

Pinellas Plant Site Profile Update

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Background

- **DOE operations 1957 to 1997**
 - Plant was located in Clearwater, FL
 - Produced precisely-timed neutron generators used to initiate nuclear explosions
 - Accelerator-type neutron generators produced at Pinellas gradually replaced polonium-beryllium initiators manufactured at the Mound site
 - Also fabricated other weapons components that included: lightning-arrestor connectors, specialty capacitors, crystal resonators, magnetics, and optoelectronic devices

Background—cont.

- **September 1994, Pinellas stopped producing weapons-related components and began to change its mission to environmental management**
 - **The Department of Energy (DOE) transferred much of the Pinellas production capability to the Kansas City Plant in Missouri and the Sandia National Laboratory in New Mexico**
- **DOE completed cleanup of the site in December 1997**
- **Contractors**
 - **General Electric Company (1957-1992)**
 - **Lockheed Martin Specialty Components, Inc. (1992-1997)**

History of the Site Profile Review

- **2005 – Initial Pinellas Plant TBD completed**
- **2006 – TBD updates (page changes) completed for the External (2), Site Description and X-ray sections**
- **May 2007 – SC&A review of the Pinellas profile submitted**
 - **11 primary issues and 8 secondary issues**
- **June 2008 – Pinellas Work Group meeting**
 - **Agreement in principle for satisfying SC&A issues**

October 2011 WG Meeting

- **Updates to the Pinellas Plant Site Profile**
 - **July 2011 –**
 - **Introduction (ORAUT-TKBS-0029-1, Rev 01)**
 - **Site Description (ORAUT-TKBS-0029-2, Rev 02)**
 - **Occupational Environmental Dose (ORAUT-TKBS-0029-4, Rev 01)**
 - **Occupational Internal Dose (ORAUT-TKBS-0029-5, Rev 01)**
 - **August 2011 – Occupational External Dose (ORAUT-TKBS-0029-6, Rev 01)**
 - **October 2011 – Occupational Medical Dose (ORAUT-TKBS-0029-3, Rev 01)**

October 2011 WG Meeting—cont.

- **Discussion of the review matrix**

- **11 primary and 8 secondary issues**

—Primary issues include:

- 1. Reconstruction of doses in the absence of early health physics, industrial hygiene, and environmental records**
- 2. Potential doses from insoluble metal tritides not sufficiently addressed**
- 3. Minimum detectable concentrations and uncertainties for plutonium and bioassay measurements are inadequately addressed (Occupational Internal Dose; ORAUT-TKBS-0029-5)**

October 2011 WG Meeting—cont.

- **Discussion of the review matrix—cont.**
 4. **Assessment of personnel badging policy during early years needs further review**
 5. **Problems with personnel dosimetry**
 6. **Decontamination and decommission (D&D) era of Pinellas operations is not sufficiently addressed**
 7. **Missing internal dose estimation methods for unmonitored workers (e.g., maintenance and support personnel)**

October 2011 WG Meeting—cont.

- **Discussion of the review matrix—cont.**
 8. **Potential missed dose for depleted uranium**
 9. **The TBD fails to adequately define and assess occupational medical exposure**
 10. **Techniques and protocols increase uncertainty of dose conversion factors listed in the TBD**
 11. **Frequency and type of X-ray exposure is uncertain**

Work Group Path Forward

- **NIOSH – revising Pu bioassay section of the TBD**
- **SC&A**
 - **Reviewing documents to verify changes reported by NIOSH**
 - **Revisiting Pu bioassay data**
 - **Conducting personnel interviews (December 9, 2011)**