

History and Information Used to Process EEOICPA Requests

Grand Junction, Colorado, Site & Uranium Mill Sites

presented by

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Grand Junction Site, Colorado



U.S. DEPARTMENT OF
ENERGY

Legacy
Management

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Grand Junction Site History

- The Grand Junction Site is located in Grand Junction, Colorado about 240 miles west of Denver near the Utah border
- Site established as the Colorado Area Engineer Office in 1943 by the Manhattan Engineer District (MED) to procure uranium for the Manhattan Project



Grand Junction Site History (continued)



- 1943 - 1946: MED built and operated a uranium refinery to concentrate uranium from vanadium mill tailings
- 1947: the Atomic Energy Commission established the domestic uranium procurement program
- 1953 - 1958: Research program known as the Grand Junction Pilot Plant operated to test experimental uranium ore milling techniques



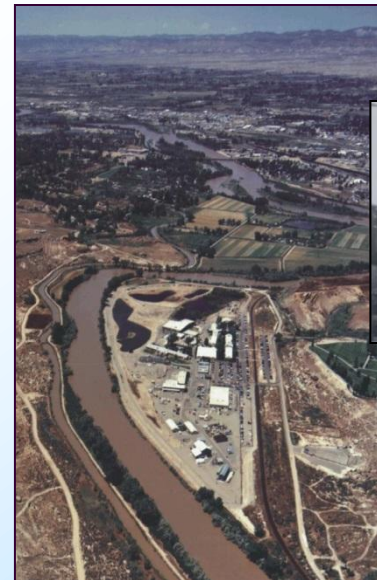
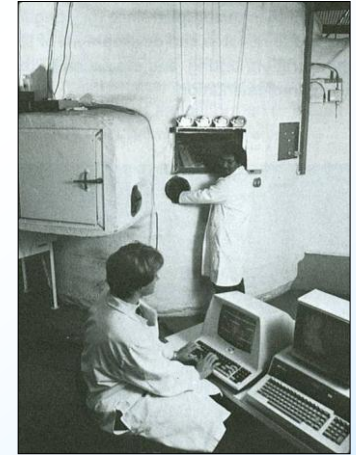
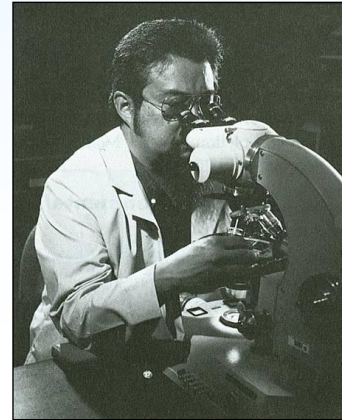
Grand Junction Site History (continued)

- The Grand Junction uranium refinery refined the mill product into uranium oxide known as “yellow cake”
- Uranium oxide was placed in 55-gallon drums and shipped to the eastern U.S. for final processing



Grand Junction Site History (continued)

- 1951: A uranium concentrate sampling plant and an assay laboratory were constructed and operated until 1974
- 1974 – 1984: National Uranium Resource Evaluation Program to assess the nation's uranium resources
- 1986 – 2001: DOE conducted cleanup of radioactive contamination at the Grand Junction Site
- 2001: DOE transferred the majority of site property ownership to the Riverview Technology Corporation, a local nonprofit entity with a small portion of land transferred to the U.S. Army Reserve.



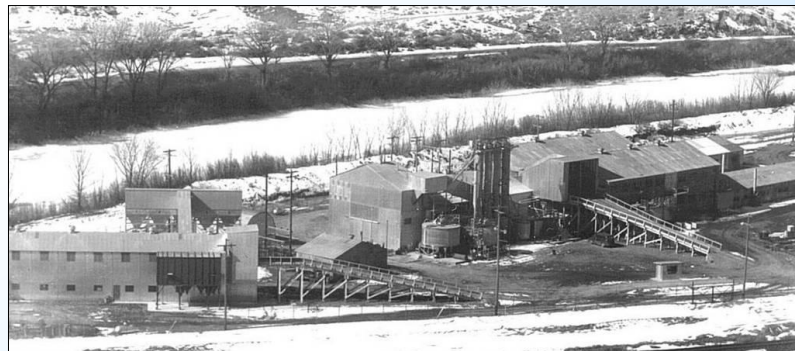
Grand Junction Contractors

- U.S. Vanadium Corporation, 1943–1946
- U.S. Army Manhattan Engineer District (AEC controlled site operations) 1947
- Walker-Lybarger Construction Company, 1948–1956
- Swinerton and Walberg, 1957–1959
- Lucius Pitkin, Inc., 1959–1975
- Bendix Field Engineering Corporation, 1975–1986
- UNC Technical Services, Inc., 1986–1987
- UNC Geotech, Inc., 1987–1990
- Chem-Nuclear Geotech, Inc., 1990–1993
- RUST Geotech, Inc., 1993–1996
- WASTREN, Inc. and MACTEC-ERS, 1996–2002
- S.M. Stoller Corporation, 2002–Present



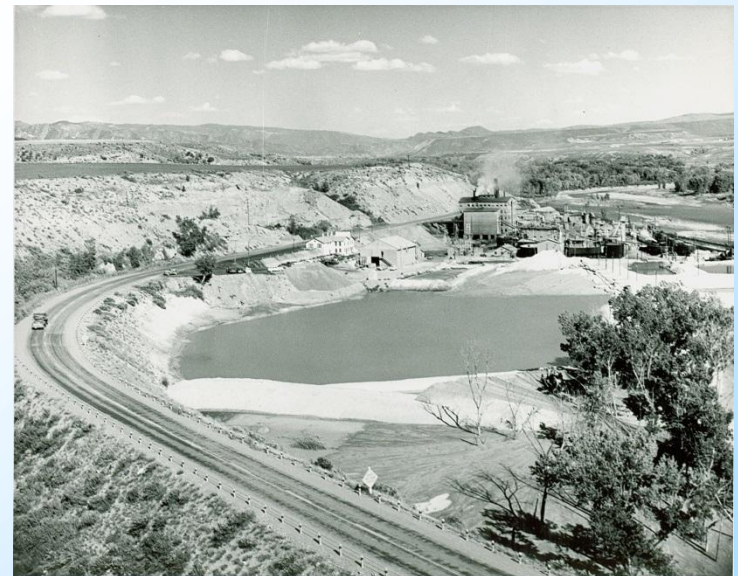
Other Grand Junction Contractors

- Analytical Chemistry Laboratory
 - American Smelting and Refining Company, 1948–1955
 - Lucius Pitkin, Inc., 1956–1965
 - Analytical Chemistry Laboratory continued operations through follow-on contractors until its closure in 2003
- Uranium Concentrate Sampling Plant
 - Ledoux and Company, 1948
 - American Smelting and Refining Company, 1948–1955
 - Lucius Pitkin, Inc., 1956–1971
- Grand Junction Pilot Plant
 - American Cyanamid Company, 1953–1954
 - National Lead Company, Inc., 1954–1958



Site Remediation

- Uranium Mill Tailings Radiation Control Act (UMTRCA)
 - Enacted in 1978
 - Established a uranium mill tailings remediation program
 - Designated 22 inactive uranium ore-processing sites for remediation
- Uranium Mill Tailings: Sandy waste material from uranium milling operations. The ore residue contains radioactive decay products and heavy metals.



Uranium Mill Sites

- Uranium mill sites
 - Arizona
 - Colorado
 - Idaho
 - New Mexico
 - Oregon
 - Pennsylvania
 - Texas
 - Utah
 - Wyoming
- Remediation periods covered for uranium mill sites under EEOICPA
- Operational periods covered for some sites under EEOICPA



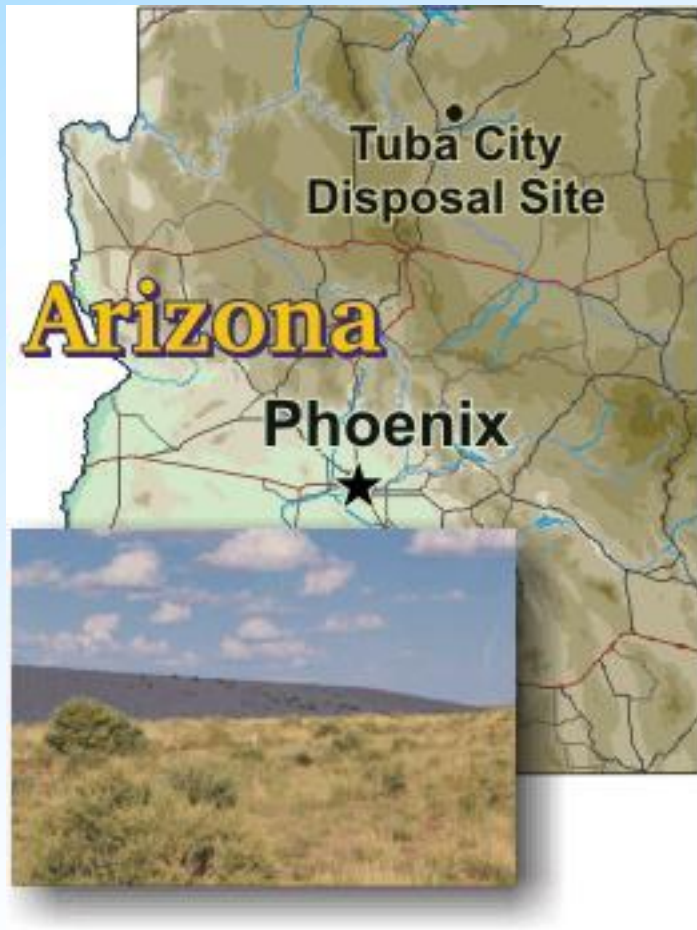
Uranium Mill in Monument Valley, Arizona



- Uranium ore processing mill
- Operated from 1955 - 1968
- Located on the Navajo Nation about 15 miles south of Mexican Hat, Utah
- Milling process produced radioactive mill tailings
- EEOICPA coverage for remediation:
 - May 1989 – February 1990
 - September 1992 – May 1994



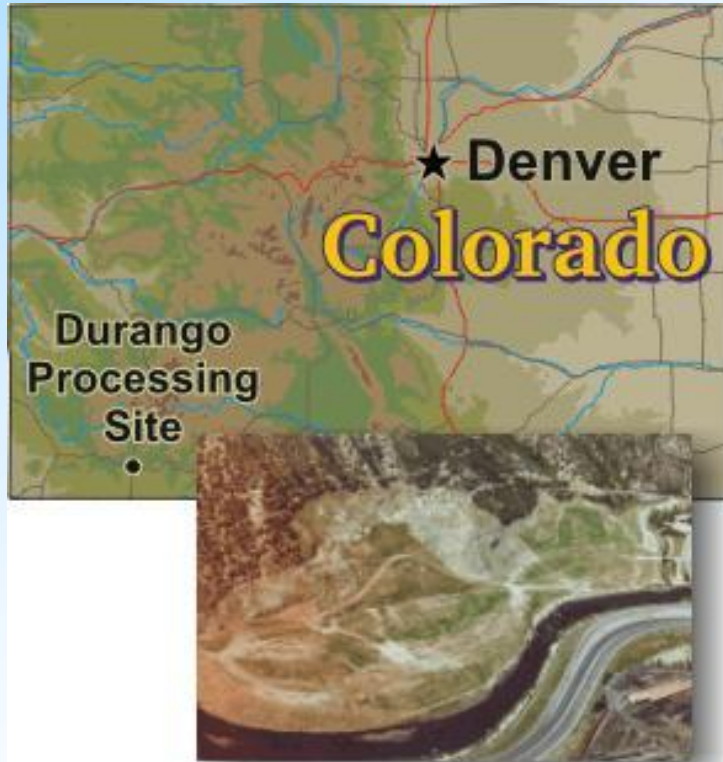
Uranium Mill in Tuba City, Arizona



- Located on the Navajo Nation and close to the Hopi Reservation
- Processed more than 800,000 tons of uranium ore between 1956 - 1966
- Contamination from mill tailings in evaporation ponds affected 33.5 acres with windblown tailings affecting an additional 250 acres
- EEOICPA coverage for remediation:
 - January 1985 – February 1986
 - January 1988 – April 1990



Uranium Mill in Durango, Colorado



- Located ¼ mile from the city of Durango
- Constructed on the site of a former lead smelter that operated from 1880 - 1930
- Vanadium produced from 1942 – 1946
- Uranium ore produced from 1949 – 1963
- EEOICPA coverage for operations:
 - 1948 - 1953
- EEOICPA coverage for remediation:
 - October 1986 – May 1991



Climax Uranium Mill in Grand Junction, Colorado



- Located in the city of Grand Junction
- Originally was a sugar beet mill established in 1899
- Operated as a uranium and vanadium mill from 1950 – 1970
- From 1950 to 1966, mill tailings were available to private citizens and contractors, and used as fill dirt and as a component of concrete and mortar
 - Radioactive mill tailings were hauled to more than 4,000 private and commercial properties in the Grand Junction area, which were later remediated by DOE
- EEOICPA coverage for remediation:
 - December 1988 – August 1994



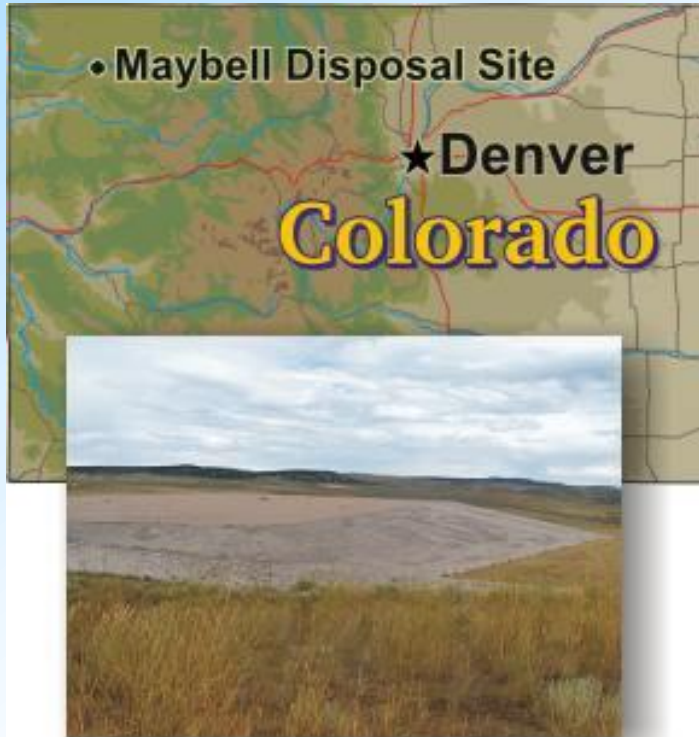
Uranium Mill in Gunnison, Colorado



- Uranium ore processing facility
- Located on 61.5 acres adjacent to Gunnison County Airport, ½ mile southwest of the city of Gunnison, Colorado
- Processed approximately 540,000 tons of uranium ore between 1958 and 1962
- Mill tailings covered approximately 39 acres of the site
- EEOICPA coverage for remediation:
 - September 1991 – December 1995



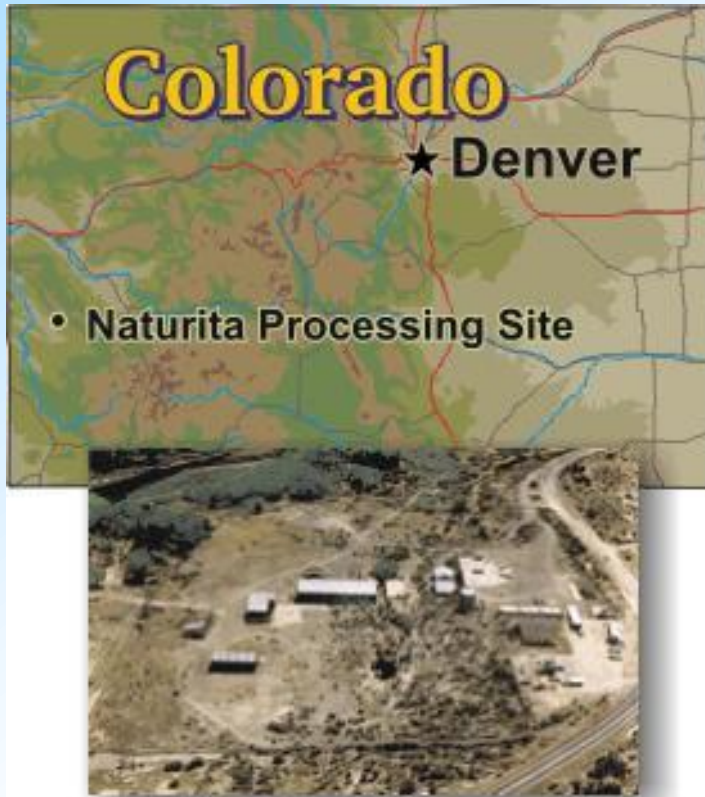
Uranium Mill in Maybell, Colorado



- Located in northwest Colorado about 5 miles from the small town of Maybell
- Processed approximately 2.6 million tons of uranium ore between 1957 and 1964
- EEOICPA coverage for remediation:
 - May 1995 – September 1998



Uranium Mill in Naturita, Colorado



- Uranium and vanadium ore processing facility
- Located on 79 acres in western Colorado about 2 miles from the city of Naturita, Colorado
- Operated intermittently between the 1930's and 1958 processing about 704,000 tons of ore
- Before 1942 only vanadium ore was processed; began processing uranium in 1942
- EEOICPA coverage for remediation:
 - May 1994 – November 1994
 - June 1996 – September 1998



Old Uranium Mill in Rifle, Colorado



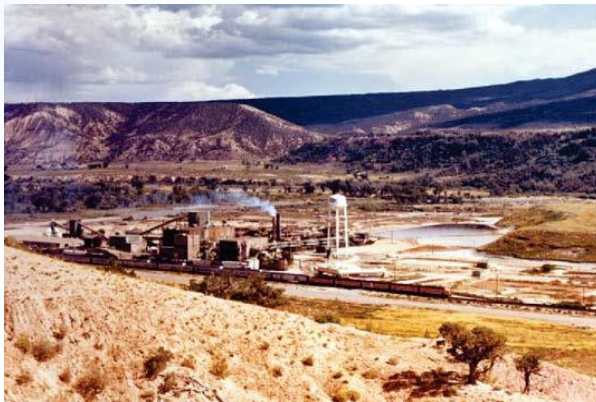
- Uranium and vanadium ore processing facility
- Located less than ½ mile east of the city of Rifle, Colorado
- Processed vanadium ore from 1924 – 1932 and vanadium and uranium ore from 1942 – 1958
- Remediation: 1992 - 1996
- EEOICPA coverage for remediation:
 - September 1988 – September 1989
 - April 1992 – October 1996



New Uranium Mill in Rifle, Colorado



- Uranium and vanadium processing facility
- Located about 2 miles southwest of Rifle, Colorado
- Replaced old Rifle mill in 1958
- Produced uranium and vanadium concentrates from 1958-1973
- EEOICPA coverage for remediation:
 - September 1988 – September 1989
 - April 1992 – October 1996



Uranium Mill No. 1 in Slick Rock (East), Colorado



- Located in remote area of southwest Colorado, about 22 miles from the town of Dove Creek
- Constructed in 1931, designed to extract radium salts and vanadium from locally mined ores
- Uranium ore processed from 1945 to early 1960's
- EEOICPA coverage for remediation:
 - 1995 - 1996



Uranium Mill No. 2 in Slick Rock (West), Colorado



- Located in remote area of southwest Colorado, about 22 miles from the town of Dove Creek (about 1 mile from Slick Rock East)
- Operated from 1957 - 1961
- Processed uranium and vanadium ore
- EEOICPA coverage for remediation:
 - 1995 - 1996



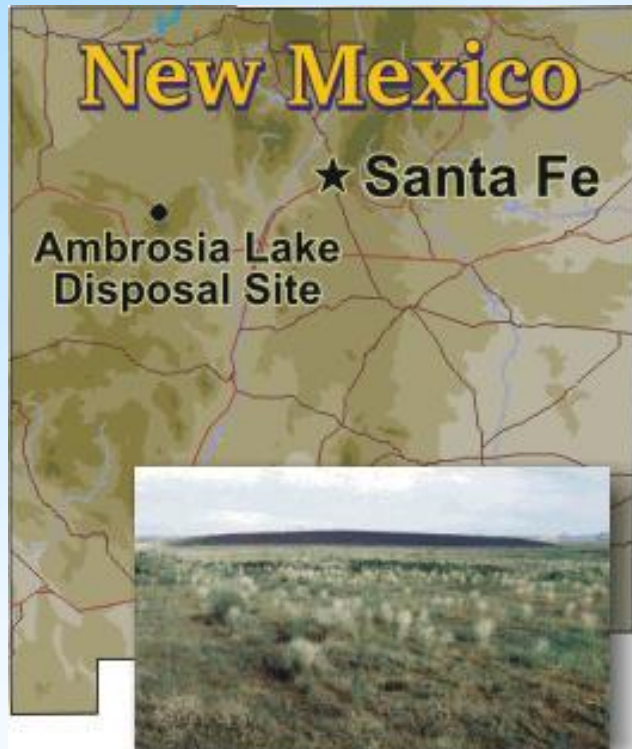
Uranium Mill in Lowman, Idaho



- Located approximately 73 miles from Boise and ½ mile from the town of Lowman
- Site of former mechanical concentrator for sands containing rare-earth elements, uranium, and thorium
- Operated from 1955 - 1960
- EEOICPA coverage for remediation:
 - 1992
 - 1994 - Present



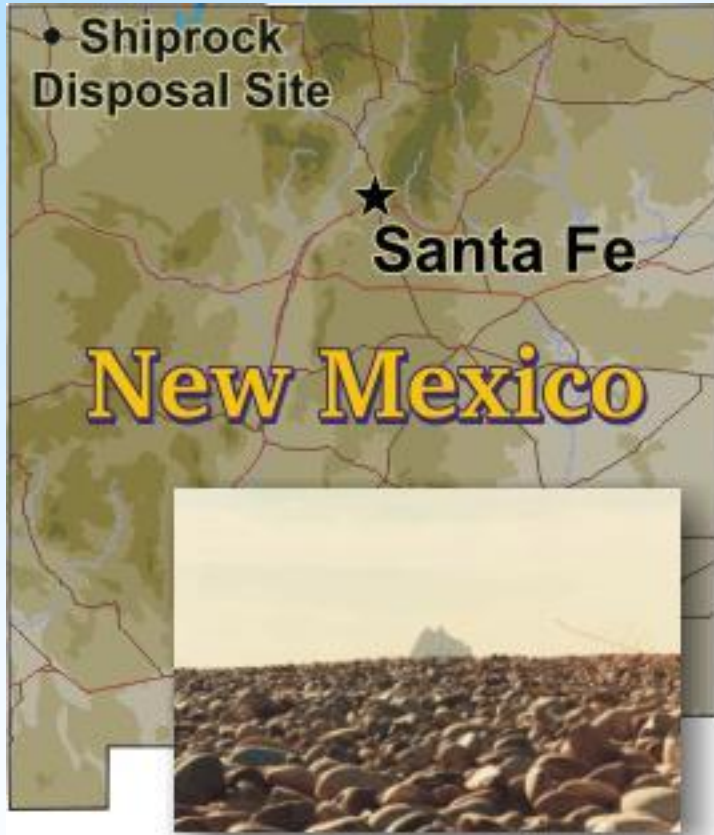
Uranium Mill at Ambrosia Lake, New Mexico



- Uranium ore processing facility
- Located in Ambrosia Lake Valley about 25 miles north of Grants, New Mexico
- Former mill processed more than 3 million tons of uranium ore between 1958 and 1963
- Late 1970's to early 1980's operated an ion exchange system (extracting uranium from mine water)
- Mill operations ceased in 1982 leaving radioactive mill tailings on approximately 111 acres
- EEOICPA coverage for remediation:
 - July 1987-April 1989
 - October 1992-July 1995



Uranium Mill in Shiprock, New Mexico



- Located in northwest New Mexico on the Navajo Nation near the town of Shiprock
- Uranium and vanadium ore processing facility
- Operated from 1954 – 1968
- EEOICPA coverage for remediation:
 - October 1984 – November 1986



VCA Mill, Shiprock, New Mexico — July 1965



Uranium Mill and Disposal Cell in Lakeview, Oregon



- Located approximately 1.5 miles from the town of Lakeview and 16 miles north of the California-Oregon border
- Uranium ore processed at the site from 1958 – 1961
- EEOICPA coverage for remediation:
 - 1986 - 1989



Vitro Manufacturing in Canonsburg, Pennsylvania



- Located in southwestern Pennsylvania about 20 miles from downtown Pittsburgh
- Processed uranium and other ores from 1911 - 1957
- EEOICPA coverage for operations:
 - Beryllium Vendor - 1948
 - AWE Employer – 1942 – 1959 with residual radiation coverage for 1958 - 1985
- EEOICPA coverage for remediation:
 - 1983 – 1985
 - 1996



Uranium Mill in Falls City, Texas



- Located approximately 40 miles east of San Antonio and 8 miles from Falls City
- Uranium ore processing facility
 - Uranium extraction from sandstone ore
 - Uranium extraction from mill tailings
- EEOICPA coverage for remediation:
 - January 1992 – June 1994



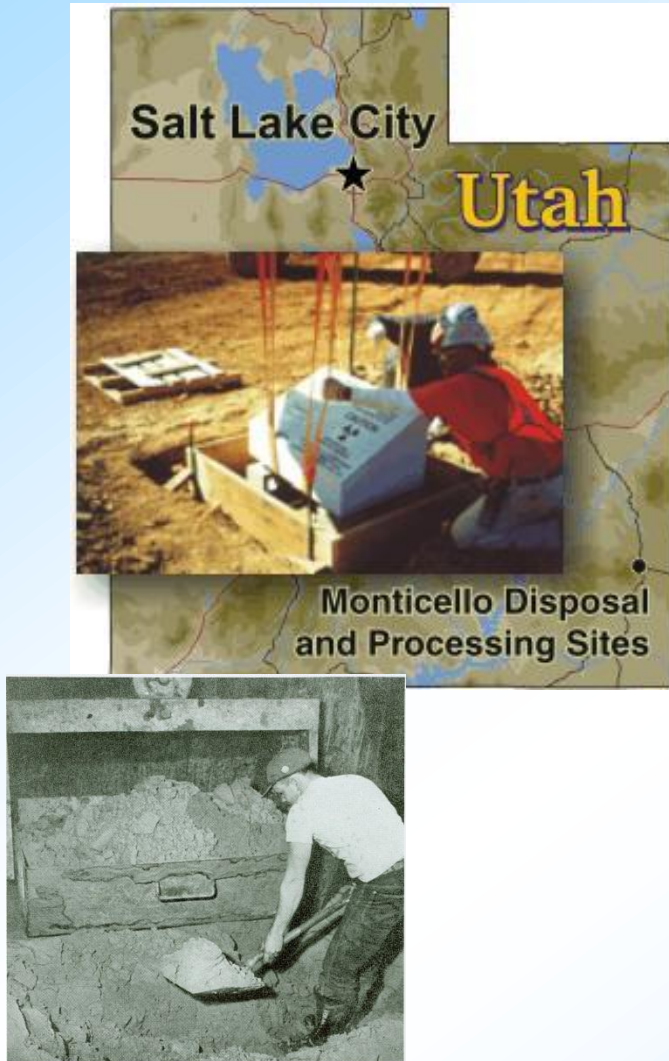
Uranium Mill in Mexican Hat, Utah



- Located in southeast Utah on the Navajo Nation, 1.5 miles from the town of Mexican Hat and about 10 miles north of the Utah-Arizona border
- Uranium ore processing mill operated from 1957 – 1965
- Much of the ore brought to the mill also contained copper which was processed for recovery
- EEOICPA coverage for remediation:
 - July 1987 – October 1987
 - September 1992 – February 1995



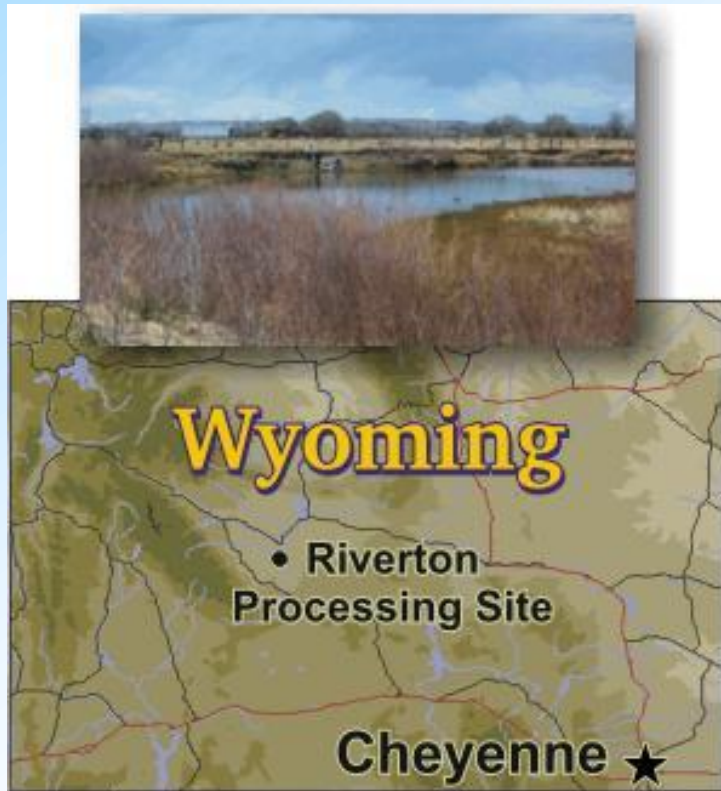
Uranium Mill in Monticello, Utah



- Located in southeastern Utah in the city of Monticello
- Constructed in 1942 to produce uranium and vanadium; built at the site of a former uranium and vanadium ore buying station
- Operated until 1960 and produced 900,000 tons of ore
- EEOICPA coverage for operations:
 - 1948 - 1960
- EEOICPA coverage for remediation:
 - 1983 – 2000



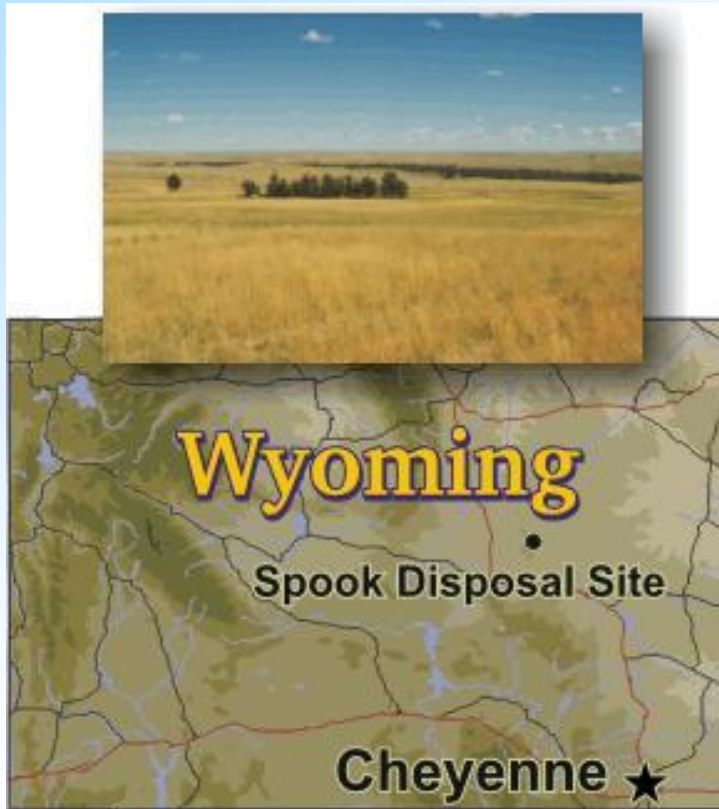
Uranium Mill in Riverton, Wyoming



- Located 2 miles from the town of Riverton and within the boundaries of the Wind River Indian Reservation (Northern Arapahoe and Eastern Shoshone Tribes)
- Uranium and vanadium ore processing mill operated from 1958 – 1963
- EEOICPA coverage for remediation:
 - May 1988 – September 1990



Uranium Mill in Converse County, Wyoming (Spook Site)



- Uranium and vanadium processing facility
- Located on 19 acres about 32 miles north of Glenrock, surrounded by large, privately owned sheep and cattle ranches
- Operated from 1958 – 1963
- EEOICPA coverage for remediation:
 - April 1989 - September 1989



Programs for Former Uranium Workers

- Energy Employees Occupational Illness Compensation Program Act (EEOICPA)
 - Administered by the Department of Labor
 - Covers employees at the Grand Junction Facilities
 - August 1943 – October 2001
 - Special Exposure Cohort: Grand Junction Operations Office
March 23, 1943 through January 31, 1975
 - Remediation: November 2001 – Present
 - Covers employees at Uranium Mill Sites
 - During remediation periods
 - Operational periods for Uranium Mills in Durango, Colorado, and Monticello, Utah also covered under EEOICPA

Programs for Former Uranium Workers (cont'd)

■ Radiation Exposure Compensation Act (RECA)

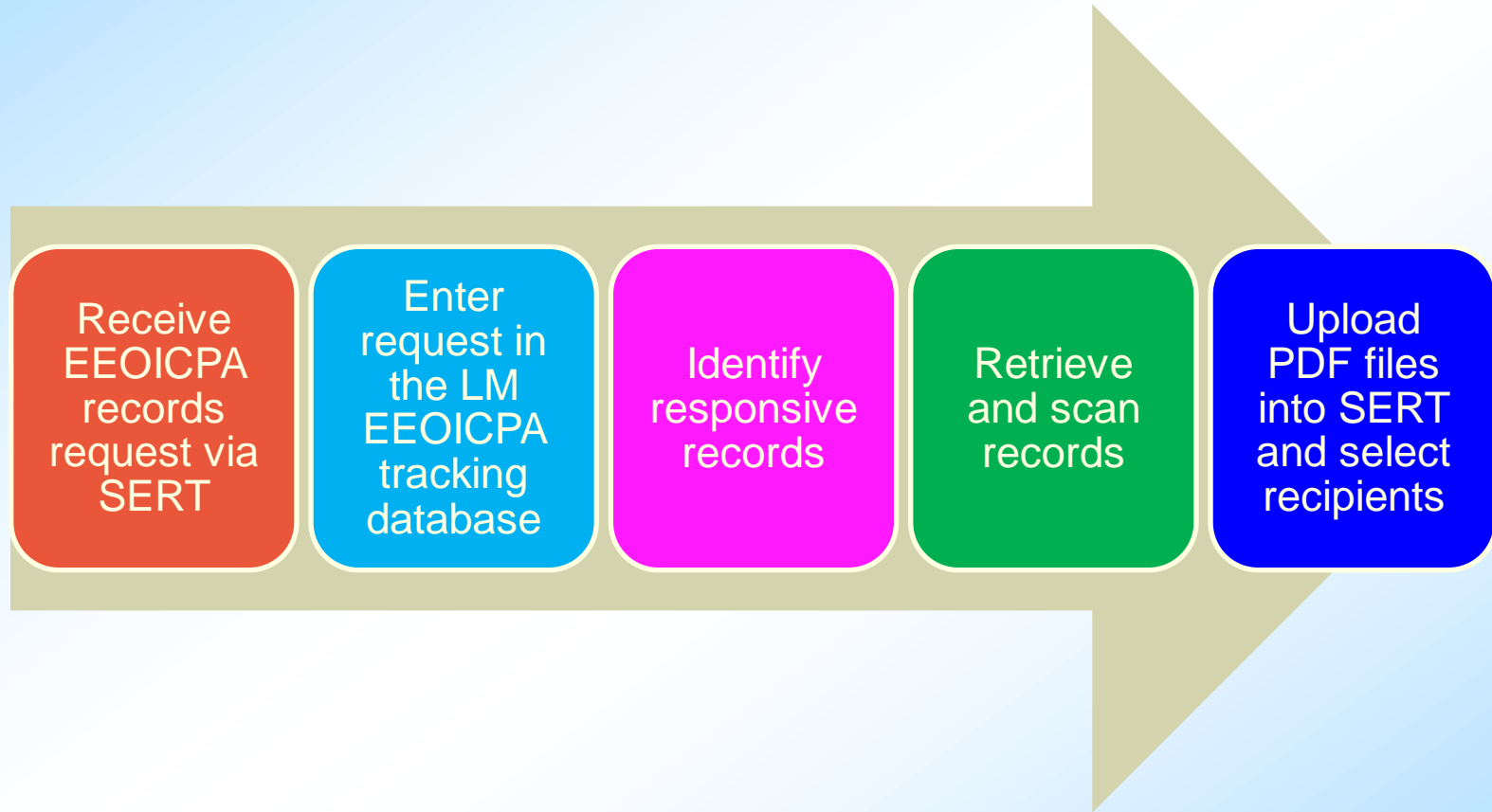
- Administered by the Department of Justice
- Eligibility
 - Uranium miners, millers, and ore transporters
 - Onsite participants at atmospheric nuclear weapons tests
 - “Downwinders” of the Nevada Test Site
- The Radiation Screening and Educational Program (RESEP)
 - Medical screenings, referrals, radiogenic cancer and disease education
 - Assistance with medical documentation for RECA program



■ RECA coverage for LM sites:

- Former employees that worked in the Grand Junction Site uranium production areas
- Milling operations at facilities that operated from 1942 through 1971

EEOICPA Claims Processing

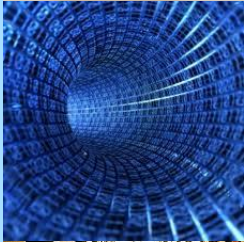


Information Sent on Parts B & E

- Part B (DOL Employment Verification)
 - Employment dates if available
 - Training, medical, radiological, Industrial Hygiene (IH), and employment records as needed
- Part B (NIOSH)
 - Radiological, monitoring reports, X-ray results, and dose
- Part E (DARs)
 - Specific records per DOL requests (e.g., personnel, IH, medical, payroll, monitoring, radiological, and dose)



Records Searches



- LM's electronic recordkeeping system provides retrieval of personnel, medical, training, and radiological files; security badge history; industrial hygiene records; radiological information; training records; and limited job history. The records are in electronic and paper form with hard copy records residing at the LMBC.
- DOSE records – Retrieved from the Idaho National Laboratory
- Records for the uranium mines, mills, and ore-buying stations are limited
 - Older records were not kept for long-term retention
 - Contractors and subcontractors retained employee records



Process Improvements

- Finding aids housed in the LM electronic recordkeeping system provide a single, consolidated search tool to locate responsive documents
- Centralized tracking system used to manage the processing of inherited and new EEOICPA claims



EEOICPA Contacts

Grand Junction Site and Uranium Mills

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www.lm.doe.gov

