July 10, 2007

Ms. Karen M. Burke
Director of Environmental Remediation
Mallinckrodt Chemical, Inc.
Mallinckrodt & Second Streets
P.O. Box 5439
St. Louis, MO 63147

SUBJECT: MEETING SUMMARY NOTES

Dear Ms. Burke:

On June 12, 2007, a meeting was held between the staff of the U.S. Nuclear Regulatory Commission (NRC) and Mallinckrodt, Inc. (Mallinckrodt) to discuss Mallinckrodt's request (ADAMS Accession No. ML070960487) to remove Un-reacted Ore (URO) burial pits in the Plant 6W area of your St. Louis, Missouri site.

During a May 9, 2007, site visit and subsequent exchanges, Mallinckrodt and representatives of the U.S. Army Corps of Engineers (USACE) described the need for timely approval of this action by the NRC staff. USACE and Mallinckrodt pointed out that NRC approval of the proposed license amendment will permit USACE to gain access to and remediate its legacy materials underlying the URO burial material. Consistent with its authority under the Formerly Utilized Sites Remedial Action Program (FUSRAP) USACE is authorized to conduct remedial activities at this site, including in Plant 6W. Subsequently, USACE informed the NRC staff that USACE and Mallinckrodt are finalizing an agreement which delineates the USACE responsibilities for removal of FUSRAP legacy material, and Mallinckrodt's responsibilities for removal of the NRC-licensed material in Plant 6W. USACE stated this delineation and subsequent removal will allow for protection of human health and the environment. During the June 12 meeting staff was assured by Mallinckrodt and the USACE that the Plant 6W delineation agreement would be provided to NRC. To date, we have not received the agreement.

In accordance with Title 10 of the Code of Federal Regulations (10 CFR) 2.390 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at http://www.nrc.gov/reading-rm/adams.html (the Public Electronic Reading Room). This information is also available on NRC's website at:
http://www.nrc.gov/materials/decommissioning/public-involve.html

If you have any questions regarding the enclosed, please contact me at (301) 415-0023, or by email at aak@nrc.gov.

Sincerely,

/RA/

Amir Kouhestani, Project Manager
Decommissioning & Uranium Recovery
Licensing Directorate
Division of Waste Management
and Environmental Protection
Office of Federal and State Materials
and Environmental Management Programs

Docket No.: 40-6563
License No.: STB-401

Enclosures:
1. Meeting Summary Notes
2. Meeting Agenda
3. Meeting Participant List

cc: Mallinckrodt Service List

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MEETING REPORT

DATE: June 12, 2007

TIME: 1:00 p.m. - 3:30 p.m.

PLACE: U.S. Nuclear Regulatory (NRC), Headquarters
Two White Flint North
Room: T-8C5
11545 Rockville Pike
Rockville, MD 20852-2738

PURPOSE: Mallinckrodt proposes to handle removal of the Un-reacted ore burial trenches in Plant 6W as a source removal action under current license as a stand alone amendment

ATTENDEES: Refer to Attachment

BACKGROUND: The Mallinckrodt site has been in operation since 1867 and has produced a wide range of products. In addition to the extraction of columbium and tantalum carried out under NRC Nuclear Material License No. STB-401, various uranium compounds were extracted under contract to the Manhattan Engineering District and the Atomic Energy Commission (MED-AEC). Remediation of MED-AEC radiological constituents is currently being performed under the U.S. Department of Energy's Formerly Utilized Site Remediation Program (FUSRAP) by the United States Army Corps of Engineers (USACE). Decommissioning at the Mallinckrodt site will take place in two phases. Phase I addressed the decommissioning of the buildings and equipment. Phase I was completed in December 2004. Phase II will complete the decommissioning of the building slabs and foundations, paved surfaces, and subsurface materials. Mallinckrodt continues to provide Phase II supplemental information for staff evaluation. Contaminants at the Mallinckrodt site are: U-238 and progeny (U-238, U234, Th230, Ra226, Pb-210), U235 and progeny (U235, Ac-227, and Pa-231), and Th-232 and progeny (Th-232, Ra-228, and Th-228).

DISCUSSION:

The meeting was a followup meeting to a Mallinckrodt April 5, 2007, advance proposal notification to NRC staff (ML070960487), and a May 9, 2007, NRC staff site visit, to discuss the details of Mallinckrodt's request for a license amendment for a source removal action to remove un-reacted ore (URO) burials in Plant 6W.

In opening remarks, the NRC senior decommissioning manager noted the proposal is a positive development, needs to be narrowly focused, and that NRC staff is committed to act on a high quality amendment application. Management noted that receipt of the Mallinckrodt-USACE delineation agreement is essential for staff to proceed with its review of the proposed request.

The Missouri Department of Natural Resources (MDNR) senior manager, participating by phone, indicated that he appreciated the opportunity to participate and hear the proposal, queried if one of the burial trenches may not be addressed now, and if any potential institutional controls will be discussed. Because the burial trench in question is underneath an existing building and is not part of this source removal action, it was not discussed.

Mallinckrodt's consultant, who was authorized to speak on behalf of the Mallinckrodt, described the regulatory basis of the pending license amendment request for a source removal action as part of their overall management of Mallinckrodt Possession-Only-License in Decontamination & Decommissioning relating to regulated material in the URO burials in Plant 6W area of the site. The technical rationale was described as the source removal to reduce potential sources of exposure. Mallinckrodt desires that as part of a safe URO removal process to explore with staff various options to dispose of the URO material.

Next Mallinckrodt reviewed the details it intends to include in its pending application. Mallinckrodt noted the application will include two parts. The license amendment application, as a framework document will contain an overall summary of the proposed action and will refer to a series of appendices applicable to the source removal action. This part of the application will in brief describe: general license information; site history; location and physical boundaries of the burials; description of the URO; organization and administration; health & safety; source removal action including waste disposal management; quality assurance; safety analysis, and an environmental report. The second part of the application will include several appendices supplementing the application. The appendices will cover: organization and control; health & safety program to include protection of workers and members of the public, and the environment; radioactive waste management quality assurance; safety evaluation report for URO removal; and an environmental report. To the extend possible the information in the appendices will be drawn from previously approved similar topics contained in Phase I Decommissioning Plan (DP). Approval of this amendment does not supplant approval the Phase II DP.

In addition, Mallinckrodt indicated that it also intends to request the NRC to approve the process that they will describe in the amendment application for disposal of URO source materials that would not require subsequently NRC review and approval for each disposal situation that may be encountered.

Management asked Mallinckrodt if they are clear about Plant 6W demarcation agreement with USACE. Although staff is made aware that an agreement in principle may have been reached, staff may not act on full review of the application without first having received the formal agreement. Mallinckrodt committed to get back to NRC in short with an answer about how soon it will be formally submitted to the NRC. The USACE headquarters representative also made a similar commitment.

A discussion ensued on whether Mallinckrodt would also submit a request for NRC approval of portion of URO material disposal by other methods consistent with 10 CFR 20.2002. Staff noted inclusion of such a request in the application should reference and be consistent with the Commission position as described in the Federal Register (FR) Notice (67 FR 55175; dated August 28, 2002). Staff committed to provide Mallinckrodt with a copy of the FR Notice.

Mallinckrodt noted that it has written to certain waste disposal facilities and is inquiring about how to ensure meeting the facility's Waste Acceptance Criteria and comply with the State regulatory requirements.

Mallinckrodt indicated it plans not to submit final status surveys of the burial pits once the removal action has been completed. The NRC counsel sought Mallinckrodt's clarification and asked if it meant not submitting final surveys after URO removal and before USACE completes its remediation in those burials. The NRC project manager (PM) reminded Mallinckrodt of their May 9, 2007, commitment to review and endorse USACE's Post Remedial Action Report containing the final status surveys and shall submit the report to NRC via a Mallinckrodt formal transmittal as their own surveys for NRC review and approval. The PM further noted the Plant 6W area will not be released from the control of the license until such time as successful completion of the remaining decommissioning activities under Phase II DP and Mallinckrodt demonstration of compliance with the site-wide 25 mrem/yr residual dose at the time of license termination request.

Mallinckrodt noted it will review the procedures of any general contractor selected to perform the URO removal action to ensure their procedures is in full compliance with the NRC requirements in 10 CFR Part 20.

Staff sought clarification regarding Mallinckrodt's plan to transfer aqueous effluent from the URO removal project into the on-site FUSRAP water treatment system where it would be treated, sampled, and analyzed for eventual permitted release to the St. Louis Metropolitan Sewerage District facilities. Mallinckrodt committed to clarify the issue and in essence inform NRC that Mallinckrodt will control permitted releases and will be fully responsible for any potential liability thereof.

In light of foregoing discussions, management reemphasized the importance of staff receiving at the earliest formal details of the Mallinckrodt-USACE Plant 6W delineation and remediation agreement. In particular, management expressed the importance of an integrated Mallinckrodt-USACE schedule for activities associated with the URO removal action and underlying FUSRAP material removal action, as this effort constitute a major step forward toward decommissioning of this site. Mallinckrodt noted that at its biweekly design coordination meetings with USACE they have worked on an integrated schedule and will furnish NRC the integrated schedule shortly or prior to submittal of the license amendment application for URO removal action.

Mallinckrodt informed the staff that it did not have at this time an organizational chart of Mallinckrodt organization structure responsible for safe URO removal project. Staff noted that the application should include a detailed URO removal project organization chart.

Mallinckrodt reviewed the details it intends to include in a safety evaluation report and an environmental report associated with the license amendment. Staff noted that the environmental report should discuss both radiological and non-radiological impacts specific to URO removal project. Mallinckrodt committed to include the requested information in the environmental report.

Mallinckrodt indicated that it regarded NRC approval of their license amendment as the basis for the scope of its work plan for advertising and awarding a URO remedial action contract. Staff noted once NRC receives Mallinckrodt's application, a followup meeting may be necessary

to ensure completeness of the application. Staff is committed to a timely review of the license amendment for the URO removal project, if the application is found to be complete and of high quality.

Upon completion of formal agenda items discussions, staff sought comments from USACE, MDNR, and the two members of the public in attendance.

The MDNR senior manager asked when Mallinckrodt will submit the official application. The MDNR would like to comment on the Mallinckrodt environmental report when it becomes available. Mallinckrodt and the NRC staff separately committed to inform MDNR as soon as the application is submitted, and the staff has posted it on the license docket. MDNR also sought to learn about the status of remainder of the site-wide decommissioning under Phase II. Mallinckrodt noted that once the URO removal project is completed, Mallinckrodt will move forward addressing burial #10 under Phase II decommissioning activities. MDNR sought Mallinckrodt assurances that due to current FUSRAP remedial activities on the north side of building 101, which is situated on top of burial trench #10, there will not be an inadvertent breach of this trench by the USACE remedial contractor.

ACTIONS:

1. NRC provides Mallinckrodt with the August 28, 2002 Federal Register notice (67 FR 55175; dated August 28, 2002), regarding the Commission current policy of approving requests to transfer material to exempt persons under the NRC regulations in Sec. 40.13(a).

2. Mallinckrodt will formally provide NRC with delineation agreement reached with USACE in Plant 6W.

3. Mallinckrodt will clarify in writing how it intends to meet the NRC requirements for Final Status Survey requirements for the burial areas in Plant 6W.

4. Mallinckrodt will provide NRC with an Integrated schedule for Mallinckrodt-USACE URO burial removal project and FUSRAP activities for Plant 6W.

5. Mallinckrodt will provide NRC with a clear explanation in the application that all Mallinckrodt releases to the environment, due to the URO removal project, shall be controlled by Mallinckrodt and there will be only permitted releases under 10 CFR Part 20, appendix B.

6. Mallinckrodt will discuss, in the environmental report section of the application, the radiological as well as the non-radiological impacts associated with the URO removal project

7. NRC-PM will post the Mallinckrodt license amendment application for URO source removal action on the license docket upon receipt and will inform the MDNR. Separately, Mallinckrodt commits to informing MDNR upon their issuance of the application to NRC.

8. Mallinckrodt will provide NRC with a detailed organization chart specific to the URO removal project.

9. NRC observed that Mallinckrodt needs to clarify the differences in the radiation worker training frequency specified in the information provided in the meeting and the STB-401 license condition.

MALLINCKRODT - NRC MEETING ON

SOURCE REMOVAL IN PLANT 6W OF THE MALLINCKRODT FACILITY LOCATED IN ST. LOUIS, MISSOURI

JUNE 12, 2007

AGENDA

- Opening remarks
- Mallinckrodt reviews the regulatory basis and technical rationale for its proposal to remove sources in Plant 6W
- Mallinckrodt reviews with staff details contained in its proposed license amendment application
- Mallinckrodt discusses safety and environmental considerations associated with the proposed action
- Mallinckrodt reviews the integrated Mallinckrodt - US Army Corps of Engineers schedule for all source removal in trenches 1 through 9
- Opportunity for the public to ask questions* of the NRC staff
- Conclusion

* This is a Category 1 Meeting. The public is invited to participate in this meeting by discussing regulatory issues with the NRC at designated points identified on the agenda.

ATTENDEE LIST

(See ML071640364)

Enclosure 3