

U.S. NUCLEAR REGULATORY COMMISSION
REGION I

INSPECTION REPORT

Report No. 040-08794/97-001

Program Code 11700

Docket No. 040-08794

License No. SMB-1408

Priority 3

Category E

Licensee: Molycorp, Incorporated
300 Caldwell Avenue
Washington, PA 15301

Facility Name: Molycorp

Inspection At: 350 N. Sherman Avenue
York, PA 17403

Inspection Conducted: February 11, 1997

Inspectors:

Todd J. Jackson
Todd J. Jackson, CHP
Health Physicist

February 19, 1997
date

Approved By:

Ronald R. Bellamy
Ronald R. Bellamy, Ph.D., Chief
Decommissioning & Lab Branch
Division of Nuclear Materials Safety

February 19, 1997
date

Inspection Summary: Routine, announced inspection on February 11, 1997
(Inspection Report No. 040-08794/97-001).

Areas Inspected: Site tour; status of site facilities; liquid and solid radioactive waste management; and radiation surveys. Independent measurements were made of six rooms in three buildings, in areas where licensee surveys were in-process or completed. The inspector was accompanied by Mr. James Kopenhaver from the Pennsylvania Department of Environmental Protection.

Results: Licensee activities at the site and decontamination work were being conducted in accordance with approved procedures, and in accordance with licensee commitments to the NRC. NRC surface contamination measurements in the buildings surveyed did not identify areas exceeding release limits for unrestricted use. No violations of regulatory requirements were observed during this inspection.

The inspector independently surveyed areas of Building 4 (rooms 1,2,and 3), Building 6 (rooms 1 and 2), and Building 13. Measurements were made on floors and walls. All measurements were within the criteria for release for unrestricted use, in accordance with the methodology of draft NUREG 5849², section 8.5. The inspector also surveyed numerous pieces of equipment which had been released by the licensee as uncontaminated and were stored in the yard awaiting salvage or disposal. No contamination was detected by the inspector on any of the equipment surveyed.

The inspector used a gas proportional probe in conjunction with a scaler to independently measure the beta and alpha surface contamination in selected buildings on site, and a "pancake" G-M tube to survey equipment cleared by the licensee and awaiting salvage or disposal. Calibrations and source checks were performed using Tc-99 and Th-230 electroplated standards. Electronic calibration for the scaler was valid through March 14, 1997.

6.0 RADIATION SURVEYS

6.1 AIR SAMPLING

The inspector reviewed results and calculations for selected air samples taken from areas where work activities were expected to generate airborne contamination. Samples collected in Building 14 during December 1996 were examined. The licensee's method of air monitoring had evolved to include an initial count using a proportional detector immediately after removal of sample filters from the samplers, followed by a second count approximately 72 hours later (after radon had decayed) as necessary to confirm the presence of Th-232. Most measured radioactivity was due to naturally occurring radon gas (Ra-222), not to airborne licensed materials. The inspector also reviewed the licensee's gamma spectrometry measurements used to show the absence of thorium on filters having measurable radon, and calculations to show the small quantities of Th-232 collected on the filters.

6.2 OUTSIDE YARD SURVEYS

Equipment and material on which contamination had been detected was staged in several asphalt covered areas between buildings on site, within areas delineated by stanchions and ropes with postings indicating that contamination was present. The inspector asked about surveys to detect any contamination which may have been washed off during rain or snow-melt, and the licensee indicated that routine smears of the asphalt surfaces were performed to confirm that contamination was not moving off the stored materials. The licensee also stated that the yard survey program included site roadways on which the forklift was used to move material and equipment from one area to another for cleaning, in order to assure that the forklift did not spread

² NUREG-5849, Manual for Conducting Radiological Surveys in Support of License Termination, Draft for Comment. June 1992.

contamination. The licensee had not detected any migration of contamination off of stored material.

7.0 RADIOACTIVE WASTE MANAGEMENT

The inspector observed the equipment for collecting and discharging liquid waste generated during the washing and decontamination operations. Wash water in Building 14 was collected in floor drains and pumped into one of two holding tanks. The collection tanks were used so that only one was in service at any time. When a tank was filled it was isolated, sampled, and, if analytical results found to be acceptable, discharged through a five micrometer particulate filter to the single clarifier tank. In the clarifier tank the wastewater was mixed with the continuous effluent from site monitoring wells and discharged to the sewer.

The inspector reviewed results of wastewater radiological analyses for the three batches of wastewater sampled on October 30 and November 19, 1996, and January 17, 1997. These were the only batches collected during the period. All samples analyzed showed concentrations of radioactive material to be less than the discharge concentration limits for licensed materials.

The licensee continued to segregate solid wastes and accumulate contaminated wastes in covered dumpsters on site. Efforts continued to recover as much material as possible for its lanthanide content, which will reduce the amount of radioactive waste generated.

8.0 EXIT MEETING

The inspector met with the representatives identified in Section 1.0 at the conclusion of the inspection on February 11, 1997. The inspector summarized the purpose, scope, and findings of the inspection. The licensee acknowledged the inspection findings.

DETAILS

1.0 INDIVIDUALS CONTACTED

- *G. Dawes, Project Manager/Radiation Safety Officer (RSO), Molycorp Inc.
- *J. Stokowski, Project Manager, IT Corporation
- *D. Williams, Health Physics Site Supervisor/RSO, IT Corporation

*Denotes those present at the exit meeting on February 11, 1997.

2.0 PURPOSE

The purpose of this inspection was to examine the current status of decommissioning activities and facilities at the York, Pennsylvania site. Activities reviewed included decontamination work, radiation surveys, and liquid and solid radioactive waste management. The inspector also conducted independent radiological measurements of selected building interior surfaces already characterized by the licensee. The inspector was accompanied on this inspection by Mr. James Kopenhaver, Pennsylvania Department of Environmental Protection.

3.0 SITE DECOMMISSIONING STATUS

The inspector toured the York facility to observe the current status of decontamination work. Final survey of Building 4 had been completed for both interior and exterior of the structure, and the licensee stated the Final Survey Report was in preparation. Interior surveys had been performed in Buildings 1, 6, 7, and 13. The west end of the interior of Building 1 was being used to survey and classify equipment and materials which had been washed.

The floor of Building 8 (also known as the Moly Building) had been roped-off and posted as a contaminated area. Contamination had been identified on the floor following the removal of equipment from the building, and there was also known contamination in floor drains and trenches of the main room. A final survey report for the building had been submitted to the NRC in December 1995.¹ The licensee planned to decontaminate the floor and resubmit a survey report for the building.

The licensee had identified the need in some buildings to stabilize floor and sub-floor structures such as drains and trenches which were known to be contaminated. Stabilization will be necessary before demolition can be completed for some of the site structures, especially Buildings 3 and 8, to prevent the spread of contamination when the above-floor structures are demolished. The licensee expects to submit detailed plans for stabilization to the NRC prior to demolition.

5.0 INDEPENDENT MEASUREMENTS

¹Final Radiological Status Report for the Structure of the Moly Building at Molycorp, Inc., York, Pa., December, 1995).