



DOE – ENVIRONMENTAL MANAGEMENT SEPARATIONS PROCESS RESEARCH UNIT (SPRU) DISPOSITION PROJECT

PREFERRED ALTERNATIVES FACT SHEET July 2007

In This Issue:

SPRU Project Recap	1	Lower Level Land Area Alternatives.....	3
Facilities Alternatives Summary	1	Lower Level Land Area Preferred Alternative.....	3
Facilities Preferred Alternative	2	North Field Alternatives.....	3
Upper Level Land Area Alternatives	2	North Field Preferred Alternative	3
Upper Level Land Area Preferred Alternative.....	2	Public Involvement Opportunities and Contacts.....	4

This fact sheet describes the preferred alternatives for cleanup of the SPRU facilities and land areas under DOE’s SPRU Disposition Project. The public is invited to comment on the preferred alternatives through mail and e-mail. Contact information for comments is provided on page 4 of this fact sheet. SPRU project documents can be viewed at DOE’s SPRU website, <http://www.spru.doe.gov>.

Public Comment Period: July 26, 2007 through August 25, 2007

SPRU Project Recap

The U.S. Department of Energy (DOE) has selected preferred alternatives for disposition of the contaminated buildings and land areas associated with the former Separations Process Research Unit (SPRU) operations.

SPRU was built in the late 1940s and operated through the early 1950s to conduct pilot tests for recovery of plutonium from irradiated uranium. Following cessation of SPRU operations, Knolls Atomic Power Laboratory (KAPL) converted some of Building G2 to office space, and continued using Building H2 for waste processing. In 1999, KAPL informed DOE that it had no further use for the SPRU facilities. The following year, DOE began characterizing the SPRU areas as part of the SPRU Disposition Project.

In their present state, the SPRU facilities and land areas do not pose a risk to the public, on-site workers, or the environment. KAPL personnel

continue to perform surveillance, maintenance, and capital improvement activities to maintain SPRU buildings and land areas safely. However, it is not prudent to continue surveillance and maintenance activities indefinitely since the SPRU facilities will continue to age, deteriorate, and require additional capital improvements, such as roof replacement. The preferred alternatives will eliminate surveillance and maintenance costs, and allow the affected areas to be redeveloped and used by KAPL for its continuing mission at the site.

The alternatives identified for disposition of the contaminated SPRU buildings were summarized in a May 2006 fact sheet and the Facilities Engineering Evaluation/Cost Analysis (EE/CA) document, and were presented at a public meeting on May 25, 2006. Alternatives identified for disposition of the contaminated land areas were summarized in a December 2006 fact sheet and the Land Areas EE/CA document, and were presented at a public meeting on January 18, 2007.

FACILITIES ALTERNATIVES SUMMARY

DOE developed four alternatives for disposition of the contaminated SPRU buildings.

Alternative 1 is the “No Action” alternative. Surveillance and maintenance of existing SPRU facilities would continue indefinitely. In addition, the existing groundwater system would remain in operation to collect contaminated groundwater. The estimated cost of implementing this alternative is \$60 million over the next 30 years. DOE would still have to re-evaluate removal alternatives at a future date.

Alternative 2 includes removal of the Tank Farm tanks, cleanout and decontamination of the tank

vaults, and gross decontamination of the remaining facilities. Approximately 95% of the radioactive contamination in the SPRU facilities would be removed. Surveillance and maintenance activities would continue indefinitely. The estimated cost of Alternative 2 is \$90 million. DOE would still have to re-evaluate removal alternatives for the remaining contaminated facilities at a future date.

Alternative 3 involves decontamination and complete removal of Building H2 and the Tank Farm. Approximately 98% of the radioactive contamination would be removed. Building G2 and the Pipe Tunnels would remain, requiring continued surveillance and

Facilities Alternatives

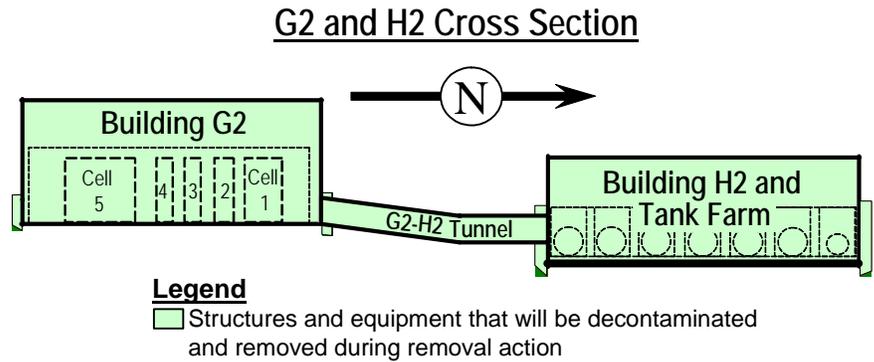
maintenance. The estimated cost of Alternative 3 is \$130 million. DOE would still have to re-evaluate removal alternatives for the remaining contaminated facilities at a future date.

Alternative 4 includes decontamination and complete removal of Buildings G2 and H2, the

Tank Farm, and the G2-H2 Tunnel and decontamination of the E1 and G1 Tunnels. Surveillance and maintenance activities would no longer be required. The estimated cost of Alternative 4 is \$160 million.

FACILITIES PREFERRED ALTERNATIVE

The preferred alternative for cleanup of the SPRU facilities is Alternative 4, Removal of SPRU Facilities. Alternative 4 best satisfies the evaluation criteria presented in the EE/CA (i.e., effectiveness, implementability, and cost) and was also the alternative most preferred by the public and regulatory authorities as expressed during the May 15 to June 5, 2006 public comment period. This effort will start in 2008 and finish in 2014.



SPRU Facilities Removal (Alternative 4)

UPPER LEVEL LAND AREA ALTERNATIVES

Two alternatives were considered for the cleanup of the Upper Level (UL).

Under Alternative UL-1, the “No Action” alternative, Upper Level surveillance and maintenance would continue indefinitely. In addition, the existing groundwater collection system would remain in operation to remove contaminated groundwater (cost included in the Facilities EE/CA). Alternative UL-1 surveillance and maintenance activities are encompassed by the cost estimated for the Facilities Alternative 1 “No Action” over the next 30 years.

Alternative UL-2 would involve removing impacted soil exceeding cleanup goals under Building H2 and the H2 Tank Farm. For planning purposes, DOE assumed that approximately six feet of soil would be removed from beneath the building. Confirmation sampling would be conducted in the excavated area for radioactivity and chemicals. After verifying cleanup, the excavations would be backfilled with clean backfill material and compacted. A groundwater collection system for contaminated groundwater would continue to operate, if needed (cost included in the Facilities EE/CA). The estimated cost for removal of contaminated soil in Alternative UL-2 is \$8 million.

UPPER LEVEL LAND AREA PREFERRED ALTERNATIVE

Alternative UL-2, Upper Level Soil Removal, is the preferred Upper Level land area alternative. Alternative UL-2 best satisfies the evaluation criteria presented in the EE/CA (i.e., effectiveness, implementability, and cost). Alternative UL-2 was also the alternative most preferred by the public, as expressed during the December 22, 2006 to January 26, 2007 public comment period. It is anticipated that Alternative UL-2 will be implemented in conjunction with the Building H2 and G2 removal, which will start in 2008 and finish by 2014.



Upper Level Soil Removal (Alternative UL-2)

LOWER LEVEL LAND AREA ALTERNATIVES

Three alternatives were considered for the Lower Level (LL) (Parking Lot and Railroad Staging Area).

Alternative LL-1, the “No Action” alternative, would include continued surveillance and maintenance program activities such as landscape maintenance and controlled access to the contaminated soil areas. The radioactive contamination would decay away over time; however, the area would not be readily available for reuse. The estimated cost of implementing this alternative is \$3.3 million over the next 30 years.

Under Alternative LL-2, approximately 6,500 cubic yards of contaminated soil exceeding cleanup goals would be excavated to an average depth of four feet. Excavations would be backfilled with clean backfill material and compacted. The estimated cost of

Alternative LL-2 is \$31 million. This alternative allows KAPL to reuse this area upon completion of the cleanup.

Alternative LL-3 includes excavation of an estimated 6,300 cubic yards of contaminated soil exceeding cleanup goals from the Railroad Staging Area. Excavations would be backfilled with clean backfill material and compacted. Approximately 200 cubic yards of residual radioactive and metals contaminated soil in the Lower Level Parking Lot would be capped with two additional inches of asphalt. The cap over the Parking Lot would require periodic inspection, and the asphalt would be maintained to ensure that the cap remained in good condition. The estimated cost of Alternative LL-3 is \$27 million. This alternative allows KAPL to reuse this area upon completion of the cleanup.

LOWER LEVEL LAND AREA PREFERRED ALTERNATIVE

Alternative LL-2, Lower Level Soil Removal, is the preferred alternative for the Lower Level Railroad Staging Area and Parking Lot. Alternative LL-2 best satisfies the evaluation criteria presented in the EE/CA (i.e., effectiveness, implementability, and cost), and allows KAPL to reuse the area upon completion of cleanup. Alternative LL-2 was also the alternative most preferred by the public, as expressed during the December 22, 2006 to January 26, 2007 public comment period. Estimated duration for Alternative LL-2 is three years. Implementation of this alternative will start in 2008 and finish by 2010.



Lower Level Parking Lot and Railroad Staging Area Soil Removal (Alternative LL-2)

NORTH FIELD ALTERNATIVES

Two alternatives were considered for cleanup of the North Field (NF).

Under Alternative NF-1, the “No Action” alternative, the current surveillance and maintenance program activities, including landscape maintenance and controlling access to the contaminated soil areas, would continue. The radioactive contamination would decay away over time. The estimated cost of

this alternative is \$3.3 million over the next 30 years. KAPL has no plans to reuse this area.

Alternative NF-2 includes removal of approximately 5,000 cubic yards of soil exceeding cleanup goals to an average depth of two feet. Some trees and shrubs in the North Field would be removed to facilitate soil excavation. The estimated cost of Alternative NF-2 is \$18 million.

NORTH FIELD PREFERRED ALTERNATIVE

Selection of a preferred alternative for the North Field is being deferred until KAPL completes its investigations of the non-SPRU related areas adjacent to the North Field. KAPL expects to complete their investigation and make a recommendation to New York State Department of Environmental Conservation by 2012. At that time, DOE will reevaluate the North Field alternatives for the cleanup of radioactive

contamination. In its present state, the SPRU-related areas of the North Field do not pose a risk to the public, on-site workers, or the environment. Surveillance and maintenance, and controlled access to the soil contamination areas will continue.



North Field

U.S. Department of Energy
SPRU Project Office
2425 River Road
Niskayuna, New York 12309-7100

Public Involvement
Opportunities

How Can I Comment?

The public comment period will be held from July 26, 2007 through August 25, 2007.

Please comment in one of the following ways:

- 1) Mail comments to:
Steven Feinberg, Federal Project Director
DOE SPRU Project Office
2425 River Road
Niskayuna, NY 12309

- 2) E-mail comments to: anne.wickham@emcbc.doe.gov.
You will receive an e-mail confirmation that your e-mail comment was received.

Please postmark mailed comments by August 25, 2007.

Contacts

DOE SPRU Federal Project Director

Steven Feinberg
U.S. Department of Energy
SPRU Project Office
2425 River Road
Niskayuna, NY 12309
Phone: (518) 395-4627

DOE SPRU Public Affairs Contact

Anne Wickham
EM Consolidated Business Center
U.S. Department of Energy
250 East 5th St., Suite 500
Cincinnati, OH 45202
Phone: (513) 246-0463