

August 08

**Formerly Utilized Sites Remedial Action Program (FUSRAP)  
Seaway Site  
Frequently Asked Questions**

**1. What is FUSRAP?**

FUSRAP stands for the Formerly Utilized Sites Remedial Action Program, a program initiated in 1974 to identify, investigate and clean up or control sites that were part of the Nation's early atomic energy and weapons program. Activities at the sites that are eligible for FUSRAP were conducted by the Manhattan Engineer District (MED) or the Atomic Energy Commission (AEC), both predecessors of the U.S. Department of Energy (DOE). In October 1997, the Energy and Water Development Appropriations Act for Fiscal Year 1998, was signed into law, transferring responsibility for the administration and execution of FUSRAP from the DOE to the U. S. Army Corps of Engineers (Corps). When implementing FUSRAP, the Corps follows the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), which was enacted by Congress on December 11, 1980.

**2. What is the mission of FUSRAP and the objectives of the program?**

The FUSRAP mission is to identify, evaluate, and clean up or control sites where residual radioactivity exceeding current guidelines remains from MED/AEC contract activities and other sites assigned by Congress. The Corps' FUSRAP objectives are to safely, effectively and efficiently:

- Identify and evaluate sites where authority and a need for response action exists.
- Clean-up or control the sites to ensure protection of public health and the environment.
- Dispose or stabilize radioactive material in a way that is safe for the public and the environment.
- Perform work in compliance with applicable federal, state, and local environmental laws and regulations.

**3. What is the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)?**

The Corps follows CERCLA when implementing FUSRAP. CERCLA was enacted by Congress on December 11, 1980. This law:

- Established prohibitions and requirements concerning closed and abandoned hazardous waste sites.
- Imposed liability on responsible parties.
- Authorizes response actions for both short-term removals and long-term remedial response actions to permanently and significantly reduce the dangers associated with releases or threats of releases of hazardous substances.

#### 4. Where is the Seaway Site?

The Seaway Site is located on River Road in the Town of Tonawanda, NY. The site is a closed landfill, known as the Niagara Landfill, and is maintained by the landfill operator, Browning-Ferris Industries (BFI). The property is currently owned by the Sands Mobile Park Corporation (a company owned by Benderson Development Company), successor by merger to the Seaway Industrial Park Development Company, Inc. To the west of the site, next to I-190, is the former Ashland Oil refinery that has been undergoing site demolition and restoration over the past few years and the Ashland 1 Site. To the east of the site is the Ashland 2 Site. Remediation of Ashland 1, including Seaway Area D, and Ashland 2 including Rattlesnake Creek was completed in 2005 by the Corps under FUSRAP.



#### 5. How did the site become contaminated?

In the 1940s, the former Linde Air Products Division of Union Carbide processed uranium ores under contract to the Manhattan Engineer District (MED). The mill tailings from the FUSRAP-related activities were transported from the Linde Site to the former Haist Property, now known as the Ashland 1 Site near the Ashland Oil facilities on River Road. During the mid-1970's, Ashland Oil constructed oil tanks on the Ashland 1 property. During the construction, materials removed from the area were

transported to the Seaway landfill and used as cover or grading material. This material was placed in what is now known as Seaway Areas A, B and C.

#### 6. What contaminants are at the site?

Principal radionuclides of concern at the site are radium, thorium, uranium and the uranium daughter products actinium and protactinium, which are from the residues associated with the uranium ore processing conducted at the Linde Site for MED.

#### 7. Is this FUSRAP-related material located throughout the entire landfill?

No. Based on review of historical information, the materials were only placed in the areas known as Areas A, B and C during the Ashland Oil tank installation efforts in the mid-1970's.

#### 8. What are the new areas referred to as Seaway Southside and Seaway Northside?

During the Corps remediation efforts at Ashland 1, FUSRAP-related materials at elevated concentrations were found that appear to go onto the Seaway Site and at one location, elevated concentrations may extend under the capped portion of the landfill. Remediation of this



material as part of the Ashland 1 remediation ceased at the site boundary and this area is now included within the scope of the FUSRAP remediation of Seaway. This area is referred to as Seaway Southside. There is also an area on the north side of Seaway near Area A where, during Ashland 2 remediation efforts, elevated concentrations of FUSRAP-related materials were found outside of the Seaway containment system (i.e., outside the area encompassed by the landfill's leachate collection system). This area is referred to as Seaway Northside. Both Seaway Southside and Seaway Northside are included within the scope of the FUSRAP remediation activities for the Seaway Site.

**9. Since radium is a contaminant and the landfill is vented, is there a radon emissions problem?**

No. The Corps has conducted a detailed evaluation of the potential radon emissions with both active and passive venting at the landfill once the areas (i.e., Seaway Areas A, B and C) containing the FUSRAP-related materials are capped as in alternative 6 of the Proposed Plan. The results are documented in the "Technical Memorandum: Estimates of Air Quality Impacts of Radon in Landfill Gas Seaway Site, Areas A, B and C", dated June 22, 2000, and conclude that there are no unacceptable radon levels at the site boundary.



**10. What investigations has the Corps conducted at the Seaway Site?**

The Corps conducted three additional field investigations beyond those conducted by the Department of Energy (DOE) approximately 15 years ago. The Corps also conducted groundwater and leachate sampling at the site and those efforts are discussed further in response to question 11.

The first Corps investigation of the Seaway Site was a gamma-walkover survey conducted during the fall of 1998. The survey found elevated readings of radioactivity in Area A which was expected since there is FUSRAP-related material located at or near the surface in that area. The survey also found a few elevated readings in Areas B and C. The Corps conducted a second, limited surface investigation of these elevated areas in Areas B and C in 1998 to determine whether they were FUSRAP-related or not. The results found that only the elevated areas in Area C were due to the presence of some FUSRAP-related materials at or near the surface in a few locations.

The third investigation was conducted during the summer of 2001 to better define the extent of FUSRAP-related contamination in Areas B and C. This investigation consisted of drilling numerous borings in Areas B and C and then conducting down-hole gamma logging at each of these locations. The Corps was able to develop a better understanding of the extent of the FUSRAP-related materials in Areas B and C. The Corps found that the FUSRAP-related materials were present in a lens as thick as three feet or more which



extended over a larger area that encompassed both Areas B and C. The results of the two Corps investigations in 1998 and the summer of 2001 Corps investigation summarized above are described in more detail in the April 2008 Feasibility Study Addendum.

### **11. Are FUSRAP-related materials impacting the groundwater?**

Under New York State Department of Environmental Conservation (NYSDEC) regulatory control, the Seaway landfill was constructed to contain the various materials, including hazardous materials, placed in the landfill and not impact the environment, including the deep groundwater system. The landfill leachate collection system collects and diverts, to the Town wastewater collection system, leachate generated within the landfill. Additionally, a subsurface clay cutoff wall installed around the perimeter of the landfill, is connected to the naturally occurring clay layer, 45 to 75 feet thick, that underlies the site and acts as a barrier to migration of any contaminants to the deep groundwater system. The leachate collection system and cutoff wall minimize the potential for releases onto the surface and into the environment.

The Corps has collected and analyzed groundwater samples during the quarterly groundwater sampling conducted by BFI. The Corps has also collected and analyzed samples from the landfill leachate at the location where the leachate is discharged to the municipal wastewater collection system under a permit issued by the Town. Based on the Corps sampling results, the Corps has concluded that the leachate and groundwater at the Seaway Site are not being impacted by FUSRAP-related materials located in Seaway Areas A, B, and C, Seaway Northside and Seaway Southside.

### **12. What is the status of the Seaway Site?**

A Feasibility Study (FS) addressing the Tonawanda Sites, including the Seaway Site, was issued in 1993 by the DOE. After the Corps receipt of responsibility for FUSRAP in October 1997, the Corps has conducted additional investigations and studies for Seaway, as discussed in response to earlier questions. A Feasibility Study Addendum (FSA) has been prepared to supplement the material in the 1993 FS with the additional information developed by the Corps. A Proposed Plan for the Seaway Site has also been developed based on the FSA. Both documents were released on August 27, 2008 with a public meeting regarding the Proposed Plan scheduled for Wednesday, September 24, 2008. The public meeting will be held at the Kenmore Town of Tonawanda Union Free School District, Phillip Sheridan Building, Community Room, 3200 Elmwood Avenue, Buffalo, NY 14217.

### **13. What alternatives were considered by the Corps?**

The Corps evaluated the five alternatives presented by the DOE in the 1993 Proposed Plan. The Corps determined that the DOE alternatives considering the use of an on-site disposal cell for all the Tonawanda FUSRAP material to be located at Ashland 1, Ashland 2 or Seaway are no longer appropriate. The Tonawanda Sites (Ashland 1 and Seaway Area D, Ashland 2 and Rattlesnake Creek, Linde, and Town of Tonawanda Landfill) have been or are in the process of being remediated and all remediation waste is being shipped offsite for disposal. The alternatives that the Corps carried forward were (1) Alternative 1: No Action; (2) Alternative 2: Complete Excavation with Offsite Disposal; (3) Alternative 4: Partial Excavation with Offsite Disposal; and (4) Alternative 6: Containment. The Corps has proposed Alternative 6: Containment, as the Preferred Alternative.

**14. What projected land uses for the site and areas around the site are being assumed by the Corps?**

In 1992, a Waterfront Region Master Plan was written to address revitalization of the Town of Tonawanda waterfront area. This Master Plan defined a planning region, set goals and objectives, outlined a plan for future development, and recommended strategies for plan implementation in phases. This plan concluded that the landfill, once closed, could be redeveloped and used for low-intensity recreational uses such as ball fields, walking trails, or open space. This is consistent with the way other closed landfills are being used across the country (EPA 2005). Therefore, the Corps has determined that the most reasonable expected future site use of the Seaway Site is recreational, which is consistent with plans for the area.

The areas all around the Seaway Site are planned for industrial land uses. Due to the heavy presence of industrial land use surrounding the Seaway Site and uncertainties in the future regarding re-use of the entire property, the Corps considered the possibility that portions of the site might be used for industrial uses. So, both recreational and industrial scenarios were evaluated, although the Corps has determined that the most likely future site use of the Seaway Site is recreational.

**15. The DOE proposed putting a disposal site in Tonawanda fifteen years ago. Now the Corps of Engineers is considering leaving FUSRAP materials in-place in a landfill in Tonawanda. How is this different?**

The disposal option that was presented by DOE in the 1993 Proposed Plan considered the use of an on-site disposal cell for all the Tonawanda FUSRAP material to be located at Ashland 1, Ashland 2 or Seaway. This disposal option is no longer appropriate since the other Tonawanda Sites (Ashland 1 and Seaway Area D, Ashland 2 and Rattlesnake Creek, Linde, and Town of Tonawanda Landfill) have been or are in the process of being remediated and all remediation waste is being shipped offsite for disposal. The disposal option proposed by DOE in 1993 is no longer being considered by the Corps. No remediation wastes from the other Tonawanda sites will be placed at the Seaway Site. The containment option being considered by the Corps is only for the FUSRAP-related materials that are already located inside the existing disposal facility, the landfill containing other solid and hazardous waste materials. Any FUSRAP-related materials located outside of the landfill leachate collection system will be removed to achieve the clean-up criteria and shipped off-site for disposal. This alternative does not involve construction of a new disposal cell at the Seaway Site. The FUSRAP-related materials currently inside the existing disposal facility will remain in place.

**16. Is the site safe?**

Yes. Under current conditions, the residual contamination does not pose an immediate threat to the environment nor to the public or the workers who frequent the site for inspections.

**17. How can I find out more information about the Seaway Site?**

The Corps of Engineers welcomes questions from citizens regarding the Seaway Site or any other FUSRAP site. Questions may be addressed to: U.S. Army Corps of Engineers, FUSRAP Team, 1776 Niagara Street, Buffalo, NY 14207, or call toll-free 1-800-833-6390. FUSRAP also has an e-mail address at [fusrap@usace.army.mil](mailto:fusrap@usace.army.mil).

The Administrative Record File is another valuable resource for information on the Seaway Site. The file contains a collection of documents that form the basis for the decisions made during the environmental restoration of the site. The Administrative Record File is located at the following locations:

U.S. Army Corps of Engineers  
Buffalo District Library  
1776 Niagara Street  
Buffalo, NY 14207  
(By appointment only—Call (716) 879-4438)

Tonawanda Public Library  
333 Main Street  
Tonawanda, NY 14150