



FUSRAP Team
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INVESTIGATIVE AREA 06 (IA06)

The Corps is also working toward the expedited close-out of a six-acre undeveloped parcel of land located north of Harvard Avenue and east of the Cuyahoga River (IA06). The Remedial Investigation found very little radioactivity above background levels and indicated no further evaluation or remedial action would be required to release IA06 for public use. The early release of IA06, under a No Further Action Record of Decision, is intended to make the land available for other uses prior to the completion of the Feasibility Study planned for the remainder of the site. The expedited closeout of IA06 only relates to FUSRAP contaminants, and does not include the consideration of any contamination which may exist on IA06 that is unrelated to MED/AEC activity. Future steps that the Corps will take to facilitate the closeout of IA06 will include the development of a Proposed Plan that outlines the preferred alternative for remediation (No Further Action). After the Corps develops the Proposed Plan, it will be submitted for review and comment by regulatory agencies and the public. Once the public comment phase is complete, the final Record of Decision will be prepared for the final closeout of IA06 under FUSRAP.

Please share this newsletter with a friend!

You're Invited
 Join us for an Information Session regarding the Former Harshaw Chemical Site
 Wednesday, January 20, 2010
 7 to 9 p.m.
 State Boat Landing Room of the Cleveland Metroparks' Leonard Krieger CanalWay Center
 Ohio & Erie Canal Reservation
 (located off of 4524 East 49th Street)
 Cuyahoga Heights, Ohio 44125

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US Army Corps of Engineers
 Buffalo District
 BUILDING STRONG



Information about the Former Harshaw Chemical FUSRAP Site for Cleveland area residents

Harshaw Spotlight

January 2010

SITE INFORMATION

The Former Harshaw Chemical Site is located at 1000 Harvard Avenue in Cleveland, Ohio. The 55-acre site is located within an industrialized area adjacent to the Cuyahoga River and Big Creek. The site includes former production areas with remaining facility buildings, foundations, and parking areas associated with previously demolished buildings, and redeveloped privately-owned commercial properties.

From 1942 through 1959, the Harshaw Chemical Company conducted chemical and radiological research and production activities under contract to the Manhattan Engineer District and the Atomic Energy Commission (MED/AEC). The primary radiological production process involved refining uranium oxide feed material to produce uranium-based materials. The uranium was sent to Oak Ridge, Tennessee, for isotopic separation and enrichment.

The Formerly Utilized Sites Remedial Action Program (FUSRAP) was initiated in 1974 to identify, investigate, and clean up or control sites throughout the United States that were part of the Nation's early atomic weapons and energy programs. In June 1999, the Former Harshaw Chemical Site was added to FUSRAP. The U.S. Army Corps of Engineers (the Corps) currently manages FUSRAP following the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). The Former Harshaw Chemical Company Site is assigned to the Corps' Buffalo District.

Dear Interested Citizen,

You are invited to attend an Information Session regarding the Former Harshaw Chemical Site on Wednesday, January 20, 2010, from 7 to 9 p.m. in the State Boat Landing Room of the Cleveland Metroparks' Leonard Krieger CanalWay Center, Ohio & Erie Canal Reservation, located off of 4524 East 49th Street Cuyahoga Heights, Ohio 44125. The purpose of this newsletter and the upcoming Information Session is to provide you with details of current and future activities at the site.

Recently, the Corps released the revised Remedial Investigation Report for the Former Harshaw Chemical Site which is available for public viewing at the Cuyahoga County Library - Brooklyn Branch. This report:

- ✓ Details the current conditions at the Harshaw Chemical Site,
- ✓ Defines the nature and extent of FUSRAP-related contamination on the site,
- ✓ Assesses the potential for movement of FUSRAP-related contaminants in groundwater, and
- ✓ Assesses the risks associated with the FUSRAP-related contaminants on the site.

Future activities planned at the Former Harshaw Chemical Site include: groundwater monitoring, expedited closeout of an undeveloped parcel (Investigative Area 06 [IA06]), and completion of a Feasibility Study.

During the Feasibility Study, the results of the Remedial Investigation are used to help develop and evaluate potential ways to remediate the site. The Feasibility Study will also identify any further data that is needed to thoroughly evaluate each of the remedial alternatives.

You can learn more about the revised Remedial Investigation Report and future activities inside this newsletter. Please contact us if you have additional questions; we can be reached by phone at 800.833.6390 (option 4) or email us at fusrap@usace.army.mil. We hope to see you at our Information Session!

Respectfully,

The U.S. Army Corps of Engineers FUSRAP Team



Cuyahoga River/Big Creek confluence south of Harvard Avenue



Left: RI Phase I soil boring installation with hollow-stem auger drill rig; Right: RI Phase I Sewer line sediment sample collection.

Project Update

REMEDIAL INVESTIGATION

A Remedial Investigation of the Former Harshaw Chemical Site was performed to collect information on site conditions and to determine the nature and extent of FUSRAP-related contamination. The Remedial Investigation included a comprehensive study of site groundwater sources for potential contamination from FUSRAP-related activities. This included the development of a groundwater flow and contaminant transport model to assess the potential movement of FUSRAP-related contaminants in groundwater. A Baseline Risk Assessment was also conducted as part of the Remedial Investigation to assess potential risk to human health and the environment. The Baseline Risk Assessment utilized the data collected in the Remedial Investigation to analyze the human health and ecological risk in the environmental media as well as the human health risk in the buildings.

The Remedial Investigation was divided into four different phases. Results of the first two phases were presented in the 2006 Remedial Investigation Report. The first two phases found uranium present above normal levels in buildings, soils, sediments, and groundwater. The highest concentration of uranium was located in and around the former processing plant, Building G-1. Based on the current use of the site, the levels of contamination do not pose an immediate risk to human health or the environment. However, it was determined that with 25 to 30 years of daily exposure, there could be long-term risks related to the radiological contaminants from MED/AEC activities.

The Remedial Investigation included the sampling of site groundwater sources for potential contamination from FUSRAP-related activities.

Groundwater monitoring wells produced results that indicate FUSRAP-related constituents are present in site groundwater near the operational corridors contracted by the Government. Groundwater was found impacted below the former processing plant north of Harvard Avenue.

During the development of the Baseline Risk Assessment for the 2006 Remedial Investigation Report, it was determined that the thorium data set was incomplete to determine the overall risk at the site. Additionally, historical documents were discovered that suggested recycled uranium was processed at the site. These processes could result in the potential presence of additional radionuclides not included in the original investigation. Due to these two data gaps, two additional field data collection phases were conducted.

Phase III was performed to understand the source and possible distribution of thorium contamination at the site, and to expedite the close out of IA06 (located north of Harvard Avenue and east of the Cuyahoga River).



RI Phase III XRF soil sample analysis

Phase IV focused on determining if a release of recycled uranium or associated contaminants occurred at levels which could pose a potential risk to human health or the environment.



RI Phase I Big Creek surface water sample collection

Phase III and Phase IV of the Remedial Investigation included additional field work and the re-analysis of archived soil samples originally collected during earlier phases. The archived soil samples were analyzed for thorium and radionuclides associated with recycled uranium. Phase III field work consisted of sampling from locations at the site and along the Cuyahoga River and Big Creek. Phase IV field work consisted of collecting groundwater and soil samples, as well as sediment and surface water from onsite sewer lines. The results of the additional phases were incorporated into the Baseline Risk Assessment and the revised Remedial Investigation Report.

New information presented in the report includes:

- ✓ Results confirming the basic findings of the original phases;
- ✓ Phases III and IV results indicating thorium and uranium contamination was consistently found together at levels similar to the results from the initial phases; and
- ✓ Results of soil sample analysis confirming the presence of recycled uranium, as well as low levels of associated radiological contaminants, in the vicinity of the former processing plant.

The Remedial Investigation of the Former Harshaw Chemical Site is complete. The revised Remedial Investigation Report identifies preliminary constituents of concern for each environmental medium. These constituents represent the significant contributors to human health risk at the Former Harshaw Chemical Site and will be addressed in the forthcoming Feasibility Study. It is important to understand that there are no imminent threats to human health for current site use and controls.

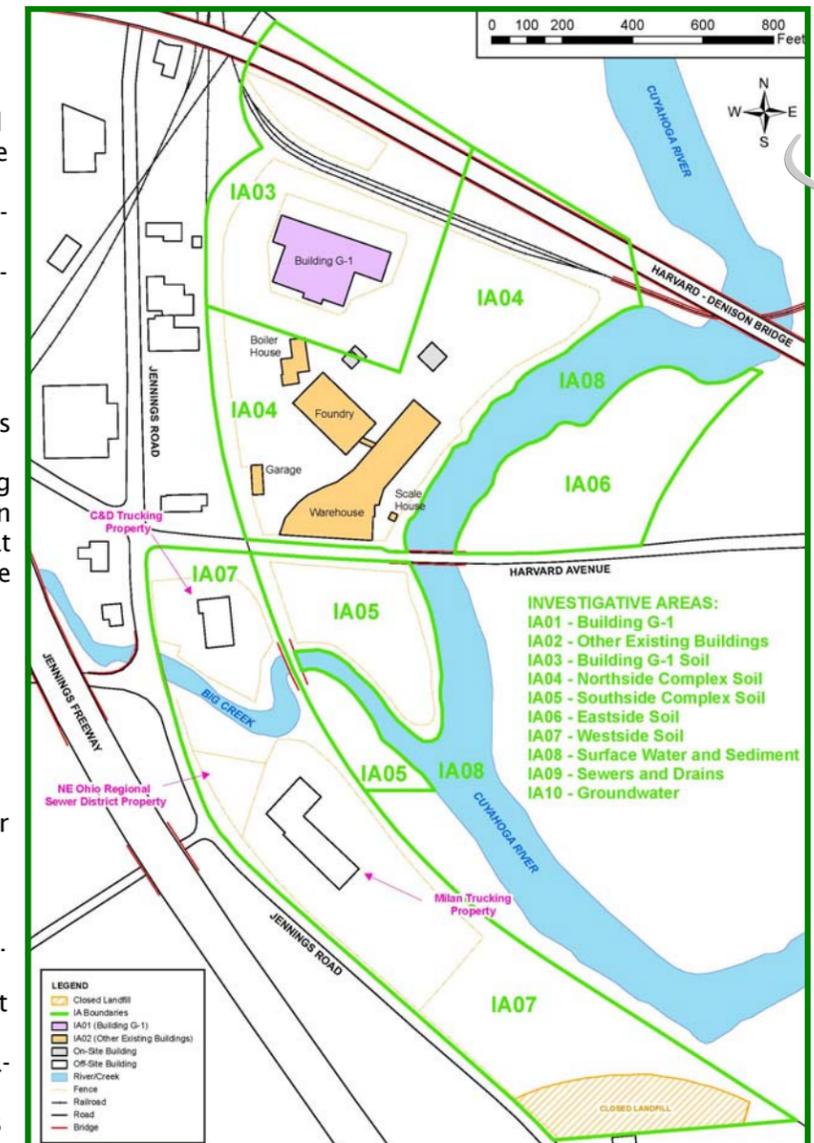
ONGOING MONITORING ACTIVITIES

The Corps is conducting annual groundwater sampling at various locations around the Former Harshaw Chemical Site as part of the long-term monitoring program at the site.

FEASIBILITY STUDY

Now that the Remedial Investigation for the Former Harshaw Chemical Site is complete, the next step in the CERCLA process is to complete the Feasibility Study to address the FUSRAP-identified contamination. The Feasibility Study will include the development of remedial alternatives and the evaluation of these alternatives based on criteria such as protection of human health and the environment, effectiveness, implementability, cost, and public acceptance.

The Feasibility Study will also identify any additional data needs that may require further investigation during the development and assessment of remedial alternatives. The Corps' Buffalo District began work on the Feasibility Study in the fall of 2009.



Former Harshaw Chemical Site ~ Site Features and Investigative Areas



Questions? Please call or e-mail us to learn more and ask questions!

Our contact information is located on the back page.