

Finding 1: *It is not clear what the start date for the assignment of unmonitored neptunium intakes at SRS is intended to be. Current documentation suggests that the intended start date for coworker assignment is in the 1960–1961 timeframe. SC&A notes that pilot scale activities for Np/Pu separation began in May 1959, and that neptunium appears to have been handled on laboratory-scale experiments as early as 1955. SC&A acknowledges that the feasibility of assigning coworker intakes may be limited by the availability of sufficient data and not by actual site activities.*

Response: While most of the early neptunium work was performed in glove boxes or high-level caves there would have been some potential for exposure to unencapsulated Np-237, as well as Pu-238. ORAUT has identified about twenty SRS staff that worked in neptunium research through 1960 though type and amount of involvement are unknown. Of those ORAUT found records for four of the workers in NOCTS. Three of the four were sampled for plutonium in 1959 – 1960 while one was sampled in 1958 and 1959 and the other sampled in 1959 – 1960. ORAUT has found no bioassay for neptunium prior to 1961. Because neptunium research and lab scale operations conducted prior to 1961 were similar, though smaller in scope, to production operations beginning in 1961, 50th percentile coworker excretion rates for neptunium will be used to assign intakes in each of the years 1955 through 1960 and will be presented in OTIB-0081, Rev 4.

Finding 2: *While RPRT-0065 provides a thorough discussion of neptunium activities at SRS, it does not clearly establish the ending date for when potentially unmonitored intakes will be assigned. The timeline of activities provided in the report indicates exposure potential to some workers through 2010. However, a comparison of derived coworker intakes ends in 2000, while the concluding section appears to indicate that urinalysis data will be used to derive coworker intakes only through 1995.*

Response: Work with potential for exposure to Np-237 occurring from 1990 through 2000 primarily consisted of dismantling and decontamination of canyon and other process equipment and bench-scale and lab-scale analyses and research performed in 773-A. Building 235-F was used for storage and was mostly dormant in this period until decommissioning. ORAUT-RPRT-0065 documented measurable contamination with the decommissioning of 321-M. Contamination was possible in other decontamination and decommissioning activities as well. Given that different tasks were conducted in this time period than in the production years ORAUT will derive coworker excretion rates and intakes of Np-237 to be used through December 31, 1995 in a future revision of ORAUT-OTIB-0081. SRS implemented 10 C.F.R. 835 on Jan. 1, 1996. In this era, the regulations regarding required monitoring levels will be used to assign worker intakes.

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