

September 23, 2004

Mr. Jim Grant
C-T Decommissioning Project Manager
Mallinckrodt Chemical, Inc.
Mallinckrodt & Second Streets
P.O. Box 5439
St. Louis, MO 63147

SUBJECT: FINAL STATUS SURVEY REPORT FOR BUILDING 250 INTERIOR

Dear Mr. Grant:

On June 15, 2004, Mallinckrodt, Inc., (Mallinckrodt) submitted Final Status Survey Reports (FSSR) for the following areas: (1) Building 101 Exterior; (2) Building 200 Roof; (3) Building 222 & 223 Roof; (4) Building 235 & 236 Exterior Walls; (5) Building 240 Exterior; (6) Building 240 Interior; (7) Building 245 Exterior; (8) Building 250 Exterior; (9) Building 250 Interior; and (10) 9101 Crane Pad, to the U.S. Nuclear Regulatory Commission (NRC) for review. The staff has completed its review of the FSSR for the Building 250 Interior and concludes: (1) that the FSSR for the Building 250 Interior (Survey Units 2502, 2503 and 2504) is acceptable; and (2) Survey Units 2502, 2503 and 2504 meet the criteria for unrestricted release as established in the Mallinckrodt Phase 1 Decommissioning Plan (DP). The basis for the staff's conclusion is attached. NRC will continue its review of the remaining FSSRs and will provide the results of our review under separate cover.

NRC understands that Mallinckrodt would like to make physical modifications to Building 250, Laboratory 201, in November 2004. The staff has no objection to Mallinckrodt proceeding with planned interior modifications. Mallinckrodt should ensure that this area is not recontaminated during future decommissioning activities through effective implementation of the Radiation Protection Program. Mallinckrodt should include final status survey results for Survey Units 2502, 2503 and 2504, in its demonstration that the site meets the criteria established in 10 CFR Part 20, Subpart E, at the time of license termination.

If you have any questions, please call John Buckley 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: As stated

Docket No. 040-06563
License No. STB-401

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NAME	JBuckley		JThompson		CBurkhalter		ENJensen for STreby		CCraig	
DATE	9/13/04		9/13/04		9/13/04		9/22/04		9/23/04	

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Basis for Approval of Final Status Survey Report
for
Building 250 Interior, Rev. 0, March 2004

Three survey units are described in this FSSR. Survey unit sizes in square feet were converted to square meters for comparison to the MARSSIM guideline for Class 2 areas (100 to 1000 m²). All survey unit sizes were within the MARSSIM guideline.

Survey Unit	Area (ft ²)	Area (m ²)	Reference	Area Range Test
2502	7514	697	p.44	Class 2 Pass
2503	3432	319	p. 46	Class 2 Pass
2504	7527	699	p. 50	Class 2 Pass

The DCGL_w is presented in Table 2.4 of the FSSR and is consistent with the Phase I DP.

The number of grid points was sufficient to satisfy the requirements for the Sign Test for Paired Data, NUREG-1505 Section 12.3. Note that the design was based on an administrative level of 20% of the DCGL_w, resulting in approximately twice the number of points than if the DCGL_w had been used.

A condition of the DP is that if all walls measure less than 0.5 x DCGL_w, the ceiling does not have to be surveyed. All measurements were less than 0.5 x DCGL_w.

Judgmental samples were performed and marked on room drawings, along with grid measurement locations.

No measurements exceeded the DCGL_{EMC}.

Beta scan thresholds were adequate (Sections 4.2.5.2, 4.3.5.2, and 4.4.7.2). MDCs (Table 2.5) met the requirements of the DP.

One direct beta measurement in SU-2503, Room 201 counter top, exceeded the administrative guideline but was less than the DCGL_w. This reading was discussed in Section 4.3.2.2.

Elevated gamma readings on the floor of SU-2504 were investigated and evaluated using beta measurements. The more accurate beta measurements showed much lower activity (Section 4.4.3.2).

Conclusion:

Survey Units 2502, 2503, and 2504 meet the unrestricted release criteria established in the Mallinckrodt Phase 1 Decommissioning Plan.