

Weldon Spring Site SEC-00143

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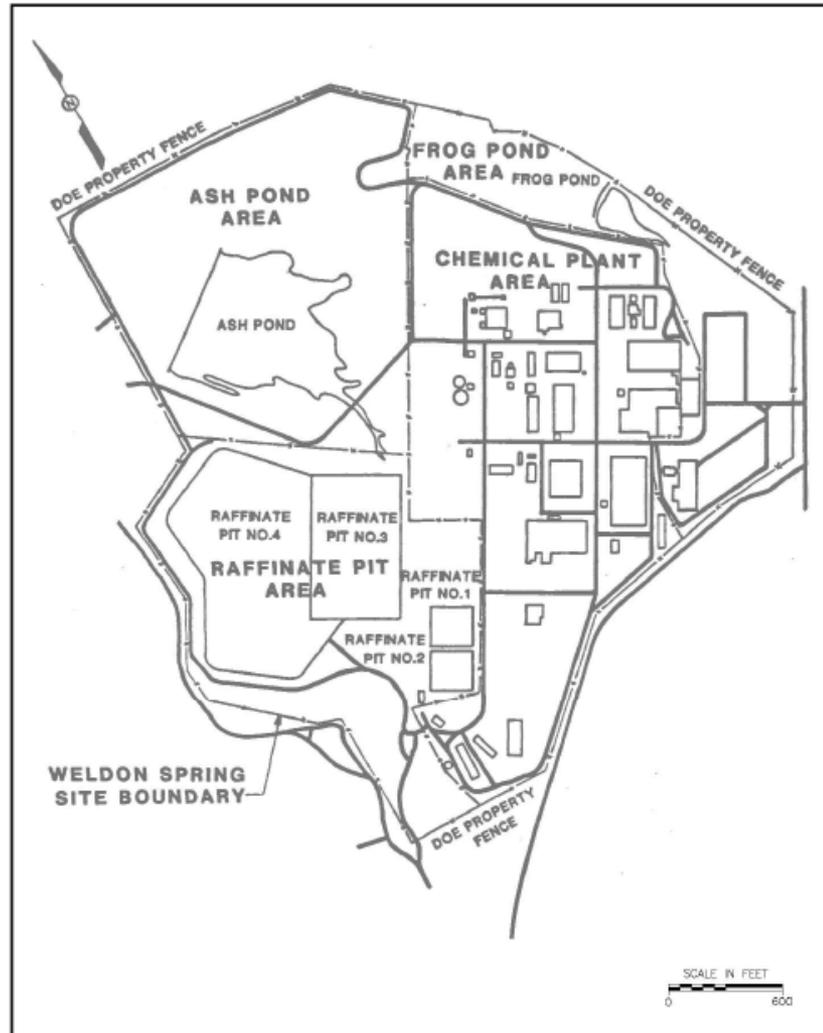
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Brief Review of the Weldon Spring (WS) Site

- 1941-1946 Explosive production for Army
- 1946-1954 Idle
- 1954-1957 Land acquisition & plant development
- June 1957-12/31/1966 Uranium operations
- 12/31/1967 Plant transferred to DOD
- 1967-1969 DOD prepares plant, then terminates
- 1975-1985 Monitoring and Maintenance
- 1985-2002 WSSRAP- D&D of plant, quarry & pits. Material placed in engineered disposal cell.

WS Site During Operations

(ORAUT-TKBS-0028-2, page 9)



Engineered Disposal Cell 2008



Recap of WS Site Profile and SEC Activities

- June 2005: NIOSH issued TKBS-0028-1 through 6
- March 2009: SC&A issued WS site profile review
- Sept 2009: SEC-00143 qualified
- April 2010: NIOSH issued Evaluation Report (ER) for SEC-00143
- 19 Oct 2010: WS 1st WG meeting
- 25 Jan 2011: WS 2nd WG meeting
- 9 May 2011: WS 3rd WG meeting.

Summary of SEC Issues for 1957-1967

1. Accuracy and completeness of internal and external dose data (including air & coworker data).
2. Lack of egress monitoring.
3. Lack of dose records for 1967.
4. No radon/thoron measurements.

SEC issues (continued)

5. Validity of method used to assign recycled uranium intakes.
6. Lack of neutron dose data.
7. Lack of air measurements at quarry and raffinate pits during 1957-1967.
8. Impact of accidents/incidents on dose reconstruction.
9. Geometry and extremity monitoring.

Site Profile Issues

- There were 28 site profile issues identified.
- Most of these site profile issues have been incorporated into the SEC issues, or have been addressed, or are being addressed.

Status of SEC Issues

1. Accuracy and completeness of data:

Accuracy of data:

- Dose reconstructors use only photocopies of the original Weldon Spring data sheets.
- Electronic or CER databases are not used for dose reconstruction (DR).

Completeness of data:

- Not yet verified.
- Presently being addressed.

2. Lack of egress monitoring:

- Sufficient bioassay data to reconstruct dose if ingestion did occur.
- External exposures addressed by monitoring and skin dose calculations.
- Issue has presently been closed.

3. Lack of dose records for 1967:

- Indications are that 1967 may have been a transition year. Operational-period external and internal data sufficient to bound doses incurred during 1967.
- Issue has presently been closed.

4. No radon/thoron measurements:

- NIOSH performed analyses of potential environmental and indoor radon/thoron intakes and issued response on 4/21/2011.
- SC&A presently reviewing NIOSH's response and its SEC implications.

5. Validity of method used to assign recycled uranium intakes:

- Method is presently being addressed to determine if consistent and appropriate intakes are being applied during DR.

6. Lack of neutron dose data:

- There is a lack of neutron dose data at Weldon Spring.
- Fernald neutron dose method can be used as surrogate because of similar materials.
- SC&A/NIOSH presently evaluating Weldon Spring neutron dose assignment method.

7. Lack of air measurements at quarry and raffinate pits during 1957-1967:

- Measures performed in later period are applicable to operational period because quarry and pits not released to DOD and conditions remained fairly constant.
- Issue has presently been closed.

8. Impact of accidents/incidents on dose reconstruction:

- Bioassay data available for workers with accidents in claims reviewed.
- Accidents/incidents are factored into DR process on an individual case basis.
- NIOSH to provide statement concerning claimant favorability from using group bioassay monitoring.

9. Geometry and extremity monitoring:
- NIOSH is currently evaluating methods used at other DOE uranium sites for dosimetry geometry and extremity monitoring and the impact on recorded doses at the Weldon Spring site.

Summary of WS SEC

- WS Working Group, NIOSH, and SC&A have been actively working on SEC (and site profile) issues during the last year.
- Progress has been made for each of the nine SEC issues (and also the site profile issues).
- Several important areas are yet to be evaluated and completed.