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Buffalo District
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*Information about the Former Linde
FUSRAP Site for Tonawanda area residents*

Linde Site News

September 2010

WHAT IS FUSRAP?

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 during the 1940s, 1950s, and 1960s. Activities at the sites were performed by the Manhattan Engineer District (MED) or under the Atomic Energy Commission (AEC). Both MED and AEC were predecessors of the Department of Energy (DOE).

In October 1997, Congress transferred management of FUSRAP to the U.S. Army Corps of Engineers. When a site is identified, records are reviewed by DOE, and if DOE determines there is potential for contamination present that may affect human health and the environment, they may send a request to the Corps to review the site. The Corps then does a Preliminary Assessment, and possibly a Site Inspection, to review historical records, perform limited sampling, and determine if further investigation is necessary. If contamination is found that is connected with past MED or AEC activities, exceeding guidelines, investigation and, if necessary, cleanup may be authorized under FUSRAP. Congress has also added sites to FUSRAP through authorizations.

Dear Interested Citizen,

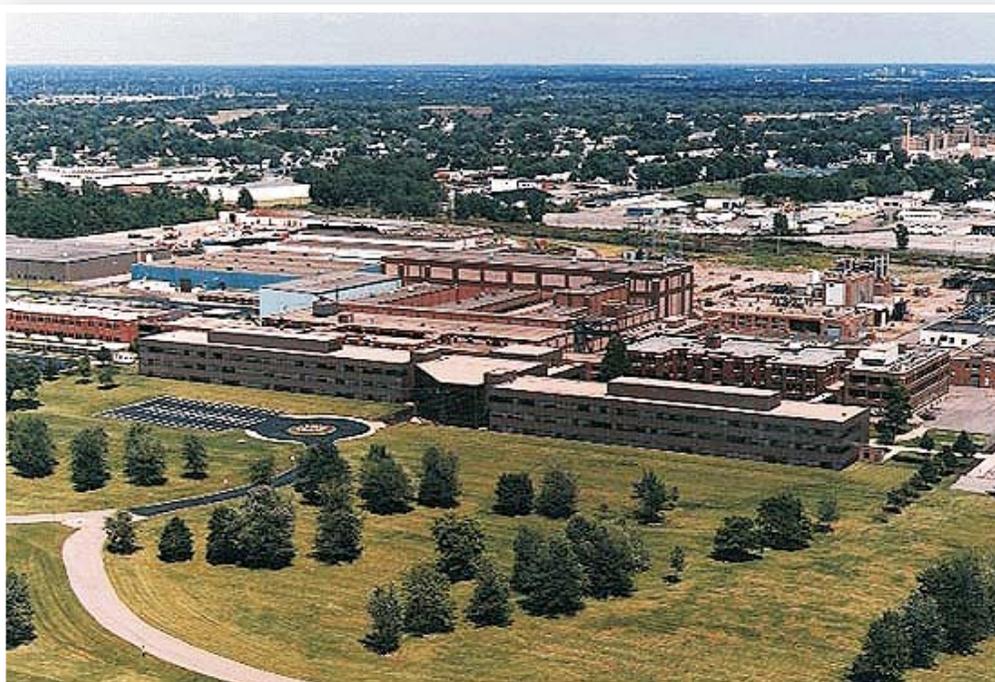
In accordance with the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), this newsletter announces the completion of a Five-Year Review of the remediation of radiologically contaminated soils at the former Linde Formerly Utilized Sites Remedial Action Program (FUSRAP) Site. The purpose of the CERCLA Five-Year Review was to evaluate the effectiveness and protectiveness of the selected remedial actions contained within the Record of Decision (ROD) for the Linde Site soils prepared by the U.S. Army Corps of Engineers in March 2000.

You can learn more about the former Linde FUSRAP Site history and the CERCLA Five-Year Review results inside this newsletter.

Please contact us if you have additional questions; our contact information is on the last page of this newsletter.

Respectfully,

*The U.S. Army Corps of Engineers
FUSRAP Team*



Former Linde Site, Tonawanda, New York

Where are we now?

SITE DESCRIPTION AND HISTORY

The former Linde Site is located in the Town of Tonawanda, New York, which is just north of the city of Buffalo, New York. The 135-acre site was previously owned by the Linde Division of Union Carbide and was used to process uranium ores under contract with the Manhattan Engineering District between 1942 and 1946. That activity resulted in residual radiological contamination at portions of the property.

In the 1950s, the Linde facilities were decontaminated and cleaned in compliance with health and safety guidelines applicable at that time; some structures were demolished and many others were converted to other commercial uses.

The current owner is Praxair, Inc. The corporation uses its Tonawanda facility as its worldwide research and development facility. Over 1,000 people are employed at the Linde Site.

Adjacent properties include an elementary school, residential areas, a public park and golf course, railroad tracks, and industrial and commercial businesses.

The U.S. Army Corps of Engineers is currently managing cleanup of FUSRAP-related materials at the Linde Site in accordance with the March 2000 Linde soils ROD.

LINDE SOILS REMEDIAL ACTION

The major elements of the remedy selected in the March 2000 Linde soils ROD involve excavation of soils with constituents of concern (COC), radium, thorium and uranium, above the soil cleanup levels identified in the soils ROD, placement of clean materials, and cleanup of contaminated surfaces in buildings with COCs above the surface cleanup levels. The selected remedy also involves the demolition/relocation of buildings necessary to remediate the site. The cleanup levels presented in the March 2000 soils ROD were established to be protective of industrial workers at the site.

Remedial action began at the site in 2000. The USACE has removed numerous buildings and over 300,000 tons (150,000 cubic yards) of material from the site to date. Contaminated materials are sent off-site for disposal at licensed facilities outside of New York State.

Since beginning site restoration activities, over 300,000 tons of backfill have been placed to restore excavated areas. Additional material will be placed as areas are cleared and made ready for restoration.

FIVE-YEAR REVIEW

SUMMARY OF FIVE-YEAR REVIEW RESULTS

The purpose of the CERCLA five-year review is to determine the effectiveness of the selected remedial actions contained within the ROD for the Linde Site soils. There were six major components to the five-year review process recently completed:

- 1) Community Notification
- 2) Documents Review
- 3) Data Review and Analysis
- 4) Site Inspection
- 5) Interviews
- 6) a Protectiveness Determination



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

Our contact information is located on the back page.

Geoprobe Sampling Inside Building 8

In order to assess the protectiveness of the remedy in accordance with CERCLA, data gathered while completing the six components listed above were evaluated to answer the following three questions:

Question A: Is the remedy functioning as intended by the decision documents?

The remedy is currently being implemented. To date, it is functioning as intended.

Reports for each Final Status Survey Unit (FSSU) completed to date indicate that the remediation has achieved the ROD cleanup levels. In addition, the data show that the average residual concentrations of total uranium are well below the 60 picocuries per gram (pCi/g) average level committed to by the Corps.

The average of all samples collected from the FSSUs is about 7% of the ROD criterion for surface soils. Since the ROD levels correspond to an annual dose of 8.8 millirem (mrem) to a future site worker, the actual residual levels would result in an estimated annual dose of approximately 0.6 mrem.

Question B: Are the exposure assumptions, toxicity data, cleanup levels, and remedial action objectives (RAOs) used at the time of remedy selection still valid?

Overall, the exposure assumptions, toxicity data, cleanup levels, and RAOs used at the time of remedy selection are still valid. There have been several slight changes, as discussed below that do not change the overall conclusions or decisions.

The underlying standards for the applicable or relevant and appropriate requirements (ARARs) 40CFR192 (Uranium Mill Tailings Radiation Control Act [UMTRCA]) and 10 CFR 40 Appendix A (Source Material Waste Management) have not changed since the ROD was finalized. The cleanup criteria are thus consistent with the existing ARARs identified in the ROD. Conditions on and near the Linde Site have not changed the human health or ecological routes of exposure or receptors in a way that could affect the protectiveness of the remedy. Slight changes in the radiological dose and risk assessment results based on changes in knowledge about toxicity for contaminants at the Linde Site do not suggest any change in the protectiveness of the remedy. The RAOs from the ROD, 40 CFR 192 (UMTRCA) and 10 CFR 40 Appendix A (Source Material Waste Management), continue to be applicable.

Question C: Has any other information come to light that could call into question the protectiveness of the remedy?

There has been no additional information identified that could call into question the protectiveness of the remedy.

REMEDY PROTECTIVENESS DETERMINATION

The remedy at the Linde Site, Soils Operable Unit, is expected to be protective of human health and the environment upon completion, and in the interim, exposure pathways that could result in unacceptable risk are being controlled.

NEXT FIVE-YEAR REVIEW

Remediation of the Linde Site is ongoing. If remediation is not completed before then, the next five-year review will be completed in August 2015.

INFORMATION REPOSITORIES

The Five-Year Review Report has been provided for public review in the Administrative Record File located at the following facilities:

Tonawanda Public Library
333 Main Street, Tonawanda, New York

U.S. Army Corps of Engineers
1776 Niagara Street, Buffalo, New York
(by appointment)

Documents and site information can also be found at the Linde FUSRAP Site Public Website at:

<http://www.lrb.usace.army.mil/fusrap/linde/index.htm>



Excavation Near Building 70





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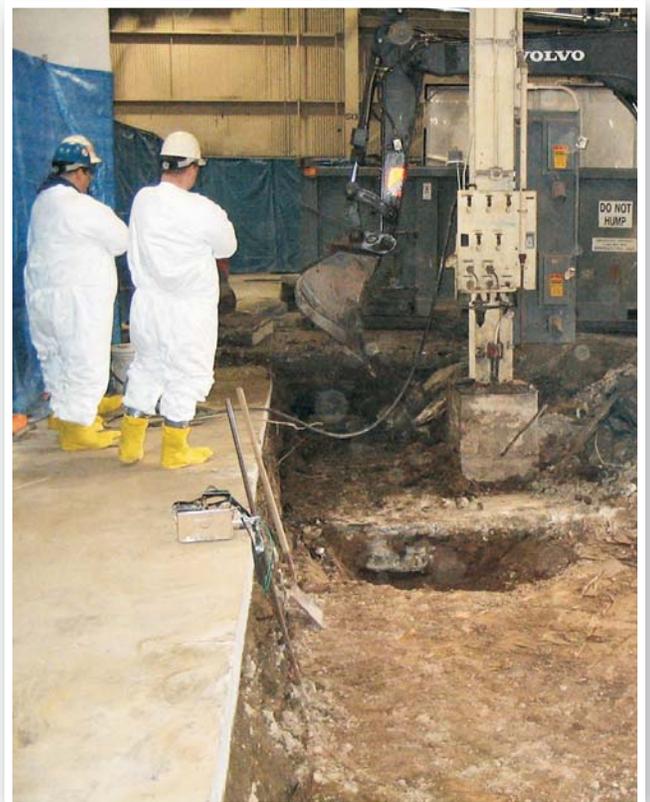
Contact Us!

Please contact us if you have questions or would like additional information. Please share this newsletter with a friend and ask them to contact us if they would like to be added to our mailing list.



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Excavation Inside Building 70