

June 22, 2005

Mr. Bill Vinzant
Project Manager, KACC
Kaiser Aluminum & Chemical Corporation
9141 Interline Avenue, Suite 1A
Baton Rouge, LA 70809

SUBJECT: APPROVAL OF DECOMMISSIONING PLAN (DP) ADDENDUM, AND FLUX
BUILDING SURVEY RECLASSIFICATION

Dear Mr. Vinzant:

On May 5, 2005, Kaiser Aluminum & Chemical Corporation (Kaiser) submitted: (1) "Technical Addendum to Decommissioning Plan, and Addendum, Revised Structural Surface Acceptance Criteria," dated May 2005; (2) "Tulsa Oklahoma Facility Decommissioning, Memorandum, Re.: Flux Building Reclassification," dated April 29, 2005; and (3) a revised Chapter 14.0 of Decommissioning Plan, for U.S. Nuclear Regulatory Commission (NRC) review and approval. Based on clarifications requested by the staff, Kaiser submitted revisions on May 25, 2005, and June 7, 2005.

Kaiser's proposed revision to the Decommissioning Plan (DP) includes the following changes:

- Revised gross activity DCGL for Flux Building materials;
- Re-classification of the Flux Building from Class 1 survey units to Class 1, 2 and 3 survey units;
- Revision to Section 14.11.3.1, Surface Sampling, to clearly indicate surface samples will be taken on the bottom of the excavation survey units prior to backfill activity;
- Revision to Section 14.11.3.2, Core Sampling, to delete reference to include the excavation bottom surface during core sampling. The bottom surface of an excavation will be sampled prior to backfilling and thus there is no need to core sample from the surface after backfilling;
- Revision to Section 14.12.2, Postremediation Surveys for Returned Overburden Material, to reflect the practice of excavation sampling prior to backfilling; and
- Correction to an error in Section 14.13.2 table entitled "Summary of Statistical Tests."

The staff has completed its review of Kaiser's submittals and concludes that:

- Kaiser has provided adequate technical basis for the revised gross activity DCGL for Flux Building materials;
- Kaiser has provided adequate rationale for re-classifying the Flux Building from class 1 survey units to class 1, 2 and 3 survey units; and
- Revisions to Section 14 provide acceptable clarification to the DP.

The staffs review is documented in the attached Technical Evaluation.

Therefore, the staff approves the requested revisions to Section 14 of the DP and the re-classification of the Flux Building Final Status Survey units. Because the revision to the DP results in a dose smaller than that previously approved in DP Rev. 3, dated May 2003, the

environmental impacts from the proposed DP revision are bounded by the environmental assessment previously prepared for the approval of DP Rev.3 (ML0316203431). The proposed action is subject to no further NEPA review.

If you have questions concerning this letter, please contact me at (301) 415-6607.

Sincerely,

/RA/

John T. Buckley, Project Manager
Decommissioning Directorate
Division of Waste Management
and Environmental Protection
Office of Nuclear Material Safety
and Safeguards

Attachment: Technical Evaluation

Docket No.: 040-2377

License No.: STB-472 (Terminated)

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Technical Evaluation
of
Technical Addendum to Decommissioning Plan, and
Addendum Revised Structural Surface Acceptance Criteria, dated May 2005,
as revised on May 25, 2005, and June 7, 2005

Current Decommissioning Plan (DP) Requirements

Section 14.3 of the DP, Rev. 3, dated May 2003, includes the following requirements applicable to structural surveys:

Debris is subdivided into two categories: 1) removable debris that can be easily removed from an excavation and 2) permanent structures such as the concrete spillway contained beneath Characterization Grids 1-4 (ALRP). Removable debris will be segregated from soil to the extent practical by visual inspection. Debris buried within the dross and soil mixture will be evaluated in accordance with NRC Fuel Cycle Policy and Guidance Directive FC 83-23 to determine whether they are potential candidates for clearance surveys considering such factors as volumetric contamination and accessibility of surfaces for survey. Clearance surveys may be performed if large, nonporous, solid debris with only surface contamination are uncovered during residue excavation. In this case, clearance surveys for total and loose alpha will be performed on the debris to ensure that released items are released in accordance with NRC Fuel Cycle Policy and Guidance Directive FC 83-23. Otherwise, debris material will be packaged to meet the applicable disposal facility waste acceptance criteria. Permanent structures will be surveyed for unrestricted release in accordance with the guidance provided in the May 2002 DPA for structural surface surveys."

In the DP, the Flux Building is considered a permanent structure, subject to final status surveys (FSSs), to be released for unrestricted use and left in place.

Proposed Revision to DP Requirements

Due to contamination beneath the Flux Building, Kaiser now plans to deconstruct the Flux Building, survey the footers/floor, building walls and roof as removable debris, and dispose of the material accordingly. Clean material will be disposed of at a local landfill, and material with residual contamination will be disposed of as waste and transported to a disposal facility licensed to accept this material.

Kaiser will survey the surfaces of the Flux Building in accordance with the final Survey Plan. The site clearance criteria, based on FC 83-23 established for the site and approved in the DP, will be used to implement the FSS so that the Flux Building can be deconstructed and free released from the site if the criteria are met. The following criteria will be used for the FSS (consistent with FC 83-23):

- Average total alpha contamination < 230 dpm/100 cm²
- Maximum total alpha contamination < 700 dpm/100 cm²
- Removable alpha contamination < 50 dpm/100 cm².

Kaiser has provided (1) an adequate technical basis for the gross activity DCGL for Flux Building materials, and (2) has also provided a basis for a FC 83-23-based surface contamination clearance criteria. Kaiser used the measured, relative activity fractions for Th-228, Th-230 & Th-232, and used a MARSSIM methodology to calculate contamination clearance criteria (avg. 230 dpm/100cm², etc. for alpha surface contamination).

Kaiser has provided a rationale for re-classifying the Flux Building from Class 1 survey units to Class 1, 2 and 3 survey units. The basis for this re-classification was based on knowledge of facility use and additional radiological characterization of the facility. Kaiser provided an adequate survey design for the Flux Building Class 1, 2 and 3 survey units.

Dose Consequence from DP Revision

The proposed DP revision will result in a decrease in the dose from the site. In accordance with DP Rev. 3, dated 5/03, the Flux Building is designated as a permanent structure to be surveyed, released for unrestricted use, and left on site. As such, there was a minimal dose associated with the remaining building. Kaiser's proposed revision to the DP would result in the deconstruction of the Flux Building and the removal of the footers/floor, walls and roof from the site. Clean material will be free released from the site and contaminated material will be disposed of as waste at a licensed disposal facility. Since all of the material from Flux Building will be removed from the site, the small dose associated with the building material will also be removed from the site.