

SAFETY INSPECTION REPORT AND COMPLIANCE INSPECTION

1. LICENSEE/LOCATION INSPECTED:

Mallinckrodt Chemical, Inc. / St. Louis, MO
CT Phase II Decommissioning Project

2. NRC/REGIONAL OFFICE

REGION III
US NUCLEAR REGULATORY COMMISSION
801 WARRENVILLE ROAD
LISLE IL 60532-4351

REPORT NUMBER(S) 040-06563/2011-002

3. DOCKET NUMBER(S)

040-06563

4. LICENSE NUMBER(S)

STB-401

5. DATE(S) OF INSPECTION

06/01-02/2011

LICENSEE:

The inspection was an examination of the activities conducted under your license as they relate to radiation safety and to compliance with the Nuclear Regulatory Commission (NRC) rules and regulations and the conditions of your license. The inspection consisted of selective examinations of procedures and representative records, interviews with personnel, and observations by the inspector. The inspection findings are as follows:

- ☒ 1. Based on the inspection findings, no violations were identified.
- ☐ 2. Previous violation(s) closed.
- ☐ 3. The violation(s), specifically described to you by the inspector as non-cited violations, are not being cited because they were self-identified, non-repetitive, and corrective action was or is being taken, and the remaining criteria in the NRC Enforcement Policy, NUREG-1600, to exercise discretion, were satisfied.

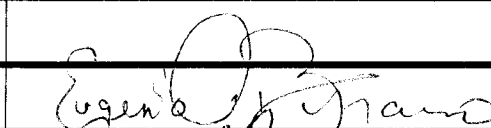
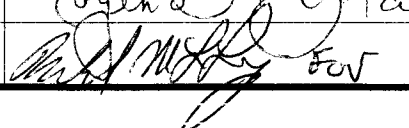
_____ Non-cited violation(s) were discussed involving the following requirement(s):

- ☐ 4. During this inspection, certain of your activities, as described below and/or attached, were in violation of NRC requirements and are being cited. This form is a NOTICE OF VIOLATION, which may be subject to posting in accordance with 10 CFR 19.11.

(Violations and Corrective Actions)

Statement of Corrective Actions

I hereby state that, within 30 days, the actions described by me to the Inspector will be taken to correct the violations identified. This statement of corrective actions is made in accordance with the requirements of 10 CFR 2.201 (corrective steps already taken, corrective steps which will be taken, date when full compliance will be achieved). I understand that no further written response to NRC will be required, unless specifically requested.

TITLE	PRINTED NAME	SIGNATURE	DATE
LICENSEE'S REPRESENTATIVE			
NRC INSPECTOR	Eugenio A. Bonano		06/02/2011
BRANCH CHIEF	Christine A. Lipa		6/20/2011

Docket File Information
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3. DOCKET NUMBER(S) 040-06563	4. LICENSE NUMBER(S) STB-401	5. DATE(S) OF INSPECTION 06/01-02/2011	
6. INSPECTION PROCEDURES USED IP 87104, IP 83890		7. INSPECTION FOCUS AREAS Inspection of the Phase II Decommissioning Project, Plant 5 Area	

SUPPLEMENTAL INSPECTION INFORMATION

1. PROGRAM CODE(S) 11300	2. PRIORITY Decommissioning	3. LICENSEE CONTACT Karen M. Burke	4. TELEPHONE NUMBER 314-654-5838
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☐ Main Office Inspection Next Inspection Date: TBD

☐ Field Office Inspection _____

☒ Temporary Job Site Inspection Plant 5, St. Louis, MO

PROGRAM SCOPE

The inspectors completed an on-site inspection on June 2, 2011; and observed the NRC's contractor, ORISE personnel, complete confirmatory surveys of survey units 1, 2, and 3. During the on-site inspection, the inspectors also observed the licensee's contractor work in the Plant 5 Area conducting final status surveys, excavation and remediation, and the security and control of the site. Specifically, the inspectors reviewed the licensee's FSS sampling results from SU-2 and verified that sample analyses included slag material greater than 1/4" sieve; observed FSS and sample collection from SU-1 and SU-3, and observed sample processing for laboratory analyses; and observed the excavation remediation activity guided by action level based on gamma scan. The inspectors also evaluated the licensee's contractor on-site laboratory and radiological survey instrumentation QA program, and air sampling program. In addition to ORISE personnel's work, the inspectors also conducted independent walk-over confirmatory surveys of SU-1, 2 and 3 using a calibrated Ludlum 2241-2 with a 2 by 2 NaI detector. The inspectors also used a Ludlum 44-9, "Pancake" detector to survey areas outside of the excavation, including heavy equipment that leave the controlled areas, to determine the licensee's control of contamination. The inspectors interviewed select licensee and contractor management and staff regarding their roles, responsibilities, and knowledge related to the decommissioning project and safety.

PERFORMANCE OBSERVATIONS

The inspectors determined that ORISE personnel conducted confirmatory surveys in accordance with their NRC approved work plan. The licensee implemented their revised sampling procedures to include material greater than 1/4 inch sieve. The licensee's contractor identified two elevated areas with the sum-of-fractions (SOF) of the DCGLs greater than 2.0 in SU-2. The licensee stated that they would determine the appropriate area factors for the elevated areas to demonstrate that SU-2 did not exceed 25 mrem/yr, and document the results in their FSSR. The licensee performed the excavation remediation activity safely and in accordance with their remediation plan. The contractor's on-site radioanalytical laboratory and calibrated survey instrumentation were periodically checked and tracked for proper operation and performance. Sample preparation and analysis was conducted in accordance with established data quality management objectives and procedures. Calibrated and maintained air monitoring stations were strategically placed around the site, and calibrated survey meter "frisking" stations were in place. The site was cordoned off and secured to prevent entry into the affected areas by unauthorized personnel. All radiation postings were in accordance with 10 CFR Part 20. The licensee conducted work in accordance with their Decommissioning Plan, MPP, WP, HASP, FSP, QAPP and procedures, and NRC regulations. Management and staff were knowledgeable and cognizant of their roles and responsibilities regarding the project and safety. No findings of significance were identified.