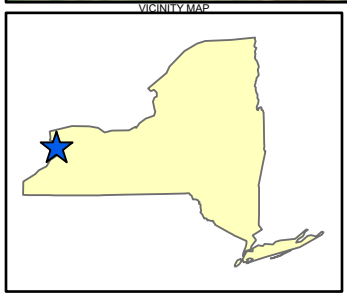
VICINITY MAP



Legend

- Site Boundary and Area for Radiological Survey
- Open Surface Water Channel
- Surface Water Conduit/Culvert

0 400 800
Feet

N

Figure 1
SITE MAP AND SURROUNDING AREA
5565 River Road (915239)
Tonawanda, New York

Map Date: 3/3/2025
Projection: NAD 1983 (2011) State Plane
New York West FIPS 3103 (US Feet)

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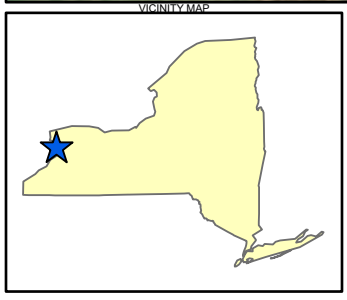

Legend

- Site Boundary and Area for Radiological Survey
- Open Surface Water Channel
- Surface Water Conduit/Culvert
- Background Measurement

0 400 800
Feet

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Figure 2
RADIOLOGICAL SURVEY AREA
5565 River Road (915239)
Tonawanda, New York

Map Date: 3/6/2025
Projection: NAD 1983 (2011) State Plane
New York West FIPS 3103 (US Feet)

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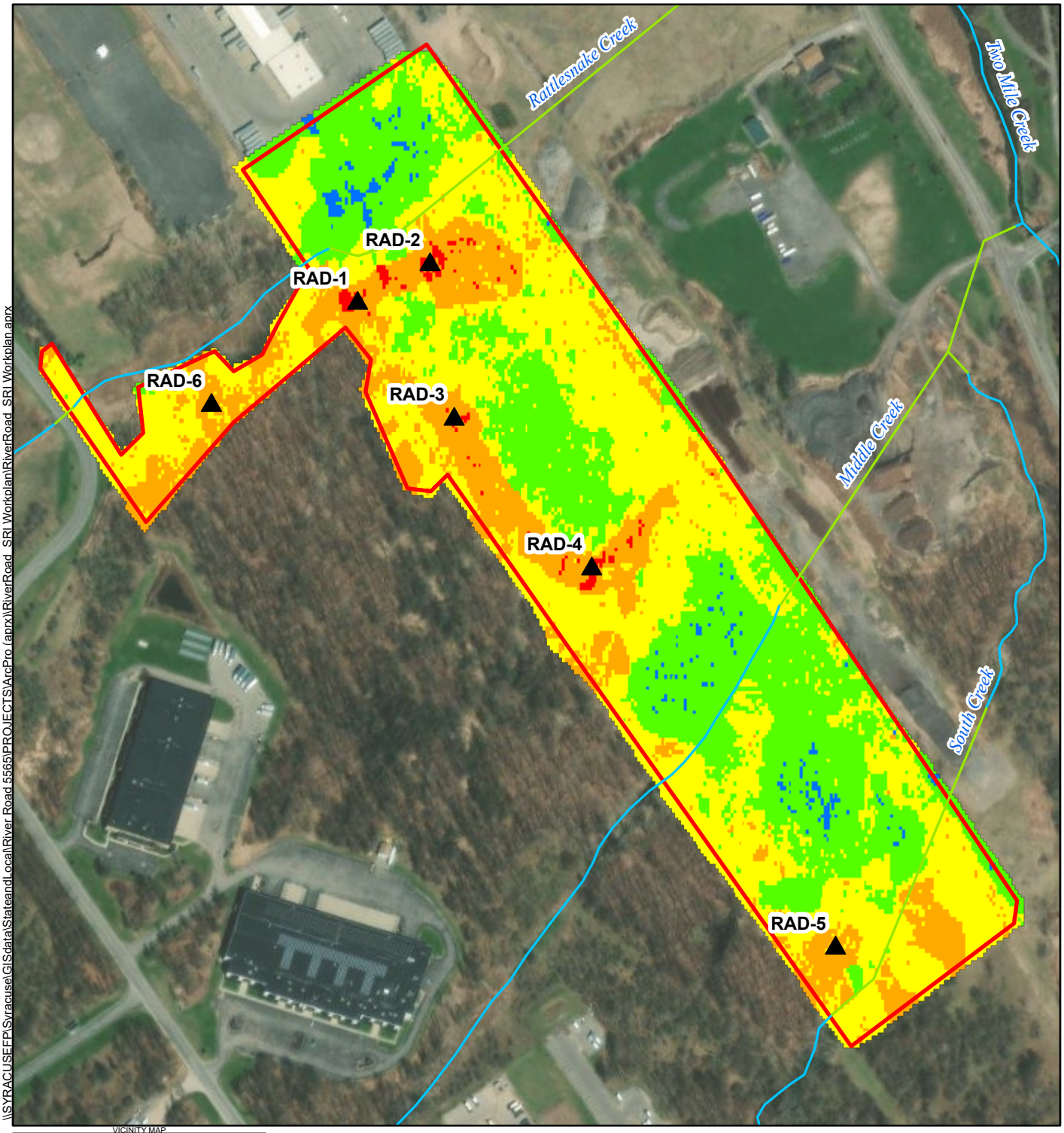

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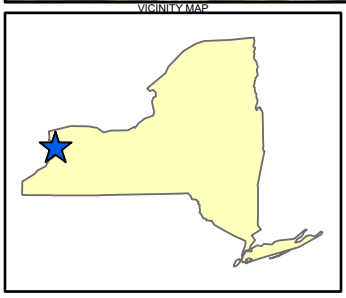


Legend

- Site Boundary and Area for Radiological Survey
- Open Surface Water Channel
- Surface Water Conduit/Culvert
- Proposed Sample Location

Gamma Count Rate (CPM)

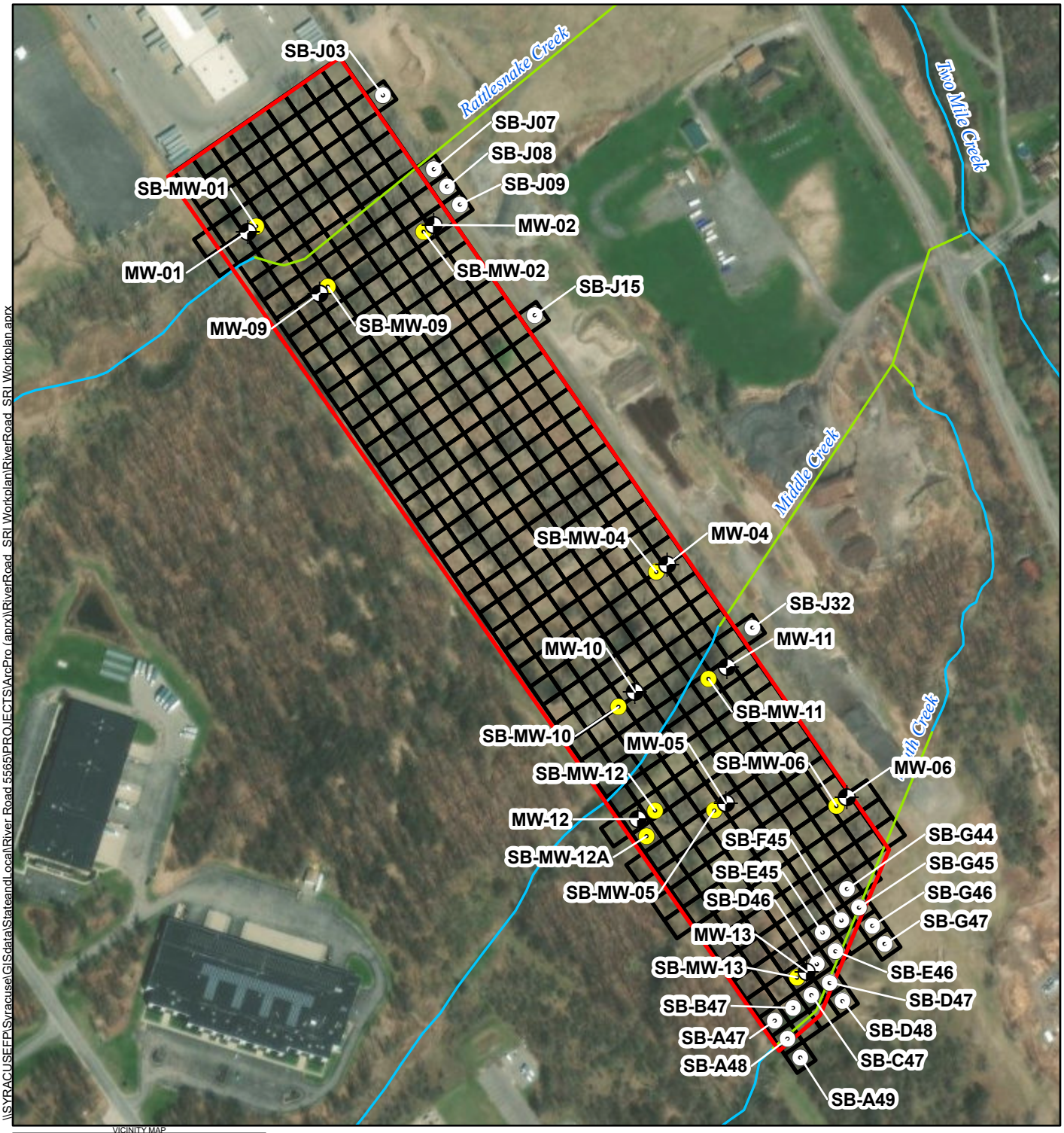
- ≤ 5,000
- 5,001 - 7,000
- 7,001 - 8,779
- 8,880 - 11,000
- > 11,000

0 200 400
Feet
N

Figure 3
RADIOLOGICAL SURVEY AREA AND PROPOSED SAMPLE LOCATIONS
5565 River Road (915239)
Tonawanda, New York

Map Date: 3/19/2025
Projection: NAD 1983 (2011) State Plane New York West FIPS 3103 (US Feet)

NEW YORK STATE Department of Environmental Conservation



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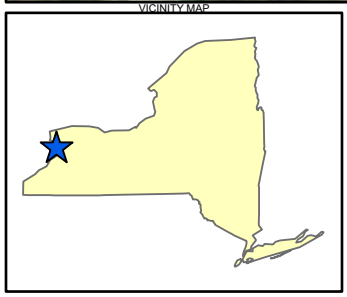

Legend

- Site Boundary
- 50-ft x 50-ft Sampling Grid
- Open Surface Water Channel
- Surface Water Conduit/Culvert
- Monitoring Well
- PCB & Metal Delineation Boring
- PFAS Sample Boring

0 200 400
Feet
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Figure 4
PROPOSED SOIL BORING LOCATIONS
5565 River Road (915239)
Tonawanda, New York

Map Date: 3/3/2025
Projection: NAD 1983 (2011) State Plane
New York West FIPS 3103 (US Feet)

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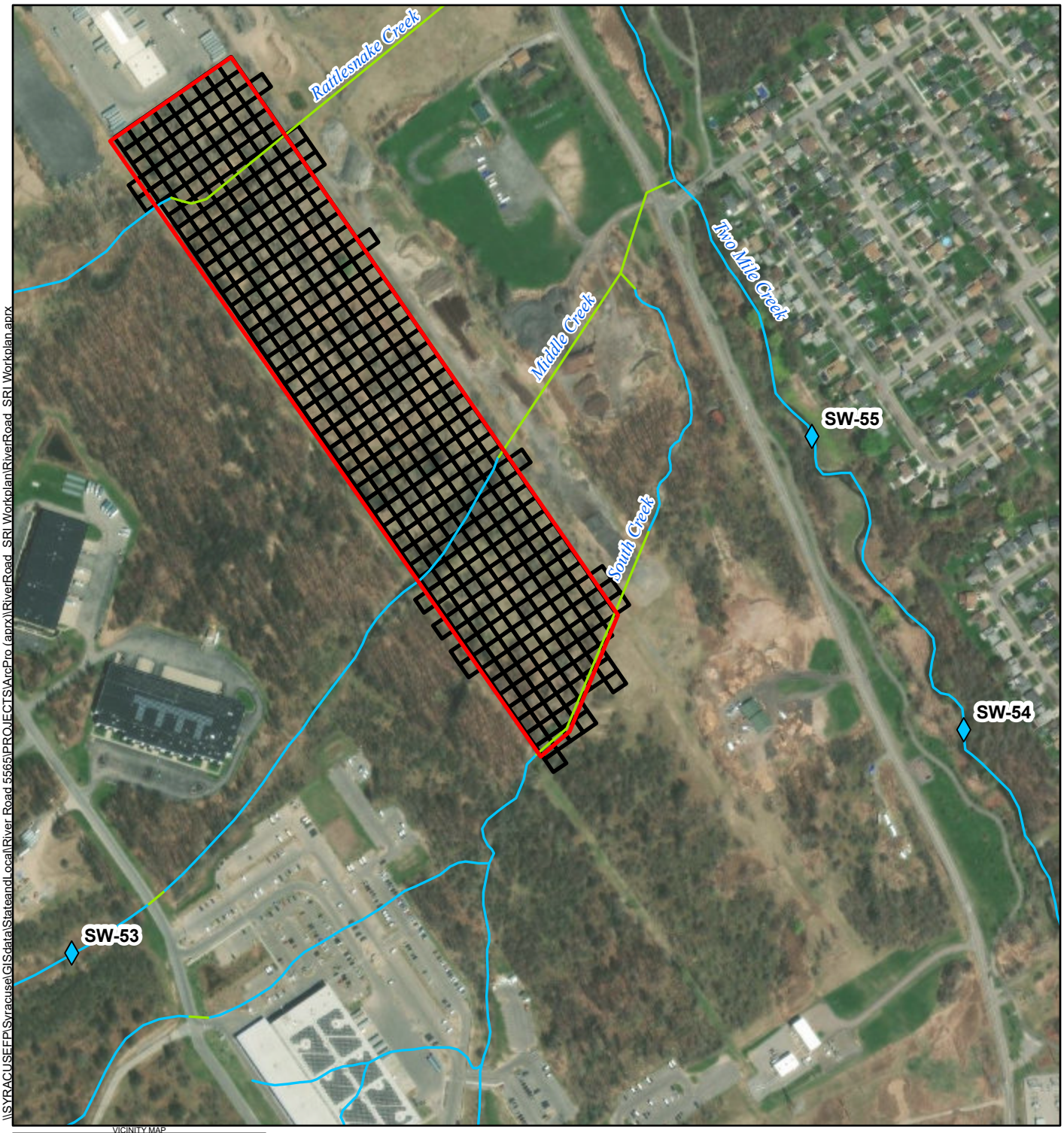

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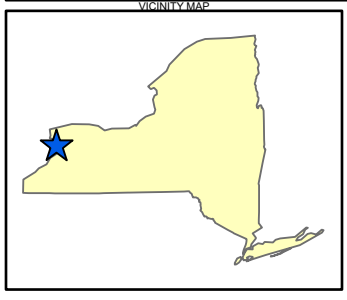

Legend

- Site Boundary
- Open Surface Water Channel
- Surface Water Conduit/Culvert
- Proposed Surface Water Sample

0 300 600
Feet
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Figure 5
PROPOSED SURFACE WATER SAMPLE LOCATIONS
5565 River Road (915239)
Tonawanda, New York

Map Date: 3/3/2025
Projection: NAD 1983 (2011) State Plane New York West FIPS 3103 (US Feet)

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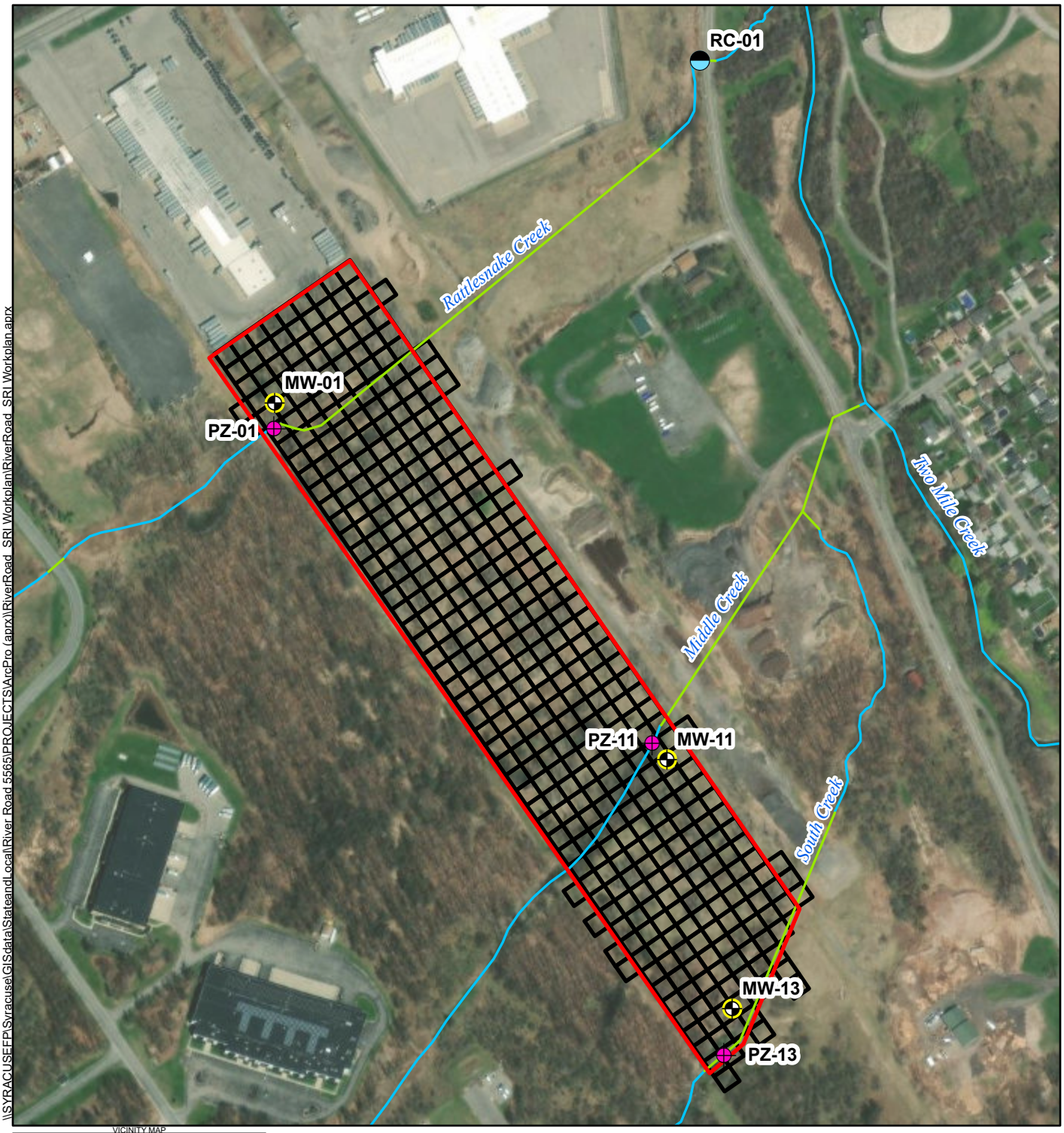

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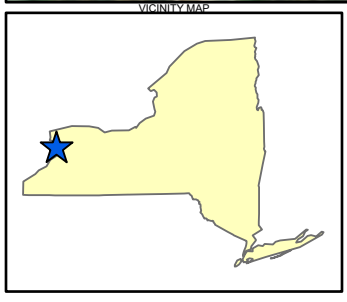

Legend

- Site Boundary
- Open Surface Water Channel
- Surface Water Conduit/Culvert
- Monitoring Well
- Proposed Piezometer Location
- Proposed Transducer Location

0 200 400
Feet

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Figure 6
HYDROLOGIC STUDY
MEASUREMENT LOCATIONS
5565 River Road (915239)
Tonawanda, New York

Map Date: 3/3/2025
Projection: NAD 1983 (2011) State Plane
New York West FIPS 3103 (US Feet)

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Tables

Table 1. Background Gamma Counts

Date	Background Measurement (CPM)	Average (CPM)	1.5x Background (CPM)
10/30/2024	6,009	5,920	8,880
10/31/2024	5,805		
11/1/2024	6,053		
11/4/2024	5,977		
11/5/2024	5,719		
11/7/2024	6,040		
11/8/2024	6,048		
11/9/2024	5,710		

Notes:
CPM = counts per minute

Table 2. Soil Sample Locations and Analyses

Location ID	Sampling Intervals (feet below ground surface)	Number of samples	Laboratory Analysis
SB-J03	0-3, 3-6, 6-9	3	PCBs, metals
SB-J07	0-3, 3-6, 6-9, 9-12, 12-15	5	
SB-J08	0-3, 3-6, 6-9, 9-12	4	
SB-J09	0-3, 3-6, 6-9	3	
SB-J15	0-3, 3-6, 6-9	3	
SB-J32	0-3, 3-6, 6-9, 9-12, 12-15, 15-18	6	
SB-A47	0-2, 2-4	2	
SB-A48	0-2, 2-4	2	
SB-A49	0-2, 2-4	2	
SB-B47	0-2, 2-4	2	
SB-C47	0-2, 2-4	2	
SB-D46	0-2, 2-4	2	
SB-D47	0-2, 2-4	2	
SB-D48	0-2, 2-4	2	
SB-E45	0-3, 3-6, 6-9	3	
SB-E46	0-2, 2-4	2	
SB-F45	0-2, 2-4	2	
SB-G44	0-3, 3-6, 6-9, 9-12	4	
SB-G45	0-2, 2-4	2	
SB-G46	0-2, 2-4	2	
SB-G47	0-2, 2-4	2	
SB-MW-01	3-6	1	PFAS
SB-MW-02	2-5	1	
SB-MW-04	2-5	1	
SB-MW-05	3-6	1	
SB-MW-06	6-9	1	
SB-MW-09	12-15	1	
SB-MW-10	8-11	1	
SB-MW-11	12-15	1	
SB-MW-12	9-12	1	
SB-MW-12A	9-12	1	
SB-MW-13	12-15	1	
RAD-1	0-3, 3-6, 6-9, 9-12, 12-15, 15-18	6	Radium-226, Radium-228, Gross Alpha/Beta, Uranium, Thorium
RAD-2	0-3, 3-6, 6-9, 9-12, 12-15, 15-18	6	
RAD-3	0-3, 3-6, 6-9, 9-12	4	
RAD-4	0-3, 3-6, 6-9	3	
RAD-5	0-3, 3-6	2	
RAD-6	0-3	1	

Notes:
ID = identification
SB = soil boring
MW = monitoring ewll
PCB = polychlorinated biphenyls
PFAS = per- and polyfluoalkyl substances
RAD = radiological sample location

Attachment A
RMMS Trip Report

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Materials of Management, Bureau of Hazardous Waste and Radiation Management, Radioactive Materials Management Section
700 Delaware Avenue, Buffalo, New York 14209
P: (716) 851-7220 | F: (716) 851-7226
www.dec.ny.gov

Radioactive Materials Management Section

Trip Report

Site Name: 5565 River Road, Tonawanda, NY

Date of Visit: April 30th, 2024

Participants:

Derick Dietrich – ERS trainee

Taylor Monnin – DEC Project Manager

Adam Haines, Biologist at NYSDEC Division of Fish and Wildlife

Charles Rosenburg, Regional Habitat Protection Manager, NYSDEC Division of Fish and Wildlife

Adam Etringer, Senior Scientist/Project Manager (EA Science and Technology)

Kritika Thapa, (EA Science and Technology)

Donald Conan, (EA Science and Technology)

Thomas King, (EA Science and Technology)

Reporting ERS: Derick Dietrich

Date: April 30th, 2024

Purpose of Visit:

Preliminary survey of a site containing fly ash and foundry sand from historic disposal. Screening was conducted to determine the potential for material with elevated activity and possible TENORM.

Instrumentation:

Region 9 #1 Ludlum Model 2241-2 w/44-10 NaI Probe

Meter Background and Source Checks:

Pre-Survey Checks

(700 Delaware Ave, Buffalo)

Background: 5,651 cpm

Cs-137 Source: 213,266 cpm

(5565 River Road, Tonawanda)

On-Site Background: 5,414 cpm

On-Site Field Cs-137 Source: 103,175 cpm

Post Survey Checks

(Isle View Park 796 Niagara St, Tonawanda, NY 14150)

Background: 5,923 cpm

On-Site Field Cs-137 Source: 109,720 cpm

Observations:

Background Location:

The location chosen for the background survey was a patch of grass near the entrance of 5565 River Road, on the outskirt of the property. The background location was far away from any known material that potentially could have had elevated readings. Readings at this location were similar to the pre-check readings collected at 700 Delaware Ave, with a difference of 237 cpm.

Following the background checks, a survey around the site was initiated as the biologists began to examine the wetland portions of the site. During the biologist's investigation the ERS collected readings utilizing the 2241 ratemeter with the 44-10 NaI probe

Surveys Performed:

The first part of the screening survey began with a walk around the site to establish average readings away from the known areas of fly ash and foundry sand material. As the group progressed through the site, the activity readings were monitored and yielded

a range of approximately 4.0 to 6.5 kcpm. These levels were noted for a majority of the site that was away from the known fly ash and foundry sand material.

During the survey of the property, there were a few spots that did indicate elevated activity levels. These levels were found in the locations known to contain the disposed materials. When these elevated readings were encountered, the ratemeter reading was noted as well as obtaining a one-minute static count, where the readings were the highest. The ratemeter readings collected at these elevated locations ranged from 8.0 to 10.8 kcpm, with the highest scaler count reaching 10,568 cpm. The locations with the elevated readings coincided with exposed soil that at times had a distinct grey color to it.

Conclusions:

Elevated material was encountered during the preliminary screening for the 5565 River Road site. The locations where the elevated readings were found matched up with the areas known to contain fly ash and foundry sand. Further investigations by a NYSDOH D&D licensed consultant will be required to characterize and map the extent of the elevated material on this site.

Attachments:

Site and background location map

Photos where elevated readings were encountered

Readings collected from the site survey

Fly ash and foundry sand contours w/ the elevated readings marked.

Site location, on-site background location, and post survey check location

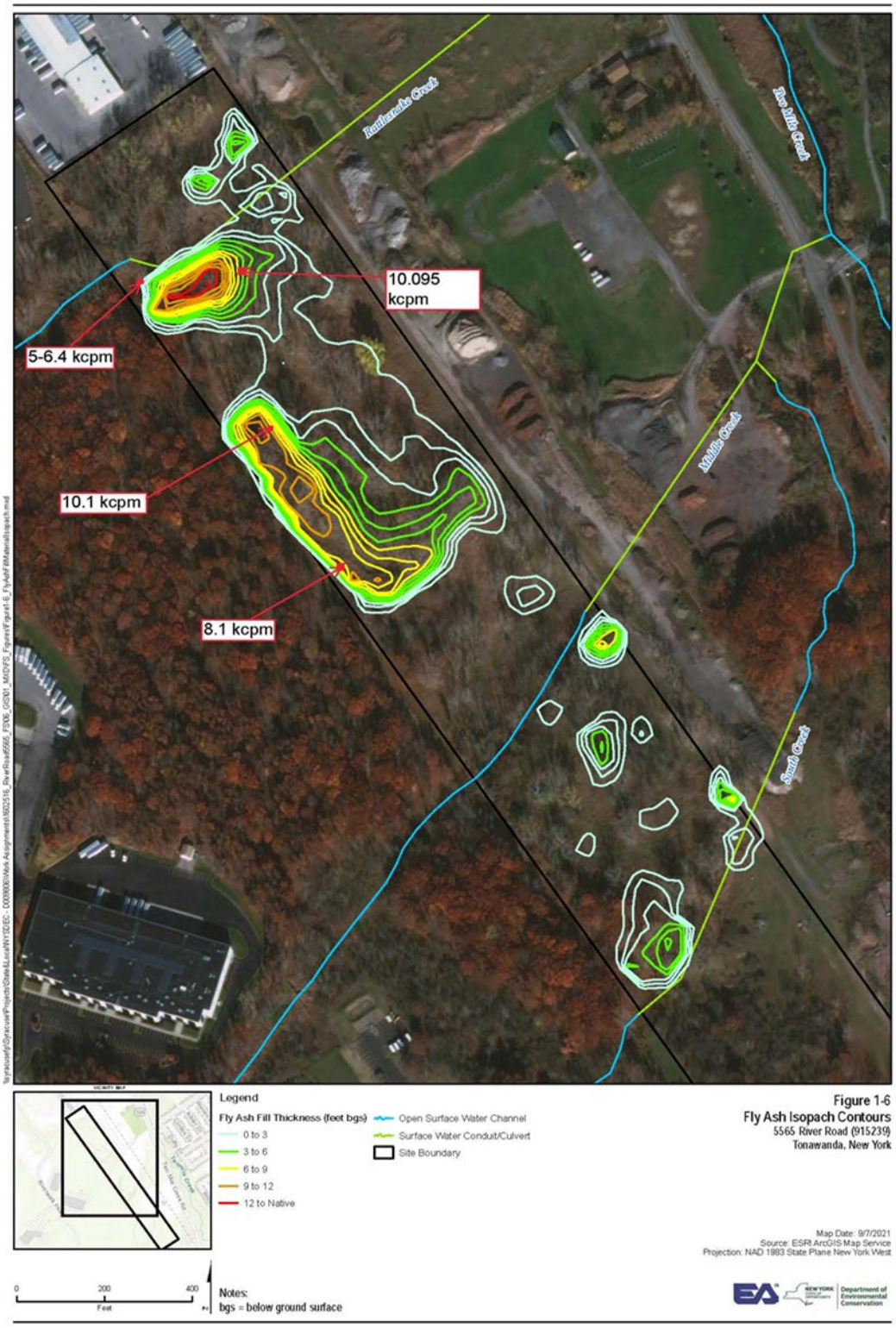
Photo of the on-site background location

photo of the location where the first elevated reading was encountered

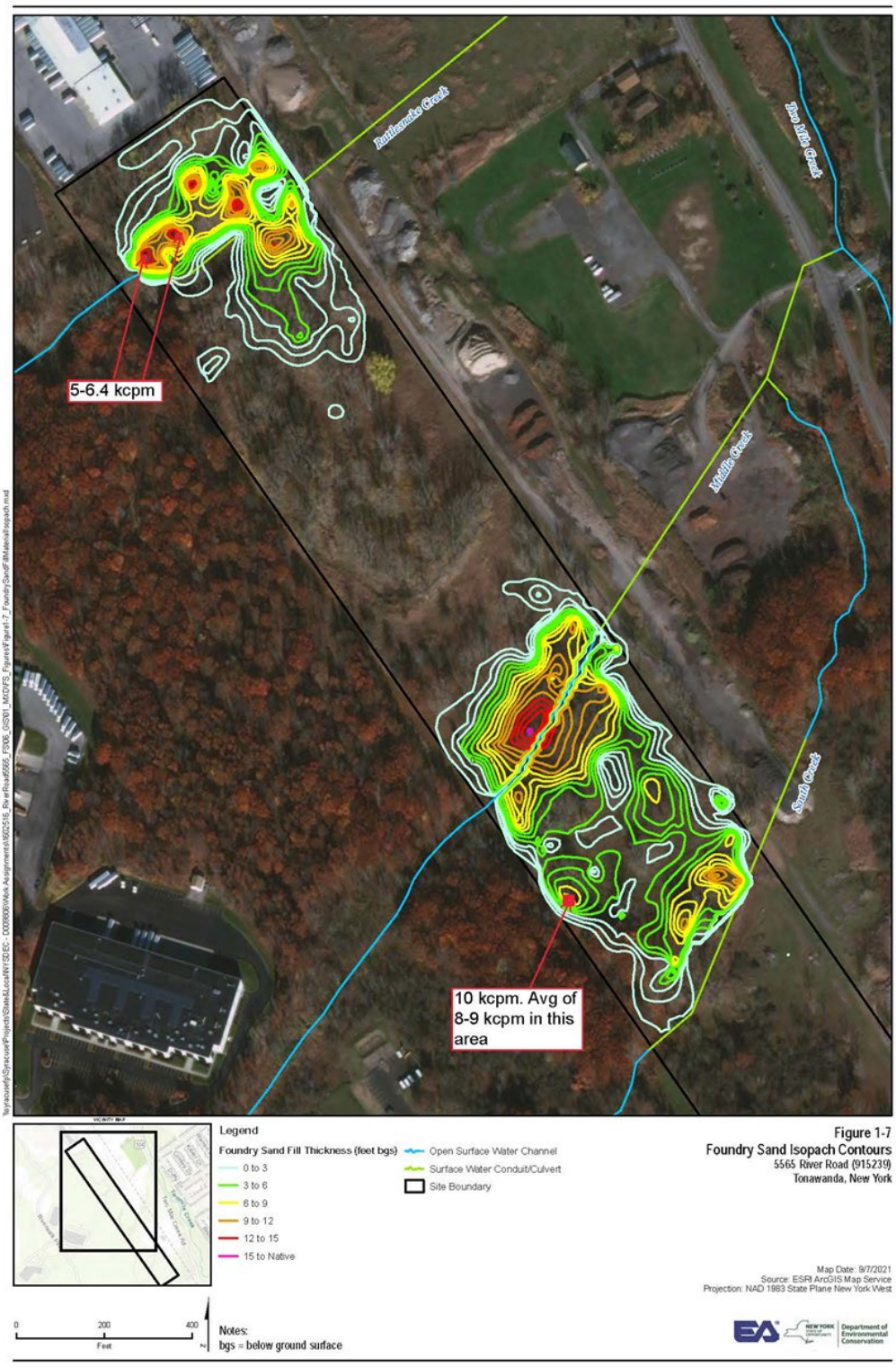
Photo of the exposed soil where an elevated reading was encountered

Photo showing an area of exposed soils where elevated activity was encountered.

Photos from an elevated reading location showing the scaler (left) and ratemeter (right) readings



Fly Ash Contour Map w/ activity readings (provided by Taylor Monnin)



Foundry Sand Contour Map w/ activity readings (provided by Taylor Monnin)

Attachment B
DMM-5

DMM-5 / Management of Soils Contaminated with Technologically Enhanced Naturally Occurring Radioactive Materials (TENORM)	
New York State Department of Environmental Conservation **DEC Program Policy**	
Issuing Authority: David Vitale 	**Title:** Acting Deputy Commissioner, Office of Remediation and Materials Management
Date Issued: 10/27/2023	**Latest Date Revised: NEW POLICY**

I. Summary:

This policy explains the process and requirements for obtaining a variance under 6 NYCRR 380-3.5 for the management of processed and concentrated naturally occurring radioactive material, also commonly referred to as technologically enhanced naturally occurring radioactive material (TENORM). Additionally, this policy identifies the process and criteria to be used to evaluate TENORM and provides guidelines to Department of Environmental Conservation ("Department") program staff, and property owners, project sponsors, and the public who may be seeking variances, on how to appropriately handle TENORM encountered during construction or earthwork projects, such as clearing, grading, excavation, filling, demolition, or stockpiling. This policy also applies to any project site where the intrusive work conducted has or will likely disturb identified or suspected TENORM. This policy does not apply to activities that disturb naturally occurring radioactive materials.

Part 380 applies to any person who disposes of or releases TENORM. This policy is applicable where a variance application has been submitted pursuant to 6 NYCRR 380-3.5 for on-site management of TENORM fill that was generated, disposed of, or released prior to the implementation of 6 NYCRR Part 380, which was March 24, 1994, and which has been excavated for a project. Once TENORM has been excavated, it is considered radioactive material and may be subject to DEC's regulatory authority as noted in 6 NYCRR 380-1.2(e) and as defined in 6 NYCRR 380-2.1(a)(20). Placing the TENORM back into the area in which it was excavated constitutes deposition or injection into the environment and thus disposal. This policy provides guidance on the variance application that may be submitted pursuant to 6 NYCRR 380-3.5 to allow on-site management of excavated TENORM.

Implementation

This policy is to be implemented at any site, location, or work area where anthropogenic (i.e., "man- made" or "man-modified") material or fill (frequently observed to be "slag") has been noted or discovered and is suspected or known to have a potential or definitive TENORM characteristic, (see definition below).

Definitions

As Low As Reasonably Achievable (ALARA) – Means every reasonable effort is made to maintain exposures to radiation as far below the dose limits (or for purposes of this Policy concentration values) in Part 380 as is practical consistent, with the purpose for which the action is undertaken, taking into account the state of technology, the economics of improvements in relation to the state of technology, the economics of improvements in relation to benefits to the public health and safety, and other societal and socioeconomic considerations, and in relation to utilization of radioactive materials in the public interest.

Area of Contamination (AOC) – Means a discrete area of generally dispersed contamination.

Excavation – Means any man-made cut, cavity, trench, or depression in the earth surface formed by the removal of soil and rock, or any activity that causes or contributes to the creation of any such cut, cavity, trench, or depression.

Disposal – Means the act of discarding regulated radioactive material. Depositing or injecting radioactive material in the environment is disposal unless the radioactive material is being used in the environment, as authorized by a permit issued under 6 NYCRR 380-3.1.

TENORM Fill – Means slag or other material containing TENORM used as fill, without regard to its radiological content, placed on its present site before March 24, 1994, when 6 NYCRR Part 380 became effective. Such historically placed fill is not a regulated waste if it remains as it was placed at that time.

Licensed Decontamination & Decommissioning (D&D) Contractor – Means a person or company who possesses a radioactive materials license that authorizes them to perform decontamination and decommissioning of radiologically contaminated sites. D&D Contractors must possess a license issued by the New York State Department of Health (DOH). Companies licensed by the US Nuclear Regulatory Commission (NRC), or another state may work under reciprocity with the DOH.

Naturally-Occurring Radioactive Material (NORM) –Means any of the primordial radionuclides (those present since the formation of the earth – Uranium, Thorium, Potassium) or radioactive elements as they occur in nature, and their radioactive decay products, such as radium and radon, that are not concentrated as a result of human activity. (*Note*: NORM produced through interaction of cosmic rays with certain gasses in the upper atmosphere (cosmogenic NORM) such as tritium or carbon-14 are not addressed in this policy.)

Person – Means:

(i) any individual; public, private, or government corporation; joint stock company; industry; partnership; co-partnership; firm; association; trust; estate; public or private institution; agency, department, or bureau of the State, or group, political subdivision of the State, any other State or political subdivision thereof; Federal government agencies other than the U.S. Nuclear Regulatory Commission or Department of Energy; any foreign government or nation or any political subdivision of any such government or nation; and

(ii) any legal subsidiary, successor, representative, agent, or agency of the foregoing, or any other legal entity whatsoever.

Slag – Means a waste product from the pyrometallurgical processing of various ore, both ferrous (e.g., steel and blast furnace Fe) and non-ferrous (e.g., P, Ag, Cu, Ni, Pb, Sn, Zn).

Technologically-enhanced naturally occurring radioactive material (TENORM) – Means naturally occurring radioactive material whose radionuclide concentrations are increased by or as a result of past or present human practices, such as manufacturing or water processing.

TENORM (Background-comparable) – Means TENORM fill that has been disturbed by excavation or other methods and is below 5 pCi/g of radium-226.

TENORM Waste – Means TENORM fill that has been disturbed by excavation or other methods and exceeds 15 pCi/g of radium-226.

TENORM Disposal Plan – Means a TENORM disposal plan must cover management and disposal of TENORM waste (>15 pCi/g of Ra-226) generated for disposal to ensure handling in a manner adequate to protect human health and the environment until such time as it is shipped for disposal.

TENORM Management Plan – Means a plan to appropriately manage in an AOC and/or dispose of TENORM fill containing a concentration of radium-226 between 5 pCi/g and 15pCi/g that must be submitted with an application for a variance to be approved by the Department. (*Note*: for TENORM (Background-comparable), the procedure(s) utilized in determining compliance with the <5 pCi/g criteria will constitute a “Management Plan” for purposes of meeting the management requirements in Section IV.B. of this policy.)

II. Policy

The Department will allow excavated TENORM to be returned to the excavation area on a project site if the concentration of radium-226 meets certain thresholds (discussed throughout) and the TENORM is handled in accordance with this policy and pursuant to a variance issued under 6 NYCRR 380-3.5. The Department’s position is that handling excavated TENORM in accordance with this policy and a Department-approved TENORM Management Plan will have no significant adverse impact on public health and safety, and the environment. (*Note*: A variance application to allow excavated TENORM below 15 pCi/g of Ra-226 to be returned to the area of excavation on a project site does not need to include the demonstrations required under 6 NYCRR 380-3.5(b)(4) and (5).) This policy utilizes the EPA Uranium Mill Tailings Radiation Control Act standards of 5 and 15 pCi/g of Ra-226, but conservatively applies them only to the excavated TENORM.

Purpose and Background

The purpose of this policy is to address intrusive work on sites containing TENORM fill. A number of industrial processes generated byproducts that contained processed and concentrated NORM, also known as TENORM. Slag and other TENORM-containing byproducts from ore refining were used as backfill beneath roadways and other construction projects. This was done due to their low cost and beneficial physical properties, but without consideration of their inherent radioactivity.

This policy applies to sites containing TENORM that was placed on its present site before March 24, 1994, when 6 NYCRR Part 380 was updated to address the radiological content of TENORM. Since that time, this type of waste is not allowed to be used as fill or disposed of at any site unless the site has regulatory approval to accept it. As of the effective date of this policy, there are no sites approved for the disposal of newly generated TENORM waste in New York. Therefore, such waste must be disposed of in an authorized disposal facility.

When the presence of TENORM at sites first came to light, the New York State Department of Health commissioned a group of outside experts to assess the potential public health risks of the sites. These experts determined that the sites did not pose significant public health or environmental concerns if the TENORM is left in place. If TENORM is disturbed, it must be appropriately handled and the potential impacts to public health and the environment must be taken into consideration.

III. Responsibility

Responsibility for the interpretation and implementation of this policy resides with the Department's assigned Environmental Radiation Specialist (ERS) in coordination with any Department project manager (or other involved Department staff), to ensure that an adequate radiological screening is performed. Additional consultation may occur as determined to be necessary with the Department's Radioactive Materials Management Section (RMMS) staff, in the Bureau of Hazardous Waste and Radiation Management in the Division of Materials Management.

Responsibility for updating of this policy resides with the RMMS in consultation with regional management and staff (e.g., ERS) responsible for implementation of this policy.

IV. Procedure

The first step is to verify whether anything exhibiting elevated radioactivity is present in the materials being handled. This includes a preliminary screening radiation survey to determine if TENORM is present. Prior to conducting the survey, a survey plan must be developed and submitted for Department approval.

Second, if the survey results demonstrate that TENORM is present, then a proper TENORM management plan must be developed and submitted for Department approval. The third step is the TENORM must be managed in accordance with the approved TENORM management plan and if necessary, a variance. Further details of each step are provided below.

A. Radiological Screening

6 NYCRR 380-1.5(c)(1) requires that a variance application include a description of the waste containing radioactive material to be disposed of, including the physical and chemical properties relevant to the risk evaluation. Radiological screening, as described below, may be used to satisfy this requirement.

At sites known or reasonably suspected of being contaminated with TENORM where any development activity or other ground-disturbing activity or excavation is planned, a licensed D&D contractor must be utilized to perform an initial radiological screening survey (the "survey") to identify the presence and concentration of radium-226, as described in Attachment A. If appropriate, the survey may be submitted with the necessary proposed TENORM Management Plan (see Section VI.C. of this policy). For sites where TENORM was not initially known or suspected, but during work the presence of slag fill or other indicators raise a concern for the possible presence of TENORM, a health physics technician or appropriately trained person (as approved by the Department) may perform a preliminary radiological screening survey. Project sponsors must submit a draft of the survey plan to the Department in advance to ensure that the survey will meet the Department's data needs. The Department will review and approve the survey plan prior to implementation.

After the survey plan is approved and an initial survey is conducted, the project sponsor, site owner, or other appropriate person must submit the initial survey results to the assigned ERS (and DEC project manager for sites in a DEC remedial program) for review. The initial radiological screening survey results will assist the ERS in determining the necessity, and scope, of a TENORM Management Plan. Additionally, the initial radiological screening survey results provide the description of the waste containing radioactive material, which includes the physical and chemical properties relevant to risk evaluation, that is a requirement for a variance application under 6 NYCRR 380-3.5(c)(1).

If any radiological screening survey conducted indicates the presence of radium-226 or other NORM isotopes, in potentially elevated concentrations, the site will be deemed to contain potential TENORM. If any material is determined to be TENORM, it must be handled in accordance with the management requirements in Section IV.B of this policy.

B. Management Requirements

This policy utilizes the EPA Uranium Mill Tailings Radiation Control Act standards of 5 and 15 pCi/g of Ra- 226, but conservatively applies them only to the management of the excavated TENORM. This standard is widely used as a remedial goal at sites across the country, and in New York, which contain Ra-226 contamination. The original purpose of these values was to minimize the radiation dose received via radon emanation from Ra-226 and, as such, represents a comparable risk and exposure scenario. The following are the management requirements for the different types of TENORM that could be discovered on a particular site:

> **TENORM (Background-comparable)** (below 5 pCi/g of radium-226) – the Department may either grant a variance to allow the excavated TENORM (Background-comparable) to be returned to the excavation/AOC, or the assigned ERS determines, and approves, that the proposed use and handling in the AOC is acceptable. The Department will also require that appropriate and approved institutional control(s) be put in place (e.g., deed restriction, environmental easement) for each AOC.

TENORM fill (between 5 pCi/g and 15 pCi/g of radium-226) – the Department may grant a variance to allow excavated TENORM fill to be returned to the excavation/AOC if the following conditions are met:

1) the site where the TENORM fill is found contains undisturbed TENORM fill;

2) all excavated TENORM fill is handled in conformance with the submitted and approved TENORM Management plan;

3) an appropriate and approved institutional control(s) is put in place (e.g., deed restriction, environmental easement) for each AOC; and

4) the TENORM fill does not exceed 15 pCi/g of radium-226.

TENORM Waste (above 15 pCi/g of radium-226) – TENORM waste is considered a regulated waste per 6 NYCRR Part 380 and must be disposed of in accordance with appropriate regulatory requirements at an authorized disposal facility.

C. Management Plan Requirements for TENORM fill

Once TENORM fill has been identified on a property where it is being or will be disturbed, a TENORM Management Plan must be submitted to the Department for approval. As discussed previously, the radiological screening survey plan can be incorporated into the TENORM Management Plan. The TENORM Management Plan describes the proposed manner and conditions of waste disposal and the procedures to ensure that doses are maintained ALARA, which are both requirements for a variance application under 6 NYCRR 380-3.5(c)(1), (4). The TENORM Management Plan must demonstrate the following:

1) the site is conducive to the implementation of long-term site controls;

2) a well-defined and documented consolidation location within the AOC (if proposed) will be established;

3) a minimum of two feet of acceptable soil cover material or the equivalent of paving with asphalt or concrete will be placed over the consolidation area;

4) whether substantial TENORM will remain on the site at the completion of any site work;

5) the size of the consolidation area will be based on the known extent of area containing undisturbed TENORM remaining on-site; and will be determined and approved on a case-by- case basis by the Department; and

6) that it is implemented in a manner consistent with the ALARA

concept. For more details on the TENORM Management Plan, see

Attachment B of this policy.

D. Variance Application Requirements

For TENORM to remain onsite per a proposed management plan, an application for a variance must be submitted and approved. The application must comply with the requirements of 6 NYCRR 380-3.5.

However, as previously indicated, the application does not need to include the demonstrations required under 6 NYCRR 380-3.5(b)(4) and (5).

To meet the requirements of 6 NYCRR 380-3.5, the application for a variance for TENORM fill must include the following:

1) an explanation as to why the applicant believes the property contains TENORM;

2) the initial radiological survey results showing the concentration of radium-226 and other NORM isotopes found in the TENORM;

3) a TENORM Management Plan;

4) institutional controls as previously discussed, as determined by the Department to be necessary; and

5) any additional information deemed necessary by the Department.

The application for a variance will be reviewed by the assigned ERS, with recommendations made to appropriate Department management and programmatic areas for determination of approval or rejection (preference is for determination to be made in a regionalized program office, whenever possible).

Any denial of a variance application may result in the applicant or responsible person being required to take further action, including, but not limited to, additional characterization, site definition, and potentially removal and disposal off site of the material in question. Additionally, when a variance application is denied, the Department will issue a notice of denial and the applicant may request a hearing in accordance with the procedures in 6 NYCRR Part 621 as a variance from Part 380 qualifies as a permit.

Additional Requirements and Recommendations

This policy does not address the transportation of TENORM or other radioactive materials.

Regardless of the concentration of radium-226 and other NORM isotopes determined to exist at a site, any new structures built at said location are recommended to utilize radon resistant construction.

V. Related References

49 CFR Part 173 Subpart I Class 7 Radioactive

Materials 10 NYCRR Part 16 Ionizing Radiation

6 NYCRR Part 380 Prevention and Control of Environmental Pollution by Radioactive

Materials 6 NYCRR Part 381 Transporters of Low-Level Radioactive Material

17 NYCRR Part 154 Special Hauling Permits

Attachment A Radiological

Screening Survey Criteria

If a radiological screening survey is needed to verify the presence of TENORM, the following process must be followed:

1) Establish an appropriate background(s) representative for the area(s) to be surveyed, as approved by the Department. It is intended for the background area to be distinct from the area of contamination (AOC), yet representative of background conditions in the vicinity of the AOC. Natural radiological background is preferred, however, in some instances, such as urban areas, background representative of non-natural conditions not impacted by TENORM may be acceptable.

2) At a minimum, survey the portion of the site to be disturbed.

3) If survey readings exceed 1.5 x background, collect a minimum of three representative composite samples of the TENORM (to be analyzed by a DOH Environmental Laboratory Approval Program (ELAP) certified laboratory) including from the area of highest survey readings. Perform fixed one-minute meter readings at each sampling location prior to collection of a sample.

   a) In consultation with the assigned ERS, develop a correlation between meter readings and soil concentrations to guide future survey efforts. Where feasible, the use of a meter reading-to-concentration correlation (backed-up by limited sample analyses) can reduce costs and time delays during site characterization and waste monitoring rather than relying solely on analytical results.

   b) As long as survey results indicate radium-226 levels below 5 pCi/g, no separation of soil and TENORM is required.

4) If no readings in excess of 1.5 times background are noted, no further monitoring during excavation activities is necessary, except as noted below.

   a) In most cases, no other radiological monitoring will be required.

   b) However, certain factors may necessitate limited additional monitoring of excavated materials. Those factors can include:

      i) Whether there are known areas of TENORM in the region or on nearby properties;

      ii) Whether there is evidence that slag is present on-site and if so whether it contains TENORM; or

      ii) If major changes in types of TENORM encountered occur during excavation.

   c) If Department staff or a site consultant see possible TENORM at or from a depth greater than was evaluated by the original survey, it is strongly recommended that a plan to perform limited radiological screening of excavated materials be developed. The goal is to ensure that contaminated materials are

not inadvertently redistributed on the site or moved off site. If such a circumstance arises, ERS staff will work with the consultant to establish an appropriate limited screening plan.

Attachment B

TENORM Management Plan

The TENORM Management Plan must include the following:

1) TENORM Sorting Process:

a) Unless an alternate plan is approved by the Department as part of previously discussed process regarding granting a Part 380 variance, material removed from the excavation area must be sorted as part of the excavation process and placed into stockpiles using average soil concentrations, based upon waste management needs. Stockpiles should be managed to minimize erosion and the generation of dust.

b) These stockpiles may include:

i) A pile for TENORM (Background-comparable) clearly below 5 pCi/g of radium- 226

ii) A pile for TENORM Waste clearly exceeding 15 pCi/g of radium- 226 for off-site disposal.

iii) An optional intermediate pile for TENORM fill that cannot readily be identified during excavation as fitting into one of the above categories based on meter readings alone. (below 5 pCi/g or above 15pCi/g for Ra-226.)

1) If an intermediate concentration pile is proposed by the TENORM Management Plan, the TENORM Management Plan must describe how the fate of this TENORM fill will be resolved, or

2) If an intermediate concentration pile is not proposed by the TENORM Management Plan, all TENORM fill exceeding 5 pCi/g of radium-226 must be placed in the pile for off-site disposal.

c) If a correlation between meter readings and soil concentrations to guide future survey efforts has not already been completed and approved by the assigned Department ERS, it must be included as part of this TENORM Management Plan.

2) Survey Process for Soil/TENORM Sorting

a) In larger excavations, the preferred method is to excavate in six-inch (6”) lifts and perform walkover surveys using the established meter reading-to-concentration correlation to separate out contaminated material. If site characteristics or other restrictions do not allow for this, surveying bucket by bucket, visual screening, or another process may be submitted for consideration as part of the TENORM Management Plan.

b) In tight areas such as trenches where normal surveying is impractical or dangerous, bucket loads of excavated material should be surveyed as they are removed from the excavation. Due to the change in geometry from a flat plane to a bucket of soil, a separate meter reading-to-concentration ratio would be required

for this survey option. Alternatives to surveying buckets of excavated material during excavation may be submitted to the Department for consideration as part of the TENORM Management Plan.

3) TENORM Management

The following contains information on the management requirements for the different types of TENORM:

a) TENORM Waste (i.e., material with survey levels exceeding 15 pCi/g of radium-226) must be disposed of off-site at facilities permitted to accept such wastes. Representative sampling must be performed following the waste acceptance criteria of the selected disposal site.

b) TENORM (Background-comparable) (i.e., material with survey levels below 5 pCi/g of radium-226) are generally not restricted for radiological purposes and may be reused on-site, dependent upon development of a variance and/or approval by the assigned ERS, and a commitment to utilize radon-resistant construction for any structures built on the property in the future, along with an appropriate land use control.

c) TENORM fill less than 15 pCi/g of radium-226 may be able to be placed back into the excavation area consistent with the criteria in this policy. Reuse of TENORM fill concentrations between 5 pCi/g and 15 pCi/g:

i) TENORM fill must be placed a minimum of two feet below grade.

ii) Appropriate land use controls, as previously discussed, must record the presence of TENORM fill and the known, or suspected, extent of its existence at the site.

4) Undisturbed TENORM

a) TENORM that does not have to be disturbed for site development or for remediation of other contaminants is not required to be remediated as long as the undisturbed TENORM poses no significant risk to public health or the environment in its present state.

b) Radon-resistant construction is strongly encouraged to be utilized for any future buildings.

Attachment C
HASP Addendum

Health and Safety Plan Addendum
5565 River Road Site (915239)
Tonawanda, Erie County, New York

Prepared for

New York State Department of Environmental Conservation
625 Broadway
Albany, New York 12233

Prepared by

EA Engineering, P.C. and Its Affiliate
EA Science and Technology
333 West Washington Street, Suite 300
Syracuse, New York 13202
315-431-4610

October 2024
EA Project No. 16025-16-00-CP

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Health and Safety Plan Addendum
5565 River Road Site (915239)
Tonawanda, Erie County, New York

Prepared for

New York State Department of Environmental Conservation
625 Broadway
Albany, New York 12233

Prepared by

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23 October 2024

Donald F. Conan, P.E., Program Manager
EA Engineering, P.C.

Date

23 October 2024

Adam Etringer, Senior Project Manager
EA Science and Technology

Date

October 2024
EA Project No. 16025-16-00-CP

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TABLE OF CONTENTS

LIST OF APPENDIXES

LIST OF ACRONYMS AND ABBREVIATIONS

CFR	Code of Federal Regulations
EA	EA Engineering, P.C. and its affiliate EA Science and Technology
HASP	Health and Safety Plan
No.	Number
NYSDEC	New York State Department of Environmental Conservation
OSHA	Occupational Safety and Health Administration
P.E.	Professional Engineer
PFAS	Per- and polyfluoroalkyl substances
PPE	Personal protective equipment
SSHO	Site Health and Safety Officer

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1. INTRODUCTION

1.1 GENERAL

A Generic Health and Safety Plan (HASP) (EA Engineering, P.C. and its affiliate EA Science and Technology [EA] 2024)[1] was developed for field activities performed under the New York State Department of Environmental Conservation (NYSDEC) Standby Contract Number (No.) D009806. This HASP Addendum is to supplement the Generic HASP with site-specific information to protect the health and safety of personnel while performing field investigation activities for the 5565 River Road Site (NYSDEC Site No. 915239) (Site), in Tonawanda, Erie County, New York

This HASP Addendum describes the safety organization, procedures, and protective equipment that have been established based on an analysis of potential physical, chemical, and biological hazards. Specific hazard control methodologies have been evaluated and selected to minimize the potential for accidents or injuries to occur. One copy of the Generic HASP (EA 2024)[1] and this HASP Addendum will be maintained for use during the scheduled field investigation activities. The copies will be made available for site use and employee review at all times.

This HASP Addendum addresses regulations and guidance practices set forth in the Occupational Safety and Health Administration (OSHA) Standards for Construction Industry, 29 Code of Federal Regulations (CFR) 1926, including 29 CFR 1926.65, Hazardous Waste Operations and Emergency Response and 29 CFR 1926.59, Hazardous Communications.

The following are provided as appendixes:

- **Appendix A:** Emergency Telephone Numbers and Hospital Directions
- **Appendix B:** Health and Safety Plan Addendum Review Record
- **Appendix C:** Safety Data Sheets
- **Appendix D:** Site Entry and Exit Log

Note: This site-specific HASP Addendum should be left open to display **Appendix A** (Emergency Telephone Numbers and Hospital Directions) and made available to all site personnel in a conspicuous location for the duration of field investigation activities in the event of an emergency.

[1]EA. 2024. *Generic HASP for Work Assignments under NYSDEC Contract No. D009806. Revision 02.* August.

1.2 SITE DESCRIPTION AND BACKGROUND

The Site, which includes soil, sediment, groundwater, and surface water associated with the 5565 River Road Site in Tonawanda, Erie County, New York (Figure 1 of the Letter Work Plan). The property is a single vacant parcel consisting of approximately 37 acres. The site is defined as the northern 24-acre portion of this parcel (**Figure 1**). The property is bounded on the west by vacant, forested land and a subsurface crude oil pipeline; on the south by commercial property; on the east by a gravel road; and on the north by a truck terminal. Access to the 5565 River Road site is by a gravel drive on the adjacent property owned by the Town of Tonawanda

Three creeks traverse the site – Rattlesnake Creek in the northern portion of the site, and two unnamed creeks in the central and southern portions of the site, which for the ease of identification are referred to as Middle Creek and South Creek, respectively. All three creeks discharge to Two Mile Creek to the east, which ultimately discharges to the Niagara River approximately 2,500 feet (ft) downstream of the site.

The 5565 River Road site was operated as a dump for industrial fill material (primarily fly ash and foundry sand) from the 1960s through the 1990s. Aerial photographs indicate that dumping at the site had ended sometime before 2005 and trees were present at the former disposal areas. The site is currently vacant and is zoned by the Town of Tonawanda as Waterfront Industrial District. Surrounding land use consists of commercial/industrial properties zoned Waterfront Business District and Waterfront Industrial District

1.3 POLICY STATEMENT

EA takes every reasonable step to provide a safe and healthy work environment, and to eliminate or control hazards in order to minimize the possibility of injuries, illnesses, or accidents to site personnel. EA and EA subcontractor employees will be familiar with this HASP Addendum for the project activities they are involved in. Prior to entering the Site, the HASP Addendum will be reviewed and an agreement to comply with the requirements will be signed by EA personnel, subcontractors, and visitors (**Appendix B**).

Operational changes that could affect the health and safety of site personnel, the community, or the environment will not be made without approval from the Project Manager and the Program Health and Safety Officer. This document will be periodically reviewed to ensure it is current and technically correct. Any changes in site conditions and/or the Scope of Work will require a review and modification to the HASP Addendum. Such changes will be documented in the form of a revision to this Addendum.

2. KEY PERSONNEL

The following table contains information on key project personnel.

Title	Name	Telephone Nos.
NYSDEC Project Manager	Glenn May	P: 716-851-7220
Program Health and Safety Officer	Rob Marcase	P: 410-329-5192
Program Manager	Donald Conan	M: 315-877-7403
Quality Assurance/Quality Control Officer	Frank Barranco	P: 410-584-7000
Project Manager	Adam Etringer	P: 315-565-6564 M: 518-242-9773
Site Manager/SSHO	Lincoln Backman-Lowe	P: 315-930-3763 M: 716-364-7282
Site Geologist	Edward Ashton	P: 315-565-6560 M: 315-551-1161

Notes:
SSHO = Site Safety and Health Officer

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3. SCOPE OF WORK

This HASP Addendum was developed to designate and define site-specific health and safety protocols applicable to project activities to be implemented and followed during field activities and consulting work at the Site. The Scope of Work covered by this HASP Addendum includes the following:

- Clearing and Grubbing
- Drilling for soil boring installation and sampling
- Monitoring well gauging and sampling
- Surface water sampling

Each of these activities is summarized below and additional detail for each activity is provided in the Letter Work Plan that this HASP Addendum is attached to.

3.1 CLEARING AND GRUBBING

Prior to any soil sampling at the site, EA will make the necessary arrangements to clear vegetation blocking access to the proposed soil boring locations (if needed). Activities may include removing brush and clearing access for sampling locations.

3.2 DRILLING FOR SOIL BORING INSTALLATION AND SAMPLING AND MONITORING WELL INSTALLATION AND DEVELOPMENT

Soil borings will be advanced at various locations across the site, as defined in applicable work plans submitted under separate cover. UDig New York will be called to mark out public utilities, and EA will coordinate with the Town of Tonawanda Water Department to mark the location of a storm sewer that is located along the eastern edge of the site. Special coordination will also be made with Enbridge Energy Partners to ensure that any drilling or sampling activities are taking place outside of the established buffer zone adjacent to the crude oil pipeline on the western boundary of the site. After the utility clearance has been completed, borings will be advanced with a tracked Geoprobe rig and subsurface soil samples will be collected from the desired depth intervals.

3.3 MONITORING WELL GAUGING AND SAMPLING

Groundwater sampling procedures will include water-level measurements, well purging with a peristaltic pump, field water quality measurements (including dissolved oxygen and oxidation-reduction potential), and sample collection at each well location. Purge water will first be discharged to a 5-gallon carbon vessel before being discharged to the ground surface away from the well, unless otherwise directed by NYSDEC.

3.4 SURFACE WATER SAMPLING

Surface water samples will be collected from the shallow creeks that bisect the site. Field personnel will collect the surface water sample by wading into the stream (starting at the

downstream location) to reach the desired sample location. If the water is sufficiently deep, surface water samples will be collected using the sample container itself. Otherwise, surface water samples will be collected with a dipper, beaker, or pond sampler.

3.5 HYDROLOGIC STUDY

Three surface water channels bisect the north, middle, and south sections of the site. The northern surface water channel is referred to as Rattlesnake Creek, the middle channel is called Middle Creek, and the southern channel is called South Creek. The three channels are thought to flow northwesterly across the site towards Two Mile Creek which is a tributary of the Niagara River. Rattlesnake Creek is shown on figures to be approximately 1,300-foot-long culvert pipe that transitions to an open channel then to a culvert pipe under Two Mile Creek Rd. draining to Two Mile Creek approximately 1,100 feet southeast of the Niagara River. Middle Creek is depicted as an open channel across the site that transitions to a 24-inch diameter culvert at the eastern site boundary. South Creek is depicted as culvert across the site that transitions to an open channel approximately 300 feet beyond the site boundary. South Creek flows approximately 900 feet as an open channel flow before entering the Middle Creek Culvert pipe under Two Mile Creek Rd. draining to Two Mile Creek approximately 2,500 feet southeast of the Niagara River.

Piezometers will be installed in areas of ponded water adjacent to select monitoring wells. Transducers will be placed in each piezometer and corresponding monitoring well to determine the interaction of ponded surface water and the perched groundwater at the site. One pressure transducer will be placed onsite to measure and record atmospheric pressure

4. POTENTIAL HAZARD ANALYSIS

Based on the field activities detailed in Section 3, the following potential hazard conditions may be anticipated:

- Personnel may be injured during physical lifting and handling of equipment, construction materials, or containers. Additionally, personnel may encounter slip, trip, and fall hazards associated with sampling activities. Precautionary measures should be taken in accordance with the Generic HASP (EA 2024)[1] and this HASP Addendum.

- Field operations conducted during cold weather months could impose excessive heat loss to personnel conducting strenuous activities during unseasonably cold weather days, and can impose cold-related illness symptoms during unseasonably cold weather days or when the wind chill is high. In addition, heavy rains, electrical storms, and high winds may create extremely dangerous situations for employees.

- EA anticipates the use of manual hand tools to clear brush, previously downed trees, and downed limbs. Physical hazards include musculoskeletal sprains/strains, noise, and struck-by hazards. EA staff will be trained prior to site work, utilize the correct PPE while using the tools, and will utilize any tools in a safe manner to reduce physical hazards associated with its use.

- Field operations conducted during the summer months can impose heat stress on field personnel conducting strenuous activities during unseasonably hot weather days. Because wearing PPE can increase the risk of developing heat stress, workers must be capable of recognizing the signs and symptoms of heat-related illnesses and be able to recognize these signs and symptoms in both themselves and their co-workers.

- Work around large equipment often creates excessive noise. Noise can cause workers to be startled, annoyed, or distracted; can cause physical damage to the ear, pain, and temporary and/or permanent hearing loss; and can interfere with communication. If workers are subjected to noise exceeding an 8-hour time-weighted average sound level of 85 decibels, hearing protection will be selected with an appropriate noise reduction rating to comply with 29 CFR 1910.95 and to reduce noise below levels of concern.

- The use of mechanical and construction equipment such as drill rigs, skid steers, etc. can create a potential for crushing and pinching hazards due to movement and positioning of the equipment; movement of lever arms and hydraulics; entanglement of clothing and appendages in exposed drives and augers; and impact of steel tools, masts, and cables should equipment rigging fail or other structural failures occur during hydraulic equipment operation and drilling mast extension and operation. Heavy equipment work must be conducted only by trained, experienced personnel. If possible, personnel must remain outside the turning radius of large, moving equipment. At a minimum, personnel must maintain visual contact with the equipment operator. When not operational, equipment must be set and locked so that it cannot be activated, released, dropped, etc. Hard hats,

safety glasses, and steel toe boots are required when working around mechanical and construction equipment.

- Equipment can be energized due to contact with overhead or underground electrical lines, utilities impaired by excavation of communication or potable/wastewater lines, or a potential for fire or explosion due to excavation of below ground propane/ natural gas lines. Prior to commencement of intrusive operations, a drilling/excavation permit will be obtained, and the area will be inspected and flagged. Personnel should be aware that although an area may be cleared, it does not mean that unanticipated hazards will not appear. Safe distances will be maintained from live electrical equipment. Workers should always be alert for unanticipated events such as snapping cables, digging into unmarked underground utilities, etc. Such occurrences should prompt involved individuals to halt work immediately and take appropriate corrective measures to gain control of the situation.

- Entry into a confined space in support of this project is not anticipated and is forbidden.

- Field investigation activities intended to define potential sources of environmental contamination often require employees to be in direct proximity or contact with hazardous substances. Employees may be exposed through inhalation of toxic dusts, vapors, or gases. Normal dust particulates from surficial soil may have adsorbed or absorbed toxic solvents, petroleum compounds, or toxic metal salts or metal particulates. The proposed work is not anticipated to generate nuisance odors or dust. Toxic materials contained in dusts or particulates can be ingested if eating, smoking, drinking, and gum chewing prior to personnel washing their hands and face or removing contaminated work clothing and PPE. Some chemicals may be absorbed directly through the skin. PPE, properly designed for the chemicals of concern, will always be provided and worn when a potential for skin contact is present.

- Biological Hazards—Potential hazards may be present at the Site due to bites from stray domestic and wild animals (to include rodents), spiders, bees, ticks, and other venomous anthropods. Potential hazards may also be present at the Site in the form of poisonous plant life, which can result in skin rashes or abrasions. In the case of an animal or insect bite that can be serious or fatal, workers must seek immediate medical attention and report the incident to the site safety and health officer (SSHO) prior to leaving the Site. An employee known to be allergic or sensitive to poisonous insects should alert the Site Manager and SSHO.

- The potential chemicals of concern present at the site include, but are not limited to, PCBs, metals, per- and poly-fluoroalkyl substances (PFAS), and semi-volatile organic compounds.

- Safety data sheets for chemicals that may be used on-site are provided in **Appendix C**.

5. PERSONAL PROTECTIVE EQUIPMENT

Based upon currently available information, it is anticipated that Level D PPE will be required for currently anticipated conditions and activities. If, at any time, the sustained level of total organic vapors in the worker breathing zone exceeds 5 parts per million above background, site workers will evacuate the area and the condition will be brought to the attention of the SSHO. Efforts will be undertaken to mitigate the source of the vapors. Once the sustained level of total organic vapors decreases to below 5 parts per million above background, site workers will be allowed to continue activities at the direction of the SSHO. If dust levels exceed the Occupational Safety and Health Administration (OSHA) permissible exposure limit (EA 2024)[1]; dust masks will be worn by all on-site personnel until dust suppression using water methods reduce the levels.

The PPE components for use during this project are detailed in the Generic HASP (EA 2024).[1] The components of Level D PPE are summarized below. Level D will be worn for initial entry on-site and for all activities and will consist of the following:

- Coveralls or appropriate work clothing
- Steel-toe, steel-shank safety boots/shoes
- Hard hats (when overhead hazards are present or as required by the SSHO)
- Chemical resistant gloves (nitrile/neoprene) when contact with potentially contaminated soil or water is expected
- Safety glasses with side shields
- Hearing protectors (during operations producing excessive noise).

Insulated clothing, hats, etc. must be worn when temperatures or wind chill fall below 40 degrees Fahrenheit.

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6. SITE CONTROL AND SECURITY

All personnel shall sign the site entry and exit log (**Appendix D**) prior to beginning work and leaving the site for the day. Only authorized personnel will be permitted to conduct field activities. Authorized personnel include those who have completed hazardous waste operations initial training, as defined under OSHA 29 CFR 1910.120/29 CFR 1926.65, have completed their training or refresher training within the past 12 months, and have been certified by a physician as fit for hazardous waste operations.

6.1 SAFE WORK PRACTICES

Safe work practices that will be followed by site workers include, but are not limited to, the following rules:

- Working before or after daylight hours without special permission is prohibited.
- Do not enter restricted or posted areas without permission from the SSHO.
- Smoking on-site is prohibited.
- Possessing, using, purchasing, distributing, or having controlled substances in their system throughout the day or during meal breaks is prohibited.
- Consuming or possessing alcoholic beverages is prohibited.
- Good housekeeping; employees will be instructed about housekeeping throughout field activities.
- Sitting or kneeling in areas of obvious contamination is prohibited.
- Avoid overgrown vegetation and tall grass areas.

6.2 DAILY STARTUP AND SHUTDOWN PROCEDURES

The following protocols will be followed daily prior to start of work activities:

- The SSHO will review site conditions to determine if modification of work and safety plans is needed.
- Personnel will be briefed and updated on new safety procedures as appropriate.

- Safety equipment will be checked for proper function.
- The SSHO will ensure that the first aid kit is adequately stocked and readily available.
- On-site equipment and supplies will be locked and secure.

Appendix A

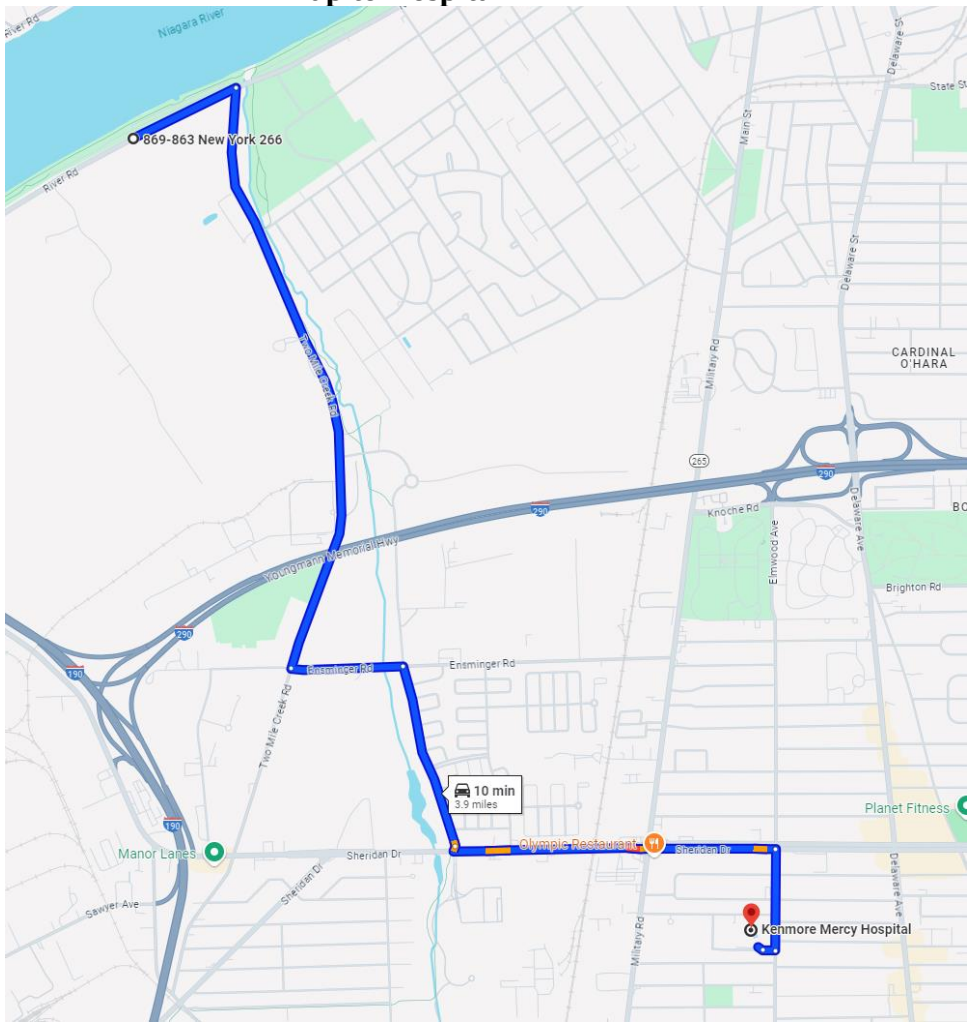
Emergency Telephone Numbers and Hospital Directions

Appendix A

Emergency Telephone Numbers and Hospital Directions

SITE: 5565 River Road Site, Tonawanda, Erie County, New York	
Police: Town of Tonawanda Police Department	9-1-1 / (716) 876-5300
Fire: River Road Volunteer Fire Co. #3	9-1-1 / (716) 874-9140
Ambulance	9-1-1
Hospital: Kenmore Mercy Hospital	(716) 447-6100
Directions to Kenmore Mercy Hospital (2950 Elmwood Avenue, Buffalo, NY 14217): Turn right from site exit and head east on River Road to right turn on Two Mile Creek Road. After 1.6 miles turn left on Ensminger Road for 0.3 miles, then right onto E. Park Drive for 1.1 miles. Turn left onto Sheridan Drive for 0.9 miles, then right onto Elmwood Avenue for 0.3 miles. The hospital entrance is on the right.	
Program Safety and Health Officer: **Rob Marcase, CIH, CSP, CHMM**	(410) 329-5192 Office (717) 586-9878 Cell
Program Manager: **Donald Conan, P.E., P.G.**	(315) 877-7403
EA Project Manager **Adam Etringer**	(315) 565-6564 Office (518) 242-9773 Cell
In case of spill, contact **Adam Etringer**	(315) 565-6564 Office (518) 242-9773 Cell
EA Medical Services (Physician) **All One Health Services**	(800) 229-3674
Field Manager/Site Health and Safety Officer: **Lincoln Backman-Lowe**	(315) 930-3763 Office (716) 364-7282 Cell
Site Geologist: **Edward Ashton**	(315) 565-6560 Office (315) 551-1161 Cell
In case of accident or exposure incident, contact Corporate Health and Safety Officer **Robert Marcase, CIH, CSP, CHMM**	(410) 329-5192 Office (717) 586-9878 Cell

Map to Hospital



Appendix B

Health and Safety Plan Addendum Review Record

Appendix B

Health and Safety Plan Addendum Review Record

I have read the Health and Safety Plan Addendum for this site and have been briefed on the nature, level, and degree of exposure likely as a result of participation in this project. I agree to conform to all the requirements of this Plan.

SITE: 5565 River Road Site, Tonawanda, Erie County, New York			
Name	Signature	Affiliation	Date

Appendix C

Safety Data Sheets

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

1.1 Product identifier

Product name **POLYCHLORINATED BIPHENYLS (PCB)**
Synonym(s) CHLOREXTOL • CHLORINATED BIPHENYL • MONTAR • PCB • PHENOCHLOR

1.2 Uses and uses advised against

Use(s) INSULATION • PLASTICISER • TRANSFORMER LUBRICANT

1.3 Details of the supplier of the safety data sheet

Supplier name **GENERIC REPORT - FOR REFERENCE PURPOSES ONLY**
Address PO Box 21, West Perth, WA, Australia, 6872
Telephone (08) 9322 1711
Fax (08) 9322 1794
Email Not supplied
Website Not supplied

1.4 Emergency telephone number(s)

Emergency (08) 9322 1711

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

CLASSIFIED AS HAZARDOUS ACCORDING TO SAFE WORK AUSTRALIA CRITERIA
GHS Classification(s) Specific Target Organ Systemic Toxicity (Repeated Exposure): Category 2
Aquatic Toxicity (Chronic): Category 1

2.2 Label elements

Signal word **WARNING**
Pictograms

Hazard statement(s)
H373 May cause damage to organs through prolonged or repeated exposure.
H410 Very toxic to aquatic life with long lasting effects.
Prevention statement(s)
P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P273 Avoid release to the environment. This statement does not apply where this is the intended use.
Response statement(s)
P314 Get medical advice/attention if you feel unwell.
P391 Collect spillage.
Disposal statement(s)
P501 Dispose of contents/container in accordance with relevant regulations.

2.3 Other Hazards

No information provided.

3. COMPOSITION/ INFORMATION ON INGREDIENTS

3.1 Substances / Mixtures

Ingredient	CAS number	EC number	Content
POLYCHLORINATED BIPHENYLS (PCB)	1336-36-3	215-648-1	100%

4. FIRST AID MEASURES

Product name **POLYCHLORINATED BIPHENYLS (PCB)**

4.1 Description of first aid measures

Eye	If in eyes, hold eyelids apart and flush continuously with running water. Continue flushing until advised to stop by a Poisons Information Centre, a doctor, or for at least 15 minutes.
Inhalation	If inhaled, remove from contaminated area. To protect rescuer, use a Type A (Organic vapour) respirator or an Air-line respirator (in poorly ventilated areas). Apply artificial respiration if not breathing.
Skin	If skin or hair contact occurs, remove contaminated clothing and flush skin and hair with running water. Continue flushing with water until advised to stop by a Poisons Information Centre or a doctor.
Ingestion	For advice, contact a Poison Information Centre on 13 11 26 (Australia Wide) or a doctor (at once). If swallowed, do not induce vomiting.
First aid facilities	No information provided.

4.2 Most important symptoms and effects, both acute and delayed

No information provided.

4.3 Immediate medical attention and special treatment needed

Treat symptomatically.

5. FIREFIGHTING MEASURES

5.1 Extinguishing media

Dry agent, carbon dioxide or foam. Prevent contamination of drains and waterways.

5.2 Special hazards arising from the substance or mixture

Combustible. May evolve toxic gases (carbon oxides, dibenzofurans, dioxins, hydrogen chloride, phenols, chlorides, hydrocarbons) when heated to decomposition.

5.3 Advice for firefighters

Evacuate area and contact emergency services. Toxic gases may be evolved in a fire situation. Remain upwind and notify those downwind of hazard. Wear full protective equipment including Self Contained Breathing Apparatus (SCBA) when combating fire. Use waterfog to cool intact containers and nearby storage areas.

5.4 Hazchem code

2X

2	Water Fog (or fine water spray if fog unavailable)
X	Full protective clothing including Self Contained Breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Wear Personal Protective Equipment (PPE) as detailed in section 8 of the SDS. Contact emergency services where appropriate.

6.2 Environmental precautions

Prevent product from entering drains and waterways.

6.3 Methods of cleaning up

Contain spillage, then cover / absorb spill with non-combustible absorbent material (vermiculite, sand, or similar), collect and place in suitable containers for disposal. Only trained personnel should undertake clean up.

6.4 Reference to other sections

See Sections 8 and 13 for exposure controls and disposal.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Before use carefully read the product label. Use of safe work practices are recommended to avoid eye or skin contact and inhalation. Observe good personal hygiene, including washing hands before eating. Prohibit eating, drinking and smoking in contaminated areas.

7.2 Conditions for safe storage, including any incompatibilities

Store in segregated, locked and signposted compound with bunded floor. Drums may be plastic lined. Ensure area is cool, dry, well ventilated removed from direct sunlight, incompatible substances, heat or ignition sources and foodstuffs. Ensure each container is adequately labelled, protected from physical damage & sealed when not in use. Check regularly for leaks or spills.

Product name **POLYCHLORINATED BIPHENYLS (PCB)**

7.3 Specific end use(s)

No information provided.

8. EXPOSURE CONTROLS/ PERSONAL PROTECTION

8.1 Control parameters

Exposure standards

Substance	Reference	TWA		STEL	
		ppm	mg/m³	ppm	mg/m³
PCBs (42% Chlorine)	SWA (AUS)	--	1	--	2
PCBs (54% Chlorine)	SWA (AUS)	--	0.5	--	1

Biological limits

No biological limit values have been entered for this product.

8.2 Exposure controls

Engineering Controls Avoid inhalation. Use in well ventilated areas. Where an inhalation risk exists, mechanical extraction ventilation is recommended. Maintain vapour levels below the recommended exposure standard.

PPE

Eye/Face Wear splash-proof goggles.

Hand Wear viton (R) or neoprene gloves.

Body Wear coveralls.

Respiratory Wear a Type A (Organic vapour) respirator. If using product in a confined area, wear an Air-line respirator.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	VARY FROM OILY LIQUID TO WHITE CRYSTALLINE SOLID AND NON CRYSTALLINE RESIN
Odour	MILD AROMATIC ODOUR
Odour Threshold	NOT AVAILABLE
pH	NOT AVAILABLE
Melting Point	NOT AVAILABLE
Boiling Point	340°C to 375°C
Flash Point	NOT AVAILABLE
Evaporation Rate	NOT AVAILABLE
Flammability	COMBUSTIBLE
Upper Explosion Limit	NOT AVAILABLE
Lower Explosion Limit	NOT AVAILABLE
Vapour Pressure	NOT AVAILABLE
Vapour Density	NOT AVAILABLE
Solubility (water)	INSOLUBLE
Partition Coefficient	NOT AVAILABLE
Autoignition Temperature	NOT AVAILABLE
Decomposition Temperature	NOT AVAILABLE
Viscosity	NOT AVAILABLE
Explosive Properties	NOT AVAILABLE
Oxidising Properties	NOT AVAILABLE
Specific Gravity	1.44

9.2 Other information

% Volatiles	NOT AVAILABLE

10. STABILITY AND REACTIVITY

10.1 Reactivity

Carefully review all information in sections 10.2 to 10.6.

10.2 Chemical stability

No information provided.

10.3 Possibility of hazardous reactions

No information provided.

10.4 Conditions to avoid

No information provided.

10.5 Incompatible materials

Incompatible with oxidising agents (e.g. hypochlorites), acids (e.g. nitric acid), alkalis (e.g. sodium hydroxide), heat and ignition sources.

10.6 Hazardous decomposition products

May evolve toxic gases (carbon oxides, dibenzofurans, dioxins, hydrogen chloride, phenols, chlorides, hydrocarbons) when heated to decomposition.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Health hazard summary Toxic. This product has the potential to cause adverse health effects. Use safe work practices to avoid eye or skin contact and inhalation. PCBs are classified as probably carcinogenic to humans (IARC Group 2A). Chronic exposure may result in liver and skin damage. Chronic exposure may result in birth defects. Cumulative poison.

Eye Irritant. Contact may result in irritation, lacrimation, pain and redness.

Inhalation Toxic. Over exposure may result in irritation of the nose and throat, coughing, loss of appetite, nausea and vomiting. Chronic exposure may result in liver damage. PCBs are classified as probably carcinogenic to humans (IARC Group 2A).

Skin Toxic - irritant. Contact may result in irritation, redness, rash, brown-grey pigmentation and chloracne. May be absorbed through skin with harmful effects.

Ingestion Toxic. Ingestion may result in nausea, vomiting, abdominal pain, diarrhoea, dizziness and drowsiness. Chronic exposure may result in liver damage and skin pigmentation.

Toxicity data POLYCHLORINATED BIPHENYLS (PCB) (1336-36-3)
LD50 (Ingestion): 1900 mg/kg (mouse)
LDLo (Skin): 1148 mg/kg/38 days intermittently (rabbit)
TCLo (Inhalation): 0.93 mg/m³/8 hours/20 weeks intermittently (rat)
TDLo (Ingestion): 400 mg/kg (female rat)
TDLo (Intraperitoneal): 700 mg/kg (female rat)

12. ECOLOGICAL INFORMATION

12.1 Toxicity

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

12.2 Persistence and degradability

No information provided.

12.3 Bioaccumulative potential

No information provided.

12.4 Mobility in soil

No information provided.

12.5 Results of PBT and vPvB assessment

No information provided.

12.6 Other adverse effects

Product name **POLYCHLORINATED BIPHENYLS (PCB)**

Current evidence suggests that the major source of Polychlorinated biphenyls (PCBs) released to the environment is an environmental cycling process of PCBs previously introduced into the environment. This cycling process involves volatilisation from ground surfaces (water, soil) into the atmosphere with subsequent removal from the atmosphere via wet/dry deposition and then revolatilisation. Monochlorinated biphenyls, dichlorinated biphenyls and trichlorinated biphenyls biodegrade relatively rapidly, tetrachlorinated biphenyls biodegrade slowly, & higher chlorinated biphenyls are resistant to biodegradation.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Waste disposal PCBs may only be disposed of by authorised methods or organisations. Contact your state EPA or the manufacturer for additional information.

Legislation Dispose of in accordance with relevant local legislation.

14. TRANSPORT INFORMATION

CLASSIFIED AS A DANGEROUS GOOD BY THE CRITERIA OF THE ADG CODE

	Land Transport (ADG)	Sea Transport (IMDG/IMO)	Air Transport (IATA/ICAO)
14.1 UN number	2315	-	-
14.2 UN proper shipping name	POLYCHLORINATED BIPHENYLS	-	-
14.3 Transport hazard classes			
DG Class	9	-	-
Subsidiary risk(s)	None Allocated	-	-
14.4 Packing group	II	-	-
14.5 Environmental hazards		None Allocated	
14.6 Special precautions for user			
Hazchem Code	2X		

15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Poison schedule A poison schedule number has not been allocated to this product using the criteria in the Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP).

Classifications N - Dangerous for the environment
Xn - Harmful

Risk phrases

R33:	Danger of cumulative effects.
R50/53:	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Safety phrases

S2:	Keep out of reach of children.
S35:	This material and its container must be disposed of in a safe way.
S60:	This material and its container must be disposed of as hazardous waste.
S61:	Avoid release to the environment. Refer to special instructions/safety data sheets.

Inventory listing(s) **AUSTRALIA: AICS (Australian Inventory of Chemical Substances)**
All components are listed on AICS, or are exempt.

15.2 Chemical safety assessment

No information provided.

Product name **POLYCHLORINATED BIPHENYLS (PCB)**

16. OTHER INFORMATION

Additional information

This ChemAlert report is for informational purposes in case of accidental exposure to Polychloinated Biphenyls (PCBs)

IARC - GROUP 2A - PROBABLE HUMAN CARCINOGEN. This product contains an ingredient which has demonstrated sufficient evidence to have been classified by the International Agency for Research into Cancer (IARC) as a probable human carcinogen and whose use should be strictly monitored and controlled.

POLYCHLORINATED BIPHENYLS: The use of PCBs has been banned in industry for some time, however problems may occur due to their use in the past. PCBs have been reported to be present within construction jointing sealants and capacitors. Special precautions are required when handling materials which may contain PCBs. Please consult Risk Management Technologies for further information.

HEALTH EFFECTS FROM EXPOSURE:
It should be noted that the effects from exposure to this product will depend on several factors including: frequency and duration of use; quantity used; effectiveness of control measures; protective equipment used and method of application. Given that it is impractical to prepare a ChemAlert report which would encompass all possible scenarios, it is anticipated that users will assess the risks and apply control methods where appropriate.

PERSONAL PROTECTIVE EQUIPMENT GUIDELINES:
The recommendation for protective equipment contained within this report is provided as a guide only. Factors such as method of application, working environment, quantity used, product concentration and the availability of engineering controls should be considered before final selection of personal protective equipment is made.

COLOUR RATING SYSTEM: RMT has assigned all ChemAlert reports a colour rating of Green, Amber or Red for the sole purpose of providing users with a quick and easy means of determining the hazardous nature of a product. Safe handling recommendations are provided in all ChemAlert reports so as to clearly identify how users can control the hazards and thereby reduce the risk (or likelihood) of adverse effects. As a general guideline, a Green colour rating indicates a low hazard, an Amber colour rating indicates a moderate hazard and a Red colour rating indicates a high hazard.

While all due care has been taken by RMT in the preparation of the Colour Rating System, it is intended as a guide only and RMT does not provide any warranty in relation to the accuracy of the Colour Rating System. As far as is lawfully possible, RMT accepts no liability or responsibility whatsoever for the actions or omissions of any person in reliance on the Colour Rating System.

Abbreviations

ACGIH	American Conference of Governmental Industrial Hygienists
CAS #	Chemical Abstract Service number - used to uniquely identify chemical compounds
CNS	Central Nervous System
EC No.	EC No - European Community Number
EMS	Emergency Schedules (Emergency Procedures for Ships Carrying Dangerous Goods)
GHS	Globally Harmonized System
GTEPG	Group Text Emergency Procedure Guide
IARC	International Agency for Research on Cancer
LC50	Lethal Concentration, 50% / Median Lethal Concentration
LD50	Lethal Dose, 50% / Median Lethal Dose
mg/m³	Milligrams per Cubic Metre
OEL	Occupational Exposure Limit
PEL	Permissible Exposure Limit
pH	relates to hydrogen ion concentration using a scale of 0 (high acidic) to 14 (highly alkaline).
ppm	Parts Per Million
REACH	Regulation on Registration, Evaluation, Authorisation and Restriction of Chemicals
STEL	Short-Term Exposure Limit
STOT-RE	Specific target organ toxicity (repeated exposure)
STOT-SE	Specific target organ toxicity (single exposure)
SUSMP	Standard for the Uniform Scheduling of Medicines and Poisons
SWA	Safe Work Australia
TLV	Threshold Limit Value

Product name **POLYCHLORINATED BIPHENYLS (PCB)**

TWA Time Weighted Average

Report Status This ChemAlert report has been independently compiled by RMT's scientific department utilising the original Safety Data Sheet ('SDS') for the product provided to RMT by the manufacturer. The information is based on the latest chemical and toxicological research and is believed to represent the current state of knowledge as to the appropriate safety and handling precautions for the product at the time of issue. It is an independent collation by RMT of information obtained from the original SDS for this product. Its content has not been authorised or verified by the manufacturer / distributor of the chemical to which it relates.

This ChemAlert report does not constitute the manufacturer's original SDS and is not intended to be a replacement for same. It is provided to subscribers of ChemAlert as a reference tool only, is not all-inclusive and does not represent any guarantee as to the properties of the product. Further clarification regarding any aspect of the product should be obtained directly from the manufacturer.

While RMT has taken all due care to include accurate and up-to-date information in this ChemAlert report, it does not provide any warranty as to accuracy or completeness. As far as lawfully possible, RMT accepts no liability for any loss, injury or damage (including consequential loss) which may be suffered or incurred by any person as a consequence of their reliance on the information contained in this ChemAlert report.

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Last Reviewed: 05 Feb 2013
Date Printed: 27 Apr 2015
Based on SDS dated: 05 Feb 2013

End of Report

Appendix D

Site Entry and Exit Log

Appendix D

Site Entry and Exit Log

SITE: 5565 River Road Site, Tonawanda, Erie County, New York				
Name	**Date**	**Time of Entry**	**Time of Exit**	**Initials**

Attachment D
NYSDOH Generic
CAMP

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

Attachment E
GRD Work Plan

Survey Plan
at
5565 River Road,
Tonawanda, NY 14150

Prepared for:

EA Engineering and Geology, P.C.

Prepared by:

Greater Radiological Dimensions Inc.

3857 Hyde Park Blvd

Niagara Falls, NY 14305

March 17, 2025 - Rev 2

SIGNATURE SHEET

Survey Plan
5565 River Road,
Tonawanda, NY 14150

Prepared and Approved:

Michael Pauly_____ Date_____
Greater Radiological Dimensions, Inc / Radiation Safety Officer

John McCune, CHMM_____ Date_____
Greater Radiological Dimensions Inc. Senior Project Manager / Environmental Manager

Plan Concurrence:

R Conrad Perlman_____ Date _____
Greater Radiological Dimensions, Inc / Radiation Technician

Contents

List of Acronyms

ALARA	As Low As Reasonably Achievable
AOC	Areas of Concern
CFR	Code of Federal Regulations
CHP	Certified Health Physicist
COC	Contaminants of Concern
DEC	The New York State Department of Environmental Conservation
DMM-5	Management of Soils Contaminated with Technologically Enhanced Naturally Occurring Radioactive Materials
DOH	Department of Health
ELAP	Environmental Laboratory Approval Program
ERS	Environmental Radiation Specialist
FBGS	Feet Below Ground Surface
GRD	Greater Radiological Dimensions Inc. (Radiation Services Subcontractor)
MDAs	Minimum Detectable Activities
pCi/g	picocuries per gram
PM	Project Manager
PPE	Personal Protective Equipment
RI	Remedial Investigation
RMMS	Radioactive Materials Management Section
RSO	Radiation Safety Officer
RT	Radiation Technician
TENORM	Technologically Enhanced Naturally Occurring Radiation Material
UD	Urban Land
USDA	United States Department of Agriculture

1.0 Introduction

Greater Radiological Dimensions (GRD), Radioactive Materials License No. C5514, has been subcontracted by EA Engineering and Geology, P.C. (EA) to perform a gamma survey with sampling at this site.

The subject site is located at 5565 River Road in the Town of Tonawanda, Erie County, New York. The property is a single parcel consisting of approximately 37 acres (**Figure 1**). The site is defined as the northern 24-acre portion of this parcel. The property is bounded on the west by vacant, forested land and a subsurface crude oil pipeline; on the south by commercial property; on the east by a gravel road; and on the north by a truck terminal. Access to the 5565 River Road site is by a gravel drive on the adjacent property owned by the Town of Tonawanda.

Three creeks traverse the site, one called Rattlesnake Creek in the northern portion of the site, and two unnamed creeks in the central and southern portions of the site, which for the ease of identification are referred to as Middle Creek and South Creek, respectively. All three creeks discharge to Two Mile Creek to the east, which ultimately discharges to the Niagara River approximately 2,500 feet (ft) downstream of the site.

The 5565 River Road site was operated as a dump for industrial fill material (primarily fly ash and foundry sand) from the 1960s through the 1990s. Aerial photographs indicate that dumping at the site had ended sometime before 2005 and trees were present at the former disposal areas. The site is currently vacant and is zoned by the Town of Tonawanda as Waterfront Industrial District. Surrounding land use consists of commercial/industrial properties zoned Waterfront Business District and Waterfront Industrial District.

GRD performed a GPS radiological field screening in November 2024, see results (**Figure 2**). GRD established an average background of 5,880 counts per minute (cpm). Screening was measured using a Ludlum Model 3000 meter with a 44-10 probe. Elevated radiation was associated with fly ash and foundry sand.

All work is subject to the conditions of GRD's Radioactive Materials License and the requirements of applicable regulations. The requirements and guidelines in this plan have been developed to ensure workers are afforded a safe work environment, and to maintain occupational and environmental exposure to ionizing radiation "As Low As Reasonably Achievable" (ALARA).

Greater Radiological Dimensions, Inc. (GRD) places its highest priority on ensuring the safety and health of its employees, neighbors, and the public, as well as protecting the environment. This priority extends to all areas affected by site operations.

2.0 Scope

According to the results of the surface scan (**Figure 2**) there are multiple areas that exceeded 1.5x background. These areas generally correspond to known fly ash or foundry sand piles resulting from historical dumping. EA has selected the following sample locations (**Figure 2**):

- RAD-1 and RAD-2 were selected to characterize areas of known foundry sand piles with gamma counts exceeding 1.5x background. Boring depths are approximately 15-18 feet.

- RAD-3 and RAD-4 were selected to characterize areas of known fly ash with gamma counts exceeding 1.5x background. The boring depth at Location 3 is approximately 12 feet; and Location 4 is approximately 9 feet.

- RAD-5 was selected for known fly ash with gamma counts exceeding 1.5x background. The boring depth at Location 5 is approximately 6 feet.

- RAD-6 was selected to characterize the wetland area near the northwest corner of the site with gamma counts exceeding 1.5x background. The boring depth at location 6 is approximately 3 feet.

Drilling equipment (provided by the Client) will be advanced into the subsurface to remove soil cores at each sample location. The soil will be screened using a Ludlum Model #3000 Detector paired with a #44-10 sodium iodide probe to create a vertical profile from the ground surface to the native clay material.

A composite soil sample will be collected from each three-foot interval. Each sample will consist of 3 grab samples to form a composite sample and analyzed for radium-226 at an ELAP certified laboratory. Upon completion of reporting, the site Owner, or other appropriate person must submit the results to the assigned ERS (and DEC project manager for sites in a DEC remedial program) for review.

Background activity levels will be recorded prior to screening each area(s) to be surveyed. It is intended for the background area to be distinct from the area of concern (AOC), yet representative of background conditions in the vicinity of the AOC. Once established, backgrounds will be recorded from the same location(s). Natural radiological background is preferred, however, in some instances, such as urban areas, background representative of non-natural conditions not impacted by TENORM may be acceptable, as approved by the Department (DEC).

Once testing is complete, Radium-226 results will be compared to established NYSDEC thresholds presented in Policy DMM-5 to assess material management implications. Analytical results will be included with GRD's submittal package to the Owner/Client and should be provided to the NYSDEC Site Project Manager. The results will assist in determining the necessity and scope of a TENORM Management Plan.

If radiologically impacted materials are encountered, then an equipment release survey will be conducted by surveying the item/equipment/personnel for contamination.

A visual inspection of any equipment that encounters radiologically impacted material will be performed. If needed a contamination survey using an appropriate portable survey instrument will subsequently be conducted if they encounter radiologically impacted materials (e.g., equipment treads and buckets, truck beds and tires, etc.). The scan rate will not exceed 1 inch per second. The entire surface of the item to be released will be surveyed. Items will be released if they exhibit beta/gamma activity levels less than 0.2 mR/hr (see 10 NYCRR 16, Appendix 16-A Table 7: Radioactive Surface

Contamination Limits for release of material of facilities in an uncontrolled area).

At the end of each workday personnel will be frisked by a GRD employee using a Model 12 paired with 44-9. If readings are above background they will need to wash the contaminated area with soap and water. Once completed they will be frisked again.

3.0 Personal Protective Equipment

- No high-level radiation exposure is expected during this project. Level D PPE is anticipated.
- The RSO has the authority to stop work and/or prescribe additional PPE based on radiological conditions encountered.

4.0 Documentation

GRD will be responsible for records pertaining to radiation surveys, monitoring, and sampling performed including:

- Name of the person making the evaluation and recording the results.
- Date of the survey.
- Instrument serial number used for surveys and measurements.
- Results obtained.

Material placement activities will be documented on a daily log. Logged information will include daily weather conditions, instrumentation in use, gamma screening results, and sketches or maps of activity areas.

5.0 Organization

Greater Radiological Dimensions (GRD), Radioactive Materials License No. C5514, has been subcontracted by EA to implement the gamma walkover survey at this site.

5.1 Radiation Safety Officer

The Radiation Safety Officer (RSO) has the authority to direct all aspects of surveying and sampling, including the RT, and to ensure compliance with required regulations. The RSO is organizationally independent from operations and has the authority and responsibility to stop any activity which is not conducted in a safe manner, with respect to radiological safety, or in compliance with the license, applicable regulations, and procedures.

5.2 Senior Project Manager

The Senior project manager will oversee and lead the planning, execution, and successful completion of the project. Ensuring alignment with organizational objectives while managing resources, deadlines, and budget.

5.3 Radiation Technician

GRD will provide the Radiation Technician (RT) for the project. The Radiation Technician reports directly to the RSO. The RT will perform fieldwork activities in support of surveying and sampling operations. All results will be reviewed by the RSO and transmitted to the client or Owner. The RSO and Owner will immediately be notified if elevated material is located.

GRD will have oversight of all radiation safety activities and operations relating to surveying, sampling, and sample analysis. GRD will also be responsible for the following:

- Ensure that operations are being conducted in accordance with 10 NYCRR Part 16, with 6 NYCRR Part 380 and with DMM-5.
- Perform briefing of personnel and ensure that all personnel are adequately trained in radiation safety principles commensurate to the level with each person's job function.
- Maintaining radiological records and reports. Consults with the Certified Health Physicist (CHP) about any deficiencies.

6.0 Responsibility

GRD's responsibility will be the compilation of the initial radiological survey screening results, and the collection of the samples detailed in this work plan. The client is responsible for the collection of the soil material for which the gamma screening and sampling will be conducted. Responsibility for the interpretation and implementation of this policy resides within the Department and its assigned Environmental Radiation Specialist (ERS) in coordination with any Department project manager (or other Department staff involved), to ensure that adequate radiological screening is performed. Additional consultation may occur as determined to be necessary with the Department's Radioactive Materials Management Section (RMMS) staff, in the Bureau of Hazardous Waste and Radiation Management in the Division of Materials Management.

7.0 Contacts

The following individuals are competent persons, and the primary contacts associated with this project:

Name	**Cell Phone #**
Adam Etringer, Project Manager (EA)	(518)-242-9773
John McCune, Senior Project Manager (GRD)	(716) 525-6630
Michael Pauly, Radiation Safety Officer (GRD)	(716) 913-5041
Conrad Perlman, Radiation Technician (GRD)	(716) 550-9215

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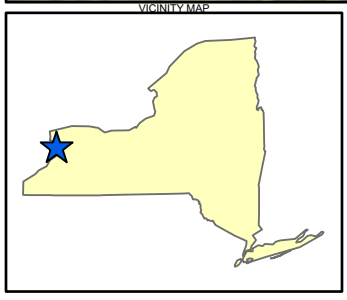
VICINITY MAP



Legend

- Site Boundary and Area for Radiological Survey
- Open Surface Water Channel
- Surface Water Conduit/Culvert

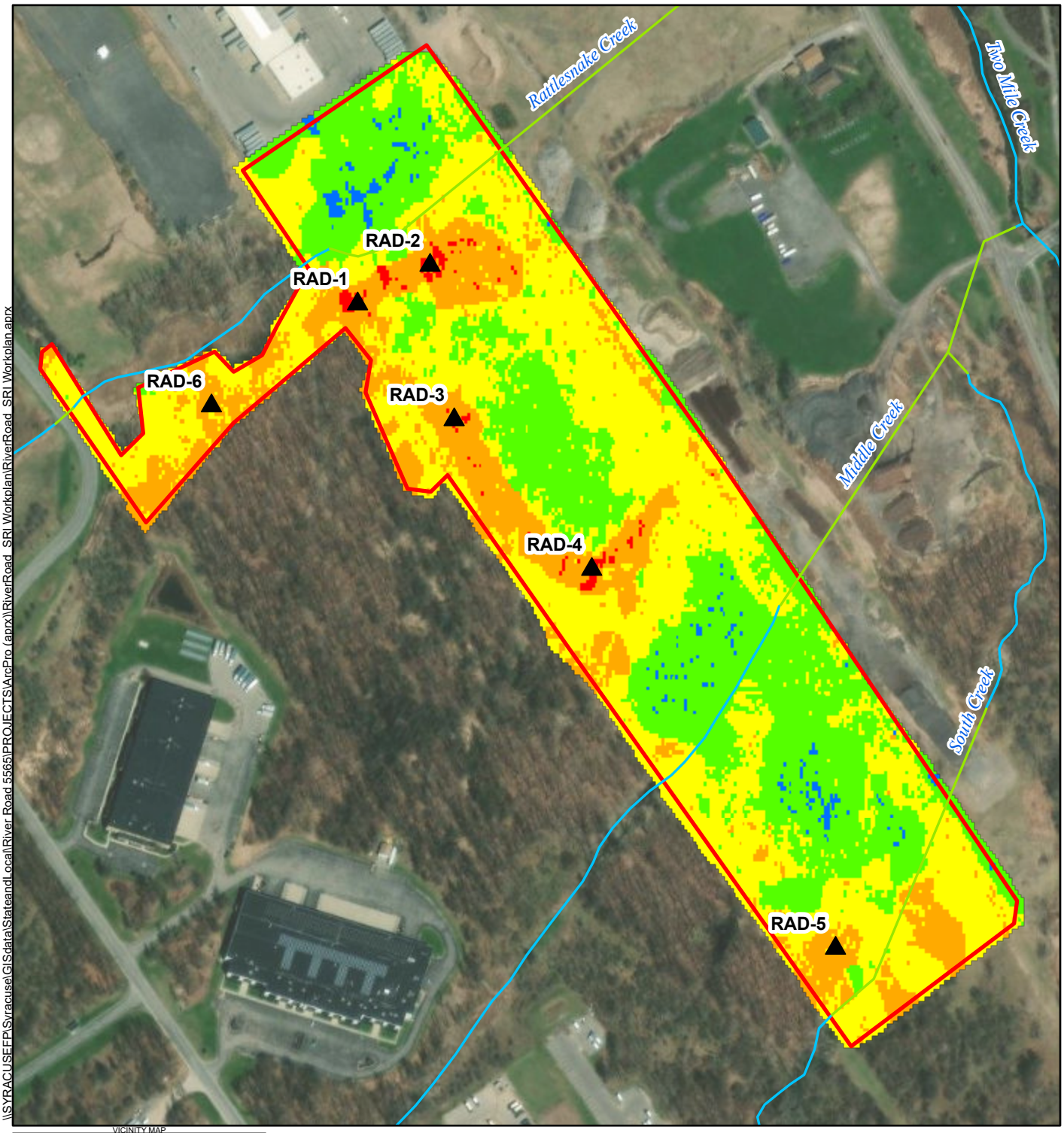
0 400 800
Feet

N

Figure 1
SITE MAP AND SURROUNDING AREA
5565 River Road (915239)
Tonawanda, New York

Map Date: 3/3/2025
Projection: NAD 1983 (2011) State Plane
New York West FIPS 3103 (US Feet)

NEW YORK STATE | Department of Environmental Conservation



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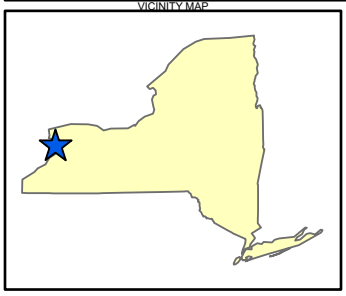
VICINITY MAP



Legend

- Site Boundary and Area for Radiological Survey
- Open Surface Water Channel
- Surface Water Conduit/Culvert
- Proposed Sample Location

Gamma Count Rate (CPM)

- ≤ 5,000
- 5,001 - 7,000
- 7,001 - 8,779
- 8,880 - 11,000
- > 11,000

0 200 400
Feet
N

Figure 2
RADIOLOGICAL SURVEY AREA AND PROPOSED SAMPLE LOCATIONS
5565 River Road (915239)
Tonawanda, New York

Map Date: 3/19/2025
Projection: NAD 1983 (2011) State Plane New York West FIPS 3103 (US Feet)

NEW YORK STATE Department of Environmental Conservation