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*The Trusted Integrator for Sustainable Solutions*

September 27, 2013

Mr. Andrew Fessler, Work Assignment Manager
U.S. Environmental Protection Agency
290 Broadway - 18th Floor
New York, NY 10007-1866

**Document Control No.: 2224-2A-BIZD**

**Subject:** **Abbreviated Preliminary Assessment Checklist**
**738 Upper Mountain Road**
**Contract No.: EP-S5-06-04, TDD No.: S05-0013-1307-007**

Dear Mr. Fessler,

Weston Solutions, Inc. (WESTON®) is pleased to submit the draft Abbreviated Preliminary Assessment Checklist for the 738 Upper Mountain Road site in Lewiston, New York. If you have any questions, please contact me at (732) 417-5814.

Very truly yours,

WESTON SOLUTIONS, INC.

Denise Breen

Denise Breen
Assistant Project Scientist

enclosure

cc: C. Romano, EPA (w/o enclosure)
G. Gilliland, WESTON
file

# ABBREVIATED PRELIMINARY ASSESSMENT CHECKLIST

This checklist can be used to help the site investigator determine if an Abbreviated Preliminary Assessment (APA) is warranted. This checklist should document the rationale for the decision on whether further steps in the site investigation process are required under CERCLA. Use additional sheets, if necessary.

**Checklist Preparer**: Denise Breen / Assistant Project Scientist (Name/Title) — September 27, 2013 (Date)

205 Campus Drive, Edison NJ 08837 (Address) — (732) 417-5814 (Phone)

denise.breen@westonsolutions.com (E-Mail Address)

**Site Name:** 738 Upper Mountain Road

**Previous Names (if any):** N/A

**Site Location**: 738 Upper Mountain Road (Street)

Lewiston, New York, 14092 (City) (ST) (Zip)

**Latitude:** 43.155° North **Longitude:** -79.022° West

**Describe the release (or potential release) and its probable nature:**

From October 3-16, 1984, 100 elevated gamma radiation anomalies in the Niagara Falls, New York, area were recommended for an on-site survey by Oak Ridge National Laboratory (ORNL) to determine if the elevated levels of radiation may be related to the transportation of radioactive waste materials to the Lake Ontario Ordnance Works for storage. During July 15-17, 1985, members of the Radiological Survey Activities (RASA) group at ORNL performed the radiological survey. During the survey, the 738 Upper Mountain Road location showed a maximum gamma exposure rate of 710 microroentgens per hour (μR/h). The area with these readings was an area approximately 10 feet wide by 59 feet in length along a ditch and gravel residential driveway. The survey, which included outdoor gamma exposure rates, showed that the 738 Upper Mountain Road anomaly is associated with the asphalt driveway that contained a phosphate slag material. This rocky-slag waste material was used for bedding under asphalt surfaces and in general gravel applications. Biased surface soil samples collected in conjunction with the study indicated the presence of radium-226, uranium-238, and thorium-232 at the following respective concentrations: 92 ± 5 picocuries per gram (pCi/g), 70 pCi/g, and 560 ± 180 pCi/g.

The subsequent November 1986 report stated that all the contaminated soil and rock samples collected had approximately equal concentrations of radium-226 and uranium-238, which suggested that the rocks probably originated from a singular source. The anomalies from the region are associated with phosphate slag material used as bedding for asphalt driveways and fill applications. An elevated concentration of thorium-232 was also detected in the slag and rock. The origin of the thorium-bearing material was unknown; the report postulated its source was from some type of mineral extraction activity in the Niagara Falls area. According to the report, this rocky-slag waste material was once involved in the electrochemical production of elemental phosphorous using uranium-bearing raw materials and reportedly originated from the former Oldbury Furnace in Niagara Falls, New York. The report stated that the 738 Upper Mountain Road anomaly was not related to materials connected with Niagara Falls Storage Site (NFSS), including materials that were transported to NFSS. In addition to the 738 Upper Mountain Road anomaly, there were eight other anomalies in the Lewiston, NY area, in excess of the average background radium-226 and uranium-238 concentrations, which also were not related to materials connected with NFSS.

During a reconnaissance performed by the New York State Department of Health (NYSDOH) on July 9, 2013, screening activities showed radiation levels at 300 µR/hr with a with a hand-held pressurized ion chamber (PIC) and 105,000-110,000 counts per minute (CPM) with a sodium iodide (NAI) 2x2 scintillation detector. The NYSDOH employee who performed the reconnaissance stated that the singular reading was taken at the end of the driveway.

During a September 10, 2013 reconnaissance, Weston Solutions, Inc. (WESTON®) performed a gamma radiation screening on site. Elevated gamma readings were observed toward the end of the driveway close to the road, in an approximately 45-foot by 45-foot gravel area. The readings in the area of elevated gamma radiation ranged from greater than background levels (i.e., approximately 9,000 CPM) to greater than 300,000 CPM (i.e., readings greater than 35 times background gamma radiation). The majority of the driveway is gravel and showed no signs of discoloration as seen in Figure 3. Values greater than two times background are considered to be a likely indication that contaminated material is present at those locations. Other contributing factors should be considered in defining "significant", which include contaminated soil depth, source, consistency of screening meter height, etc.

The property encompasses approximately 0.5 acre and is located in a rural, residential area, as shown on Figures 1 and 2. The property is bordered to the north by Upper Mountain Road and residential properties; further north is a wooded area. Residential properties are also located east and west of the site. A wooded area is situated south of the property. There are an estimated 2,202 residents within 1 mile of the site and an estimated 35,136 residents within 4 miles of the site. The site is located approximately 0.4 mile northeast of a large reservoir approximately 1,900 acres in size; this reservoir diverts water from the Niagara River for drinking water supply and its overflow discharges back to the river. The site is located approximately 1 mile east of the Niagara River. Currently, the property is owned by Mr. John Grace, who purchased the residential property on December 28, 2000. There are two residents who reside within the 739 Upper Mountain Road home.

There are no known active public or domestic groundwater wells utilized for drinking water within a 4-mile radius of the site. The population within a 4-mile radius of the site receives its drinking water supply from the Niagara Falls Water Board, which obtains water from the Niagara River.

Available information documents that radioactive slag is present on site and is releasing radioactivity into the environment, potentially affecting the on-site and nearby populations. Site access is unrestricted and the contaminated fill material is exposed.

**Part 1 - Superfund Eligibility Evaluation**

| **If all answers are "no" go on to Part 2, otherwise proceed to Part 3.** | **YES** | **NO** |
|---|---|---|
| 1. Is the site currently in CERCLIS or an "alias" of another site? | ☐ | ☒ |
| 2. Is the site being addressed by some other remedial program (Federal, State, or Tribal)? | ☐ | ☒ |
| 3. Are the hazardous substances potentially released at the site regulated under a statutory exclusion (e.g., petroleum, natural gas, natural gas liquids, synthetic gas usable for fuel, normal application of fertilizer, release located in a workplace, naturally occurring, or regulated by the NRC, UMTRCA, or OSHA)? | ☐ | ☒ |
| 4. Are the hazardous substances potentially released at the site excluded by policy considerations (i.e., deferred to RCRA corrective action)? | ☐ | ☒ |
| 5. Is there sufficient documentation to demonstrate that no potential for a release that could cause adverse environmental or human health impacts exists (e.g., comprehensive remedial investigation equivalent data showing no release above ARARs, completed removal action, documentation showing that no hazardous substance releases have occurred, or an EPA approved risk assessment completed)? | ☐ | ☒ |

**Please explain all "yes" answer(s).**

N/A

**Part 2 - Initial Site Evaluation**

For Part 2, if information is not available to make a "yes" or "no" response, further investigation may be needed. In these cases, determine whether an APA is appropriate. Exhibit 1 parallels the questions in Part 2. Use Exhibit 1 to make decisions in Part 3.

| **If the answer is "no" to any of questions 1, 2, or 3, proceed directly to Part 3.** | **YES** | **NO** |
|---|---|---|
| 1. Does the site have a release or a potential to release? | ☒ | ☐ |
| 2. Does the site have uncontained sources containing CERCLA eligible substances? | ☒ | ☐ |
| 3. Does the site have documented on-site, adjacent, or nearby targets? | ☒ | ☐ |

| **If the answers to questions 1, 2, and 3 above were all "yes" then answer the questions below before proceeding to Part 3.** | **YES** | **NO** |
|---|---|---|
| 4. Does documentation indicate that a target (e.g., drinking water wells, drinking surface water intakes, etc.) has been exposed to a hazardous substance released from the site? | ☐ | ☒ |
| 5. Is there an apparent release at the site with no documentation of exposed targets, but there are targets on site or immediately adjacent to the site? | ☒ | ☐ |
| 6. Is there an apparent release and no documented on-site targets or targets immediately adjacent to the site, but there are nearby targets (e.g., targets within 1 mile)? | ☐ | ☒ |
| 7. Is there no indication of a hazardous substance release, and there are uncontained sources containing CERCLA hazardous substances, but there is a potential to release with targets present on site or in proximity to the site? | ☐ | ☒ |

**Notes:**

**EXHIBIT 1**
**SITE ASSESSMENT DECISION GUIDELINES FOR A SITE**

Exhibit 1 identifies different types of site information and provides some possible recommendations for further site assessment activities based on that information. You will use Exhibit 1 in determining the need for further action at the site, based on the answers to the questions in Part 2. Please use your professional judgment when evaluating a site. Your judgment may be different from the general recommendations for a site given below.

| Suspected/Documented Site Conditions | | APA | Full PA | PA/SI | SI |
|---|---|---|---|---|---|
| 1. There are no releases or potential to release. | | Yes | No | No | No |
| 2. No uncontained sources with CERCLA-eligible substances are present on site. | | Yes | No | No | No |
| 3. There are no on-site, adjacent, or nearby targets. | | Yes | No | No | No |
| 4. There is documentation indicating that a target (e.g., drinking water wells, drinking surface water intakes, etc.) has been exposed to a hazardous substance released from the site. | Option 1: APA→SI | Yes | No | No | Yes |
| | Option 2: PA/SI | No | No | Yes | NA |
| 5. There is an apparent release at the site with no documentation of exposed targets, but there are targets on site or immediately adjacent to the site. | Option 1: APA→SI | Yes | No | No | Yes |
| | Option 2: PA/SI | No | No | Yes | NA |
| 6. There is an apparent release and no documented on-site targets and no documented targets immediately adjacent to the site, but there are nearby targets. Nearby targets are those targets that are located within 1 mile of the site and have a relatively high likelihood of exposure to a hazardous substance migration from the site. | | No | Yes | No | No |
| 7. There is no indication of a hazardous substance release, and there are uncontained sources containing CERCLA hazardous substances, but there is a potential to release with targets present on site or in proximity to the site. | | No | Yes | No | No |

**Part 3 - EPA Site Assessment Decision**
When completing Part 3, use Part 2 and Exhibit 1 to select the appropriate decision. For example, if the answer to question 1 in Part 2 was "no," then an APA may be performed and the "NFRAP" box below should be checked. Additionally, if the answer to question 4 in Part 2 is "yes," then you have two options (as indicated in Exhibit 1): Option 1 --conduct an APA and check the "Lower Priority SI" or "Higher Priority SI" box below; or Option 2 -- proceed with a combined PA/SI assessment.

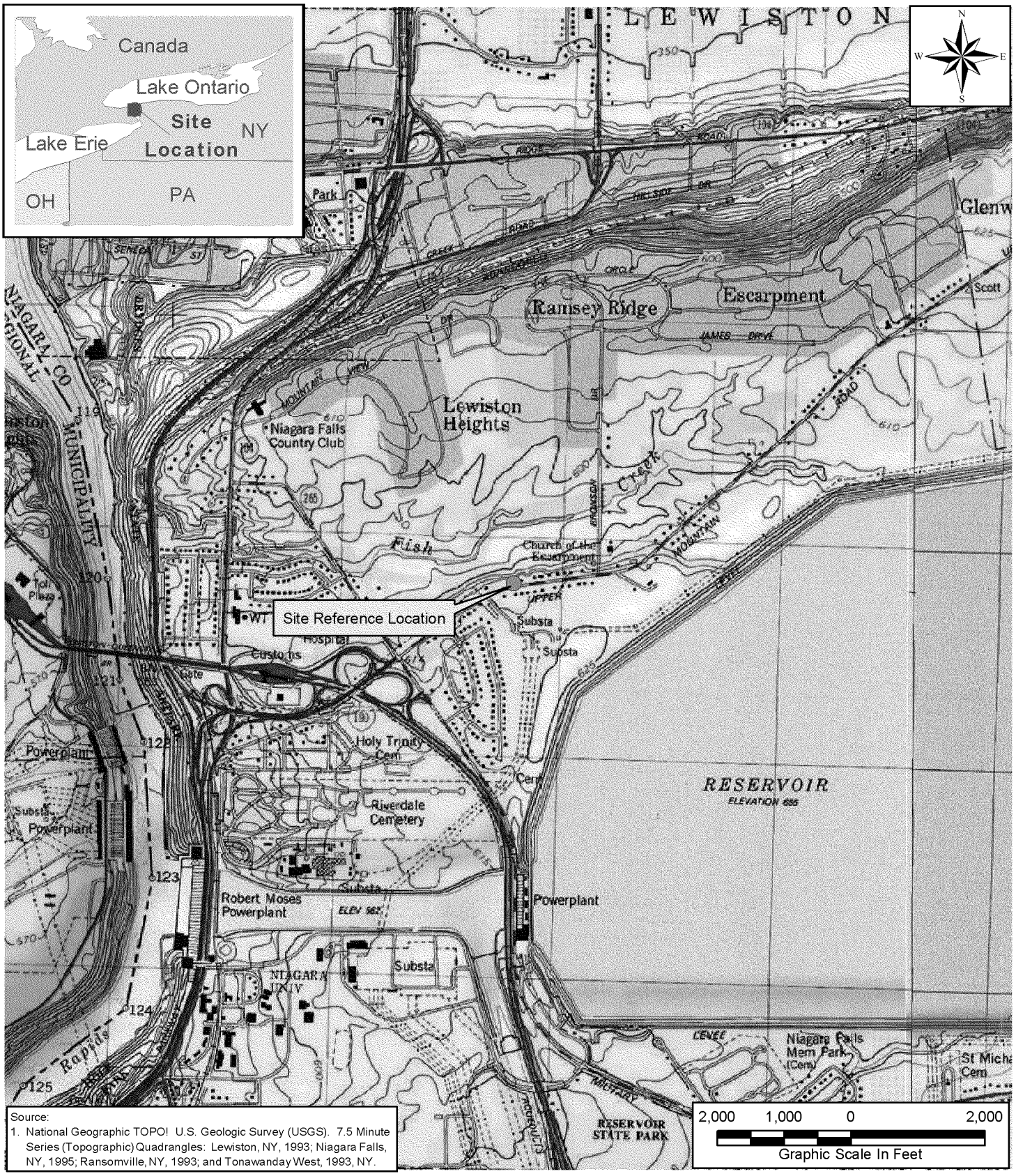
**Check the box that applies based on the conclusions of the APA:**

- ☐ NFRAP
- ☒ Higher Priority SI
- ☐ Lower Priority SI
- ☐ Defer to RCRA Subtitle C
- ☐ Defer to NRC
- ☐ Refer to Removal Program - further site assessment needed
- ☐ Refer to Removal Program - NFRAP
- ☐ Site is being addressed as part of another CERCLIS site
- ☐ Other: _____

**Regional EPA Reviewer:** _____ _____
Print Name/Signature Date

I:\WO\START3\2224\46269

**PLEASE EXPLAIN THE RATIONALE FOR YOUR DECISION:** The Higher Priority SI decision is based on the presence of radioactive slag, on-site at a residence with other residences in the immediate vicinity that could potentially be exposed to site-related contaminants.




Source:
1. National Geographic TOPO! U.S. Geologic Survey (USGS). 7.5 Minute Series (Topographic) Quadrangles: Lewiston, NY, 1993; Niagara Falls, NY, 1995; Ransomville, NY, 1993; and Tonawanda West, 1993, NY.

LEGEND:

Site Reference Location

TITLE:

Site Location Map
738 Upper Mountain Road
Lewiston, NY

PROJECT:
738 Upper Mountain Road

CLIENT NAME:
EPA

WESTON SOLUTIONS

DATE:
September 2013

FIGURE #:
1

P:\SAT2\2013 NY RAD Sites\738_Upper_Mountain_Road\MXD\13592_738UMR_Site.mxd

Sources:
1. NYS Division of Homeland Security and Emergency Services - Office of Cyber Security. Niagara County 12 Inch Ortho (4bd). http://www.orthos.dhses.ny.gov/?id=974130. November 2011.
2. NYS Division of Homeland Security and Emergency Services - Office of Cyber Security. Erie County 12 Inch Ortho (4bd). http://www.orthos.dhses.ny.gov/?id=974130. November 2011.

LEGEND:

Site Reference Location

TITLE:

Site Aerial Map
738 Upper Mountain Road
Lewiston, NY

PROJECT:
738 Upper Mountain Road

CLIENT NAME:
EPA

WESTON SOLUTIONS

DATE:
September 2013

FIGURE #:
2

P:\SAT2\2013 NY RAD Sites\738_Upper_Mountain_Road\MXD\13593_738UMR_Aerial.mxd

SCALE:

30 15 0 30

Graphic Scale In Feet

TITLE:

Gamma Radiation Screening Results Map
738 Upper Mountain Road
Lewiston, NY

PROJECT:
738 Upper Mountain Road

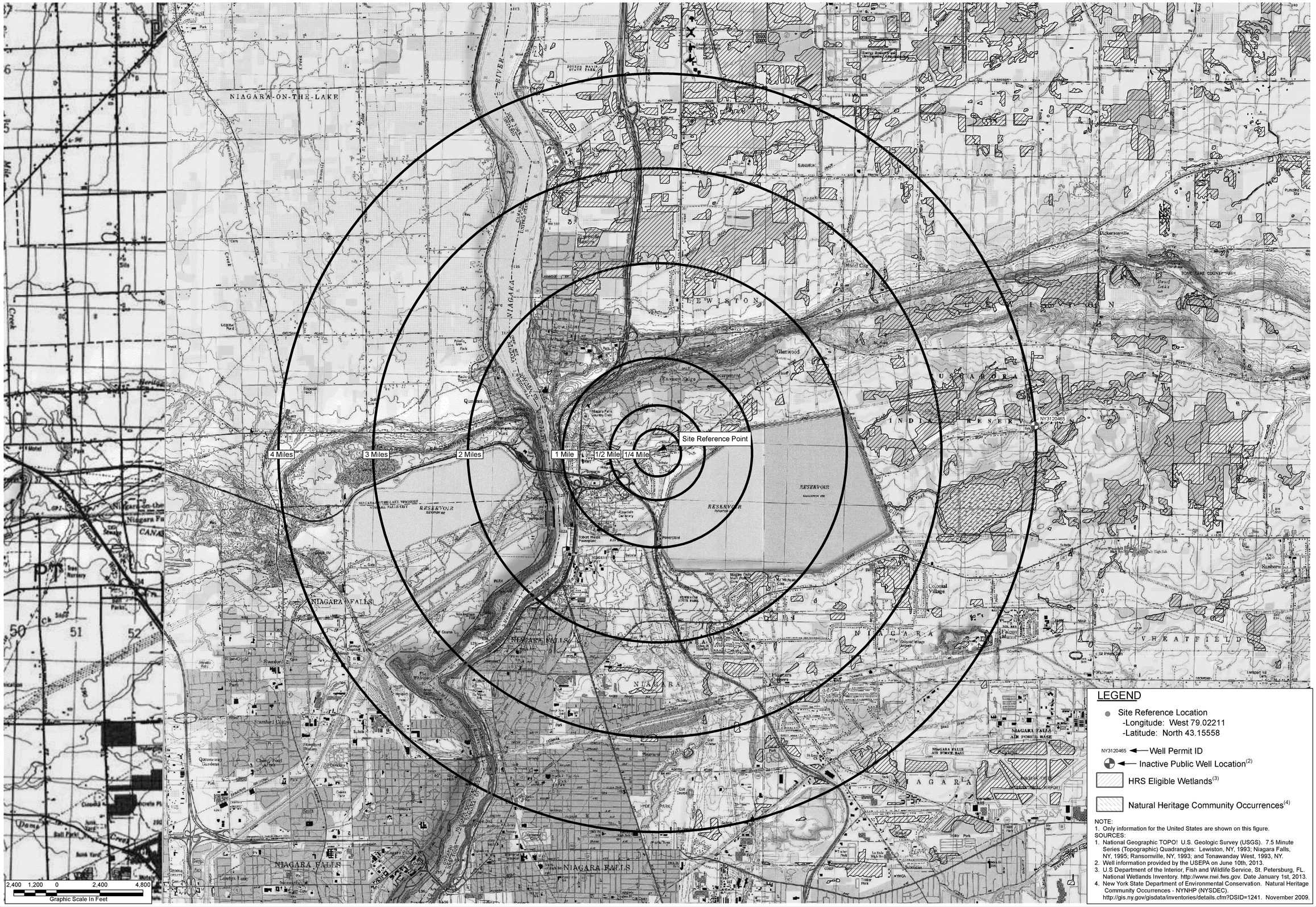
CLIENT NAME:
EPA

WESTON SOLUTIONS

DATE:
September 2013

FIGURE #:
3

P:\SAT2\2013 NY RAD Sites\738_Upper_Mountain_Road\MXD\13611_738UMR_Recon.mxd




## LEGEND

- Site Reference Location
  - -Longitude: West 79.02211
  - -Latitude: North 43.15558
- NY3120465 ← Well Permit ID
- ← Inactive Public Well Location(2)
- HRS Eligible Wetlands(3)
- Natural Heritage Community Occurrences(4)

NOTE:
1. Only information for the United States are shown on this figure.

SOURCES:
1. National Geographic TOPO! U.S. Geologic Survey (USGS). 7.5 Minute Series (Topographic) Quadrangles: Lewiston, NY, 1993; Niagara Falls, NY, 1995; Ransomville, NY, 1993; and Tonawanday West, 1993, NY.
2. Well information provided by the USEPA on June 10th, 2013.
3. U.S Department of the Interior, Fish and Wildlife Service, St. Petersburg, FL. National Wetlands Inventory. http://www.nwi.fws.gov. Date January 1st, 2013.
4. New York State Department of Environmental Conservation. Natural Heritage Community Occurrences - NYNHP (NYSDEC). http://gis.ny.gov/gisdata/inventories/details.cfm?DSID=1241. November 2009.

DRAWING TITLE
# 4-Mile Radius Map
# 738 Upper Mountain Road
# Lewiston, NY

| | |
|---|---|
| FIGURE | 4 |
| SCALE | 1" = 2400' |
| DATE | September 2013 |
| CLIENT NAME | EPA |
| PROJECT NAME | 738 Upper Mountain Road |
| PROJECT MANAGER | D. Breen |
| CHECKED BY | D. Breen |
| CONTRACT No. | EP-S5-06-04 |
| DRAWN/MODIFIED BY | J. Lynes |
| DATE DRAWN/MODIFIED | 09/04/2013 |
| REPORT DATE | September 2013 |
| DRAWING PATH | 1359M_738MUR_4_mile.mxd P:\SAT\2013\1NY RAD Sites\738_Upper_Mountain_Road\MXD |
| REVISION No. | 0 |
| WORK ORDER No. | 20405.012.013.2224.00 |

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http://www.westonsolutions.com

## REFERENCES


1. Breen, Denise, Weston Solutions, Inc. (WESTON). Project Note to 738 Upper Mountain Road Site File, Subject: Determination of population within the 4-mile target distance limit of the Site. September 16, 2013. [2 pages]

2. SDWIS, Environmental Protection Agency. List of Water Systems in SDWIS. Downloaded from: http://oaspub.epa.gov/enviro/sdw_query_v2.get_list?wsys_name=&fac_search=fac_beginning&fac_county=NIAGARA&pop_serv=500&pop_serv=3300&pop_serv=10000&pop_serv=100000&pop_serv=100001&sys_status=&pop_serv=&wsys_id=&fac_state=NY&last_fac_name=&page=1&query_results=&total_rows_found=. September 17, 2013. [2 pages]

3. Oak Ridge National Laboratory. Results of Radiological Measurements Taken in the Niagara Falls, New York, Area (NF002). November 1986. [58 pages]

4. Linda E. Johnson, Assessor, Town of Lewiston. Parcel Summary. Downloaded from www.lewistonnyassessment.com/SearchOARS.aspx. September 17, 2013. [1 page]

5. WESTON Region 5 Superfund Technical Assessment and Response Team (START). Site Logbook No. 2224-4E-BJCD, 738 Upper Mountain Road; with attached photo documentation. September 2013. [8 pages]