

Energy Employees Occupational Illness Compensation Program
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Facility List

There were 382 records found for all records in the list.

1 - A.O. Smith Corporation

State: Wisconsin **Location:** Milwaukee
Time Period: 1948-1950
Facility Type: Beryllium Vendor

Facility Description: A.O. Smith studied methods for protecting beryllium carbide-matrix bodies for the Nuclear Energy for the Propulsion of Aircraft (NEPA) project.

2 - AC Spark Plug

Also Known As: AC Spark Plug
State: Michigan **Location:** Flint
Time Period: AWE/BE 1946-1947; Residual Radiation 1948-March 1, 2011

Facility Type: Atomic Weapons Employer Beryllium Vendor

Facility Description: AC Spark Plug performed beryllium work for the AEC. Records indicate that approximately 10 men worked with beryllium at this location in 1947. Information about AC Spark Plug is found in health hazard surveys, shipping reports and in a MED history. The company continued to receive hundreds of pounds of beryllium for use under government contract into the 1960's. It is possible that some or all of this beryllium was being used for other, non-AEC projects.

There was also a small amount of thorium procurement related to AC Spark

Plug in the 1946-1947 timeframe.

During the period of residual contamination, as designated by the National Institute for Occupational Safety and Health and as noted in the dates above, employees of subsequent owners and operators of this facility are also covered under the Energy Employees Occupational Illness Compensation Program Act.

3 - Accurate Machine & Tool

Also Known As: Accurate Machine & Tool

State: New Mexico **Location:** Albuquerque

Time Period: 1987-2002

Facility Type: Beryllium Vendor

Facility Description: Accurate Machine & Tool provides machine shop services to Sandia National Laboratory, California. This work has included the use of beryllium-copper materials.

4 - Adrian Facility

Also Known As: Bridgeport Brass Co.

Also Known As: General Motors, Chevrolet Mfg. Div.

Also Known As: National Distillers and Chemical Corp.

Also Known As: Martin

Also Known As: A.C. Spark Plug

State: Michigan **Location:** Adrian

Time Period: DOE May 25, 1954-1962; DOE (remediation) 1995

Facility Type: Department of Energy

Facility Description: Starting on May 25, 1954, the Bridgeport Brass Company had a contract with the Atomic Energy Commission (AEC) to operate the extrusion plant designated here as the Adrian Facility, which was located at 1450 E. Beecher Street in Adrian, Michigan. Bridgeport Brass operated a special metals extrusion press and produced uranium fuel elements for the Hanford and Savannah River Plant reactors and developmental extrusion work on thorium and depleted natural and slightly enriched uranium at the Adrian Facility.

After termination of AEC activities in 1961, most of this plant's functions were transferred to Reactive Metals, Inc. (RMI) in Astabula, Ohio.

Bridgeport shipped one large extrusion press to RMI and all other equipment was dismantled and scrapped. Decontamination and closeout work was accomplished in 1962, after the presses had been removed to Ohio.

Although this site was designated as part of the Formerly Utilized Site Remediation Action Program (FUSRAP) in 1985, the only year in which remediation work took place, by or on behalf of the DOE, was 1995. The 1995 work was performed under the Bechtel National Inc. umbrella contract for DOE site environmental remediation.

5 - Aeroprojects, Inc.

Also Known As: Sonabond Ultrasonics

Also Known As: Sonobond Ultrasonics

State: Pennsylvania **Location:** West Chester

Time Period: AWE 1951-1973; Residual Radiation 1974-1976

Facility Type: Atomic Weapons Employer Beryllium Vendor

Facility Description: Beginning in 1951, Aeroprojects Inc. performed research and development for the AEC. The company's work included investigation of the use of ultrasonic energy in the areas of instrumentation, welding, filling of tubes with powders, extrusion, solidification and cleaning. Materials used by the company include alloys and compounds of aluminum, beryllium, mercury, thorium and uranium.

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6 - Ajax Magnethermic Corp.

State: Ohio **Location:** Youngstown

Time Period: 1958-1962

Facility Type: Atomic Weapons Employer

Facility Description: The Ajax-Magnethermic Corp. was involved in induction heat treatment of various forms of uranium for National Lead Company of Ohio (Fernald) and also for General Electric (Hanford). The

company fabricated an induction heating unit for NLO in 1961.

7 - Alba Craft

Also Known As: Alba Craft Shop

Also Known As: Alba Craft Laboratories

Also Known As: Albaugh

State: Ohio **Location:** Oxford

Time Period: AWE 1952-1957; Residual Radiation 1958-1993; DOE 1994-1995 (remediation)

Facility Type: Atomic Weapons Employer Department of Energy

Facility Description: From 1952 to 1957, Alba Craft provided a variety of machine shop services on natural uranium metal for National Lead Company of Ohio (Fernald). Early work at Alba Craft included general and developmental machining of threaded reactor fuel slugs for use at the Savannah River Site. Subsequent production-scale operations consisted of hollow drilling and turning of slugs for the Savannah River and Hanford plutonium-production reactors.

Remediation activities under the Formerly Utilized Site Remediation Action Program (FUSRAP) occurred in 1994-1995 under the Bechtel National Inc.(BNI) umbrella site remediation contract. Remediation was certified complete in 1997.

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8 - Albany Research Center

Also Known As: ARC

Also Known As: U.S. Bureau of Mines

Also Known As: Albany Metallurgical Research Center

Also Known As: National Energy Technology Laboratory (NETL) - Albany

State: Oregon **Location:** Albany

Time Period: DOE 1987-1993 (remediation) & 1995-present

Facility Type: Department of Energy

Facility Description:

The [Albany Research Center](#) became part of the Department of Energy in 1995. In 2004 residual beryllium contamination associated with historic beryllium use at Albany Research Center was identified. The precise origins and dates of beryllium operations have not been determined, though it certainly was already present in 1987.

9 - Albuquerque Operations Office

State: New Mexico **Location:** Albuquerque

Time Period: 1942-present

Facility Type: Department of Energy

Facility Description: The [Albuquerque Operations Office](#) is the major defense program field organization in the Department of Energy. Although its roots can be traced to the Manhattan Engineer District's efforts to provide the nation with a nuclear weapons capability, the Albuquerque Operations Office did not officially come into existence as a civilian organization until the establishment of the Atomic Energy Commission in 1946. Originating during the war years as the Los Alamos "Z" division - the engineering branch of the project. After the establishment of the AEC, it was called the Santa Fe Operations Office. The Office moved to Albuquerque in 1951 and in 1956, became the Albuquerque Operations Office. Today, in managing a national program, Albuquerque's primary mission continues to be stewardship and maintenance of the nation's nuclear weapons stockpile.

10 - Aliquippa Forge

Also Known As: Vulcan Crucible Steel Co.

Also Known As: Universal Cyclops, Inc.

State: Pennsylvania **Location:** Aliquippa

Time Period: AWE 1947-1950; Residual Radiation 1951-1987; 1989-1992; DOE 1988; 1993-1994 (remediation)

Facility Type: Atomic Weapons Employer Department of Energy

Facility Description: In the late 1940s, Aliquippa Forge (previously Vulcan Crucible) was a supplier of rolled uranium rods used in Hanford's reactors. The AEC operated a rolling mill, two furnaces and cutting and extrusion

equipment at Vulcan. Work at the site ended in 1950.

This site was designated as part of the Formerly Utilized Site Remediation Action Program (FUSRAP) in 1983 and remediation work took place in 1988 and again in 1993-1994. This work was performed under the Bechtel National Inc. umbrella contract for DOE site environmental remediation.

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11 - Allegheny-Ludlum Steel

State: New York **Location:** Watervliet
Time Period: 1950-1952
Facility Type: Atomic Weapons Employer

Facility Description: Allegheny-Ludlum Steel rolled uranium billets into rods for the AEC as part of the multi-site process overseen by the New York Operations Office for the production of uranium metal for fabrication into slugs for fueling the Hanford production reactors.

12 - Allied Chemical and Dye Corp.

Also Known As: General Chemical Div., Allied Chemical and Dye Corp.
Also Known As: Allied Chemical Corp.
Also Known As: Union Texas Petroleum Div.
State: Delaware **Location:** North Claymont
Time Period: AWE early 1950s-late 1960s; Residual Radiation late 1960s-1977
Facility Type: Atomic Weapons Employer

Facility Description: Allied Chemical and Dye Company was involved in research and development and small pilot-scale operations on uranium recovery from a phosphoric acid plant. Former AEC employees estimated that, at most, only a few pounds of uranium concentrate were produced.

During the period of residual contamination, as designated by the National Institute for Occupational Safety and Health and as noted in the dates above,

employees of subsequent owners and operators of this facility are also covered under the Energy Employees Occupational Illness Compensation Program Act.

13 - Allied Chemical Corp. Plant

Also Known As: General Chemical Division

Also Known As: Allied Signal Metropolis Plant

Also Known As: Honeywell Metropolis Works Plant

State: Illinois **Location:** Metropolis

Time Period: AWE 1959-1976; Residual Radiation 1977-March 1, 2011

Facility Type: Atomic Weapons Employer

Facility Description: After World War II, many companies working for the United States Government produced UF6 feed for uranium enrichment and diffusion plants. The Allied Plant in Metropolis, IL was completed and initial deliveries began sometime in 1959. In 1962, several feed plants were shut down and the privately-owned Allied Chemical Company Plant in Metropolis, IL, took over the conversion of U3O8 to UF6. This plant produced approximately five thousand tons of uranium hexafluoride feed for the Paducah Gaseous Diffusion Plant per year. It was shut down in 1964. Though it later reopened, it is not clear that any material after this date was used in the Atomic Weapons Production Process.

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14 - Allis-Chalmers Co.

Also Known As: Hawley Plant

State: Wisconsin **Location:** West Allis, Milwaukee

Time Period: 1943-1944

Facility Type: Atomic Weapons Employer

Facility Description: Allis-Chalmers made vacuum pumps for the Y-12 plant effort. The company also wound magnetic coils for the "calutrons" used in the Y-12 plant to produce highly enriched uranium. In late 1943

General Groves ordered some partially-used coils be sent back to Allis-Chalmers for cleaning. This cleaning effort is how some uranium would have found its way back to Wisconsin.

Allis-Chalmers was also involved in the construction of the K-25 Plant. It provided compressors designed to handle uranium hexafluoride..

15 - Aluminum Co. of America (Alcoa) (New Jersey)

State: New Jersey **Location:** Garwood

Time Period: 1944

Facility Type: Atomic Weapons Employer

Facility Description: Under subcontract to the Metallurgical Laboratory (University of Chicago), the Garwood facility manufactured casting dies and used them to cast uranium slugs. This work was conducted intermittently between July and November of 1944.

16 - Aluminum Co. of America (Alcoa) (Pennsylvania)

Also Known As: Aluminum Research Laboratories

Also Known As: New Kensington Works (of ALCOA) on Pine and 9th Sts

State: Pennsylvania **Location:** New Kensington

Time Period: AWE 1943-1945; Residual Radiation 1946-1991

Facility Type: Atomic Weapons Employer

Facility Description: The Aluminum Company of America (Alcoa) site in New Kensington, Pennsylvania was one of 14 facilities in the early 1940s that produced nuclear fuel for the X-10 pilot plant reactor in Oak Ridge, Tennessee and the production reactors at Hanford, Washington. Alcoa used a unique welding process to "can" and seal uranium slugs produced by these other facilities.

During the period of residual contamination, as designated by the National Institute for Occupational Safety and Health and as noted in the dates above, employees of subsequent owners and operators of this facility are also covered under the Energy Employees Occupational Illness Compensation Program Act.

17 - Amchitka Island Nuclear Explosion Site

Also Known As: Amchitka Island Test Center

Also Known As: Amchitka Island Test Site

State: Alaska **Location:** Amchitka Island

Time Period: 1965 - September 1973; May 25, 2001 - October 13, 2001 (remediation)

Facility Type: Department of Energy

Facility Description: Amchitka Island was used as a test site for three underground nuclear detonations.

For the Long Shot detonation, drilling began in May 1964. The shot was fired on October 29, 1965, and the operation ended in November 1965.

For the Milrow detonation, drilling began March 9, 1967. The shot was fired on October 2, 1969. No drillback operations took place and the operation ended in November 1969.

For the Cannikin detonation, drilling began August 1967. The shot was fired on November 6, 1971. Drillback operations began November 1971 and were completed with the demobilization of drilling equipment on February 23, 1972.

The Atomic Energy Commission continued site demobilization in 1973, and the site was returned to the Department of the Interior in September 1973.

18 - AMCOT

State: Texas **Location:** Forth Worth

Time Period: AWE 1961-1962; Residual Radiation 1963

Facility Type: Atomic Weapons Employer

Facility Description: The American Manufacturing Company of Texas (AMCOT) conducted specialized tube elongation and billet piercing tests on uranium metal for National Lead Company of Ohio (Fernald). The tube elongation tests were conducted from July to September 1961 and involved approximately 7 tons of uranium. The billet piercing tests were conducted from June to September 1962 and involved approximately 23 tons of uranium. Both NLO and AMCOT employees participated in the tests.

During the period of residual contamination, as designated by the National Institute for Occupational Safety and Health and as noted in the dates above,

employees of subsequent owners and operators of this facility are also covered under the Energy Employees Occupational Illness Compensation Program Act.

19 - American Bearing Corp.

State: Indiana **Location:** Indianapolis

Time Period: AWE 1954-1959; Residual Radiation 1960-1983

Facility Type: Atomic Weapons Employer

Facility Description: In 1954, American Bearing Corp. was selected to participate in the machining of a sample lot of four hollow extrusion uranium billets from ingots for National Lead of Ohio (Fernald). Subsequently, National Lead used the Special Products Area of American Bearing to process uranium materials in the late 1950s. In May 1959, National Lead Industries (NLI), Nuclear Division was formed in Albany (Colonie), NY, and this work was moved to this NLI facility.

During the period of residual contamination, as designated by the National Institute for Occupational Safety and Health and as noted in the dates above, employees of subsequent owners and operators of this facility are also covered under the Energy Employees Occupational Illness Compensation Program Act.

20 - American Beryllium Co.

State: Florida **Location:** Sarasota

Time Period: 1967-1992

Facility Type: Beryllium Vendor

Facility Description: American Beryllium Company machined parts for Y-12 and Rocky Flats. Generally, the beryllium for these parts was supplied by Kawecki Berylco Industries, Inc.

21 - American Chain and Cable Co.

State: Connecticut **Location:** Bridgeport

Time Period: 1944

Facility Type: Atomic Weapons Employer

Facility Description: American Chain and Cable worked under contract to the Du Pont Company to support the manufacture of uranium slugs during the Manhattan Project. In 1944, the company swaged (reduced the diameter) of uranium rods at its Bridgeport facility.

22 - American Machine and Foundry

Also Known As: AMF

Also Known As: Lutheran Medical Center

Also Known As: Bus Terminal

State: New York **Location:** Brooklyn

Time Period: AWE 1951-1954; Residual Radiation 1955-1992

Facility Type: Atomic Weapons Employer

Facility Description: During the early 1950s, this location designed and produced industrial equipment for the Atomic Energy Commission. American Machine Foundry also performed a large volume of uranium, thorium and possibly zirconium metal machining work from 1951-1954.

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23 - American Machine and Metals, Inc.

Also Known As: Vapofier Corp.

State: Illinois **Location:** E. Moline

Time Period: 1960

Facility Type: Atomic Weapons Employer

Facility Description: In 1960, American Machine and Metals demonstrated a process for National Lead of Ohio (Fernald) that involved dehydration of green salt using a centrifuge process.

24 - American Peddinghaus Corp.

State: New Jersey **Location:** Moonachie
Time Period: April 3, 1978
Facility Type: Atomic Weapons Employer

Facility Description: The facility conducted a one-day shear (cutting) test on uranium metal for National Lead of Ohio (Fernald) in 1978.

25 - American Potash & Chemical

Also Known As: National Fireworks Ordnance Corp
Also Known As: National Northern Div.
State: Massachusetts **Location:** West Hanover
Time Period: 1959 -1961
Facility Type: Atomic Weapons Employer

Facility Description: American Potash and Chemical Company conducted uranium metal shaping and uranium-magnesium explosive forming studies for Union Carbide Nuclear Corporation, Oak Ridge. The tests done up to May 1961 were performed with 430 stainless steel and uranium metal pieces. Work was also done with green and sintered uranium based powders. The powders were formed in a die into discs approximately 4 1/2 inches in diameter and 1 inch thick.

26 - Ames Laboratory

Also Known As: Iowa State University
State: Iowa **Location:** Ames
Time Period: 1942-present
Facility Type: Department of Energy

Facility Description: [Ames Laboratory](#) is located on the Iowa State University Campus in Ames, Iowa. During the Manhattan Project, researchers at Iowa State perfected a magnesium reduction process, producing pure uranium metal that quickly became the industry standard. Iowa State was one of the first organizations to supply metallic uranium used as fuel for the first self-sustaining chain reaction at the University of Chicago.

In 1947, the AEC formally established the Ames Laboratory and directed it to focus on materials research. Over the years the laboratory broadened its

mission to include fundamental research in the physical, chemical, mathematical, engineering, and environmental sciences as well.

Throughout the course of its operations, the potential for beryllium exposure existed at this site, due to beryllium use, residual contamination, and decontamination activities.

CONTRACTOR: Iowa State University (1942-present)

27 - Anaconda Co.

Also Known As: American Brass Co.

Also Known As: Fabric Metal Goods Plant and West Tube Mill

Also Known As: Anamet, Inc.

Also Known As: Anaconda Co.

State: Connecticut **Location:** Waterbury

Time Period: 1942; 1956-1959

Facility Type: Atomic Weapons Employer

Facility Description: In 1942, the American Brass Company produced the barriers used in the gaseous diffusion process. In the late 1950s, under contract to Nuclear Metals Inc., the company extruded copper-clad uranium billets into tubes at least two separate times for the Savannah River Site. While the original plans called for work on 500 billets, only around 50 were actually processed. The operations involved plating, heating, extruding, sawing, drilling, deburring, cleaning, testing, crating, and shipping. Work was conducted at the West Tube Mill. AEC Health and Safety Laboratory personnel visited the site in 1956 and 1959, and obtained air quality and surface radiation measurements during the later visit.

28 - Area IV of the Santa Susana Field Laboratory

Also Known As: Nuclear Development Field Laboratory (NDFL)

Also Known As: Liquid Metal Engineering Center (LMEC)

Also Known As: Energy Technology Engineering Center (ETC)

State: California **Location:** Santa Susana, Area IV

Time Period: DOE 1955-1988; DOE remediation 1988-present

Facility Type: Department of Energy

Facility Description: The Santa Susana Field Laboratory (SSFL) is located in eastern Ventura County, California, and borders Los Angeles County. The

SSFL is divided into four administrative and operational portions based on ownership and operations. Area IV was devoted to nuclear operations. It is Area IV that is covered under EEOICPA as a DOE facility.

Coverage includes, but is not necessarily limited to the following operations: The Energy Technology Engineering Center (ETEC), the Nuclear Development Field Laboratory (NDFL), and the Liquid Metal Engineering Center (LMEC). This also includes the Sodium Reactor Experiment Facility, the Kinetics Experiment Water Boiler Facility, the Water Boiler Neutron source (which is also known as the AE-6/L-85 Facility), the Organic Moderated Reactor, as well as facilities in Area IV associated with the Systems for Nuclear Auxiliary Power (SNAP) Program; the Sodium Graphite Reactor Critical Facility, the Shield Test Experiment/Shield Test Irradiation Reactor Facility, the Advanced Epithermal Thorium Test Facility, the Hot Lab Facility, the Fuel Storage Facility, the Radioactive Measurement Facility, the Radioactive Material Handling Facility, the Van De Graaff Accelerator Facility and the Radiation Instrument Calibration Laboratory.

Decontamination, decommissioning and demolition of radiological facilities in Area IV has been funded by the DOE beginning in the 1970's, but predominantly since 1988.

Throughout the course of operations in Area IV, the potential for beryllium exposure existed.

Contractors: The Boeing Company (1996-present); Rockwell International (1973-1996); North American Rockwell (1968-1973); North American Aviation (1955-1967).

29 - Argonne National Laboratory--East

State: Illinois **Location:** Argonne

Time Period: 1946-present

Facility Type: Department of Energy

Facility Description: [Argonne](#) is one of the U.S. Department of Energy's largest research centers. It is also the nation's first national laboratory, chartered in 1946. The Laboratory specializes in reactor engineering, reactor physics, chemistry and metallurgy. Early reactor research focused on the production of plutonium from uranium.

Argonne is a direct descendant of the University of Chicago's Metallurgical Laboratory, part of the World War II Manhattan Project to build the atomic bomb before the Nazis did. It was at the Met Lab where, on December 2, 1942, Enrico Fermi and his band of about 50 colleagues created the world's first controlled nuclear chain reaction in a squash court at the University of Chicago.

The premises covered under this listing include all those which are part of the Argonne National Laboratory (ANL) campus in Argonne, Illinois and those in which operations associated with the former Met Lab were performed under contract to the Atomic Energy Commission (AEC) once Met Lab operations were administratively incorporated into ANL.

Throughout the course of its operations, the potential for beryllium exposure existed at this site, due to beryllium use, residual contamination, and decontamination activities.

CONTRACTOR: University of Chicago (1946-Present)

30 - Argonne National Laboratory--West

Also Known As: Argonne National Laboratory--West

Also Known As: Argonne National Laboratory--West

Also Known As: Argonne National Laboratory--West

State: Idaho **Location:** Scoville

Time Period: 1949-2005

Facility Type: Department of Energy

Facility Description: Argonne National Laboratories - West was a part of Argonne National Laboratory, operated by the University of Chicago. ANLW was located on the southeastern portion of the Idaho National Engineering and Environmental Laboratory. On February 1, 2005 the Idaho National Engineering and Environmental Laboratory and Argonne National Laboratory - West became the [Idaho National Laboratory \(INL\)](#).

For nearly 40 years, ANLW led in the development of advanced nuclear reactor technology. Breakthroughs in the type of fuel used in nuclear-generated power, simplified reprocessing, reduction in the life span of nuclear wastes, and design of increasingly safer power plant systems all were developed at the ANLW complex.

Throughout the course of its operations, the potential for beryllium exposure

existed at this site, due to beryllium use, residual contamination, and decontamination activities.

CONTRACTOR: University of Chicago (1949-2005)

31 - Armco-Rustless Iron & Steel

Also Known As: Armco Steel

State: Maryland **Location:** Baltimore

Time Period: 1948

Facility Type: Atomic Weapons Employer

Facility Description: Armco-Rustless Iron and Steel Co. rolled eight billets of uranium for the AEC. It was a one time test of rolling.

32 - Armour Fertilizer Works

Also Known As: U.S. Agri-Chemicals Pilot Facility

Also Known As: U.S. Steel Corp.

State: Florida **Location:** Bartow

Time Period: 1951-1955

Facility Type: Atomic Weapons Employer

Facility Description: Under contract with the AEC, Armour operated a pilot plant which produced uranium from phosphoric acid.

33 - Armour Research Foundation

Also Known As: ARF

Also Known As: Illinois Institute of Technology

Also Known As: IIT

State: Illinois **Location:** Chicago

Time Period: 1957; Residual Radiation 1958 - March 1, 2011

Facility Type: Atomic Weapons Employer

Facility Description: Records indicate that Armour Research Foundation may have tested radioactive materials for National Lead Company of Ohio (Fernald), specifically test quantities of materials other than metal (UF₄ or ThO₂).

34 - Arthur D. Little Co.

Also Known As: Merrill Co.

Also Known As: A.D. Little Co.

State: California **Location:** San Francisco

Time Period: AWE 1948-1956; Residual Radiation 1957-1977

Facility Type: Atomic Weapons Employer

Facility Description: Under contract to the Atomic Energy Commission from 1948-1956, initially as the Merrill Company, A.D. Little researched the separation and recovery of uranium from various ores. Specific work included the recovery of uranium and vanadium from alkaline carbonate leach solutions from domestic ores.

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35 - Ashland Oil

Also Known As: Ashland #1

Also Known As: Ashland #2

Also Known As: Ashland Oil Company

Also Known As: Haist Property

Also Known As: E. Haist and co owners

State: New York **Location:** Tonawanda

Time Period: AWE 1944-1960; 1974-1982; Residual Radiation 1961-1973; 1983-2006

Facility Type: Atomic Weapons Employer

Facility Description: In August 1944, the Manhattan Engineer District purchased the Ashland #1 property, formerly known as the Haist Property, for use as a disposal site for approximately 7,250 metric tons (8,000 tons) of uranium ore tailings and concentrate refining residues generated at the nearby Linde site. When the uranium residues were transported to the Ashland #1 site, they were spread over two-thirds of the property to estimated depths of 0.3 to 1.5 meters (one to five feet). In 1960, the Atomic Energy Commission determined that the levels of residual radioactivity at

Ashland #1 site were below then current criteria and released the land as surplus. The Ashland Oil Company eventually acquired the property. From 1957 to 1982, the Ashland Oil Company used a portion of the Ashland #2 site as a landfill for disposal of general plant refuse and industrial and chemical wastes and materials. Between 1974 and 1982, Ashland Oil transported from the Ashland #1 site an unknown quantity of soil mixed with radioactive residues to the Ashland #2 landfill.

Although the Ashland Oil facility was designated for the Formerly Utilized Site Remediation Action Program (FUSRAP) in 1984, no actual remediation under this program occurred prior to its transfer to the Army Corp.

During the period of residual contamination, as designated by the National Institute for Occupational Safety and Health and as noted in the dates above, employees of subsequent owners and operators of this facility are also covered under the Energy Employees Occupational Illness Compensation Program Act.

36 - Associated Aircraft Tool and Manufacturing Co.

Also Known As: Force Control Industries

Also Known As: Fairfield

Also Known As: Former Dixie Machinery ownership

State: Ohio **Location:** Fairfield

Time Period: AWE 1956; Residual Radiation 1957-1993; DOE 1994 - 1995(remediation)

Facility Type: Atomic Weapons Employer Department of Energy

Facility Description: From February to September 1956, Associate Aircraft Tool and Manufacturing Company machined hollow uranium slugs for the Hanford and Savannah River plutonium-production reactors under a subcontract from National Lead Company of Ohio (Fernald). Associate Aircraft machined approximately 96,000 slugs during the eight-month contract period.

Cleanup activities were performed in 1994-1995 by Thermo Nutech under the Bechtel National Inc. umbrella site remediation contract as part of the Formerly Utilized Site Remediation Action Program (FUSRAP).

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37 - Atomics International

State: California **Location:** Los Angeles and Ventura Counties

Time Period: BE 1955-1966

Facility Type: Beryllium Vendor

Facility Description: The Atomics International Division of North American Aviation is a statutory beryllium vendor under the EEOICPA. Atomics International worked with beryllium and radioactive materials under contract with the Atomic Energy Commission at numerous locations. These locations include, but are not necessarily limited to, Area IV of the Santa Susana Field Laboratory, portions of the Downey facility, the Vanowen Building at the Canoga facility and the De Soto facility.

38 - B & T Metals

State: Ohio **Location:** Columbus

Time Period: AWE 1943; Residual Radiation 1944-1995; DOE 1996 (remediation)

Facility Type: Atomic Weapons Employer Department of Energy

Facility Description: During the early stages of nuclear weapons production, uranium reactor fuel was produced by a variety of metallurgical techniques including extrusion, casting, and machining.

In February 1943, DuPont, acting as an agent of the Manhattan Engineer District, contracted B&T Metals to extrude rods from uranium metal billets for the Hanford reactor in Washington State. B&T Metals extruded an estimated 50 tons of uranium between March 1943 and August 1943.

Environmental cleanup under the Formerly Utilized Site Remediation Program (FUSRAP) was conducted in 1996. This work was performed by employees of SunPro as subcontractors to Bechtel National Inc., the company that held the umbrella contract for DOE site environmental remediation. This site's remedial action was certified complete in 2001.

During the period of residual contamination, as designated by the National Institute for Occupational Safety and Health and as noted in the dates above, employees of subsequent owners and operators of this facility are also

covered under the Energy Employees Occupational Illness Compensation Program Act.

39 - Baker and Company

Also Known As: Englehard Industries

Also Known As: Platinum (or Baker) Div. of Englehard Industries

Also Known As: Baker and Williams Co, Inc.

State: New Jersey **Location:** Newark

Time Period: AWE 1943 -1962; Residual Radiation 1963-1990

Facility Type: Atomic Weapons Employer

Facility Description: Baker and Company processed radioactive platinum as part of the process of making polonium, which was needed for initiators in nuclear weapons. Baker and Co. also processed unirradiated uranium scrap for the AEC to recover enriched uranium for use in the weapons complex.

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40 - Baker and Williams Warehouses

Also Known As: Pier 38

Also Known As: Ralph Ferrara Co Warehouse

Also Known As: Ralph Ferrara Inc.

State: New York **Location:** New York

Time Period: AWE 1942-1949; Residual Radiation 1950-1990; DOE 1991-1993 (remediation)

Facility Type: Atomic Weapons Employer Department of Energy

Facility Description: The Manhattan Engineer District and the Atomic Energy Commission used the Baker & Williams site warehouses for short-term storage of uranium concentrates. This material was generated in Port Hope, Canada by milling African ores.

Environmental cleanup under the Formerly Utilized Site Remediation Action Program was conducted in 1991-1993 by Bechtel National Inc. This site's

remedial action was certified complete in November 1995.

During the period of residual contamination, as designated by the National Institute for Occupational Safety and Health and as noted in the dates above, employees of subsequent owners and operators of this facility are also covered under the Energy Employees Occupational Illness Compensation Program Act.

41 - Baker Brothers

Also Known As: Rems, Inc.

State: Ohio **Location:** Toledo

Time Period: AWE 1943-1944; Residual Radiation 1945-1994, 1996; DOE 1995 (remediation)

Facility Type: Atomic Weapons Employer Department of Energy

Facility Description: Between June 1943 and July 1944, DuPont and the University of Chicago subcontracted the Baker Brothers company to machine roll metal rods into uranium slugs that were used for fuel in the world's first production reactors located in Oak Ridge, TN and Hanford, WA.

Environmental cleanup under the Formerly Utilized Site Remediation Action Program was conducted in 1995. This work was performed under the Bechtel National Inc. umbrella contract for DOE site environmental remediation. This site's remedial action was certified complete in 2001.

During the period of residual contamination, as designated by the National Institute for Occupational Safety and Health and as noted in the dates above, employees of subsequent owners and operators of this facility are also covered under the Energy Employees Occupational Illness Compensation Program Act.

42 - Baker-Perkins Co.

Also Known As: APV Chemical Company

State: Michigan **Location:** Saginaw

Time Period: May 14-18, 1956

Facility Type: Atomic Weapons Employer

Facility Description: On May 14-18 1956, Baker-Perkins performed a test

of their mixing equipment for National Lead Company of Ohio (Fernald). The tests involved mixing uranium trioxide (orange oxide) with water and kneading the mixture with the Baker-Perkins “P” and “K” Ko-Kneader machines

43 - Battelle Laboratories - King Avenue

Also Known As: Battelle Columbus Laboratories (BCL)

Also Known As: Battelle Memorial Institute (BMI)

State: Ohio **Location:** Columbus

Time Period: AWE 1943-1986; BE 1943-1961; DOE 1986-2000 (remediation); Residual Radiation 2001 - March 1, 2011

Facility Type: Atomic Weapons Employer Beryllium Vendor Department of Energy

Facility Description: From 1943 to 1986, Battelle Memorial Institute performed atomic energy research and development as well as beryllium work for the Department of Energy and its predecessor agencies. The Battelle Laboratories have two separate locations in Columbus - King Avenue and West Jefferson. Battelle's research supported the government's fuel and target fabrication program, including fabrication of uranium and fuel elements, reactor development, submarine propulsion, fuel reprocessing, and the safe use of reactor vessels and piping.

The following activities were performed at the King Avenue location: processing and machining enriched, natural, and depleted uranium and thorium; fabricating fuel elements; analyzing radiochemicals; and studying power metallurgy. Beryllium work was conducted from 1943 until at least 1961.

44 - Battelle Laboratories - West Jefferson

Also Known As: Battelle Memorial Institute (BMI)

Also Known As: Battelle Columbus Laboratories (BCL)

Also Known As: West Jefferson Plutonium Facilities

State: Ohio **Location:** Columbus

Time Period: AWE 1956-1975; Residual Radiation 1976-1985; DOE 1986-present (remediation)

Facility Type: Atomic Weapons Employer Department of Energy

Facility Description: From 1943 to 1986, Battelle Memorial Institute

performed atomic energy research and development for the Department of Energy and its predecessor agencies. The Battelle Laboratories have two separate locations in Columbus - King Avenue and West Jefferson. Battelle participated in research on fabrication of uranium and fuel elements, reactor development, submarine propulsion, fuel reprocessing, and the safe use of reactor vessels and piping.

At the West Jefferson location, Battelle operated a large hot cell facility and a research reactor. Reactor operations began in October 1956, and ended in December 1974. The reactor was defueled and partially dismantled in 1975 and Battelle's license was changed to possession-only status.

During the period of residual contamination, as designated by the National Institute for Occupational Safety and Health and as noted in the dates above, employees of subsequent owners and operators of this facility are also covered under the Energy Employees Occupational Illness Compensation Program Act.

45 - Bell Telephone Laboratories

Also Known As: Western Electric

State: New Jersey **Location:** Murray Hill

Time Period: AWE 1943-1944; Residual Radiation 1945-March 1, 2011

Facility Type: Atomic Weapons Employer

Facility Description: This facility handled a quantity of uranium during World War II, probably in support of its work to develop effective barrier materials for the K-25 facility in Oak Ridge. The barrier materials were not radioactive.

During the period of residual contamination, as designated by the National Institute for Occupational Safety and Health and as noted in the dates above, employees of subsequent owners and operators of this facility are also covered under the Energy Employees Occupational Illness Compensation Program Act.

46 - Bendix Aviation (Pioneer Division)

State: Iowa **Location:** Davenport

Time Period: 1960

Facility Type: Atomic Weapons Employer

Facility Description: On three separate occasions, National Lead of Ohio (Fernald) personnel conducted tests to see how well a Bendix sonic energy cleaning system could clean uranium-contaminated 55 gallon drums. At least 18 contaminated drums were test cleaned.

47 - Beryllium Corp. of America (Hazleton)

Also Known As: Berylco

Also Known As: Kawecki-Berylco

Also Known As: Cabot Corporation

Also Known As: Beryllium Corp. of America (Ashmore)

State: Pennsylvania **Location:** Hazleton

Time Period: 1957-1979

Facility Type: Beryllium Vendor

Facility Description: The Manhattan Engineer District and the Atomic Energy Commission (AEC) contracted with the facility for the production of beryllium metal, beryllium oxide, and beryllium powder. The AEC contracted with the facility for the refining and fabrication of beryllium. Later the facility produced beryllium blanks for the Y-12 plant and Dow (Rocky Flats).

48 - Beryllium Corp. of America (Reading)

Also Known As: Kawecki-Berylco

Also Known As: Berylco

Also Known As: NGK Metals Corp.

Also Known As: Cabot Corporation

Also Known As: Beryllium Corp. of America (Tuckerton)

State: Pennsylvania **Location:** Reading

Time Period: 1943 -1979

Facility Type: Beryllium Vendor

Facility Description: In 1947, the Beryllium Corporation plant at Reading produced highly distilled and pure beryllium oxide on a small scale for the AEC. By 1960, the plant focused on alloy and oxide work. In 1961, the plant supplied beryllium parts to the Y-12 plant and produced beryllium powder for the AEC from government inventory beryllium ingots. Although all major Berylco contracts (beyond 1961) and purchase orders reviewed to date show that the final product shipped from Hazelton, it has been clarified that

but for the alloy and oxide work performed in Reading, the contracts and purchase orders fulfilled for the AEC by Hazelton could not have been completed.

49 - Beryllium Metals and Chemical Corp.

Also Known As: BERMET

State: North Carolina **Location:** Bessemer City

Time Period: 1962-1969

Facility Type: Beryllium Vendor

Facility Description: Purchase orders from Y-12 indicate that Beryllium Metals and Chemical Corp. (BERMET) did some beryllium work for Y-12, beginning in 1963 and continuing at least through 1965. Beyond that, records indicate BERMET was responsive to an invitation to submit 100 pounds of beryllium metal to the AEC in 1968 for purposes of qualifying for further work, as part of the AEC's beryllium metal study group. According to a May, 1969 memo, BERMET chose not to participate beyond this initial 100 pound qualifying round.

BERMET's corporate successor has indicated that the sale of beryllium to the AEC began in 1962 and continued through 1969.

50 - Beryllium Production Plant (Brush Luckey Plant)

Also Known As: Brush Beryllium

Also Known As: Luckey Site

Also Known As: Beryllium Production Plant (Brush Luckey Plant)

Also Known As: Materion Brush, Inc.

State: Ohio **Location:** Luckey

Time Period: BE 1949-1959; DOE 1949-1961; 1992-present (remediation)

Facility Type: Beryllium Vendor Department of Energy

Facility Description: From 1942 through 1945, National Lead operated a magnesium processing facility on the Luckey site for the U.S. government. In 1949, the Atomic Energy Commission (AEC) built a beryllium production facility at the site. The government built the plant to replace the production that was lost when the Brush Beryllium Lorain plant was destroyed by fire. The Brush Beryllium Company (now Brush Wellman) under contract to the AEC, produced beryllium pebbles at this site until 1958. Records indicate

that the facility produced between 40,000 and 144,000 pounds of beryllium. In 1959, the AEC contracted with Brush to close down the facility. The site was sold to the Vulcan Materials Company in 1961.

In 1951, AEC sent approximately 1,000 tons of radioactively contaminated scrap metal to the Luckey site. This material was to be used by the Diamond Magnesium Company to resume magnesium processing at the idle facility. Former Brush Wellman employees report that the magnesium facility never resumed operations; however, some records indicate that the facility operated in the 1950s under contract by the General Services Administration (GSA). The radioactively contaminated scrap metal remained stored at the site.

Due to Brush Wellman's status as a statutory beryllium vendor, all employees of Brush Wellman in the U. S., regardless of location, are covered for the entire period for which Brush Wellman and its predecessors supplied beryllium to the U. S. Department of Energy or its predecessor agencies. That period is defined as August 18, 1943 and continuing.

Additionally, on March 8, 2011 the corporate name of Brush Wellman, Inc. changed to Materion Brush, Inc.

CONTRACTOR: Brush Beryllium (1949-1961)

51 - Besley-Wells

Also Known As: Besley Products Co.

State: Wisconsin **Location:** South Beloit

Time Period: May 4-7, 1953

Facility Type: Atomic Weapons Employer

Facility Description: Besley was a cutting tool manufacturer. A National Lead Company of Ohio (Fernald) proposal indicates Besley was to machine a trial lot of 500 uranium slugs at its Beloit, WI, plant to evaluate whether the use of the Besley facing and radiusing machine could increase production. An NLO document lists Besley-Wells as the recipient of test quantities of radioactive materials.

52 - Bethlehem Steel

State: New York **Location:** Lackawanna

Time Period: 1949-1952

Facility Type: Atomic Weapons Employer

Facility Description: In 1949, Bethlehem Steel of Lackawanna, New York developed improved rolling mill pass schedules for uranium billets into 1.5-inch rods to be used for reactor fuel rods to later be used at the Fernald plant. Bethlehem also performed uranium rolling experiments to help design the Fernald rolling mill.

53 - Birdsboro Steel & Foundry

State: Pennsylvania **Location:** Birdsboro

Time Period: 1951-1952

Facility Type: Atomic Weapons Employer

Facility Description: In 1951, eight assorted uranium billets weighing a total of 346 pounds, originating at Birdsboro, were received by the AEC's Lake Ontario Ordnance Works.

In 1952, Birdsboro received 11.5 pounds of uranium wafers for processing.

54 - Bliss & Laughlin Steel

Also Known As: B & L Steel

Also Known As: Niagara Cold Drawn

State: New York **Location:** Buffalo

Time Period: AWE 1951-1952; Residual Radiation 1953-1999

Facility Type: Atomic Weapons Employer

Facility Description: Under contract to the National Lead Company of Ohio (Fernald), Bliss and Laughlin Steel rolled uranium rods for the AEC and also provided uranium slug machining services. Bliss and Laughlin was part of a complex called the Buffalo Works that fashioned components for the early weapons program. The functions were transferred to the Albuquerque South Valley Site in 1952.

Although this site was designated for the Formerly Utilized Site Remediation Action Program (FUSRAP) in 1992, no work occurred under this program prior to its transfer to the Army Corps of Engineers.

During the period of residual contamination, as designated by the National Institute for Occupational Safety and Health and as noted in the dates above,

employees of subsequent owners and operators of this facility are also covered under the Energy Employees Occupational Illness Compensation Program Act.

55 - Blockson Chemical Co. (Building 55 and related activities)

Also Known As: Blockson Chemical Group

Also Known As: Olin Mathieson

Also Known As: Olin

State: Illinois **Location:** Joliet

Time Period: AWE 1951 - June 1960; Residual Radiation July 1960-March 1, 2011

Facility Type: Atomic Weapons Employer

Facility Description: Blockson Chemical Company operated a plant which produced uranium from phosphoric acid. The AEC contracted with Blockson for the recovery of the uranium, which was ultimately used in weapons production. The AEC Uranium production work performed by Blockson was conducted in a one-story brick structure known as Building 55.

This listing is also intended to cover the AEC-funded laboratory, pilot plant and oxidation process, which also occurred at Blockson, and was related to the work in Building 55.

During the period of residual contamination, as designated by the National Institute for Occupational Safety and Health and as noted in the dates above, employees of subsequent owners and operators of this facility are also covered under the Energy Employees Occupational Illness Compensation Program Act.

56 - Bloomfield Tool Co.

State: New Jersey **Location:** Bloomfield

Time Period: 1947; 1951

Facility Type: Atomic Weapons Employer

Facility Description: The facility had a small research contract with the Atomic Energy Commission in 1947. In 1951, it did some experimental machining of uranium slugs for the AEC. The results were not satisfactory and the work was not expanded.

57 - BONUS Reactor Plant

State: Puerto Rico **Location:** Punta Higuera

Time Period: 1964-1968

Facility Type: Department of Energy

Facility Description: The Boiling Nuclear Superheat Reactor (BONUS) was licensed from April 2, 1964 to June 1, 1968. Full power operation began in late 1965 and stopped in July 1967. The plant was Atomic Energy Commission/Department of Energy owned; it was not regulated by the Nuclear Regulatory Commission. Plutonium has been recovered from reactor fuel.

58 - Bowen Engineering, Inc.

State: New Jersey **Location:** North Branch

Time Period: May 15-17, 1951

Facility Type: Atomic Weapons Employer

Facility Description: Bowen Engineering conducted some experimental work at their laboratory in New Jersey on uranium compounds during a two-day period in 1951. The tests were to develop a process for calcining pitchblende raffinates (transforming liquid or sludge-like wastes into a more solid form).

59 - Bridgeport Brass Co., Havens Laboratory

Also Known As: Reactive Metals, Inc.

Also Known As: Piedmont Mfg.

State: Connecticut **Location:** Bridgeport

Time Period: 1950; 1952-1962

Facility Type: Atomic Weapons Employer

Facility Description: Bridgeport Brass, at the Havens Laboratory in Connecticut and in Adrian, Michigan, worked to improve the process for extruding uranium. Eventually this work was taken over by Reactive Metals, which operated the AEC/DOE extrusion facility in Astabula, Ohio. Bridgeport cut and stored uranium, and may have been involved in the rolling of uranium. Some work of the Havens Laboratory was moved to

Seymour, CT, in 1962, to a facility that is now owned by Seymour Specialty Wire.

This listing is intended to cover that portion of the Havens Laboratory known as the Housatonic Pilot Plant, which has also been called the Housatonic Avenue Plant.

60 - Brookhaven National Laboratory

State: New York **Location:** Upton

Time Period: 1947-present

Facility Type: Department of Energy

Facility Description: [Brookhaven National Laboratory \(BNL\)](#) is the former site of a U.S. Army installation (Camp Upton) and has been involved in research and development activities in support of the Department of Energy (DOE) and its predecessor agencies since 1947. BNL's facilities conduct basic and applied research in high energy and nuclear physics and in other areas of science.

Throughout the course of its operations, the potential for beryllium exposure existed at this site, due to beryllium use, residual contamination, and decontamination activities.

CONTRACTORS: Brookhaven Science Association (Battelle Memorial Institute and State University of New York at Stony Brook)(1998-Present); Associated Universities, Incorporated (1947-1998)

61 - Brush Beryllium Co. (Detroit)

Also Known As: Brush Beryllium Co. (Detroit)

Also Known As: Materion Brush, Inc.

State: Michigan **Location:** Detroit

Time Period: 1942-1950s

Facility Type: Atomic Weapons Employer Beryllium Vendor

Facility Description: The Brush Beryllium Company in Detroit, MI, was one of several companies that rolled or extruded uranium rods for Hanford reactor fuel in the late 1940s and early 1950s. In 1950, Hanford began

making rolled uranium rods onsite, but the Atomic Energy Commission shifted the rolling work to the Fernald, OH, Feed Materials Production Center and its supporting contractors in 1952. A number of private companies, including Brush Beryllium Company, contracted with Fernald to provide Hanford with these rolled rods.

Due to Brush Wellman's status as a statutory beryllium vendor, all employees of Brush Wellman in the U. S., regardless of location, are covered for the entire period for which Brush Wellman and its predecessors supplied beryllium to the U. S. Department of Energy or its predecessor agencies. That period is defined as August 13, 1943 and continuing.

Additionally, on March 8, 2011 the corporate name of Brush Wellman, Inc. changed to Materion Brush, Inc.

62 - Brush Beryllium Co. (Cleveland)

Also Known As: Brush Wellman Co.

Also Known As: Motor Wheel Corp.

Also Known As: Magnesium Reduction

Also Known As: Materion Brush, Inc.

State: Ohio **Location:** Cleveland

Time Period: AWE 1942-1943 & 1949-1953; Residual Radiation 1944-1948 & 1954-1977; BE 1943-1967

Facility Type: Atomic Weapons Employer Beryllium Vendor

Facility Description: The Brush Cleveland facility conducted research on a process for producing uranium metal (1942-1943) through magnesium reduction of molten green salt (uranium tetrafluoride). The facility later conducted research and development with uranium (1949-1953) and extruded thorium billets into slugs which were placed in Hanford production reactors (1952-1953).

The Brush Cleveland facility also produced beryllium metal and beryllium oxide for the MED (1943-1946) and later for the AEC (1947-1965?).

During the period of residual contamination, as designated by the National Institute for Occupational Safety and Health and as noted in the dates above, employees of subsequent owners and operators of this facility are also covered under the Energy Employees Occupational Illness Compensation Program Act.

Due to Brush Wellman's status as a statutory beryllium vendor, all employees of Brush Wellman in the U. S., regardless of location, are covered for the entire period for which Brush Wellman and its predecessors supplied beryllium to the U. S. Department of Energy or its predecessor agencies. That period is defined as August 13, 1943 and continuing.

Additionally, on March 8, 2011 the corporate name of Brush Wellman, Inc. changed to Materion Brush, Inc.

63 - Brush Beryllium Co. (Elmore)

Also Known As: Brush Beryllium Co. (Elmore)

Also Known As: Brush Beryllium Co. (Elmore)

Also Known As: Brush Beryllium Co. (Elmore)

State: Ohio **Location:** Elmore

Time Period: 1957-2001

Facility Type: Beryllium Vendor

Facility Description: Brush Beryllium plant in Elmore, OH, was built in 1953. It began producing beryllium for the AEC in 1957 after operations at the Brush Luckey, OH, facility ended. (Prior to 1957 it produced beryllium for the commercial market only.) The plant supplied beryllium to the Y-12 plant in 1990 and Brush purchase orders show that shipments from its Elmore location continued to Los Alamos and Sandia through April 2001.

Due to Brush Wellman's status as a statutory beryllium vendor, all employees of Brush Wellman in the U. S., regardless of location, are covered for the entire period for which Brush Wellman and its predecessors supplied beryllium to the U. S. Department of Energy or its predecessor agencies. That period is defined as August 13, 1943 and continuing.

Additionally, on March 8, 2011 the corporate name of Brush Wellman, Inc. changed to Materion Brush, Inc.

64 - Brush Beryllium Co. (Lorain)

State: Ohio **Location:** Lorain

Time Period: 1943-1948

Facility Type: Beryllium Vendor

Facility Description: The Lorain plant produced beryllium metal and beryllium oxide for the MED and the AEC. The plant was destroyed by fire in 1948.

Due to Brush Wellman's status as a statutory beryllium vendor, all employees of Brush Wellman in the U. S., regardless of location, are covered for the entire period for which Brush Wellman and its predecessors supplied beryllium to the U. S. Department of Energy or its predecessor agencies. That period is defined as August 13, 1943 and continuing.

Additionally, on March 8, 2011 the corporate name of Brush Wellman, Inc. changed to Materion Brush, Inc.

65 - Burns & Roe, Inc.

State: New York **Location:** Maspeth

Time Period: 1949-1950

Facility Type: Beryllium Vendor

Facility Description: In 1949, under AEC contract AT(30-1)438, Burns & Roe constructed a pilot plant in Maspeth on Long Island. The plant was constructed as a means of determining the potential value of the Sheer-Korman process in the manufacture of reactor materials. At least one test run involving beryllium was conducted in 1949. The New York Operations Office Health and Safety Laboratory sampled for beryllium in the air in 1949 and 1950, when the plant was dismantled.

66 - BWX Technologies, Inc. (Virginia)

Also Known As: Tubular Products Div., Lone Star Tech

Also Known As: Babcock & Wilcox Co. (Virginia)

Also Known As: BWXT

State: Virginia **Location:** Lynchburg

Time Period: AWE 1959; 1968-1972 & 1985-2001; Res. Rad. 1960-1967; 1973-1984; & 2002-March 1, 2011; BE 1995-2001

Facility Type: Atomic Weapons Employer Beryllium Vendor

Facility Description: Babcock and Wilcox Company's main plant at Mount Athos and the Lynchburg Research Center, also known as the Lynchburg Technology Center in Lynchburg, VA, performed work for a variety of Atomic Energy Commission (AEC) and DOE projects.

Babcock and Wilcox Company's Nuclear Facilities Plant in Lynchburg, VA, participated in the AEC's Oxide Pellet Fabrication Program, which was managed by the New York Operations Office. Records indicate that shipments of enriched uranium were made to and from the Fernald facility during the years 1968-1972. The company also recovered highly enriched uranium from weapons scrap received from the DOE's Oak Ridge facility between 1985 and 1996. In 1997 the Babcock & Wilcox Company facility in Lynchburg, VA became the BWX Technologies facility. From 1998 to 2000, the company fulfilled a contract for the recovery of enriched uranium from scrap materials containing beryllium. The Lynchburg plant also participated in a DOE-sponsored program called Project Sapphire, under which the plant had responsibility from 1995 to 2001 for downblending enriched uranium obtained from the government of Kazakhstan.

During the period of residual contamination, as designated by the National Institute for Occupational Safety and Health and as noted in the dates above, employees of subsequent owners and operators of this facility are also covered under the Energy Employees Occupational Illness Compensation Program Act.

67 - C.G. Sargent & Sons

State: Massachusetts **Location:** Graniteville

Time Period: 1968

Facility Type: Atomic Weapons Employer

Facility Description: C.G. Sargents and Sons Company performed extruder and drying oven tests with thorium for National Lead of Ohio (Fernald). It also conducted a uranium sump cake drying test for NLO. These were apparently one-time tests.

68 - C.H. Schnorr

Also Known As: Conviber

Also Known As: Premier Manufacturing

Also Known As: C.H. Schnoor

State: Pennsylvania **Location:** Springdale

Time Period: AWE 1943-1951; Residual Radiation 1952-1993; DOE 1994 (remediation)

Facility Type: Atomic Weapons Employer Department of Energy

Facility Description: In 1943, C.H. Schnorr & Company began providing metal fabrication services in support of Manhattan Engineer District (MED) operations. C.H. Schnorr machined extruded uranium for the Hanford Pile Project. Operations may have continued until 1951 when the building was sold.

Although this site was designated for the Formerly Utilized Site Remediation Action Program (FUSRAP) in 1992, the only year in which remediation work was performed was 1994.

During the period of residual contamination, as designated by the National Institute for Occupational Safety and Health and as noted in the dates above, employees of subsequent owners and operators of this facility are also covered under the Energy Employees Occupational Illness Compensation Program Act.

69 - C.I. Hayes, Inc.

State: Rhode Island **Location:** Cranston
Time Period: January 7-9, 1964
Facility Type: Atomic Weapons Employer

Facility Description: In 1964, C.I. Hayes Inc. handled uranium metal under subcontract to the National Lead Company. The work involved heat-treating uranium in a vacuum furnace in order to test the decontamination and health and safety aspects of this work.

70 - C.L. Hann Industries

State: California **Location:** San Jose
Time Period: 1985-1994; 2000
Facility Type: Beryllium Vendor

Facility Description: C.L. Hann Industries provided machine shop services to Sandia National Laboratory, California. This work involved beryllium materials.

71 - California Research Corp.

State: California **Location:** Richmond

Time Period: 1948-1949

Facility Type: Atomic Weapons Employer

Facility Description: Using small amounts of plutonium and uranium, the California Research Corporation performed experiments to investigate the use of continuous chelation as a means of separating plutonium and zirconium from uranium. The California Research Corporation performed the work as a subcontractor to the Kellex Corporation which was under contract to the AEC to investigate waste recovery methods.

72 - Callite Tungsten Co.

State: New Jersey **Location:** Union City

Time Period: AWE 1944; Residual Radiation 1945-March 1, 2011

Facility Type: Atomic Weapons Employer

Facility Description: According to a 1944 document, the Callite Tungsten Co. used its machines to cold roll uranium metal rods for the Manhattan Engineer District.

During the period of residual contamination, as designated by the National Institute for Occupational Safety and Health and as noted in the dates above, employees of subsequent owners and operators of this facility are also covered under the Energy Employees Occupational Illness Compensation Program Act.

73 - Canoga Avenue Facility

State: California **Location:** Los Angeles County

Time Period: DOE 1955-1960

Facility Type: Department of Energy

Facility Description: Under an operating contract with the Atomic Energy Commission (AEC), North American Aviation performed research and development into the peaceful uses of nuclear energy at the Canoga Avenue Facility in Canoga Park, CA. This work was previously performed at North American Aviation's Downey Facility, but was moved to Canoga Avenue at the very end of 1955. Principal work performed included design,

development and radiochemistry. Beryllium machining is also believed to have occurred in there.

The Nuclear Regulatory Commission concluded in its 1995 report on the facility that it "was found to be free of radioactive materials which indicated that the area had been successfully remediated... in the past."

CONTRACTOR: North American Aviation 1955-1960

74 - Carboloy Co.

Also Known As: General Electric Metallurgical Products Department

State: Michigan **Location:** Detroit

Time Period: 1956

Facility Type: Atomic Weapons Employer

Facility Description: In 1956, the Carboloy Company conducted operations to turn down the outer diameter of uranium slugs.

75 - Carborundum Company

State: New York **Location:** Niagara Falls

Time Period: AWE 1943-1944; 1959-1967; Residual Radiation 1945-1958; 1968-1992

Facility Type: Atomic Weapons Employer

Facility Description: In 1943 and 1944 the Carborundum Company at its Global Plant and Buffalo Avenue locations was engaged in various phases of Manhattan Engineer District (MED) programs to determine suitable methods for engineering and shaping uranium rods. This work also involved the forming, coating, and canning of uranium rods for the MED pile. From 1959 through 1967, the company used powder fabrication techniques to manufacture uranium, plutonium, and carbide pellets for an AEC research program. The Hanford facility supplied Carborundum with materials during that period.

Carborundum also performed work during the 1950s that is not covered under EEOICPA, including fabricating nuclear fuel elements for commercial purposes and producing zirconium, hafnium, and titanium for AEC's special reactor materials program.

During the period of residual contamination, as designated by the National Institute for Occupational Safety and Health and as noted in the dates above, employees of subsequent owners and operators of this facility are also covered under EEOICPA.

76 - Carnegie Institute of Technology

Also Known As:

State: Pennsylvania **Location:** Pittsburgh

Time Period: 1942-1946

Facility Type: Atomic Weapons Employer

Facility Description: During the Manhattan Project, Carnegie Institute of Technology was key participant in research on the phases of special metals and their alloys. It also worked on the development of methods for testing materials of construction and the construction of “necessary equipment.”

77 - Carpenter Steel Co.

State: Pennsylvania **Location:** Reading

Time Period: 1943-1944

Facility Type: Atomic Weapons Employer

Facility Description: Beginning in 1943, Carpenter Steel Corporation was one of the 14 private contractors and vendors that produced fuel for the Oak Ridge X-10 pilot plant reactor and the full-scale Hanford production reactors. As an alternative to extrusion, the Carpenter Steel Company of Reading, Pennsylvania experimented with rolled uranium rods in July 1944, but these proved to be inferior to the extruded product. The metal tended to form laps and seams on the surfaces of the rolled bars. Carpenter Steel has since changed its name to Carpenter Technology Corporation.

78 - C-B Tool Products Co.

State: Illinois **Location:** Chicago

Time Period: 1944

Facility Type: Atomic Weapons Employer

Facility Description: For a six month period in 1944, C-B Tool Products

Company had a subcontract with the University of Chicago to provide personnel, facilities, and equipment to produce special machining of parts for special equipment, tools, jigs, and fixtures to the Met Lab from materials provided by the University of Chicago. It is unclear whether the company handled radioactive materials.

79 - Ceradyne, Inc.

State: California **Location:** Costa Mesa

Time Period: 1987; 1990-1996

Facility Type: Beryllium Vendor

Facility Description: Ceradyne sold beryllium-graphite composite materials to the Y-12 plant in Oak Ridge in 1987 and between 1990 and 1996.

80 - Ceradyne, Inc.

State: California **Location:** Santa Ana

Time Period: 1977-1988

Facility Type: Beryllium Vendor

Facility Description: Ceradyne provided beryllium parts, and possibly powder, to the Y-12 plant.

81 - Chambersburg Engineering Co.

State: Pennsylvania **Location:** Chambersburg

Time Period: March 20-21, 1957

Facility Type: Atomic Weapons Employer

Facility Description: In March 1957, a series of hot uranium forging tests were conducted at the Chambersburg Engineering company by the Metallurgical Department of National Lead Company of Ohio (Fernald). Approximately 150 hot uranium slugs were forged into washers on two Chambersburg air compressor impactors.

82 - Chapman Valve

Also Known As: Chapman Valve Manufacturing Co.

Also Known As: Crane Co.

State: Massachusetts **Location:** Indian Orchard

Time Period: AWE 1948-1949; Residual Radiation 1950-1994; DOE 1995 (remediation)

Facility Type: Atomic Weapons Employer Department of Energy

Facility Description: Chapman Valve supplied valves to the MED and the AEC. In 1948, Chapman Valve machined uranium rods into slugs for the Brookhaven National Laboratory. Uranium slugs were used as reactor fuel. Chapman may also have conducted rolling operations on uranium metal in 1949. During the 1948 and 1949 time period, the Chapman Valve building located on Dean Street in Indian Orchard was part of the Chapman facility and not a distinct and separate location. Bechtel National, Inc., with Interstate Nuclear Services and Thermo Nutech as subcontractors, performed remediation in 1995 as part of the Formerly Utilized Site Remediation Action Program (FUSRAP)

During the period of residual contamination, as designated by the National Institute for Occupational Safety and Health and as noted in the dates above, employees of subsequent owners and operators of this facility are also covered under the Energy Employees Occupational Illness Compensation Program Act.

83 - Chemical Construction Co.

Also Known As: Chemico

State: New Jersey **Location:** Linden

Time Period: AWE 1953-1955; Residual Radiation 1956-March 1, 2011

Facility Type: Atomic Weapons Employer

Facility Description: The Chemical Construction Company conducted research and development activities to recover uranium and other metals from low-grade waste materials. The wastes were generated by uranium processing operations at the Mallinckrodt facility in St. Louis, Missouri.

During the period of residual contamination, as designated by the National Institute for Occupational Safety and Health and as noted in the dates above, employees of subsequent owners and operators of this facility are also covered under the Energy Employees Occupational Illness Compensation Program Act.

84 - Chupadera Mesa

State: New Mexico **Location:** Chupadera Mesa

Time Period: 1945

Facility Type: Department of Energy

Facility Description: Chupadera Mesa is located in the White Sands Missile Range and was part of the fallout area from the Trinity test. The Trinity Test took place in July 1945.

85 - Cincinnati Milling Machine Co.

Also Known As: Cincinnati Milacron, Inc.

State: Ohio **Location:** Cincinnati

Time Period: September 17, 1963

Facility Type: Atomic Weapons Employer

Facility Description: The Cincinnati Milling Machine Co. built electro-chemical machining units. In September 1963, the company tested the feasibility of electro-chemical machining of uranium. Eight normal uranium solid cylinders 1 inch in diameter and 1 inch long (approximately 14 pounds) were used in the test.

86 - City Tool & Die Manufacturing

State: California **Location:** Santa Clara

Time Period: 1985-2001

Facility Type: Beryllium Vendor

Facility Description: City Tool is a precision machine shop that provided services to Sandia National Laboratory, California. The work involved machining beryllium-copper materials.

87 - Clarksville Modification Center

Also Known As: Mason & Hanger - Clarksville Base

State: Tennessee **Location:** Clarksville

Time Period: 1949-1967

Facility Type: Department of Energy

Facility Description: The Clarksville Modification Center was established in 1958 for the purpose of testing and modifying the components of nuclear weapons. The Center was located near Clarksville, TN, on a corner of the Ft. Campbell, KY, military reservation. Prior to 1958 some buildings were used by the AEC for storage. The Clarksville Modification Center was closed in September 1965 and its functions were transferred to Pantex and Burlington. In 1967 the AEC surrendered control of the area back to the Army.

Throughout the course of its operations, the potential for beryllium exposure existed at this site.

CONTRACTOR: Mason & Hanger-Silas Mason (1958-1965); Sandia Corporation was the storage contractor (1949-1967)

88 - Clifton Products Co.

Also Known As: Clifton Products Co.

State: Ohio **Location:** Painesville

Time Period: 1942-1952

Facility Type: Beryllium Vendor

Facility Description: Clifton had at least six large contracts with the AEC to supply beryllium products. By 1949, at least 8 beryllium-related deaths had occurred at Clifton.

89 - Climax Uranium Mill in Grand Junction

State: Colorado **Location:** Gran Junction

Time Period: DOE (Remediation) December 1988 – August 1994

Facility Type: Department of Energy

Facility Description: During its 19 years of operation, the mill produced 2.2 million tons of radioactive tailings. These years of operation are covered under the auspices of the Radiation Exposure Compensation Act and are not separately covered under EEOICPA. However, DOE environmental remediation contractors performed environmental remediation under the Uranium Mill Tailings Radiation Control Act (Public Law 95-604) at this former uranium ore processing mill from at this former uranium mill from December 1988 through August 1994. DOE and DOE contractor employees who performed this remediation are covered under EEOICPA.

90 - Clinton Engineer Works (CEW)

Also Known As: Oak Ridge Area

Also Known As: Oak Ridge Reservation

State: Tennessee **Location:** Oak Ridge

Time Period: 1943-1949

Facility Type: Department of Energy

Facility Description: In 1943, as part of the Manhattan Engineer District, the US. Government purchased 59,000 acres 12 miles west of Knoxville, Tennessee because it needed a remote location to build production plants and laboratories to produce plutonium and enriched uranium for the atomic bomb project. This facility was known as the Clinton Engineer Works (CEW) and was referred to generally as Oak Ridge. The entire CEW was bounded by security fences from February 1943 through March 1949. Within the CEW were the processing plants, known as Y-12, K-25 and X-10 (now ORNL) each of which had its own security fence (a fence within a fence) and has been designated separately for purposes of the EEOIPCA. During this time, Roane Anderson Company managed, operated and maintained residences, apartment, dormitories, guest houses, barracks, hutments, trailers, restaurants, cafeterias, buses, roads, streets, sidewalks, garbage and sewage disposal, heating plants and more for the CEW. Roane did not, however, operate the processing plants and laboratories. The CEW gates came down in March 1949. This meant that people no longer needed a security clearance to enter the CEW, though clearances were still required to enter the plants and laboratories. The fences surrounding the processing plants also remained. It was also in 1949 that the privatization of what is today known as the City of Oak Ridge began.

CONTRACTOR: Roane Anderson

91 - Colonie Interim Storage Site (National Lead Co.)

Also Known As: Colonie Interim Storage Site (CISS)

Also Known As: National Lead Co., Albany, NY

Also Known As: National Lead Co. - Nuclear Division

Also Known As: NL Industries - Nuclear Division

State: New York **Location:** Colonie (Albany)

Time Period: AWE 1958-1968; Residual Radiation 1969-1983, 1999 - March 1, 2011 ; DOE 1984-1998 (remediation)

Facility Type: Atomic Weapons Employer Department of Energy

Facility Description: From 1958-1968, National Lead Industries owned and operated the Colonie site and during this time it produced uranium products under contract to the AEC. This contract was terminated in 1968. Thereafter, National Lead fabricated various products from depleted uranium. The largest customer for these products was the U.S. Department of Defense with its contract for armor penetrator cores. While the AEC was still a customer during these years, the uranium work was for reactors and not weapons based. Therefore, because this work did not constitute “producing or processing material used in a nuclear weapon”, it is not eligible for coverage under the Energy Employees Occupational Illness Compensation Program Act.

In 1984 ownership of the property transferred to the Department of Energy and from 1984 to late 1997 Bechtel National Inc. served as DOE’s contractor at the site. In 1998 the Corps of Engineers took the program over as part of the transfer from DOE to the Corps of the Formerly Utilized Site Remediation Action Program (FUSRAP).

During the period of residual contamination, as designated by the National Institute for Occupational Safety and Health and as noted in the dates above, employees of subsequent owners and operators of this facility are also covered under the Energy Employees Occupational Illness Compensation Program Act.

92 - Combustion Engineering

Also Known As: Asea Brown Boveri

State: Connecticut **Location:** Windsor

Time Period: AWE 1965-1972; Residual Radiation 1973-October 2009

Facility Type: Atomic Weapons Employer

Facility Description: Combustion Engineering (CE) sent shipments of uranium to Fernald between 1965 and 1972 for use in the nuclear weapons production process. It is because of these shipments that this site qualifies as an Atomic Weapons Employer for these years. Combustion Engineering performed substantial work for the Atomic Energy Commission in other years as well, but this work is not covered under EEOICPA because it was either non-nuclear or was not related to weapons production. Starting in the 1940s, this initial work at the site involved non-nuclear components. In 1955, CE began to use highly enriched uranium for its work in supporting the Naval Reactors Program. In the 1960s, CE obtained a license to fabricate fuel elements for power reactors.

Although this site was designated as part of the Formerly Utilized Site Remediation Action Program (FUSRAP) in 1994, no work under this program was ever performed on site.

During the period of residual contamination, as designated by the National Institute for Occupational Safety and Health and as noted in the dates above, employees of subsequent owners and operators of this facility are also covered under the Energy Employees Occupational Illness Compensation Program Act.

93 - Connecticut Aircraft Nuclear Engine Laboratory (CANEL)

Also Known As: Pratt and Whitney Corp.

Also Known As: Connecticut Advanced Nuclear Engineering Lab

Also Known As: United Aircraft Corp.

State: Connecticut **Location:** Middletown

Time Period: 1958-July 8, 1966

Facility Type: Beryllium Vendor Department of Energy

Facility Description: The Connecticut Aircraft Nuclear Engine Laboratory (CANEL) worked on an Atomic Energy Commission (AEC) program to develop a nuclear reactor with which to propel aircraft. Specifically, CANEL worked on developing high temperature materials, fuel elements, and liquid metal components and coolants. CANEL consisted of a hot laboratory facility, a nuclear physics laboratory, a fuel element laboratory, a nuclear materials research and development laboratory, and other buildings. The AEC Annual report for 1959 indicates that approximately \$4 million in AEC equipment was at CANEL. Plutonium, mixed fission products, and probably uranium were handled at CANEL. A former ORNL employee who had worked at CANEL stated that beryllium metal and oxide in a powdered form were also handled at CANEL. Although President Kennedy canceled the aircraft nuclear propulsion program in 1961, AEC work apparently continued at CANEL until 1965.

In November 1965, the AEC hired Dunbar Transfer Company to dispose of radioactively contaminated equipment and materials. This remediation work was completed on July 8, 1966.

CONTRACTOR: Dunbar Transfer Company (November 15, 1965 - July 8, 1966); Pratt and Whitney Aircraft Division of the United Aircraft Corporation (1958-1965)

94 - Coors Porcelain

Also Known As: Coors Ceramic

Also Known As: Coors Tek

State: Colorado **Location:** Golden

Time Period: 1947-1975, 1985 (remediation)

Facility Type: Beryllium Vendor

Facility Description: Coors Porcelain performed beryllium work for the Atomic Energy Commission. An early AEC document makes reference to Coors Porcelain's involvement in beryllium work during the period from 1947-1948. Coors Porcelain had an earlier contract with the Clinton Engineer Works but it is unclear whether beryllium was involved.

From 1957 through 1964, the company worked as a subcontractor with Lawrence Livermore National Laboratory on Project Pluto, a project undertaken to determine the feasibility of using heat from reactors as the energy source for ramjet engines. Coors developed fuel elements from beryllium ceramics for the project, which began in 1957 and ended in 1964.

Coors Porcelain performed other beryllium work for DOE after the completion of Project Pluto. A 1993 health study of Coors workers indicated that the company produced beryllia ceramics through 1975, presumably for the AEC/DOE. In 1985, the vendor discovered residual beryllium contamination in the building where it had done beryllium work for the AEC, and hired a private contractor to remediate and demolish the building. The contractor completed this remediation work by the end of 1985.

95 - Copperweld Steel

State: Ohio **Location:** Warren

Time Period: 1943-1946

Facility Type: Atomic Weapons Employer

Facility Description: The Copperweld Steel Company of Warren, Ohio, straightened and outgassed a large number of uranium rods for the Hanford and Oak Ridge reactors between May and August of 1943.

96 - Crane Co.

State: Illinois **Location:** Chicago

Time Period: 1947-1949

Facility Type: Atomic Weapons Employer

Facility Description: Crane Co. supplied the Atomic Energy Commission with uranium and thorium in the 1940s (and perhaps in the 1950s) and likely used materials containing uranium in manufacturing valves for the AEC. At the completion of one project in 1949, 1000 pounds of contaminated wastes, including 346 grams of uranium, were shipped from Crane to Oak Ridge. In 1949, Crane also shipped 265 kg of normal uranium to Hanford. In 1954, records indicate government interest in purchasing more uranium and thorium from Crane, but this work has not been verified.

97 - Crucible Steel Co.

State: New York **Location:** Syracuse

Time Period: AWE 1951; Residual Radiation 1952-March 1, 2011

Facility Type: Atomic Weapons Employer

Facility Description: In 1951, New York Operations Office personnel performed a test forging and rolling of 10 thorium billets at Crucible Steel Company.

During the period of residual contamination, as designated by the National Institute for Occupational Safety and Health and as noted in the dates above, employees of subsequent owners and operators of this facility are also covered under the Energy Employees Occupational Illness Compensation Program Act.

98 - Dana Heavy Water Plant

Also Known As: Wabash River Ordnance Works

State: Indiana **Location:** Dana

Time Period: 1943-1957

Facility Type: Department of Energy

Facility Description: Most of the heavy water for the U.S. nuclear weapons programs was made at two sites: the Dana Heavy Water Plant and the Savannah River Heavy Water Plant. The Dana Heavy Water Plant was

designed and built by the Girdler Corporation (under direction from E.I. du Pont de Nemours and Company) and operated by E.I. du Pont de Nemours and Company. The plant, located in Newport, Indiana, operated until May 1957, and remained on standby until July 1959. The site used a combination of hydrogen sulfide-water chemical exchange, water distillation, and electrolysis processes to make heavy water.

CONTRACTOR: E. I du Pont de Nemours (1952-1957)

99 - De Soto Avenue Facility

State: California **Location:** Los Angeles County

Time Period: DOE 1959-1995; DOE Remediation 1998

Facility Type: Department of Energy

Facility Description: In 1959, the Atomics International Division of North American Aviation moved to its new facility on De Soto Avenue. AEC/DOE work conducted at this location included engineering design, construction, and nuclear fuel fabrication. The facility also had a radiochemistry laboratory and a gamma irradiation facility. The fuel fabrication facility was used to produce a variety of different fuel elements for test reactors. AEC-sponsored work involving the manufacture of beryllium-containing parts also took place at this site. Fuel fabrication was terminated in 1984, however small scale laboratory research work on gamma irradiation and analysis of radioactive samples continued until 1995. A DOE-owned mass spectrometer at this location was removed from the premises and sent to the Pacific Northwest National Laboratory in 1995.

Remedial activities occurred at various times in the 1980's followed by license termination by the Nuclear Regulatory Commission. In 1998, decontamination and decommissioning of the mass spectrometer laboratory, funded by the DOE was performed by The Boeing Company. In 1998, decontamination and decommissioning of the state-licensed gamma irradiation facility was performed by The Boeing Company.

CONTRACTORS: The Boeing Company (1996-1998); Rockwell International (1973-1996); North American Rockwell (1967-1973); North American Aviation (1959-1967).

100 - Dorr Corp.

Also Known As: Dorr-Oliver Corp.

State: Connecticut **Location:** Stamford

Time Period: AWE 1954; 1963; Residual Radiation 1955-1962; 1964-1969

Facility Type: Atomic Weapons Employer

Facility Description: The Dorr Corp. conducted waste handling tests on low-level radioactive material (ammonium diuranate). This work was done as a subcontractor to National Lead of Ohio (Fernald). National Lead personnel monitored the tests and took air quality samples.

During the period of residual contamination, as designated by the National Institute for Occupational Safety and Health and as noted in the dates above, employees of subsequent owners and operators of this facility are also covered under the Energy Employees Occupational Illness Compensation Program Act.

101 - Dow Chemical Co.

Also Known As: Pittsburg, CA

State: California **Location:** Walnut Creek

Time Period: 1947-1957

Facility Type: Atomic Weapons Employer

Facility Description: The Dow operation involved process studies and experimental investigations on different uranium ores and thorium-bearing ores, including pilot-scale solvent extraction of uranium from phosphoric acid.

102 - Dow Chemical Co. (Madison Site)

Also Known As: Madison Site (Spectrulite)

Also Known As: Spectrulite Consortium, Inc.

Also Known As: Consolidated Aluminum

State: Illinois **Location:** Madison

Time Period: AWE 1957-1960; Residual Radiation 1961-2007

Facility Type: Atomic Weapons Employer

Facility Description: The Dow facility in Madison, Illinois, supplied the

AEC with Magnesium-thorium sheets and plates, non radioactive equipment, metal products and other services. Dow received a purchase order from Mallinckrodt in March 1960, for research and development on the extrusion of uranium metal and rod. The Department of Energy also has invoices from 1957 and 1958 indicating that the Mallinckrodt Chemical Company Uranium division purchased magnesium-thorium plates and sheets from the Dow Chemical Company in Madison Illinois.

Dow sold this facility in 1969 to Consolidated Aluminum, which continued to operate the facility from 1969 through 1986. However, during the period of 1969-1986, the operations were of a purely commercial nature and did not involve AEC or Department of Energy contracts. Spectrulite subsequently purchased the plant from Consolidated Aluminum.

Although this site was designated as part of the Formerly Utilized Site Remediation Action Program (FUSRAP) in 1992, no remediation work ever took place under the DOE FUSRAP program prior to that program being transferred to the Army Corps of Engineers in 1997.

During the period of residual contamination, as designated by the National Institute for Occupational Safety and Health and as noted in the dates above, employees of subsequent owners and operators of this facility are also covered under the Energy Employees Occupational Illness Compensation Program Act.

103 - Downey Facility

State: California **Location:** Los Angeles County

Time Period: DOE 1948-1955

Facility Type: Department of Energy

Facility Description: Under an operating contract with the Atomic Energy Commission (AEC), North American Aviation operated a 2 MeV Van De Graaff accelerator at Downey. In addition, the AEC funded a four-watt Water Boiler Neutron Source Reactor at the Downey facility. Start up for the reactor was in April of 1952. This small research reactor was moved to Area IV of the Santa Susana Field Laboratory in 1955. Personnel and operations from Downey moved to the new Canoga Avenue facility in late 1955. Effective remediation of the Downey facility was accomplished at that time. In 2000, The Boeing Company performed a survey verifying that the prior remediation met current Nuclear Regulatory Commission and State of California requirements. Ownership of the Downey facility was then transferred to the City of Downey.

CONTRACTOR: North American Aviation 1948-1955

104 - Du Pont Deepwater Works

Also Known As: E.I. Du Pont de Nemours and Co.

Also Known As: Dyeworks-Carney's Point

Also Known As: Deepwater Dyeworks

Also Known As: Du Pont Deepwater Works

Also Known As: Chambers Chemical and Dye Works

State: New Jersey **Location:** Deepwater

Time Period: AWE 1942-1949; Residual Radiation 1950-1995; 1997-March 1, 2011; DOE 1996 (remediation)

Facility Type: Atomic Weapons Employer Department of Energy

Facility Description: In the 1940s, E.I. DuPont de Nemours & Company (DuPont) produced uranium products and conducted research on uranium hexafluoride. These activities were conducted first for the U.S. Office of Scientific Research and Development (OSRD), and later under contract to the Manhattan Engineer District (MED) and the Atomic Energy Commission (AEC). DuPont also developed processes to convert uranium dioxide to uranium hexafluoride, and produced uranium oxide and uranium metal which was used to fuel the CP-1 reactor at the University of Chicago. After completion of these activities, the AEC conducted limited decontamination and released the site to DuPont for reuse. DuPont currently operates a chemical plant at this site.

Although DuPont Deepwater Works was designated as part of the Department of Energy's Formerly Utilized Site Remediation Action Program (FUSRAP) in 1980, the only year in which actual remediation was performed under contract to the DOE was 1996. There was decontamination performed in 1997, but this did not involve the Department of Energy.

During the period of residual contamination, as designated by the National Institute for Occupational Safety and Health and as noted in the dates above, employees of subsequent owners and operators of this facility are also covered under the Energy Employees Occupational Illness Compensation Program Act.

105 - Du Pont-Grasselli Research Laboratory

Also Known As: Standard Oil of Ohio

State: Ohio **Location:** Cleveland

Time Period: 1943-1945

Facility Type: Atomic Weapons Employer

Facility Description: The Grasselli Laboratory participated in the development the slug canning and coating processes for the Hanford site.

106 - Eagle-Picher Industries, Inc.

State: Oklahoma **Location:** Quapaw

Time Period: 1988-1996

Facility Type: Beryllium Vendor

Facility Description: Eagle-Picher's Quapaw, Oklahoma plant machined beryllium-alloy parts for the Department of Energy's Y-12 facility in Oak Ridge, Tennessee, during the 1980s and the 1990s.

107 - Edgerton Germeshausen & Grier, Inc.

State: Massachusetts **Location:** Boston

Time Period: 1950-1953

Facility Type: Atomic Weapons Employer

Facility Description: EG&G was under contract to the AEC during the period from 1950-1953 for "research and development and manufacturing incident to the installation of scientific test instrumentation at AEC test sites; design, manufacture, test, maintenance of operations systems, weapons systems; and participation in weapons test evaluation." It is unclear from the documentation whether any radioactive materials were handled at the Boston location.

108 - EDM Exotics

State: California **Location:** Hayward

Time Period: 1990-1997

Facility Type: Beryllium Vendor

Facility Description: EDM Exotics provided machine shop services to Sandia National Laboratory, California, working with beryllium-copper materials using an electrical discharging process.

109 - Electro Circuits, Inc.

State: California **Location:** Pasadena

Time Period: 1952-1953

Facility Type: Atomic Weapons Employer

Facility Description: Electro Circuits used uranium metal (approximately 300 lb.) to conduct tests aimed at determining the usefulness of ultrasonics in the detection of pipe in ingots.

110 - Electro Metallurgical

Also Known As: ElectroMet Corp.

Also Known As: Umetco Minerals Corp.

Also Known As: Union Carbide Corp.

Also Known As: Electro-Metallurgical Corp.

State: New York **Location:** Niagara Falls

Time Period: 1942-1953

Facility Type: Department of Energy

Facility Description: In 1942, the Electro Metallurgical Company (ElectroMet), a subsidiary of Union Carbide and Carbon Corporation, was contracted by the Manhattan Engineer District to design, engineer, construct, and operate a metal reduction plant.

Developing the technology to produce pure uranium metal was a priority for the Manhattan Project. ElectroMet received uranium tetrafluoride from Union Carbide's Linde Air Products Division. ElectroMet reacted the uranium tetrafluoride with magnesium in induction furnaces to produce uranium metal. Once the metal was produced, it was cast into ingots, and the ingots were then shipped out for testing or for rolling. The leftover process residues were sent to other sites for uranium recovery, storage, or disposal. ElectroMet was also in charge of recasting metal, research and development in low- and high-grade uranium ores, and supplying calcium metal to Los Alamos and other laboratories.

From 1950 through 1953, the plant casted zirconium metal sponge into ingots. Ownership of the facility was transferred from the Atomic Energy

Commission to ElectroMet in 1953.

111 - Electrofusion Corporation

Also Known As: Brush Wellman Electrofusion Products

Also Known As: Materion Brush, Inc.

State: California **Location:** Fremont

Time Period: 1986-2002

Facility Type: Beryllium Vendor

Facility Description: Electrofusion Corporation provided beryllium products to Sandia National Laboratory, California. Electrofusion was acquired by Brush Wellman in 1990 and is currently part of the Brush Wellman Engineered Products Division.

Due to Brush Wellman's status as a statutory beryllium vendor, all employees of Brush Wellman in the U. S., regardless of location, are covered for the entire period for which Brush Wellman and its predecessors supplied beryllium to the U. S. Department of Energy or its predecessor agencies. That period is defined as August 18, 1943 and continuing.

Additionally, on March 8, 2011 the corporate name of Brush Wellman, Inc. changed to Materion Brush, Inc.

112 - Elk River Reactor

Also Known As: Elk River Facility

Also Known As: United Power Association

State: Minnesota **Location:** Elk River

Time Period: 1962-1968

Facility Type: Department of Energy

Facility Description: The Elk River Reactor was constructed by the AEC as part of its power reactor demonstration program. The Rural Cooperative Power Association received a contract for the dismantling of the reactor and the removal of all detectable reactor radioactivity when operations ceased.

113 - Environmental Measurements Laboratory

State: New York **Location:** New York

Time Period: 1946-2003

Facility Type: Department of Energy

Facility Description: EML traces its roots to the Medical Division of the Manhattan Project during and after World War II. The Division focused on industrial hygiene, radiation protection and safety. In 1946, the Atomic Energy Commission (AEC) was created. The lab was renamed the Health and Safety Division of the AEC. In 1953 it became the Health and Safety Laboratory, or HASL. Fallout from nuclear weapons tests became a major concern and the lab's focus shifted to measurements and assessments of fallout using a network of gummed film monitoring stations and measurements of the radioactivity levels in various food products. In the 1950's and 1960's, the worldwide sampling network was expanded considerably to include soil and water samples, air filter samples at the surface and in the stratosphere, biological samples, and measurements of wet and dry fallout. In the 1970's, the lab's worldwide sampling programs were expanded to include non-nuclear pollutants. When the Atomic Energy Commission was abolished in 1975, the Health and Safety Laboratory became part of the Energy Research and Development Administration. In 1977, the Energy Research and Development Administration was absorbed by the Department of Energy, and the Health and Safety Laboratory changed its name to the Environmental Measurements Laboratory.

In the 1970's, the lab performed extensive radiation transport and dosimetry studies in and around nuclear facilities, and established the Quality Assurance Program for environmental dosimeters and radioanalytical measurements. The lab also did extensive dose reconstructions for nuclear weapons tests, and studied radon in homes. The lab took immediate measurements after the Three-Mile Island and Chernobyl accidents, providing the ability to accurately and comprehensively reconstruct the environmental contamination resulting from these incidents.

In 1997, the lab underwent a major change of focus when it moved from the DOE Office of Energy Research to the Office of Environmental Management. Today, EML's primary focus is to support environmental monitoring, decommissioning, decontamination, and remediation efforts. EML continues to put its worldwide monitoring network to good use by developing models of the atmospheric transport of pollutants. The lab has assisted in developing instruments in support of non-proliferation activities and conducts in-situ measurements in support of many decontamination and decommissioning activities undertaken by DOE after the end of the Cold War. In 2003 this laboratory was incorporated into the Department of

Homeland Security.

114 - ERA Tool and Engineering Co.

Also Known As: Audio-Tex, Inc.

State: Illinois **Location:** Chicago

Time Period: 1944

Facility Type: Atomic Weapons Employer

Facility Description: From February 1944 through June 1944, ERA Tool and Engineering Company contracted with the University of Chicago to supply services and supplies to the Met Lab, specifically to provide necessary personnel, facilities, and equipment required to produce special machining of parts for special equipment, tools, jigs, fixtures, etc. from materials furnished by the University. It is unclear from the records whether ERA handled radioactive materials as part of its work.

115 - Ethyl Corporation

State: Louisiana **Location:** Baton Rouge

Time Period: 1967-1971

Facility Type: Beryllium Vendor

Facility Description: Lawrence Livermore National Laboratory purchased beryllium from the Ethyl Corporation, Baton Rouge, LA. The beryllium was used in laboratory research work.

116 - Extruded Metals Co.

State: Michigan **Location:** Grand Rapids

Time Period: AWE 1944

Facility Type: Atomic Weapons Employer

Facility Description: A November 7, 1944, document indicates that Extruded Metals participated in work related to metal fabrication for the Manhattan Project.

117 - Extrusion Plant (Reactive Metals Inc.)

Also Known As: Reactive Metals, Inc.

Also Known As: RMI

State: Ohio **Location:** Ashtabula

Time Period: 1962 -- present

Facility Type: Department of Energy

Facility Description: From 1962 to 1988, [Ashtabula](#) (formerly known as Reactive Metals, Inc.) received uranium billets from Fernald's Feed Materials Production Center and the Weldon Springs Plant and extruded them into feed stock for fabrication of fuel and target elements to be used in nuclear materials production reactors.

In 1988, the need for Cold War weapons production diminished and the DOE began closing the Extrusion Plant. By April of 1993 the DOE and RMI had formed a partnership to clean the site as part of decontamination and decommissioning. The DOE contracted with RMI Environmental Services (RMIES), a division of the RMI Titanium Company, to manage the cleanup project. RMIES has since changed its name to EARTHLINE Technologies.

Reactive Metals Inc. of Ashtabula, Ohio was the corporate successor of the Bridgeport Brass Company of Adrian, Michigan, which performed similar extrusion work from 1954 to 1961. The semi-production extrusion press used at Adrian was transported and installed at Ashtabula.

In addition to its work for the Department of Energy (DOE) and its predecessor agencies, Ashtabula performed work for the Department of Defense and a number of commercial entities under a Nuclear Regulatory Commission (NRC) license.

118 - Fairchild Hiller Corporation

Also Known As: Republic Aviation Division

Also Known As: Fairchild Industries

State: New York **Location:** Farmingdale, Long Island

Time Period: 1969-1970

Facility Type: Beryllium Vendor

Facility Description: The Republic Aviation Division of the Fairchild Hiller Corporation produced beryllium products for the AEC's Rocky Flats facility in 1969 and 1970.

119 - Fansteel Metallurgical Corp.

State: Illinois **Location:** North Chicago

Time Period: 1944; 1950

Facility Type: Beryllium Vendor

Facility Description: Fansteel Metallurgical Corp. performed beryllium work for the Manhattan Engineer District under Contract No. W-7425 eng-27 for the fabrication of beryllium into sintered shapes and for the manufacture of 600 bricks for delivery to Los Alamos. Fansteel also worked with "approximately 150 pounds of nominal grade beryllium carbide powder" for use in the Nuclear Energy for the Propulsion of Aircraft (NEPA) project. This work is reported to have occurred between April and June of 1950.

120 - Feed Materials Production Center (FMPC)

Also Known As: Fernald

Also Known As: Fernald Environmental Management Project (FEMP)

Also Known As: FERMC0

State: Ohio **Location:** Fernald

Time Period: 1951-present

Facility Type: Department of Energy

Facility Description: The [Feed Materials Production Center \(FMPC\)](#) at the Fernald site was established by AEC in 1951 to convert depleted uranium, natural uranium, and low-enriched uranium compounds into uranium metal and to fabricate uranium metal into feed stock for fuel and target elements for reactors that produced weapons-grade plutonium and tritium. The Fernald Plant, operated by National Lead of Ohio (NLO), along with the Weldon Spring Plant in Missouri, were feed materials plants built by the AEC in the 1950s to supply fuel to the increasing number of nuclear reactors located at Hanford and Savannah River. Production operations at the Fernald site continued until July 10, 1989, when they were suspended by the Department of Energy (DOE). DOE formally shut down the facility on June 19, 1991. During its production mission, the Fernald site produced over 225 million kilograms (500 million pounds) of high-purity uranium products to support United States defense initiatives.

Throughout the course of its operations, the potential for beryllium exposure existed at this site, due to beryllium use, residual contamination, and

decontamination activities.

CONTRACTORS: Fluor Fernald (1992-present); Westinghouse (1985-1992); National Lead of Ohio (1951-1985)

121 - Fenn Machinery Co.

Also Known As: Fenn Manufacturing Co.

State: Connecticut **Location:** Hartford

Time Period: 1950

Facility Type: Atomic Weapons Employer

Facility Description: Fenn conducted swaging tests on uranium rods to determine if the process could be used to produce properly shaped rods for Hanford's production reactors. Two tests, each lasting less than one day, were conducted in June 1950.

122 - Fenwal, Inc.

State: Massachusetts **Location:** Ashland

Time Period: 1967-1968

Facility Type: Atomic Weapons Employer

Facility Description: In 1967 and 1968, National Lead of Ohio (Fernald) asked Fenwal to conduct tests aimed at determining the capabilities of Fenwal's fire extinguishing equipment for suppressing fires originating in uranium contaminated magnesium. The tests were conducted at Fenwal facilities and involved small amounts of uranium. Some Fenwal employees later traveled to Fernald to service fire suppression equipment.

123 - Fermi National Accelerator Laboratory

State: Illinois **Location:** Batavia

Time Period: 1972-present

Facility Type: Department of Energy

Facility Description: [Fermi National Accelerator Laboratory](#) was established in 1972 as a research and development facility. Fermi has one of the most powerful particle accelerators in the world and is used to conduct a

variety of high-energy physics programs.

Throughout the course of its operations, the potential for beryllium exposure existed at this site, due to beryllium use, residual contamination, and decontamination activities.

CONTRACTORS: Universities Research Association (1972-present)

124 - Foote Mineral Co.

Also Known As: Exton Cyrus Foote Mineral Co.

Also Known As: Formil

Also Known As: Cyprus Foote Mineral Company

State: Pennsylvania **Location:** East Whiteland Twp.

Time Period: BE 1947; AWE 1942-1948; Residual Radiation 1949-March 1, 2011

Facility Type: Atomic Weapons Employer Beryllium Vendor

Facility Description: Foote Mineral had a pilot plant at its East Whiteland Township location which processed monazite sands. Monazite sands are known to have a very high thorium content. Because the AEC needed fairly large quantities of thorium, they were very interested in different methods of extracting it from monazite sands.

Other work performed by Foote Mineral on behalf of the Atomic Energy Commission, including their work with zirconium, is not covered under EEOICPA.

Foote Mineral Company was also a major importer of beryl ore from Brazil. Under contract to the Atomic Energy Commission, Foote Mineral Company procured 500 tons of beryl ore in 1947.

During the period of residual contamination, as designated by the National Institute for Occupational Safety and Health and as noted in the dates above, employees of subsequent owners and operators of this facility are also covered under the Energy Employees Occupational Illness Compensation Program Act.

125 - Franklin Institute

State: Massachusetts **Location:** Boston

Time Period: 1962

Facility Type: Beryllium Vendor

Facility Description: The Franklin Institute conducted a study for the Division of Reactor Development in 1962. No information has been located on this facility to date.

126 - Gardinier, Inc.

Also Known As: U.S. Phosphoric Plant Uranium Recovery Unit

Also Known As: Cargill Fertilizer, Inc.

Also Known As: U.S. Phosphoric Products Division of The Tennessee Corp.

State: Florida **Location:** Tampa

Time Period: AWE 1951-1954; 1956-1961; Residual Radiation 1955; 1962-March 1, 2011

Facility Type: Atomic Weapons Employer

Facility Description: Under contract to the AEC, Gardinier (under the name U.S. Phosphoric Products) operated a pilot plant from 1951 to 1954 which recovered uranium from phosphoric acid. From 1956 to 1961, it produced uranium by recovery of U₃O₈ from phosphoric acid. Maximum production was 60 tons of uranium concentrate per year. The uranium was ultimately used in weapons production.

During the period of residual contamination, as designated by the National Institute for Occupational Safety and Health and as noted in the dates above, employees of subsequent owners and operators of this facility are also covered under the Energy Employees Occupational Illness Compensation Program Act.

127 - General Astrometals

State: New York **Location:** Yonkers

Time Period: 1963-1965; 1970

Facility Type: Beryllium Vendor

Facility Description: General Astrometals supplied beryllium metal and parts to the Y-12 plant and to Lawrence Livermore National Laboratory. It also purchased beryllium chips and contaminated powder from Oak Ridge. In 1970 they analyzed some beryllium samples for Rocky Flats.

128 - General Atomics

Also Known As: GA

Also Known As: Division of General Dynamics

Also Known As: John Jay Hopkins Laboratory for Pure and Applied Science

State: California **Location:** La Jolla

Time Period: BE 1959-1967; AWE 1960-1969; Residual Radiation 1970-1995, 2000; DOE 1996-1999 (remediation)

Facility Type: Atomic Weapons Employer Beryllium
Vendor Department of Energy

Facility Description: General Atomics was one of a number of private contractors that processed unirradiated scrap for the Atomic Energy Commission in the 1960s. In addition, the Hot Cell Facility was used for numerous post-irradiation examinations of Department fuels, structural materials, reactor dosimetry materials, and instrumentation. The Department-sponsored activities at the General Atomics Hot Cell Facility primarily supported the High Temperature Gas Cooled Reactor and the Reduced Enrichment Research Test Reactor programs. In December 1994, General Atomics notified the Nuclear Regulatory Commission and the State of California Department of Health Services of its intent to cease operations in the Hot Cell Facility.

General Atomics was also the operating contractor for the AEC's Experimental Beryllium Oxide Reactor (EBOR). General Atomics manufactured EBOR fuel elements (UO₂-BeO) on site and examined them in the site's hot cell.

During the period of residual contamination, as designated by the National Institute for Occupational Safety and Health and as noted in the dates above, employees of subsequent owners and operators of this facility are also covered under the Energy Employees Occupational Illness Compensation Program Act.

129 - General Electric Company (Ohio)

Also Known As: GE Evendale

Also Known As: GE Cincinnati

Also Known As: GE Lockland

Also Known As: Air Force Plant 36

State: Ohio **Location:** Cincinnati/Evendale
Time Period: BE 1951-1970; DOE 1961-June 30,1970
Facility Type: Beryllium Vendor Department of Energy

Facility Description: The Evendale Plant's major mission is to build aircraft engines. The AEC used this facility to work with a variety of radioactive materials, including uranium and thorium. This facility was also involved in the refining or fabrication of beryllium or beryllium oxide.

130 - General Electric Plant (Indiana)

State: Indiana **Location:** Shelbyville
Time Period: 1956
Facility Type: Atomic Weapons Employer

Facility Description: In 1956, this facility handled thorium metal under subcontract to National Lead of Ohio (Fernald). The work, which involved 500 pounds of thorium, was a test of compacting and shaping techniques using General Electric's equipment.

131 - General Electric Vallecitos

State: California **Location:** Pleasanton
Time Period: AWE 1958-1978; 1981-1982; Res. Rad. 1979-1980; 1983-1997; DOE 1998-June 2010 (remediation)
Facility Type: Atomic Weapons Employer Department of Energy

Facility Description: In 1958, General Electric constructed four hot cells for postirradiation examination of uranium fuel and irradiated reactor components. The U.S. Government's involvement (through the Atomic Energy Commission and later, the Department of Energy) was limited to a single hot cell, Hot Cell No. 4. Between 1965 and 1967, Hot Cell No. 4 was decontaminated, equipped with a stainless steel liner to contain plutonium, and dedicated to the study of mixed oxide fuel rods in support of the Atomic Energy Commission's fast breeder reactor development programs. In 1978, Hot Cell No. 4 was placed on standby; it was used by Lawrence Livermore National Laboratory for six months in 1981 and 1982.

During the period of residual contamination, as designated by the National

Institute for Occupational Safety and Health and as noted in the dates above, employees of subsequent owners and operators of this facility are also covered under the Energy Employees Occupational Illness Compensation Program Act.

132 - General Electric X-Ray Division

State: Wisconsin **Location:** Milwaukee

Time Period: AWE 1956-1966; Residual Radiation 1967-March 1, 2011

Facility Type: Atomic Weapons Employer

Facility Description: General Electric's X-Ray Division performed research and development work which supported its activities as contractor for the Pinellas Site in Florida. This work included the operation of a small pilot plant in Milwaukee. Sandia National Laboratory managed the GE X-ray division contract as part of the nuclear weapons program. The work in Milwaukee continued until 1966 when these activities were transferred to Pinellas and the staff relocated accordingly.

During the period of residual contamination, as designated by the National Institute for Occupational Safety and Health and as noted in the dates above, employees of subsequent owners and operators of this facility are also covered under the Energy Employees Occupational Illness Compensation Program Act.

133 - General Steel Industries

Also Known As: Old Betatron Building

Also Known As: General Steel Castings

Also Known As: General Steel Industries

Also Known As: Granite City Steel

Also Known As: National Steel Company

State: Illinois **Location:** Granite City

Time Period: AWE October 1952-1966; Residual Radiation 1967-1992; DOE 1993 (remediation)

Facility Type: Atomic Weapons Employer Department of Energy

Facility Description: From October 1952 through 1966, General Steel Castings/Industries performed quality control work for the AEC. Specifically, it x-rayed uranium ingots and betatron slices to detect

metallurgical flaws for Mallinckrodt Chemical Company. This work was performed in a facility located at 1417 State Street, which was part of what was later known as the "South Plant" of Granite City Steel. This listing is intended to cover only the South Plant, identified by the State Street address, and not any other facility that may have been owned by Granite City Steel prior to or after its purchase of the General Steel Industries facility in the early 1970s. For example, this listing does not cover Granite City Steel facilities on Madison or 20th Street.

During the period of residual contamination, as designated by the National Institute for Occupational Safety and Health and as noted in the dates above, employees of subsequent owners and operators of this facility are also covered under the Energy Employees Occupational Illness Compensation Program Act.

134 - Gerity-Michigan Corp.

Also Known As: successor to Canton Drop Forging and Manufacturing

State: Michigan **Location:** Adrian

Time Period: 1949-1950s

Facility Type: Beryllium Vendor

Facility Description: Gerity-Michigan operated a 2200/550 ton tube and rod extrusion press and performed the first extrusion of beryllium there on May 11, 1949 for the AEC. Documentation, specifically accountability reports, indicates that work continued there through the 1950s.

Gerity-Michigan was also under contract to the AEC to put extrusion presses into operating condition at the Adrian, Michigan facility.

135 - Grand Junction Facilities

State: Colorado **Location:** Grand Junction

Time Period: August 1943–October 2001; Remediation: November 2001-Present

Facility Type: Department of Energy

Facility Description: The Manhattan Engineer District (MED) constructed a uranium refinery (mill) to produce uranium concentrate from “green sludge here in 1943 which it operated through 1946.” This location also served as

the headquarters for the U.S. Atomic Energy Commission's (AEC) uranium-procurement program from 1947 through 1970 and was known as the Grand Junction Office. One of the principal functions of the site was the receipt, sampling, and analysis of uranium and vanadium concentrates from the numerous ore-processing operations in the western United States. In 1951, the AEC constructed a concentrate sampling plant, assay laboratory, and two ore-testing pilot plant mills at this facility. Furthermore, the AEC established a sampling and assaying station for the receipt of uranium ores at Grand Junction. Concentrates produced by mills were delivered in steel drums to Grand Junction, where they were received, weighed, sampled, and assayed as the basis for payment to the mills under the terms of their respective contracts.

On September 30, 2001, the Department of Energy transferred ownership of the Grand Junction property to the Riverview Technology Corporation. The DOE, however, continues to lease portions of the site and provides some on-going remediation services as well as Long-Term Surveillance and Maintenance at the site.

CONTRACTORS: Lucius Pitkin, Inc. (1956–1971) (ore-buying station, sampling, and assaying); National Lead Company (1954–1958) (pilot plant); American Cyanamid Company (1953–1954) (pilot plant); American Smelting and Refining Company (1948–1955) (ore-buying station, sampling, and assaying); Ledoux and Company (1948) (concentrate sampling); U.S. Vanadium Corporation (1943–1946) (uranium-processing mill).

Remediation Contractors: MACTEC Environmental Restoration Services (2001-2002); WASTREN, Inc.(2001-2002); S.M. Stoller Corporation; (2002-Present).

136 - Great Lakes Carbon Corp.

Also Known As: Regis Chemical and Algee Company

State: Illinois **Location:** Chicago

Time Period: 1952-1958

Facility Type: Atomic Weapons Employer

Facility Description: In 1952, the Great Lakes Carbon Corp. studied graphite for the Atomic Energy Commission and in 1958 it did some Transient Reactor Test Facility (TREAT) fuel work for Argonne National Laboratory (ANL). As part of the contract, ANL agreed to decontaminate the facility used. It handled radioactive uranium and radioactive thorium under AEC contract.

137 - Green Sludge Plant in Uravan

State: Colorado **Location:** Uravan

Time Period: 1943-1945

Facility Type: Department of Energy

Facility Description: : The Manhattan Engineer District (MED) obtained uranium from residues left over from the production of vanadium. The resulting product made at these plants was called "green sludge." It was further processed at Grand Junction. Two plants in Uravan, Colorado, provided the MED with uranium extracted from green sludge. The green sludge plant in Uravan owned by Union Carbide and operated by its subsidiary, the U.S. Vanadium Company, is not covered under EEOICPA. This listing applies only to the MED-owned plant, which was located on the north side of the San Miguel River. The U.S. Vanadium Company operated the MED-owned plant under a fixed fee contract during World War II. The plant was shut down in 1945. **Contractors:** The U.S. Vanadium Company, a subsidiary of the Union Carbide Corporation (1943-1945).

138 - Gruen Watch

Also Known As: Gruen Watch Co.

Also Known As: Gruen Watch Co., Time Hall

State: Ohio **Location:** Norwood

Time Period: 1956

Facility Type: Atomic Weapons Employer

Facility Description: The Gruen Watch Co. conducted cold shaving and stamping and hot stamping washer tests for National Lead Company of Ohio (Fernald) in May and June 1956. The tests involved shaving and stamping uranium washers on a 60-ton mechanical press and stamping washers from strips of uranium heated in a salt bath. Only small quantities of radioactive materials were handled.

139 - GSA 39th Street Warehouse

Also Known As: Resco Air Conditioning and Heating Co.

State: Illinois **Location:** Chicago

Time Period: AWE 1942-1949

Facility Type: Atomic Weapons Employer

Facility Description: The 39th Street Warehouse was occupied by the Metallurgical Laboratory and Argonne National Laboratory until approximately 1949. Activities in the building included the storage of radioactive materials.

140 - Hafer Tool

State: California **Location:** Oakland

Time Period: 1965-1985

Facility Type: Beryllium Vendor

Facility Description: Hafer Tool is a machine shop that provided services to Sandia National Laboratory, California. Some of this work involved the use of beryllium materials.

141 - Hallam Sodium Graphite Reactor

Also Known As: Hallam Nuclear Power Facility

Also Known As: HNFP

Also Known As: Nebraska Hallam Nuclear Power Facility

State: Nebraska **Location:** Hallam

Time Period: 1960-1971

Facility Type: Department of Energy

Facility Description: The Atomic Energy Commission (AEC) built and operated the Hallam Nuclear Power Facility in the 1960s. When the AEC retired this facility in 1971, the reactor core and most other radioactive materials were removed from the site; some radioactive materials were entombed in place. The Hallam facility, now owned by the Nebraska Public Power District, has no current mission.

142 - Hanford

Also Known As: Hanford Engineer Works (HEW), Richland

State: Washington **Location:** Richland

Time Period: 1942-present

Facility Type: Department of Energy

Facility Description: [Hanford](#) was established in 1942, as a major government-owned nuclear weapons production site, fabricating reactor fuel, operating nine nuclear material production reactors and building five major chemical separation plants, and producing plutonium for nuclear weapons. Later operations also included nonmilitary applications of nuclear energy. In 1965, the laboratory functions performed at Hanford were separately identified as Pacific Northwest Laboratory (renamed Pacific Northwest National Laboratory in 1995) and were operated by Battelle Memorial Institute. This work took place on the premises of the Hanford site through the end of 2004. Beginning in 2005, Battelle also began operating a separate facility in Richland where some of these laboratory functions were performed.

Throughout the course of its operations, the potential for beryllium exposure existed at this site, due to beryllium use, residual contamination, and decontamination activities.

CONTRACTORS:

Entire Site: Fluor Daniel (1994-present); Westinghouse Hanford (1987-1994); General Electric Company (1946-1965); E.I. Du Pont de Nemours & Company (1943-1946)

Reactor Operations: UNC Nuclear Industries (1973-1987); United Nuclear Industries (1967-1973); Douglas United Nuclear (1965-1967)

Chemical Reprocessing: Rockwell Hanford Company (1977-1987); Atlantic-Richfield Hanford Company (1967-1977); Isochem, Incorporated (1965-1967)

Pacific Northwest Laboratory: Battelle Memorial Institute (1965-present)

143 - Hangar 481

State: New Mexico **Location:** Albuquerque
Time Period: March 1, 1989 - February 29, 1996
Facility Type: Department of Energy

Facility Description: The Department of Energy contracted with Ross Aviation, Inc. to manage and operate Hangar 481 on the premises of the Kirtland Air Force Base for the convenience of the adjacent Sandia National Laboratory.

Contractors: Ross Aviation, Inc.

144 - Harshaw Chemical Co.

Also Known As: HarshawFiltrol Partners

Also Known As: Uranium Refinery

State: Ohio **Location:** Cleveland

Time Period: AWE 1942-1955; Residual Radiation 1956-March 1, 2011

Facility Type: Atomic Weapons Employer

Facility Description: Harshaw Chemical of Cleveland, Ohio refined black oxide and sodium diuranate to orange oxide and then to brown oxide for the Manhattan Project during World War II. The final result was a "green salt", which the Manhattan Project used to produce uranium hexafluoride for enrichment into weapons grade fuel for nuclear weapons at the gaseous diffusion plants. Harshaw also produced uranium hexafluoride during the war and this production activity was expanded in 1947. Harshaw production was reduced in 1951 and by May of 1953 the green salt plant was dismantled and the hexafluoride plant was placed on standby. The contract for removal of AEC equipment continued until September 30, 1955. This designation is limited to the Harshaw facility located at 1000 Harvard Avenue, Cleveland and generally referred to as the Harvard-Denison plant.

During the period of residual contamination, as designated by the National Institute for Occupational Safety and Health and as noted in the dates above, employees of subsequent owners and operators of this facility are also covered under the Energy Employees Occupational Illness Compensation Program Act.

Harshaw Chemical Company was acquired by Kewaunee Oil Company in 1964. Kewaunee Oil was then acquired by the Gulf Oil Company in 1976. Kaiser Chemical Company acquired Harshaw interests in 1982.

145 - Heald Machine Co.

State: Massachusetts **Location:** Worcester

Time Period: May 16-20, 1960

Facility Type: Atomic Weapons Employer

Facility Description: National Lead of Ohio (Fernald) conducted tests on a drilling machine at the Heald facility. The tests involved drilling a few uranium slugs on the machine which Fernald intended to purchase.

146 - Heppenstall Co.

Also Known As: Tippins Inc.

State: Pennsylvania **Location:** Pittsburgh

Time Period: AWE 1955; Residual Radiation 1956-1989

Facility Type: Atomic Weapons Employer

Facility Description: Under contract to the Mallinckrodt Chemical Co., the site was used to heat, press and water quench uranium "dingots".

Approximately 100,000 pounds of normal uranium metal was shaped at Heppenstall over about a 6-month period. Records indicate that the forging was done on a 1000 ton press on a schedule of two days per month by a Heppenstall crew of eight men.

During the period of residual contamination, as designated by the National Institute for Occupational Safety and Health and as noted in the dates above, employees of subsequent owners and operators of this facility are also covered under the Energy Employees Occupational Illness Compensation Program Act.

147 - Herring-Hall Marvin Safe Co.

Also Known As: Herring Hall and Marvin Safe Co.

Also Known As: Diebold Safe Co.

Also Known As: HHM Safe

State: Ohio **Location:** Hamilton

Time Period: AWE 1943-1951; Residual Radiation 1952-1993; DOE (remediation) 1994-1995

Facility Type: Atomic Weapons Employer Department of Energy

Facility Description: Intermittently from the 1943 to 1951, the Herring-Hall-Marvin Safe Company machined natural uranium metal slugs from rolled stock under subcontract to DuPont and the University of Chicago.

During the period of residual contamination, as designated by the National

Institute for Occupational Safety and Health and as noted in the dates above, employees of subsequent owners and operators of this facility are also covered under the Energy Employees Occupational Illness Compensation Program Act.

148 - Hexcel Products, Inc.

State: California **Location:** Berkeley

Time Period: 1964-1965

Facility Type: Beryllium Vendor

Facility Description: Hexcel produced a small number of corrugated beryllium sheet panels for the AEC in the mid-1960s. The finishing process involved vapor blasting and scrubbing of the beryllium panels with steel wool and cleansing powder. At the termination of the experimental project in 1965, the company sent the sheet panels and all related equipment to the AEC's Lawrence Livermore Laboratory.

149 - High Energy Rate Forging (HERF) Facility

State: California **Location:** Oxnard

Time Period: 1984-1997

Facility Type: Department of Energy

Facility Description: The Department of Energy purchased this facility in 1984 for the purpose of producing forgings for weapons parts. It consists of 13.75 acres and 7 buildings. The DOE Rocky Flats Plant managed the forging process and produced forgings at this location through 1995. In 1994, DOE decided to close the facility upon completion of its defense-related mission in 1996. The facility was sold on June 30, 1997.

CONTRACTORS: Kaiser Hill (1995-1997); EG&G Rocky Flats, Inc. (1989-1995); Rockwell International (1975-1989)

150 - Hood Building

State: Massachusetts **Location:** Cambridge

Time Period: 1946-1963

Facility Type: Department of Energy

Facility Description: In 1946, the Massachusetts Institute of Technology (MIT) relocated the work it had been performing under Manhattan Engineer District (MED) contracts into the Hood Building as a means of consolidating work with unique health hazards. The MED, and subsequently the Atomic Energy Commission (AEC) owned the Hood Building, which was located adjacent to the MIT campus. Contractors working in the Hood Building performed the same work that was previously performed on MIT's campus, including work with uranium, beryllium and other metals under contract with the MED and AEC. In 1954 Nuclear Metals Inc. was established and took over the work that MIT had been performing in the Hood Building. Those operations continued until October 29, 1958, when the work was relocated again. The Hood Building was subsequently demolished after which the AEC released it to its new owners on July 11, 1963.

Contractors: MIT (1946-1954); Nuclear Metals, Inc. (1954-1958)

151 - Hooker Electrochemical

Also Known As: Hooker Chemical Co.

Also Known As: Occidental Chemical Corp.

Also Known As: Occidental Chemical Corp., Specialty Chemical Div.

Also Known As: Hooker Chemical and Plastics Corp.

State: New York **Location:** Niagara Falls

Time Period: AWE 1943-1948; Residual Radiation 1949-1976

Facility Type: Atomic Weapons Employer

Facility Description: In January 1943, Hooker began work for the Manhattan Engineer District to manufacture fluoridated and chlorinated organic chemicals. The by-product of this work was hydrochloric acid that was subsequently used in the chemical processing of a uranium-bearing slag as a precursor of uranium recovery. This work was continued until shortly after World War II. Activities related to this contract ended June 1948. Hooker Electrochemical's relationship with the AEC resumes between 1953 and 1958 as the Management and Operating Contractor for Plant 31 at the Lake Ontario Ordnance Works, listed separately in this database.

During the period of residual contamination, as designated by the National Institute for Occupational Safety and Health and as noted in the dates above, employees of subsequent owners and operators of this facility are also

covered under the Energy Employees Occupational Illness Compensation Program Act.

152 - Horizons, Inc.

Also Known As: Celcon Metals Co.

Also Known As: Lamotite, Inc.

State: Ohio **Location:** Cleveland

Time Period: AWE 1952-1956; Residual Radiation 1957-March 1, 2011

Facility Type: Atomic Weapons Employer

Facility Description: Starting in 1952, Horizons, Inc. was under contract with the AEC for the production of granular thorium metal and conducted some thorium research work for Savannah River. Earlier work performed by Horizons, Inc. for the AEC did not involve radioactive substances.

During the period of residual contamination, as designated by the National Institute for Occupational Safety and Health and as noted in the dates above, employees of subsequent owners and operators of this facility are also covered under the Energy Employees Occupational Illness Compensation Program Act.

153 - Hunter Douglas Aluminum Corp.

Also Known As: Hunter Douglas Aluminum Plant

Also Known As: Bridgeport Brass

State: California **Location:** Riverside

Time Period: 1959-1963

Facility Type: Atomic Weapons Employer

Facility Description: In 1959, Hunter Douglas Aluminum extruded approximately 1600 pounds of solid uranium stock for National Lead Company of Ohio (Fernald). In a subsequent subcontract, the company fabricated uranium-zirconium billets for the GE Evendale Plant.

154 - Huntington Pilot Plant

Also Known As: Reduction Pilot Plant

State: West Virginia **Location:** Huntington

Time Period: 1951-1963; 1978-1979

Facility Type: Department of Energy

Facility Description: The AEC built the Huntington Pilot Plant in 1951 to supply nickel powder for use in the Paducah and Portsmouth gaseous diffusion plants. One source of the nickel was scrap nickel which was contaminated with uranium. The plant was shutdown in 1963 and maintained in standby condition. It was demolished in 1978-1979.

CONTRACTOR: International Nickel Company (1951-1963)

155 - Idaho National Laboratory

Also Known As: National Reactor Testing Station

Also Known As: Idaho National Engineering Laboratory

Also Known As: Idaho National Engineering and Environmental Laboratory

State: Idaho **Location:** Scoville

Time Period: 1949-present

Facility Type: Department of Energy

Facility Description: In 1949, the Atomic Energy Commission established the National Reactor Testing Station on the site of a 1940s United States Navy bombing and artillery range. Today, this site is known as the [Idaho National Laboratory \(INL\)](#). This was the primary nuclear reactor development laboratory in the United States. Over 100 reactor concepts were conceived and tested here. Between 1953 and 1992, the Idaho Chemical Processing Plant (ICPP) at INL reprocessed spent nuclear fuel from naval propulsion, test, and research reactors to recover enriched uranium for reuse in nuclear weapons production. Other facilities at INL also conducted various nuclear weapons research and development activities.

On February 1, 2005 the Idaho National Engineering and Environmental Laboratory and Argonne National Laboratory-West became the Idaho National Laboratory. The INL mission is to continue as a National Laboratory, developing and demonstrating compelling national security technologies, and delivering excellence in science and technology. Also at this time, the [Idaho Completion Project \(ICP\)](#) was formed to remediate the site, including the disposition of reactor and non-reactor nuclear facilities.

Throughout the course of its operations, the potential for beryllium exposure existed at this site, due to beryllium use, residual contamination, and

decontamination activities.

CONTRACTORS:

Prime Operating Site Contractors: Battelle Energy Alliance. LLC (BEA) 2005-forward, Bechtel BWXT Idaho, LLC. (1999-2005); Lockheed Martin Idaho Technologies Company (1994-1999); EG&G Idaho (1976-1994); Aerojet Nuclear Corporation (1972-1976); Idaho Nuclear Corporation (1966-1972); Phillips Petroleum Company (1950-1966)

Idaho Completion Project: CH2M-WG Idaho (CWI)(2005-2012)

Idaho Chemical Processing Plant: Bechtel BWXT Idaho, LLC. (1999-2005); Lockheed Martin Idaho Technologies Company (1994-1999); Westinghouse Idaho Nuclear Company (1984-1994); Exxon Nuclear Idaho Company (1979-1984); Allied Chemical Corporation (1971-1979); Idaho Nuclear Corporation (1966-1971); Phillips Petroleum Company (1953-1966); American Cyanamid Company (1950-1953)

Specific Manufacturing Capability: Bechtel BWXT Idaho, LLC. (1999-2005); Lockheed Martin Idaho Technologies Company (1994-1999); Babcock & Wilcox Idaho, Inc. (1991-1994); Rockwell INEL (1986-1991); Exxon Nuclear Idaho Company (1983-1986)

156 - International Minerals and Chemical Corp.

Also Known As: Pilot Facility

Also Known As: Uranium Recovery Unit at the Bonnie Plant

Also Known As: Phosphate Chemicals Div., Bonnie Uranium Plant

Also Known As: C.F. Industries, Inc.

State: Florida **Location:** Mulberry

Time Period: AWE 1951-1961; Residual Radiation 1962-March 1, 2011

Facility Type: Atomic Weapons Employer

Facility Description: International Minerals and Chemical Corp. produced uranium as a byproduct of the recovery of phosphate chemicals and fertilizers. The 1951, AEC contracted with International Minerals and Chemical Corp. for the recovery of uranium, which was ultimately used for the production of weapons. The original production plant was shut down in 1959. Starting in 1954, the uranium recovery unit was located at the Bonnie Plant. In 1955, it switched to the phosphoric acid process. International

Minerals and Chemical Corp. became Central Farmers (now C.F.) Industries; in 1969, C.F. Industries became C.F. Chemicals, Bartow Phosphate Works. The phosphoric process was shut down in 1961.

During the period of residual contamination, as designated by the National Institute for Occupational Safety and Health and as noted in the dates above, employees of subsequent owners and operators of this facility are also covered under the Energy Employees Occupational Illness Compensation Program Act.

157 - International Nickel Co., Bayonne Laboratories

State: New Jersey **Location:** Bayonne
Time Period: 1951-1952
Facility Type: Atomic Weapons Employer

Facility Description: International Nickel plated uranium slugs with nickel for use in the nuclear weapons production system during the early 1950s.

158 - International Rare Metals Refinery, Inc.

Also Known As: Canadian Radium and Uranium Corp.
Also Known As: Pregels Mt. Kisco Refinery
Also Known As: Pregel
State: New York **Location:** Mt. Kisco
Time Period: AWE 1942-1949; Residual Radiation 1950-1966
Facility Type: Atomic Weapons Employer

Facility Description: The International Rare Metals Company processed pitchblende ores for the African Metals Corporation to extract radium. The same ores were processed for the Manhattan Engineer District to recover uranium. Other than the coordination of the shipments of ores and sludge, there was no MED involvement at this site. The company did apparently ship a 1 milligram and a 5 milligram source of radium to Chicago.

During the period of residual contamination, as designated by the National Institute for Occupational Safety and Health and as noted in the dates above, employees of subsequent owners and operators of this facility are also covered under the Energy Employees Occupational Illness Compensation Program Act.

159 - International Register

Also Known As: Intermatic Inc.

State: Illinois **Location:** Chicago

Time Period: 1943

Facility Type: Atomic Weapons Employer

Facility Description: International Register was involved in the development of uranium machining techniques for the Metallurgical Lab and the Manhattan Project. Records indicate that a test of centerless grinding equipment took place at International Register in February 1943. Uranium rods (1" in diameter and 6" long) were ground with the accuracy of about .001" for the Met Lab.

160 - Iowa Ordnance Plant (Line 1 and Associated Activities)

Also Known As: Burlington Ordnance Plant

Also Known As: Silas Mason Co.

Also Known As: Mason & Hanger

Also Known As: Iowa Army Ammunition Plant

State: Iowa **Location:** Burlington

Time Period: 1947-1974

Facility Type: Department of Energy

Facility Description: The Iowa Ordnance Plant (IOP), also known as the Iowa Army Ammunition Plant (IAAP), is a load, assemble, and pack munitions facility that began production in 1941 and continues to operate as a Government-owned, contractor-operated installation. Between 1947 and 1974, a portion of the IAAP was operated under contract to the Atomic Energy Commission (AEC) for the purpose of supplying the AEC with explosive components for nuclear weapons. The area of the IOP that performed work for the AEC includes the buildings and property/grounds of the IAAP that is identified as Line 1, as well as Yards C, G and L and the Firing Site Area, Burning Field "B" and the storage sites for pits and weapons, including Buildings 73 and 77. Work performed in these areas is covered under the Energy Employees Occupational Illness Compensation Program Act. In 1974, the AEC closed out its activities at the plant and transferred all functions to the Pantex Plant.

Throughout the course of its operations, the potential for beryllium exposure existed at this site, due to beryllium use, residual contamination, and

decontamination activities.

CONTRACTOR: Mason & Hanger-Silas Mason Company (1947-1974)

161 - Ithaca Gun Co.

Also Known As: Ithaca Gun Club

State: New York **Location:** Ithaca

Time Period: 1961-1962

Facility Type: Atomic Weapons Employer

Facility Description: During 1961-1962, Ithaca Gun conducted tests involving the forging of hollow uranium billets into tubes for the metallurgical group at National Lead Company of Ohio (Fernald).

162 - J.T. Baker Chemical Co.

Also Known As: Subsidiary of Vick Chemical Company

State: New Jersey **Location:** Phillipsburg

Time Period: 1948; 1957-1958

Facility Type: Atomic Weapons Employer

Facility Description: J.T. Baker Chemical was licensed by Atomic Energy Commission to process and distribute refined source material (uranium). The company had previously sought to purchase uranium compounds during World War II, but these were diverted for wartime use.

163 - Jerry Carroll Machining, Inc.

Also Known As: Electrocut Pacific

State: California **Location:** San Carlos

Time Period: 1985-1991

Facility Type: Beryllium Vendor

Facility Description: Jerry Carroll Machining provided machine shop services to Sandia National Laboratory, California, including the machining of beryllium-copper materials.

164 - Jessop Steel Co.

State: Pennsylvania **Location:** Washington

Time Period: 1950-1954

Facility Type: Atomic Weapons Employer

Facility Description: In the early and mid 1950s, the Jessop Steel Company was under contract to the AEC for metal fabrication with some work through DuPont. In the early 1950s, records indicate that uranium metal in nickel scrap was sent to Jessop to make stainless steel piping for Fernald. In 1954, tentative plans were made for Jessop to roll uranium for Fernald billet production.

165 - Joslyn Manufacturing and Supply Co.

Also Known As: Joslyn Stainless Steel Co.

State: Indiana **Location:** Ft. Wayne

Time Period: March 1943-1952

Facility Type: Atomic Weapons Employer

Facility Description: Joslyn rolled uranium rods from billets for use by the MED and the AEC in weapons production.

166 - Kaiser Aluminum Corp.

Also Known As: Kaiser Chemicals

State: Illinois **Location:** Dalton

Time Period: 1959

Facility Type: Atomic Weapons Employer

Facility Description: In March 1959, Kaiser performed the extrusion of three CP-5 type fuel elements containing normal uranium oxide for Argonne National Laboratory. Documentation indicates that Kaiser was under consideration to participate in a program to develop alternate sources of uranium, but it is unclear whether that work ever took place.

167 - Kansas City Plant

State: Missouri **Location:** Kansas City

Time Period: 1949-present

Facility Type: Department of Energy

Facility Description: The [Kansas City Plant](#) was constructed in 1942 to build aircraft engines for the Navy. After World War II, it was used for storage. In 1949, the AEC asked the Bendix Corporation to take over part of the facility and it began manufacturing nonnuclear components for nuclear weapons. Electrical, electromechanical, mechanical, and plastic components are manufactured or procured by this facility.

In 1993, the Department of Energy officially designated the Kansas City Plant as the consolidated site for all nonnuclear components for nuclear weapons.

As of 1996, production activities at the site were still occurring and expected to continue indefinitely.

Throughout the course of its operations, the potential for beryllium exposure existed at this site, due to beryllium use, residual contamination, and decontamination activities.

CONTRACTORS: Honeywell FM&T (1999-present); Allied-Signal Aerospace (formerly Bendix) (1949-1999)

168 - Kauai Test Facility

State: Hawaii **Location:** Kauai

Time Period: mid1970s-present

Facility Type: Department of Energy

Facility Description: Kauai Test Facility is situated on the north end of the U.S. Navy Pacific Missile Range Facility on the west side of the island of Kauai, Hawaii. The Kauai Test Facility has 25 major buildings. Kauai Test Facility is equipped with resources for assembling, testing, launching, tracking, and recovering instrumented rockets, rocket payloads, and aircraft payloads. The Facility also provides high-quality capabilities for receiving, recording, and "quicklook playback" of radio telemetered test data. Additionally, resources are available for optical tracking and photometric coverage of test objects and experiments.

The Kauai Test Facility has been in operation since the mid-1970s, conducting an average of three to four weapon system delivery tests per year. The Department of Energy (DOE) suspected that these tests resulted in contamination of three release sites including the rocket launch pads, a drum

storage area, and a photography laboratory.

169 - Kellex/Pierpont

Also Known As: Vitro Corp of America

Also Known As: Kellex Corp.

State: New Jersey **Location:** Jersey City

Time Period: AWE 1943-1953; Residual Radiation 1954-1978; 1981-1983; DOE 1979-1980 (remediation)

Facility Type: Atomic Weapons Employer Department of Energy

Facility Description: In 1943, the M.W. Kellogg Company established the Kellex Corporation to design and construct the first gaseous diffusion uranium enrichment facility, the K-25 Plant, in Oak Ridge TN. This work was conducted under contract to the Manhattan Engineer District (MED) and later to the Atomic Energy Commission (AEC). In the 1940s and early 1950s, Kellex conducted research and development on fuel reprocessing and component testing using uranium hexafluoride, and uranium processing and recovery techniques at. In 1951, the Vitro Corporation of America assumed all the rights and obligations of the Kellex Corporation. In 1953, Kellex discontinued all AEC contract work at the Kellex/Pierpont site.

Remediation activities under the Formerly Utilized Site Remediation Action Program (FUSRAP) occurred in 1979 and 1980 by Tobar Construction and Envirosphere Co.. The cleanup was certified in 1983.

During the period of residual contamination, as designated by the National Institute for Occupational Safety and Health and as noted in the dates above, employees of subsequent owners and operators of this facility are also covered under the Energy Employees Occupational Illness Compensation Program Act.

170 - Kerr-McGee

Also Known As: Cimmaron Plant

State: Oklahoma **Location:** Crescent

Time Period: AWE 1963-1973; Residual Radiation 1974-March 1, 2011

Facility Type: Atomic Weapons Employer

Facility Description: Kerr-McGee processed uranium for the AEC as part of

the nuclear weapons production process. The Recycled Uranium reports show material being shipped from Kerr-McGee to both Fernald and Savannah River.

During the period of residual contamination, as designated by the National Institute for Occupational Safety and Health and as noted in the dates above, employees of subsequent owners and operators of this facility are also covered under the Energy Employees Occupational Illness Compensation Program Act.

171 - Kettering Laboratory, University of Cincinnati

State: Ohio **Location:** Cincinnati

Time Period: 1947 - 1950

Facility Type: Beryllium Vendor

Facility Description: The AEC funded a Kettering Laboratory researcher's investigation of the biological effects of beryllium and its compounds. Kettering was also working on analytical methodology for beryllium for the AEC.

172 - Kirtland Operations Office

State: New Mexico **Location:** Albuquerque

Time Period: 1964 - Present

Facility Type: Department of Energy

Facility Description: The Kirtland Operations Office was founded in 1964 as part of the United States atmospheric nuclear testing readiness program. Today, this applied-science and engineering organization supports the National Nuclear Security Administration.

Contractors: Honeywell Corporation (2000 - 2009); AlliedSignal(1984-2000); Allied Corporation (1 982 - 1984); Bendix Corporation (1 964- 1982)

173 - Koppers Co., Inc.

State: Pennsylvania **Location:** Verona

Time Period: AWE 1956-1957; Residual Radiation 1958-1996

Facility Type: Atomic Weapons Employer

Facility Description: In conjunction with the Kennecott Copper Co., Koppers conducted pilot plant tests for the production of uranium hexafluoride. In 1956, Koppers was licensed receive 2000 pounds of refined source material for use in studies toward the preparation of uranium dioxide for reactor fuel elements and 6,150 pounds of refined source material for use in research and pilot plant investigations on feed material processing. In October 1957, they were authorized to receive 110 pounds of normal uranium hexafluoride. Most of the research works appears to have taken place at the Koppers Research Department in Verona, PA.

During the period of residual contamination, as designated by the National Institute for Occupational Safety and Health and as noted in the dates above, employees of subsequent owners and operators of this facility are also covered under the Energy Employees Occupational Illness Compensation Program Act.

174 - La Pointe Machine and Tool Co.

Also Known As: La Pointe Machine and Tool Co.

State: Massachusetts **Location:** Hudson

Time Period: February 1956; Res. Rad. March-July 1956

Facility Type: Atomic Weapons Employer

Facility Description: National Lead of Ohio (Fernald) conducted a single test involving the use of uranium metal on a broaching machine and an arbor press at the La Pointe Machine Tool Company facility.

175 - Laboratory for Energy-Related Health Research

State: California **Location:** Davis

Time Period: 1958-1989; 1991-present (Remediation)

Facility Type: Department of Energy

Facility Description: For over 30 years, LEHR was the site of studies on the long-term health effects of low-level radiation on laboratory animals.

Through the support of DOE's predecessor, the AEC, LEHR (also known in the earlier years as the Radiobiology Laboratory) began in 1951 as a research project investigating the biological effects of X-rays. A few years later, the Atomic Energy Commission contracted with LEHR for what became a 33-year study that investigated the health effects of internal exposure to low levels of strontium 90 and radium 226. In a separate but related project, research animals were exposed to cobalt 60 radiation. Research involving the use of small amounts of plutonium 241, thorium 228, and other radioisotopes was also performed.

Research at LEHR has focused on: understanding better the effects of exposure to low-level radiation on the skeleton and its blood-forming constituents; investigating the behavior of certain bone-seeking radioactive materials; studying the beagle as an experimental animal model; exploring how low-level radiation triggers and affects the formation of tumors and development of leukemia; and, developing effective ways to use results gathered from animal studies to assess risks to humans. LEHR closed in 1989 and has been in remediation mode since 1991.

176 - Laboratory of Biomedical and Environmental Sciences

State: California **Location:** Los Angeles

Time Period: 1947-present

Facility Type: Department of Energy

Facility Description: The Laboratory of Biomedical and Environmental Sciences (LBES) was established in 1947 on the campus of the University of California, Los Angeles, to provide biomedical and environmental support to nuclear testing activities. Today's programs are in three areas: nuclear medicine, where the study of positron emission tomography (PET) is applied to medical problems; biomolecular and cellular sciences, which involves factors influencing gene expression, particularly with reference to early molecular events in cancer induction; and environmental biology, which focuses on the basic physiology of plants in arid ecosystems.

177 - Laboratory of Radiobiology and Environmental Health

State: California **Location:** San Francisco

Time Period: 1951-1999

Facility Type: Department of Energy

Facility Description: The Laboratory of Radiobiology and Environmental Health (LREH), established by the Atomic Energy Commission in 1951, is an institute for research and training in cell biology. LREH is dedicated to fundamental research and investigation of the ways in which radiation and other energy-related biomedical insults affect cellular processes and lead to detrimental genetic and somatic biomedical effects. Research studies are undertaken to investigate the mechanisms by which perturbation and repair of cellular systems can affect the whole organism, cause cancer in the present generation, and damage future generations. Research focuses specifically on ways in which the organism can cope with such insults. As a research unit in the University of California San Francisco School of Medicine, the laboratory was extensively involved with the academic programs of the university, until its closure in 1999.

178 - LaCrosse Boiling Water Reactor

State: Wisconsin **Location:** LaCrosse

Time Period: 1967-1969

Facility Type: Department of Energy

Facility Description: The LaCrosse Boiling Water Reactor (LACBWR), now owned and operated by Dairyland Power Cooperative, was one of a series of demonstration plants funded by the Atomic Energy Commission along with commercial utilities. LACBWR achieved initial criticality in 1967, began commercial operation in November 1969, and was permanently shut down on April 30, 1987. Final reactor defueling was completed on June 11, 1987; storing a total of 333 irradiated fuel assemblies in the 42-foot deep spent fuel pool.

179 - Ladish Co.

State: Wisconsin **Location:** Cudahy

Time Period: 1959-1965

Facility Type: Beryllium Vendor

Facility Description: Ladish supplied beryllium metal and parts to the Y-12 plant.

180 - Lake Ontario Ordnance Works

Also Known As: LOOW

Also Known As: Niagara Falls Storage Site (NFSS)

State: New York **Location:** Niagara Falls

Time Period: 1944-1997

Facility Type: Department of Energy

Facility Description: In 1944, the Manhattan Engineer District (MED) obtained a portion of the Lake Ontario Ordnance Works (LOOW) from the Department of Defense (DOD) for storage of low-grade radioactive residues resulting from pitchblende ore processing at the Linde Air Products facility. In 1948, when the DOD decommissioned the LOOW, the AEC acquired 1511 acres of the site, including the original storage areas. The AEC declared most of this property as excess in 1955, and by 1968 the General Services Administration was able to dispose of 1298 acres, with 213 acres remaining under AEC control. In 1975, additional property was transferred to the town of Lewiston, leaving the present 191-acre site. The DOE portion of the site became known as the Niagara Falls Storage Site (NFSS). The site remained under DOE control until 1997 when it was transferred to the Corps of Engineers under the FUSRAP program.

Following World War II, Linde's refinery was decommissioned and contaminated equipment was disposed at the LOOW. Contaminated materials from other MED/AEC facilities were also shipped to LOOW for disposal. Beginning in 1949, residues from operations at the Mallinckrodt Chemical Works were shipped to LOOW for storage. During the early 1950's, the AEC portion of the LOOW was also used for interim storage of uranium and thorium billets and rods being processed by various New York companies.

During 1953-1954, the AEC constructed a boron isotope separation plant at the LOOW, which began operations in 1954. The operating contractor for this plant was the Hooker Electrochemical Company which referred to it as Plant 31 (P-31).. In 1958, the facility was placed on stand-by and a maintenance contractor, Page Airways, was employed for routine surveillance. The operation was restarted in 1964, with Nuclear Materials and Equipment Company as the operating contractor. In 1971, the boron facility was again placed on stand-by with National Lead Company of Ohio (NLO) as the caretaker. In 1981, Bechtel National took over the caretaker contract and began plans for remedial work at the site. Clean-up began in 1982.

CONTRACTORS: Hooker Electrochemical (1953-1958); Page Airways (1958-1964); Nuclear Materials and Equipment Company (NUMEC) (1964-1971); National Lead Company of Ohio (1971-1981); Bechtel National (1981-1997)

181 - Landis Machine Tool Co.

State: Pennsylvania **Location:** Waynesboro

Time Period: 1952

Facility Type: Atomic Weapons Employer

Facility Description: In 1952, National Lead of Ohio (Fernald) personnel performed tests involving the machining of uranium slugs at Landis Machine Tool Company. The tests were performed over a two day period.

182 - Latty Avenue Properties

State: Missouri **Location:** Hazelwood

Time Period: AWE 1967-1974; Residual Radiation 1975-1983; 1987-March 1, 2011; DOE 1984-1986 (remediation)

Facility Type: Atomic Weapons Employer Department of Energy

Facility Description: The Mallinckrodt Chemical Company conducted uranium milling and refining operations under contracts with the Manhattan Engineer District and the Atomic Energy Commission at the St. Louis Downtown Site in Missouri. Mallinckrodt transported process residues to the St. Louis Airport Site (also in Missouri) for storage until the Commercial Discount Corporation of Chicago purchased them in 1967; Commercial Discount transported the residues to the Latty Avenue Properties for storage and processing. This material was sold to the Cotter Corporation in 1969 and was dried and shipped to their facilities in Canon City, Colorado. By 1974, most of the material had been sold and removed from the Latty Avenue Properties, leaving only residual contamination.

The 1984-1986 work was performed under the Bechtel National Inc. (BNI) environmental remediation umbrella contract for the DOE.

During the period of residual contamination, as designated by the National Institute for Occupational Safety and Health and as noted in the dates above, employees of subsequent owners and operators of this facility are also covered under the Energy Employees Occupational Illness Compensation Program Act.

183 - Lawrence Berkeley National Laboratory

Also Known As: Radiation Laboratory

Also Known As: LBL

Also Known As: Lawrence Radiation Laboratory

Also Known As: California Resources & Development

Also Known As: Lawrence Berkeley Laboratory

State: California **Location:** Berkeley

Time Period: 1942-present

Facility Type: Department of Energy

Facility Description: The laboratory that eventually became the [Lawrence Berkeley National Laboratory](#) was founded in 1931 by Ernest Orlando Lawrence, winner of the 1939 Nobel Prize in physics for his invention of the cyclotron. Once the Manhattan Engineer District (MED) was founded in 1942, the Berkeley Laboratory became part of the MED. As part of the MED, scientists at Berkeley developed the electromagnetic enrichment process that was installed and operated at the Y-12 plant in Oak Ridge from 1943-1947. Scientists at Berkeley also discovered the transuranium elements, which include plutonium, neptunium and americium.

Work performed on behalf of LBL which took place in Gilman Hall on the University of California campus is also considered part of LBL.

Throughout the course of its operations, the potential for beryllium exposure existed at this site, due to beryllium use, residual contamination, and decontamination activities.

Contractor: University of California (1942-present)

184 - Lawrence Livermore National Laboratory

Also Known As: California Radiation Laboratory

State: California **Location:** Livermore

Time Period: 1950-present

Facility Type: Department of Energy

Facility Description: The Atomic Energy Commission established the [Lawrence Livermore National Laboratory](#) as a facility for nuclear weapons research. The Department of Energy (DOE) owns the Lawrence Livermore National Laboratory Main Site and Site 300; DOE and the University of California jointly operate the sites. The Main Site was initially used as a flight training base and an engine overhaul facility. Transition from naval

operations to scientific research began in 1950, when the Atomic Energy Commission (AEC) authorized construction of a materials-testing accelerator site. The AEC established the University of California Radiation Laboratory, Livermore Site (the predecessor of the Lawrence Livermore National Laboratory) as a facility for nuclear weapons research. The Department of Energy purchased Lawrence Livermore National Laboratory's Site 300 from local ranchers in the 1950s for use as a remote high-explosives testing facility.

Throughout the course of its operations, the potential for beryllium exposure existed at this site, due to beryllium use, residual contamination, and decontamination activities.

185 - Lebow

State: California **Location:** Goleta

Time Period: 1977-2002

Facility Type: Beryllium Vendor

Facility Description: The Lebow Company produces ultra-thin metal foils for Sandia National Laboratory, California, some of which contain beryllium.

186 - Linde Air Products

Also Known As: Linde Air Products Div. Of Union Carbide Corp.

Also Known As: Linde

Also Known As: Linde Center

Also Known As: Chandler Plant

Also Known As: Chandler Street Plant

Also Known As: Linde Chandler Plant

State: New York **Location:** Buffalo

Time Period: 1945-1947

Facility Type: Atomic Weapons Employer

Facility Description: The Linde Air Products facility, also known as the Chandler Plant, was involved in the development and production of barrier for the Oak Ridge Diffusion Plant. During World War II, Linde was part of the Carbide and Carbon Chemical Corporation, later known as Union

Carbide.

187 - Linde Ceramics Plant

Also Known As: Tonawanda Laboratory (AWE portion of the plant)

Also Known As: Linde Air

Also Known As: Praxair

State: New York **Location:** Tonawanda

Time Period: AWE/DOE* 1942-1953; Res. Rad. 1954-1987; 1993-1995; 1997-March 1, 2011; DOE 1988-1992; 1996 (remedia

Facility Type: Atomic Weapons Employer Department of Energy

Facility Description: The Linde Air Company performed uranium and nickel processing for the Manhattan Engineer District (MED) and the Atomic Energy Commission (AEC) at the Ceramics Plant in Tonawanda. African and Canadian ores were milled to black oxides at the plant. Documents indicate that the facility was placed on standby as of March 1, 1950. Linde's contractual agreements with the AEC continued through 1953 for various activities relating to closing out work at the Tonawanda location. Linde was a part of Carbide and Carbon Chemical Corporation (C&CCC), which then became Union Carbide.

In 1980, Linde Ceramics was designated as part of the Formerly Utilized Site Remediation Action Program (FUSRAP) and work under this program was performed during 1988-1992, and then again in 1996. The 1996 work was performed under the Bechtel National Inc. umbrella contract for DOE environmental site remediation.

*Buildings 30,31,37 and 38 of the Linde Ceramics Plant meet the definition of a DOE facility for the years 1942 through 1953. This means that employees who worked in these buildings during these years are eligible under both Part B and E of the EEOICPA.

The Tonawanda Laboratory, which is also known as Building 14, meets the definition of an AWE for the years 1942-1953. Under the EEOICPA, employees of AWE facilities are not eligible under Part E of the EEOICPA.

188 - Lindsay Light and Chemical Co.

Also Known As: Kerr-McGee

Also Known As: Reed-Keppler Park

State: Illinois **Location:** W. Chicago

Time Period: AWE 1942 -1953; Residual Radiation 1954-March 1, 2011

Facility Type: Atomic Weapons Employer

Facility Description: Lindsay Light and Chemical was a commercial processor of monazite sands, which yield several commercially valuable products, including the radioactive metal thorium. The Manhattan Engineer District and then the Atomic Energy Commission purchased thorium from Lindsay; AEC contractors purchased a variety of products from this firm as well. Documents indicate that the firm supplied thorium to the MED and AEC through at least 1953. The facility received a source material license from the AEC in 1956, and it continued to process radioactive materials for commercial purposes until 1973.

During the period of residual contamination, as designated by the National Institute for Occupational Safety and Health and as noted in the dates above, employees of subsequent owners and operators of this facility are also covered under the Energy Employees Occupational Illness Compensation Program Act.

189 - Los Alamos Medical Center

State: New Mexico **Location:** Los Alamos

Time Period: 1952-1963

Facility Type: Department of Energy

Facility Description: Los Alamos Medical Center started as an Army hospital for Manhattan Project workers. A new facility was constructed in 1951 and opened in January 1952. The AEC sold the hospital to a private entity in 1963.

190 - Los Alamos National Laboratory

Also Known As: Los Alamos Scientific Laboratory

State: New Mexico **Location:** Los Alamos

Time Period: 1942-present

Facility Type: Department of Energy

Facility Description: Operated by the University of California since its

inception, [Los Alamos National Laboratory](#) designed, developed and tested the world's first nuclear weapons. After World War II, Los Alamos (called the Los Alamos Scientific Laboratory) continued as an important nuclear weapons research and development facility. Research programs included nuclear physics, hydrodynamics, chemistry, metallurgy, radiochemistry and life sciences. LANL also used its research facilities to back up other areas of the weapons production complex, particularly plutonium processing and fabrication of weapon components.

Throughout the course of its operations, the potential for beryllium exposure existed at this site, due to beryllium use, residual contamination, and decontamination activities.

191 - Lovelace Respiratory Research Institute

Also Known As: Inhalation Toxicology Research Institute

Also Known As: ITRI

State: New Mexico **Location:** Albuquerque

Time Period: 1960-June 20, 2013

Facility Type: Department of Energy

Facility Description: The [Lovelace Respiratory Research Institute](#) (LRRI) (formerly the Inhalation Toxicology Research Institute or ITRI) is located on Kirtland Air Force Base. It was established in 1960 to conduct research on the human health consequences of inhaling airborne radioactive materials. The Institute was operated for Department of Energy (DOE) by the non-profit Lovelace Biomedical and Environmental Research Institute. Under Public Law 111-11, the LRRI was privatized and legal transfer of the property and facility from DOE to LRRI was finalized on June 20, 2013.

Throughout the course of its operations, the potential for beryllium exposure existed at this site, due to beryllium use, residual contamination, and decontamination activities.

192 - Machlett Laboratories

State: Connecticut **Location:** Springdale
Time Period: 1952
Facility Type: Beryllium Vendor

Facility Description: Beginning in the 1940s, Machlett Laboratories worked with beryllium in its commercial business as a supplier of x-ray and electron vacuum tubes. Machlett produced a handful of brazed beryllium window assemblies in 1952 under an AEC contract.

193 - Magnus Brass Co.

Also Known As: Magnus Metals
Also Known As: Moanes Brass
State: Ohio **Location:** Cincinnati
Time Period: AWE 1954-1957; Residual Radiation 1958
Facility Type: Atomic Weapons Employer

Facility Description: The site machined various forms of uranium metal under subcontract to the National Lead Company (Fernald). The work was performed at two locations: Reading Road (from December 1954 through November 1955) and West 7th Street (from December 1955 through December 1957). Total production machining was approximately two or three hundred billets.

During the period of residual contamination, as designated by the National Institute for Occupational Safety and Health and as noted in the dates above, employees of subsequent owners and operators of this facility are also covered under the Energy Employees Occupational Illness Compensation Program Act.

194 - Mallinckrodt Chemical Co., Destrehan St. Plant

Also Known As: St. Louis Downtown Site
Also Known As: Mallinckrodt Chemical Works
Also Known As: MCW
State: Missouri **Location:** St. Louis
Time Period: DOE 1942-1962; 1995 (remediation)
Facility Type: Department of Energy

Facility Description: From 1942 to 1957, Mallinckrodt Chemical Company conducted a variety of milling and recovery operations with uranium

chemical compounds at the St. Louis Downtown Site, also known as the Destrehan Street Plant. The plant refined uranium ore, ultimately producing uranium metal. The activities supported research, development, and production programs for the national defense program. By 1957, the Mallinckrodt Chemical Company had processed more than 45,000 metric tons (50,000 tons) of natural uranium products at its facilities. During closeout of operations in 1957, government-owned buildings were either dismantled or transferred to Mallinckrodt as part of a settlement. Decontamination work continued to 1962 when the plant was released back to Mallinckrodt.

This listing of the Mallinckrodt Chemical Works (MCW), is intended to cover the entire area bounded in part by North* Broadway, Angelroot Street, and Salisbury Street. Destrehan Street runs through the middle of the entire area and is a common way to reference the plant, but is by no means the only valid building address. Many buildings are also on Mallinckrodt Street. Coverage includes, but is not limited, to the Main Plant, Plant 4, Plant 6, Plant 6e and Plant 7.

Throughout the course of its operations, the potential for beryllium exposure existed at this site.

*The original address for some buildings would have been Broadway Street. Today, these same buildings have the address of North Broadway Street.

195 - Manufacturing Sciences Corporation

State: Tennessee **Location:** Oak Ridge

Time Period: 1992-1994

Facility Type: Beryllium Vendor

Facility Description: Manufacturing Sciences Corporation performed beryllium work for Los Alamos National Laboratory.

196 - Massachusetts Institute of Technology

State: Massachusetts **Location:** Cambridge

Time Period: AWE 1942-1946, BE 1943-1946

Facility Type: Atomic Weapons Employer Beryllium Vendor

Facility Description: The Massachusetts Institute of Technology (MIT)

began experimental work on producing uranium metal in the spring of 1942 using a process involving melting and casting. It is this uranium metallurgical work which took place on the MIT campus by MIT employees that supports its designation as an Atomic Weapons Employer (AWE).

MIT is also designated as a beryllium vendor. MIT's work with beryllium was known as the "Metallurgical Project" and started when it entered into a research and development contract with the Manhattan Engineer District (MED). The Metallurgical Project involved studying the characteristics of beryllium metal and attempting to make a satisfactory beryllium-uranium alloy. In addition, beryllium oxide crucibles were made for use by the MED.

After a number of its employees contracted beryllium disease, MIT consolidated the activities described above in an off-campus site known as the Hood Building, which is a separate covered facility under the EEOICPA. The transition to the Hood Building was complete by the fall of 1946.

197 - Maywood Chemical Works

Also Known As: Maywood Site

Also Known As: Maywood Interim Storage Site

Also Known As: MISS

Also Known As: Stepan Co.

Also Known As: MCW

State: New Jersey **Location:** Maywood

Time Period: AWE 1947-1950; Residual Radiation 1951-March 1, 2011

Facility Type: Atomic Weapons Employer

Facility Description: From 1916 to 1959, Maywood Chemical Works extracted radioactive thorium and rare earth elements from monazite sands for use in commercial products. From 1947 to 1950 the AEC purchased thorium compounds from the Maywood Chemical Company.

Although this site was designated as part of the Formerly Utilized Site Remediation Action Program (FUSRAP) in 1983, no work was ever performed under this program prior to its transfer to the Army Corp.

During the period of residual contamination, as designated by the National Institute for Occupational Safety and Health and as noted in the dates above, employees of subsequent owners and operators of this facility are also covered under the Energy Employees Occupational Illness Compensation

Program Act.

198 - McDanel Refractory Co.

Also Known As: Vesuvius McDanel

Also Known As: Vesuvius Division of Cookson Group

State: Pennsylvania **Location:** Beaver Falls

Time Period: 1942-1949

Facility Type: Beryllium Vendor

Facility Description: The Manhattan District History indicates that the McDanel Refractory was used to fabricate oddly shaped beryllium crucibles or beryllium crucible stopper rods for the Manhattan Project, but was not used on a large-scale production basis.

199 - McKinney Tool and Manufacturing Co.

Also Known As: Parker Rust Proof

Also Known As: Meister-matic Inc.

Also Known As: KC & F

State: Ohio **Location:** Cleveland

Time Period: AWE 1944; Residual Radiation 1945-1981

Facility Type: Atomic Weapons Employer

Facility Description: Between May and August of 1944, McKinney Tool & Manufacturing of Cleveland, Ohio, turned and ground unbonded slugs to provide fuel for the first nuclear reactors, including the three Chicago piles; the Oak Ridge X-10 reactor; and the Hanford B, D, and F production reactors and 305 test pile.

During the period of residual contamination, as designated by the National Institute for Occupational Safety and Health and as noted in the dates above, employees of subsequent owners and operators of this facility are also covered under the Energy Employees Occupational Illness Compensation Program Act.

200 - Medart Co.

State: Missouri **Location:** St. Louis
Time Period: AWE 1951-1952; Residual Radiation 1953-March 1, 2011
Facility Type: Atomic Weapons Employer

Facility Description: The Medart Company manufactured steel mill machining equipment which was useful in uranium processing. In 1952, Medart conducted broaching machine and arbor tests turning uranium for the National Lead Company of Ohio (Fernald). According to a former Medart employee, the bar turning machine was eventually shipped to Fernald for use at the Feed Materials Production Center.

During the period of residual contamination, as designated by the National Institute for Occupational Safety and Health and as noted in the dates above, employees of subsequent owners and operators of this facility are also covered under the Energy Employees Occupational Illness Compensation Program Act.

201 - Medina Modification Center

State: Texas **Location:** San Antonio
Time Period: 1958-1966
Facility Type: Department of Energy

Facility Description: The Medina Modification Center was established in 1958 for component testing, modification, repairs, and refinements. It operated until the early spring of 1966, at which point its functions were transferred to Burlington and Pantex.

Throughout the course of its operations, the potential for beryllium exposure existed at this site.

CONTRACTOR: Mason & Hanger-Silas Mason (1958-1966)

202 - Metallurgical Laboratory

Also Known As: Eckhardt Hall (+ West Stands, New Chem. Lab and Annex, Ryerson Physical Lab, Kent Chem. Lab)

Also Known As: Met Lab

State: Illinois **Location:** Chicago

Time Period: BE 1942-1946; AWE:1942-1946; Res. Rad. 1947 - 1981;

DOE 1982 - 1984; 1987*

Facility Type: Atomic Weapons Employer Beryllium
Vendor Department of Energy

Facility Description: The University of Chicago's Metallurgical Laboratory (Met Lab) was involved in early uranium metallurgical work as part of the Manhattan Project. The first self-sustaining nuclear chain reaction was achieved at the university in a "pile" called the Chicago Pile 1, built by Enrico Fermi and his Met Lab colleagues. The Met Lab is the direct predecessor of Argonne National Laboratory into which all Met Lab functions were transferred in 1946.

Beryllium use at the Metallurgical Laboratory is linked with experimental studies in determining whether to use graphite, heavy water or beryllium as a pile moderator. Graphite was the ultimate choice for Fermi's pile.

*In 1982-1984 and 1987 environmental remediation was conducted in Eckhart Hall, Jones Laboratory and Ryeson Hall. Only environmental remediation work performed under contract to the DOE performed in these buildings as DOE facility employment during the time period.

Contractor: University of Chicago (1942-1946)

203 - Metals and Controls Corp.

Also Known As: M & C

Also Known As: Texas Instruments

Also Known As: M&C Nuclear

Also Known As: Metals and Controls Nuclear Corp.

State: Massachusetts **Location:** Attleboro

Time Period: AWE 1952-1967; Residual Radiation 1968-1997

Facility Type: Atomic Weapons Employer

Facility Description: Records indicate that Metals and Controls Corporation fabricated fuel elements for production reactors, but it is unclear whether its work related to the nuclear weapons complex. For example, Metals and Controls Corporation fabricated uranium foils for reactor experiments and fuel components, fabricated complete reactor cores for the Naval Reactors program, and fabricated uranium fuel elements for experimental and research reactors. Records indicate shipments of depleted uranium between Rocky Flats and M&C during the period from 1955-1958.

During the period of residual contamination, as designated by the National Institute for Occupational Safety and Health and as noted in the dates above, employees of subsequent owners and operators of this facility are also covered under the Energy Employees Occupational Illness Compensation Program Act.

204 - Middlesex Municipal Landfill

Also Known As: MML

State: New Jersey **Location:** Middlesex

Time Period: AWE 1948-1960; Residual Radiation 1961-1983; 1985; DOE (remediation)1984; 1986

Facility Type: Atomic Weapons Employer Department of Energy

Facility Description: From 1948 to 1960, the Middlesex Sampling Plant conducted thorium and uranium activities and disposed of the wastes at the Middlesex Municipal Landfill.

Although this site was designated as part of the Formerly Utilized Site Remediation Action Program (FUSRAP) in 1980, the only years in which remediation work took place were 1984 and 1986. This work was performed under the Bechtel National Inc. umbrella site remediation contract and by local subcontractors.

During the period of residual contamination, as designated by the National Institute for Occupational Safety and Health and as noted in the dates above, employees of subsequent owners and operators of this facility are also covered under the Energy Employees Occupational Illness Compensation Program Act.

205 - Middlesex Sampling Plant

Also Known As: MSP

Also Known As: Perry Warehouse

State: New Jersey **Location:** Middlesex

Time Period: 1943-1967; 1980-1982 (remediation)

Facility Type: Department of Energy

Facility Description: In 1943, the Manhattan Engineer District (MED)

established the Middlesex Sampling Plant to assay, sample, store, and ship uranium, thorium, and beryllium ores.

Until 1950, the plant was operated by the MED and then the AEC. By 1948, Ledoux and Company and Lucius Pitkin, Inc. personnel were stationed on site to perform assaying work. Another contractor, Perry Warehouse, provided laborers until about 1950.

From 1950 to 1955, United Lead, a subsidiary of National Lead Co., operated the plant for the AEC. The plant discontinued uranium and beryllium assaying and sampling activities in 1955 and was used as a thorium storage and sampling site until 1967. In 1967, operations at Middlesex were terminated and all remaining thorium sampling activities were transferred to the Feed Materials Production Center and to the Weldon Spring Plant.

Approximately one dozen contracting companies and subcontractors were involved in the cleanup effort between 1980-1982. No further remediation was performed on-site prior to the responsibility for cleanup being shifted to the Corps of Engineers in 1997.

Throughout the course of its operations, the potential for beryllium exposure existed at this site, due to beryllium use, residual contamination, and decontamination activities.

CONTRACTOR: United Lead Company (1950-1955)

206 - Midwest Manufacturing Co.

Also Known As: Maytag Co.

State: Illinois **Location:** Galesburg

Time Period: 1944

Facility Type: Atomic Weapons Employer

Facility Description: A November 7, 1944, document indicates that Midwest Manufacturing worked on the "self-lubricating draw die" which was related to metal fabrication for the Manhattan Project.

207 - Mitchell Steel Co.

State: Ohio **Location:** Cincinnati

Time Period: 1954

Facility Type: Atomic Weapons Employer

Facility Description: In 1954, Mitchell Steel Company may have participated in the machining of a sample lot of four hollow extrusion uranium billets from ingots for National Lead of Ohio (Fernald). It is unclear whether Mitchell conducted the test or performed any additional work for NLO or the AEC.

208 - Mitts & Merrel Co.

Also Known As: Genesse Packing Co.

State: Michigan **Location:** Saginaw

Time Period: AWE 1956

Facility Type: Atomic Weapons Employer

Facility Description: In a test for National Lead of Ohio (Fernald), Mitts and Merrell reduced a thorium metal chunk to small particle size pieces in its Hog Grinder.

During the period of residual contamination, as designated by the National Institute for Occupational Safety and Health and as noted in the dates above, employees of subsequent owners and operators of this facility are also covered under the Energy Employees Occupational Illness Compensation Program Act.

209 - Mound Plant

Also Known As: MOUND

Also Known As: Monsanto Research Corp.

Also Known As: Miamisburg Environmental Management Project (MEMP)

Also Known As: Dayton Project

Also Known As: Mound Plant

Also Known As: Miamisburg Closure Project

State: Ohio **Location:** Miamisburg

Time Period: 1947- present

Facility Type: Department of Energy

Facility Description: In 1943, the Manhattan Engineer District began the Dayton Project to investigate the chemistry and metallurgy of polonium. Between 1943 and 1948, this work was performed at locations around

Dayton, all of which turned out to be too small for the job. As such, the [Mound Plant](#) was constructed in 1947 in Miamisburg, Ohio to replace these earlier laboratories. Mound was first occupied in May 1948 and became operational February 1949.

The Mound Plant's first mission was to manufacture polonium-beryllium initiators for atomic weapons. As part of this process, the site extracted polonium-210 from irradiated bismuth slugs and machined beryllium parts. Mound stopped producing initiators after the Pinellas Plant in Florida began producing accelerator-type neutron generators in 1957. In 1954, Mound began developing and producing weapons components containing tritium, and in 1969, the plant began recovering and purifying tritium from dismantled nuclear weapons. During the 1950s and 1960s the Mound Plant also developed and produced a variety of nonnuclear weapons components including detonators, cable assemblies, firing sets, ferroelectric transducers, and explosive timers. In 1995, Mound discontinued weapons component production.

The Mound Plant has also performed nonweapons work. The site developed and manufactured radioisotope thermal generators and conducted research in the following areas: radioactive waste decontamination; the properties of uranium, protactinium-231, and plutonium-239; and separation of stable isotopes and noble gases. Mound continues to produce thermal generators which are used for remote power applications including space probes.

Throughout the course of its operations, the potential for beryllium exposure existed at this site, due to beryllium use, residual contamination, and decontamination activities.

CONTRACTORS: CH2M Hill(2003-present); BWX Technologies (1997-2002); EG&G Mound Applied Technologies (1988-1997); Monsanto Chemical Company (1947-1988)

210 - Museum of Science and Industry

State: Illinois **Location:** Chicago

Time Period: 1946-1953

Facility Type: Atomic Weapons Employer

Facility Description: Portions of the East Pavilion of the Museum of Science and Industry were used by employees of the Metallurgical Laboratory and the Argonne National Laboratory. Although the facility was primarily used as office space, it is believed that radioactive materials were

handled at this facility and that a spill of radioactive material may have taken place near the service elevator on the ground floor.

211 - National Beryllia

Also Known As: Cercom Quality Products

Also Known As: General Ceramics

Also Known As: National Beryllia

State: New Jersey **Location:** Haskell

Time Period: 1968 - 1973; 1983-1986

Facility Type: Beryllium Vendor

Facility Description: National Beryllia performed a demonstration of its capabilities for production of parts for Y-12 beginning in late 1968, with delivery in March 1969. Additionally, National Beryllia delivered some parts to Union Carbide (Y-12), though the records indicate there was only partial performance for this purchase order, which was terminated in April of 1973.

Between 1984 and 1986 the National Beryllia division of General Ceramics had a series of purchase orders through Martin Marietta, which was operating Y-12 at the time. These contracts involved the shipment of beryllium from BrushWellman to National Beryllia with Y-12 being the ultimate customer.

212 - National Guard Armory

Also Known As: Washington Park Armory

State: Illinois **Location:** Chicago

Time Period: AWE 1942-1951; Residual Radiation 1952-1986; DOE 1987 (remediation)

Facility Type: Atomic Weapons Employer Department of Energy

Facility Description: In the 1940s, the Manhattan Project leased the National Guard Armory from the State of Illinois for uranium processing and radioactive material storage. In 1951, the site was returned to the State of Illinois.

Although this site was designated as part of the Formerly Utilized Site Remediation Action Program (FUSRAP) in 1985, the only year in which remediation work took place was 1987.

During the period of residual contamination, as designated by the National Institute for Occupational Safety and Health and as noted in the dates above, employees of subsequent owners and operators of this facility are also covered under the Energy Employees Occupational Illness Compensation Program Act.

213 - National Research Corp.

Also Known As: NRC

State: Massachusetts **Location:** Cambridge

Time Period: AWE 1944-1952; Residual Radiation 1953-1987

Facility Type: Atomic Weapons Employer

Facility Description: National Research had Manhattan Engineer District experience in working with vacuum centrifugal castings, in developing jets and baffles for diffusion pumps, and in developing cold trap systems. National Research's work with vacuum centrifugal castings (contract W-7405-eng-293) involved casting tubealloy (uranium metal) using the "lost wax" technique. In 1948, National Research did work for Mallinckrodt involving the vacuum melting of approximately 500 pounds of uranium.

A December 1946 letter indicates that National Research Corp. requested a "leak detector for use in connection with some special development work on beryllium." It is not clear whether this work was ever actually done.

During the period of residual contamination, as designated by the National Institute for Occupational Safety and Health and as noted in the dates above, employees of subsequent owners and operators of this facility are also covered under the Energy Employees Occupational Illness Compensation Program Act.

214 - Nevada Site Office

Also Known As: Nevada Operations Office

Also Known As: North Las Vegas Facility

Also Known As: Atlas Facility

State: Nevada **Location:** North Las Vegas

Time Period: 1962-present

Facility Type: Department of Energy

Facility Description: The [Nevada Site Office](#) was created and assumed responsibility for operations and programs at the Nevada Test Site (NTS) on March 6, 1962, when nuclear weapons testing became a year-round effort. Prior to that date, it had been operated by the Albuquerque Field Office and prior to that the Santa Fe Operations Office.

Atmospheric nuclear testing began at the Nevada Test Site on January 27, 1951 and continued through 1963 when the Test Ban Treaty was signed. After the Test Ban, all nuclear testing was conducted underground.

In 2002, beryllium contamination was found in buildings B-1, B-2, B-3 and A-1 in the North Las Vegas Complex. Operations in these buildings were halted and employees were relocated, due to exposure concerns.

CONTRACTORS: EG&G Energy Measurements, Raytheon Services Nevada and Reynolds Electrical & Engineering Company (REECO) (1962-1995), Bechtel Nevada (1996-present); Wackenhut Services Incorporated (security)(1965-present); IT Corp. (Environmental Services (1993-2003) Stoller/Navarro (Environmental Services)(2003-present)

215 - Nevada Test Site

Also Known As: Nevada National Security Site

State: Nevada **Location:** Mercury

Time Period: 1951-present

Facility Type: Department of Energy

Facility Description: The [Nevada Test Site](#) was established in 1951. The mission of the Test Site is to conduct field tests of nuclear devices in connection with the research and development of nuclear weapons. The Nevada Test Site, slightly larger than the State of Rhode Island, has been the primary location for testing nuclear explosive devices since Operation Ranger was first conducted in 1951. In addition, the site is used for low-level waste disposal. Currently, the site is allowing other types of testing at the site, conducting remediation, and is in a standby mode so that if nuclear weapons testing ever is needed again, it could be conducted at the Nevada Test Site.

Throughout the course of its operations, the potential for beryllium exposure existed at this site, due to beryllium use, residual contamination, and decontamination activities.

CONTRACTORS: : National Security Technologies, LLC (NSTec) (July

2006-present); Bechtel Nevada (January 1996-June 2006); Reynolds Electrical & Engineering Company (1952-1995). Navarro-Intera, LLC, environmental contractor, (January 2009-present). Wackenhut Service, Inc., provides security related-work, (June 2006-present).

Holmes and Narver was an architectural and engineering contractor at the Nevada Test Site from late 1951 until November 1990. Holmes and Narver's role at the Nevada Test Site was to design and supervise construction of facilities that included towers, bunkers, instrument stations, tunnel complexes, and other test-support facilities. In November 1990, this function was assumed by a new contractor, Raytheon Services, Nevada.

216 - New Brunswick Laboratory

State: New Jersey **Location:** New Brunswick

Time Period: 1948-1977

Facility Type: Department of Energy

Facility Description: From 1948 to 1978, the Atomic Energy Commission (AEC), a predecessor agency of the Department of Energy (DOE), used the New Brunswick Laboratory as a general nuclear standards laboratory for assaying nuclear and non-nuclear materials used in reactor and weapons programs. The New Brunswick Laboratory (NBL) provided a variety of activities using nuclear materials, including thorium and uranium ores, high purity plutonium and americium, and enriched uranium.

In 1977 the New Brunswick Laboratory was moved from New Jersey onto the campus of Argonne National Laboratory -- East, where it remains today.

Throughout the course of its operations, the potential for beryllium exposure existed at this site, due to beryllium use, residual contamination, and decontamination activities.

217 - New England Lime Co.

Also Known As: NELCO

State: Connecticut **Location:** Canaan

Time Period: 1963

Facility Type: Atomic Weapons Employer

Facility Description: In 1963, the New England Lime Co. (NELCO) conducted tests on “prill,” a magnesium-uranium waste product, to determine the feasibility of recovering these materials for re-use in the nuclear weapons production system. The prill came from the AEC’s Fernald facility. Six drums of prill were sent from Fernald to NELCO for the test.

The New England Lime Company also provided magnesium and calcium to the Manhattan Engineer District and Atomic Energy Commission from 1944-1956. This work did not involve radioactive materials.

218 - New Uranium Mill in Rifle

State: Colorado **Location:** Rifle

Time Period: DOE (Remediation) September 1988 – September 1989 and April 1992- October 1996

Facility Type: Department of Energy

Facility Description: From 1958 to 1973, the mill produced uranium and vanadium concentrates and from 1973 to 1984 part of the mill was used to produce vanadium concentrate. These milling operations are covered under the auspices of the Radiation Exposure Compensation Act and are not separately covered under EEOICPA. However, DOE environmental remediation contractors performed remediation under the Uranium Mill Tailings Radiation Control Act (Public Law 95-604) of hazardous materials such as asbestos, industrial chemicals, and other materials at the site from September 1988 through September 1989 and then performed remediation of all contaminated mill tailings at the site from April 1992 through October 1996. DOE and DOE contractor employees who performed this remediation are covered under EEOICPA.

219 - New York University

State: New York **Location:** New York

Time Period: 1946-1952

Facility Type: Atomic Weapons Employer

Facility Description: New York University worked on the development of counting equipment for the Manhattan Engineer District/Atomic Energy Commission. NYU handled a small quantity of uranium for research

purposes.

220 - Northwest Machining and Manufacturing

Also Known As: Santa Clara Machining

State: Idaho **Location:** Meridian

Time Period: 1996-2000

Facility Type: Beryllium Vendor

Facility Description: Northwest Machining provided machine shop services to Sandia National Laboratory, California. This work involved beryllium materials.

221 - Norton Co.

State: Massachusetts **Location:** Worcester

Time Period: BE 1944-1956; AWE 1945-1957; Residual Radiation 1958-March 1, 2011

Facility Type: Atomic Weapons Employer Beryllium Vendor

Facility Description: Norton manufactured refractory products from boron, beryllium, uranium, thorium, and magnesium oxide for the MED and the AEC.

As early as 1943, Norton was providing boron to the SAM laboratory. Documents show that Norton began working with beryllium for the MED in approximately September 1944 and that work with beryllium continued through 1956. Work with thorium and uranium continued through 1957 at Norton's Worcester location.

Norton continued to manufacture refractory products until at least 1965 for the AEC weapons complex, including Rocky Flats, Hanford and Y-12. However, after 1957 these contracts specified that the refractory products were to be made out of magnesium oxide. Since magnesium oxide is not radioactive, Norton's work with it does not qualify it as an Atomic Weapons Employer for these years.

During the period of residual contamination, as designated by the National Institute for Occupational Safety and Health and as noted in the dates above, employees of subsequent owners and operators of this facility are also covered under the Energy Employees Occupational Illness Compensation

Program Act.

222 - Nuclear Materials and Equipment Corp. (NUMEC) (Apollo)

Also Known As: Babcock & Wilcox

Also Known As: Atlantic Richfield Corp. (ARCO)

State: Pennsylvania **Location:** Apollo

Time Period: BE 1960-1968; AWE 1957-1983; Residual Radiation 1984-1995

Facility Type: Atomic Weapons Employer Beryllium Vendor

Facility Description: The Nuclear Material and Equipment Company (NUMEC) began operations at the Apollo and Parks Township facilities in the late 1950s. The Atlantic Richfield Company (ARCO) purchased the stock of NUMEC in 1967. In 1971, Babcock & Wilcox (B&W) purchased NUMEC and is the current owner of the Apollo and Parks Township facilities.

NUMEC processed unirradiated uranium scrap for the AEC in the 1960s. This facility also provided enriched uranium to the naval reactors program and included a plutonium plant, plutonium plant storage area, highly enriched uranium fuel facility, metals and hafnium complex and a uranium hexafluoride storage area. The facility also fabricated plutonium-beryllium neutron sources.

The B&W Apollo facility ceased manufacturing nuclear fuel in 1983.

During the period of residual contamination, as designated by the National Institute for Occupational Safety and Health and as noted in the dates above, employees of subsequent owners and operators of this facility are also covered under the Energy Employees Occupational Illness Compensation Program Act.

223 - Nuclear Materials and Equipment Corp. (NUMEC) (Parks Township)

Also Known As: Babcock & Wilcox

Also Known As: Atlantic Richfield Corp. (ARCO)

State: Pennsylvania **Location:** Parks Township

Time Period: BE 1960-1968; AWE 1957-1980; Residual Radiation 1981-2004

Facility Type: Atomic Weapons Employer Beryllium Vendor

Facility Description: The Nuclear Material and Equipment Company (NUMEC) began operations at the Apollo and Parks Township facilities in the late 1950s. The Atlantic Richfield Company (ARCO) purchased the stock of NUMEC in 1967. In 1971, Babcock & Wilcox (B&W) purchased NUMEC and is the current owner of the Apollo and Parks Township facilities.

The primary function of the NUMEC Parks Township facility was the fabrication of plutonium fuel, the preparation of high-enriched uranium fuel, and the production of zirconium/hafnium bars. The Parks Township facility ceased fuel fabrication activities in 1980.

During the period of residual contamination, as designated by the National Institute for Occupational Safety and Health and as noted in the dates above, employees of subsequent owners and operators of this facility are also covered under the Energy Employees Occupational Illness Compensation Program Act.

224 - Nuclear Metals, Inc.

Also Known As: Starmet, Inc.

Also Known As: Whittaker Corp. Nuclear Metals Division

Also Known As: NMI

State: Massachusetts **Location:** West Concord

Time Period: BE October 29, 1958-1986; AWE October 29, 1958 -1990; Residual Radiation 1991-March 1, 2011

Facility Type: Atomic Weapons Employer Beryllium Vendor

Facility Description: Nuclear Metals, Inc. was incorporated in 1954 as a DOE contractor to take over the research and development work previously performed by MIT's Metallurgical Laboratory. The work performed by Nuclear Metals, Inc. employees during this period is covered under EEOICPA under a separate facility listing. (See the Hood Building.) However, on October 29, 1958, the company moved from the Hood Building to their new West Concord location, and that is the location described in this listing.

In 1958, Nuclear Metals began operating as an AWE facility that produced depleted uranium products, primarily as penetrators for armor-piercing

ammunition. It also supplied copper-plated uranium billets that were used to fuel Savannah River's production reactors. Other work at this facility included the manufacture of metal powders for medical applications, photocopiers and other applications. Thorium and thorium oxide were also handled at the site under license to the NRC.

During the period from 1962-1986, Nuclear Metals was the sole source supplier for beryllium alloy end closure fuel element rings used in the "N" Reactor in Richland.

During the period of residual contamination, as designated by the National Institute for Occupational Safety and Health and as noted in the dates above, employees of subsequent owners and operators of this facility are also covered under the Energy Employees Occupational Illness Compensation Program Act.

225 - Oak Ridge Gaseous Diffusion Plant (K-25)

Also Known As: East Tennessee Technology Park (ETTP)

State: Tennessee **Location:** Oak Ridge

Time Period: 1943-1987; 1988-present (remediation)

Facility Type: Department of Energy

Facility Description: The K-25 gaseous diffusion plant was built as part of the World War II Manhattan Project to supply enriched uranium for nuclear weapons production. Construction of K-25 started in 1943. It was the first diffusion facility for large-scale separation of uranium-235. It became fully operable by August 1945. Additional buildings involved in the enrichment process were operable by 1956. Along with the plants in Paducah, KY, and Portsmouth, OH, the site was used primarily for the production of highly-enriched uranium for nuclear weapons until 1964.

From 1959 to 1969, focus shifted to the production of commercial-grade, low-enriched uranium. In 1985, declining demand for enriched uranium caused the enrichment process to be placed on standby. In 1987, the process was stopped permanently.

The Oak Ridge Gaseous Diffusion Plant was also a host for centrifuge facilities constructed as part of a program to develop and demonstrate uranium-enrichment technology. These facilities have also been shut down.

Throughout the course of its operations, the potential for beryllium exposure existed at this site, due to beryllium use, residual contamination, and

decontamination activities.

Since 1988, the primary DOE mission at K-25 has been remediation, though on-site DOE contractors and sub-contractors continue to provide on-site services which are covered under EEOICPA. Also during this time, DOE paid for the construction of the Toxic Substances Control Act. (TSCA) incinerator which disposed of certain regulated wastes, much of which originated at various DOE facilities. In 1997 the name of the facility was changed to the [East Tennessee Technology Park](#) (ETTP) to reflect its changing nature. However, during this period of remediation, the process of privatization of K-25 into the ETTP was ongoing. This privatization effort involved leasing portions of the premises out to private industry to conduct their own business there. These private businesses and their employees are not covered under the EEOICPA.

SITE-WIDE CONTRACTORS: URS/CH2M Oak Ridge LLC (UCOR)(2011-present); Bechtel Jacobs (1998–2011); Lockheed Martin Energy Systems, Inc. (1994-1998); Martin Marietta Energy Systems, Inc. (1984-1994); Union Carbide & Carbon Corp. (1943-1984).

TSCA INCINERATOR for design, construction and operation: constructed by DOE in 1984 under Martin Marietta Energy Systems (MMES) (1984-1988); operated by Lockheed Martin Energy Systems (LMES) (1988 to 12/18/1997); BJC (12/18/1997-9/30/2011); UCOR D&D (2011-present).

REMEDIATION CONTRACTORS: BNFL (British Nuclear Fuels Limited) was the DOE prime contractor for the complete D&D of three buildings (8/25/1997-9/30/2004).

226 - Oak Ridge Hospital

State: Tennessee **Location:** Oak Ridge

Time Period: 1943-1959

Facility Type: Department of Energy

Facility Description: Originally a US Army Hospital for the Manhattan Project workers, this facility was operated for the AEC by Roane-Anderson Co. In 1959, ownership of the hospital was privatized and its operation taken over by the Oak Ridge Hospital of the Methodist Church.

227 - Oak Ridge Institute for Science Education (ORISE)

Also Known As: Oak Ridge Associated Universities (ORAU)

Also Known As: Oak Ridge Institute for Nuclear Studies

State: Tennessee **Location:** Oak Ridge

Time Period: 1946-present

Facility Type: Department of Energy

Facility Description: Oak Ridge Associated Universities (ORAU) is a university consortium leveraging the scientific strength of 105 major research institutions to advance science and education by partnering with national laboratories, government agencies, and private industry. 1966, ORINS became known by the name of the operating contractor, ORAU. In the early 1990s, the name was changed to ORISE, the [Oak Ridge Institute for Science Education](#). ORAU manages ORISE for the U.S. Department of Energy. ORISE focuses on scientific initiatives to research health risks from occupational hazards, assess environmental cleanup, respond to radiation medical emergencies, support national security and emergency preparedness, and educate the next generation of scientists.

The South Campus Facility was originally established to study accidental irradiation of cattle during testing of the first atomic bomb near Alamogordo, New Mexico. This facility was also known as the Agricultural Research Laboratory and Farm and then as the Comparative Animal Research Laboratory (CARL). It was operated by the University of Tennessee for the Atomic Energy Commission until it was assigned to ORAU and ORISE in 1981.

CONTRACTOR: Oak Ridge Associated Universities (1946-present)

228 - Oak Ridge National Laboratory (X-10)

Also Known As: Clinton Laboratories

State: Tennessee **Location:** Oak Ridge

Time Period: 1943-present

Facility Type: Department of Energy

Facility Description: During the Manhattan project, the [Oak Ridge National Laboratory](#) (ORNL) site was used by the University of Chicago Metallurgical Laboratory to construct the first pile semiworks - a test plant that would move the plutonium product process from the research stage to large scale production. DuPont began construction of the test pile, the X-10 reactor in March 1943 and was ready for operations by January 1944. A

research facility designated as the Clinton Laboratories was built during the war to support X-10 reactor activities and included chemistry, health and engineering divisions.

After the war, the laboratory was transformed from a war production facility to a nuclear research center and changed its name to Oak Ridge National Laboratory in 1948. The Laboratory's research role in the development of nuclear weapons decreased over time, but the scope of its work expanded to include production of isotopes, fundamental hazardous and radioactive materials research, environmental research, and radioactive waste disposal.

Throughout the course of its operations, the potential for beryllium exposure existed at this site, due to beryllium use, residual contamination, and decontamination activities.

CONTRACTORS: University of Chicago (1943-1945); Monsanto Chemical (1945-1947); Union Carbide and Carbon Corp. (1948-1984); Martin Marietta Energy Systems (1984-1994); Lockheed Martin Energy Research Corp. (1994-1998); UT Battelle (2000-present)

229 - Office of Scientific and Technical Information (OSTI)

State: Tennessee **Location:** Oak Ridge

Time Period: 1957 - Present

Facility Type: Department of Energy

Facility Description: The Office of Scientific and Technical Information was created to serve as a federal government repository for all technical reports pertaining to the Department of Energy and its predecessor agencies.

230 - Old Uranium Mill in Rifle

State: Colorado **Location:** Rifle

Time Period: DOE (Remediation) September 1988 – September 1989 and April 1992 – October 1996

Facility Type: Department of Energy

Facility Description: This mill was operated for two periods, namely 1924 through 1932 and again from 1942 to 1958. During these both these time periods it processed vanadium ore. Uranium ore was processed only in the latter period. These milling operations are covered under the auspices of the

Radiation Exposure Compensation Act and are not separately covered under EEOICPA. However, DOE environmental remediation contractors performed remediation under the Uranium Mill Tailings Radiation Control Act (Public Law 95-604) of hazardous materials such as asbestos, industrial chemicals, and other materials at the site from September 1988 through September 1989 and then performed remediation of all contaminated mill tailings at the site from April 1992 through October 1996. DOE and DOE contractor employees who performed this remediation are covered under EEOICPA.

231 - Oliver Corp.

State: Michigan **Location:** Battle Creek
Time Period: 1956-1957; 1961-1962.
Facility Type: Atomic Weapons Employer

Facility Description: The Oliver Corporation participated in green salt briquetting testing for the National Lead Company of Ohio (Fernald). Records indicate that testing took place in November 1956, July 1957, May 1961 and May 1962. It is unclear from the documentation whether the company ever performed this work at a production level. The Oliver Corporation AEC license history indicates that it was licensed to receive 350 pounds of normal uranium (40-6977 - 03/08/63) and 20,000 pounds of uranium enriched U-235 (70-646 – 03/26/62) (but comments that records indicate that it is not related to its work for NLO).

232 - Ore Buying Station at Crooks Gap

Also Known As: Ore Buying Station at Split Rock
Also Known As: Ore Buying Station at Jeffrey City
State: Wyoming **Location:** Crooks Gap
Time Period: 1956-1957
Facility Type: Department of Energy

Facility Description: The ore buying station at Crooks Gap purchased uranium ore for the AEC. The Lucius Pitkin managed and operated the Crooks Gap station from December 1956 to July 1957. The AEC leased the land and equipment from a private company.

Contractors: Lucius Pitkin, Inc. (1956-1957).

233 - Ore Buying Station at Edgemont

State: South Dakota **Location:** Edgemont

Time Period: 1952-1956

Facility Type: Department of Energy

Facility Description: The ore buying station at Edgemont purchased uranium ore for the AEC. The American Smelting and Refining Company (ASRC) managed and operated the Edgemont station from November 1952 to January 1956. Lucius Pitkin replaced ASRC as the M&O contractor in February 1956. The Mines Development Corporation purchased the ore buying station on July 12, 1956.

Contractors: American Smelting and Refining Company (1952-1956); and Lucius Pitkin, Inc. (1956).

234 - Ore Buying Station at Globe, AZ

State: Arizona **Location:** Globe

Time Period: 1955-1957

Facility Type: Department of Energy

Facility Description: The ore buying station at Globe purchased uranium ore for the AEC. American Smelting and Refining Company (ASRC) managed and operated the Globe station on behalf of the AEC from July 1955 to January 1956. Lucius Pitkin replaced ASRC as the management and operating contractor for the site in February 1956.

Contractors: American Smelting and Refining Company (1955-1956); and Lucius Pitkin, Inc. (1956-1957).

235 - Ore Buying Station at Grants, NM

State: New Mexico **Location:** Grants

Time Period: 1956-1958

Facility Type: Department of Energy

Facility Description: The ore buying station at Grants purchased uranium

ore for the AEC. Lucius Pitkin managed and operated the Grants station on behalf of the AEC from July 1956 to mid-1958.

Contractors: Lucius Pitkin, Inc. (1956-1958).

236 - Ore Buying Station at Marysvale

State: Utah **Location:** Marysvale

Time Period: 1950-1957

Facility Type: Department of Energy

Facility Description: The ore buying station at Marysvale purchased uranium ore for the AEC. The American Smelting and Refining Company (ASRC) managed and operated the Marysvale station from March 1950 to January 1956. Lucius Pitkin replaced ASRC as the M&O contractor in February 1956. The AEC leased the land on which the ore buying station sat from a private owner.

Contractors: American Smelting and Refining Company (1950-1956); and Lucius Pitkin, Inc. (1956-1957).

237 - Ore Buying Station at Moab

State: Utah **Location:** Moab

Time Period: 1954-1960

Facility Type: Department of Energy

Facility Description: The ore buying station at Moab purchased uranium ore for the AEC. The American Smelting and Refining Company (ASRC) managed and operated the Moab station from May 1954 to January 1956. Lucius Pitkin replaced ASRC as the M&O contractor in February 1956. The AEC leased the site, which is located adjacent to a Uranium Reduction Company mill, from a private owner. A second ore buying station located on the property of the Uranium Reduction Company mill site is not covered under EEOICPA.

Contractors: American Smelting and Refining Company (1954-1956); and Lucius Pitkin, Inc. (1956-1960).

238 - Ore Buying Station at Monticello

State: Utah **Location:** Monticello

Time Period: 1948-1962

Facility Type: Department of Energy

Facility Description: The ore buying station at Monticello purchased uranium ore for the AEC. The American Smelting and Refining Company (ASRC) managed and operated the Monticello station from 1948 to January 1956. Lucius Pitkin replaced ASRC as the M&O contractor in February 1956. The AEC purchased the site in 1948 from the War Assets Administration.

Contractors: American Smelting and Refining Company (1948-1956); and Lucius Pitkin, Inc. (1956-1962).

239 - Ore Buying Station at Riverton

State: Wyoming **Location:** Riverton

Time Period: 1955-1957

Facility Type: Department of Energy

Facility Description: The ore buying station at Riverton purchased uranium ore for the AEC. The American Smelting and Refining Company (ASRC) managed and operated the Riverton station from March 1955 to January 1956. Lucius Pitkin replaced ASRC as the M&O contractor in February 1956. The AEC leased the land on which the ore buying station was located from a railroad.

Contractors: American Smelting and Refining Company (1955-1956); and Lucius Pitkin, Inc. (1956-1957)

240 - Ore Buying Station at Shiprock

State: New Mexico **Location:** Shiprock

Time Period: 1952-1954

Facility Type: Department of Energy

Facility Description: The ore buying station at Shiprock purchased uranium ore for the AEC. American Smelting and Refining Company managed and operated the Shiprock station from July 1952 to January 1954.

Contractors: American Smelting and Refining Company (1952-1954).

241 - Ore Buying Station at White Canyon

State: Utah **Location:** White Canyon

Time Period: 1954-1957

Facility Type: Department of Energy

Facility Description: The ore buying station at White Canyon purchased uranium ore for the AEC. The American Smelting and Refining Company (ASRC) managed and operated the White Canyon station from October 1954 to January 1956. Lucius Pitkin replaced ASRC as the M&O contractor in February 1956. The AEC leased the land for the ore buying station from the Bureau of Land Management (BLM).

Contractors: American Smelting and Refining Company (1954-1956); and Lucius Pitkin, Inc. (1956-1957).

242 - Pacific Northwest National Laboratory (PNNL)

Also Known As: Pacific Northwest Laboratory

Also Known As: Battelle (PNL)

State: Washington **Location:** Richland

Time Period: 2005-present

Facility Type: Department of Energy

Facility Description: Although Hanford laboratory functions were given to an organization known as the [Pacific Northwest National Laboratory](#) in 1965 when Battelle won the contract to perform research and development for the Hanford Site, PNNL did not have a physical plant separate from the Hanford site until 2005 (see the site description for Hanford for this work prior to 2005). The Laboratory's first projects were based on the needs of the Hanford Site and included protecting the environment, fabricating reactor fuel, and designing reactors. These projects, staff expertise in diverse fields, and national needs led to outstanding research and development in several key areas: environment, health, energy, computer science, and security.

Throughout the course of its operations, the potential for beryllium exposure existed at this site, due to beryllium use, residual contamination, and decontamination activities.

CONTRACTOR: Battelle Memorial Institute (2005-present)

243 - Pacific Proving Ground *

State: Marshall Islands **Location:** Marshall Islands

Time Period: 1946-1962

Facility Type: Department of Energy

Facility Description: The United States conducted one hundred and two tests in its Pacific Proving Grounds between 1946 and 1962. The United States conducted 23 nuclear weapons tests at Bikini Atoll (1946 and 1954-1958), 43 tests at Enewetak Atoll (1948 and 1951-1958), 12 tests at Johnston Island (1958 and 1962), and 24 tests at Christmas Island (1962).

* The Pacific Proving Grounds included Bikini Atoll, Enewetak Atoll, Johnston Island (nuclear weapons testing activities only), and Christmas Island (U. S. nuclear weapons testing activities only).

244 - Paducah Gaseous Diffusion Plant

State: Kentucky **Location:** Paducah

Time Period: 1951-July 28, 1998; July 29, 1998 - present (Remediation)

Facility Type: Department of Energy

Facility Description: The Department of Energy's (DOE) Paducah Gaseous Diffusion Plant opened in 1952 to enrich uranium for nuclear weapons. During the plant's Cold War history, more than one million tons of uranium was processed.

Construction of the Paducah plant began in 1951 in response to the increased demand for enriched uranium for nuclear weapons production. Initial operations began in 1952 and full operation occurred in 1955. In addition to producing enriched uranium for weapons, the plant also supplied enriched uranium for the Navy and commercial fuel. The Paducah Plant also acted as the uranium hexafluoride feed point for all gaseous diffusion plants until

1964. Throughout the course of its operations, the potential for beryllium exposure existed at this site.

On July 1, 1993, the United States Enrichment Corporation (USEC)*, a government-owned corporation formed under the Energy Policy Act of 1992, assumed control of the plant's uranium enrichment activities. USEC, which was fully privatized in July 1998, continues to produce low enriched uranium for commercial use DOE remains responsible for addressing the environmental cleanup resulting from historic plant operations.

From 1952- July 28, 1998 (the date USEC was privatized) all 3,556 acres were exclusively controlled by the Government and considered the DOE facility. After that date, only roads and grounds outside the perimeter fence plus approximately 200 acres of grounds inside the fence remain under the exclusive control of DOE's Office of Environmental Management. The remainder of the footprint is leased to USEC to support uranium enrichment operations.

ENRICHMENT OPERATIONS CONTRACTORS: Lockheed Martin Utility Services (1995-1999); Martin Marietta Utility Services (1993-1995); Martin Marietta Energy Systems (1984-1993); Union Carbide Corporation Nuclear Division (1952-1984).

DUF6 CONVERSION CONTRACTORS for design, construction and operation of the Depleted Uranium Hexafluoride Conversion Project: Babcock and Wilcox Conversion Services (2011-present); Uranium Disposition Services (2002-2011).

REMEDATION CONTRACTORS: LATA Environmental Services of Kentucky (2010-present); Paducah Remediation Services-EM Remediation (2006-2010); Swift and Staley-EM Infrastructure Contractor (2005-present); Bechtel Jacobs Company (1998-2006); Lockheed Martin Energy Systems (1995-1998); Martin Marietta Energy Systems(1988**-1995).

* Note: Rights and liabilities pertaining to USEC are governed by the USEC Privatization Act (P.L. 104-134, April 26, 1996). This includes regulatory oversight by the Nuclear Regulatory Commission of that portion of the plant under USEC control.

** Note: In 1988, DOE began its environmental remediation program.

State: Texas **Location:** Amarillo
Time Period: 1951-present
Facility Type: Department of Energy

Facility Description: In the 1950s, the Atomic Energy Commission began manufacturing high explosives for nuclear weapons at the [Pantex Plant](#) (Pantex). Today, Pantex continues to fabricate high explosives and assemble nuclear weapons. The principal operations at this site, however, are the dismantling of retired nuclear weapons and the maintenance of the nation's nuclear weapons stockpile. Pantex, which is operated by DOE's Office of Defense Programs, is the only facility in the United States that performs these operations.

Throughout the course of its operations, the potential for beryllium exposure existed at this site, due to beryllium use, residual contamination, and decontamination activities.

CONTRACTORS: BWXT Pantex (2001-present); Mason & Hanger-Silas Mason(1956-2000); Proctor & Gamble (1951-1956)

246 - Peek Street Facility**

Also Known As: Knolls Atomic Power Laboratory
Also Known As: Knolls Atomic Power Lab of General Electric Co.
State: New York **Location:** Schenectady
Time Period: 1947-1954
Facility Type: Department of Energy

Facility Description: A note in the file for the Sacandaga facility indicates that Peek Street was a predecessor to the Knolls Atomic Power Laboratory.

Throughout the course of its operations, the potential for beryllium exposure existed at this site, due to beryllium use, residual contamination, and decontamination activities.

**Consistent with the Act, coverage is limited to activities not performed under the responsibility of the Naval Nuclear Propulsion program.

247 - Penn Salt Co.

Also Known As: Pennsylvania Salt Co.
State: Pennsylvania **Location:** Philadelphia/Wyndmoor
Time Period: 1953-1956
Facility Type: Atomic Weapons Employer

Facility Description: Pennsylvania Salt experimented with samples of fluoride containing byproducts from AEC operations to determine if they could be used for hydrogen fluoride production or to extract uranium from the material. Penn Salt was licensed to receive scrap from AEC operations.

248 - Philco-Ford Corporation

Also Known As: Ford Aeronutronic
State: California **Location:** Newport Beach
Time Period: 1967-1972
Facility Type: Beryllium Vendor

Facility Description: The Aeronutronic Division of the Philco-Ford Corporation engaged in research on beryllium manufacturing techniques for the AEC between 1967 and 1972. The overriding goal of the program was to demonstrate the feasibility of shear spinning technology for beryllium production. The production process involved drilling and grinding of beryllium cones.

249 - Pinellas Plant

State: Florida **Location:** Clearwater
Time Period: 1957-1997
Facility Type: Department of Energy

Facility Description: The AEC purchased the Pinellas Plant in 1957 from General Electric. The plant produced precisely-timed neutron generators used to initiate nuclear explosions. As older nuclear weapons were removed from the national stockpile, the accelerator-type neutron generators produced at Pinellas gradually replaced polonium-beryllium initiators manufactured at the Mound site. Pinellas also fabricated other weapons components including lightning-arrestor connectors, specialty capacitors, crystal resonators, magnetics, and optoelectronic devices.

In 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. The DOE completed cleanup of the site in December 1997.

Throughout the course of its operations, the potential for beryllium exposure existed at this site, due to beryllium use, residual contamination, and decontamination activities.

CONTRACTORS: Lockheed Martin Specialty Components, Inc.(1992-1997); General Electric Company (1957-1992)

250 - Piqua Organic Moderated Reactor

Also Known As: Piqua Nuclear Power Facility

Also Known As: PNPf

State: Ohio **Location:** Piqua

Time Period: 1963-1969

Facility Type: Department of Energy

Facility Description: From 1963 to 1966, the Piqua Nuclear Power Facility was operated as a demonstration project by the City of Piqua. The facility contained a 45.5-megawatt (thermal) organically cooled and moderated reactor. In 1966, the AEC discontinued facility operations and terminated its contract with the city. The AEC dismantled and decommissioned the reactor between 1967 and 1969. The reactor fuel coolant and most of the radioactive materials were removed from the site.

251 - Pleasanton Tool and Manufacturing

Also Known As: Thomas Tool & Die

State: California **Location:** Pleasanton

Time Period: 1989-2002

Facility Type: Beryllium Vendor

Facility Description: Pleasanton Tool provides machine shop services to Sandia National Laboratory, California.

252 - Podbelniac Corp.

Also Known As: Capitol Associates
State: Illinois **Location:** Chicago
Time Period: 1957
Facility Type: Atomic Weapons Employer

Facility Description: In 1957, National Lead Company of Ohio (Fernald) used equipment at the Podbeliniac Corp. to conduct an extraction experiment using uranium in solution. NLO later traveled to the site to oversee the decontamination of equipment used in the experiment.

253 - Poltech Precision

State: California **Location:** Fremont
Time Period: 1999
Facility Type: Beryllium Vendor

Facility Description: Poltech Precision did machining work for Sandia National Laboratory, California.

254 - Portsmouth Gaseous Diffusion Plant

State: Ohio **Location:** Piketon
Time Period: 1952 - 7/28/98; 7/29/98 - present (Remediation); 5/2001 - present (cold standby)
Facility Type: Department of Energy

Facility Description: The U.S. began construction of Portsmouth in 1952 in order to expand the nation's gaseous diffusion program. The gaseous diffusion plants already operating in Oak Ridge, TN and Paducah, KY were not able to fulfill the nation's need for highly enriched and low-enriched uranium. Portsmouth was used for isotope separation. Beginning in 1954, Portsmouth produced highly enriched uranium to support nuclear weapons production and, later, for use by submarine, research, and test reactors. The high-enrichment portion of the diffusion cascade was shut down in 1991.

On July 1, 1993, the [United States Enrichment Corporation \(USEC\)*](#), a government-owned corporation formed under the Energy Policy Act of 1992, assumed control of the plant's production activities. USEC, which was fully privatized in 1998, continued to produce enriched uranium for commercial use at this location until May 11, 2001 when production ceased based on a USEC business decision. USEC currently maintains the Portsmouth plant in a cold standby mode, under a contract with the Department of Energy. The

Department of Energy maintains responsibility for addressing the environmental legacy left by historic plant operations. It should also be noted that the area currently under control of DOE's Office of Environmental Management excludes that area of the plant which is leased to USEC.

Throughout the course of its operations, the potential for beryllium exposure existed at this site.

CONTRACTORS: USEC*(2001-present)(cold standby); Los Alamos Technical Associates and Parallax Portsmouth (LATA/LPP) (June 27, 2005 – September 30, 2009) (remediation); Theta Pro2Serve Management Company (TPMC) (June 27, 2005 – September 30, 2009) (remediation); Bechtel Jacobs company LLC (1998-June 27, 2005)(remediation); Lockheed Martin Energy Systems, Inc. (1995-1998); Martin Marietta Energy Systems (1986-1995); Goodyear Atomic Corporation (1954-1986)

CONTRACTOR for design, construction and operation of the Depleted Uranium Hexafluoride Conversion Project: Uranium Disposition Services (August 29, 2002 – Present)

*Note: Rights and liabilities pertaining to USEC are governed by the USEC Privatization Act (P.L. 104-134, April 26, 1996). This includes regulatory oversight by the Nuclear Regulatory Commission of that portion of the plant under USEC control.

255 - Precision Extrusion Co.

State: Illinois **Location:** Bensenville
Time Period: 1949-1950; 1956-1959
Facility Type: Atomic Weapons Employer

Facility Description: Precision Extrusion was involved in several projects for the Atomic Energy Commission and Argonne National Laboratory. From 1949 to 1950, it extruded experimental fuel channel tubes from aluminum and aluminum-lithium alloys. During 1956 through 1959, Precision Extrusion performed several uranium extrusion projects on a small-scale basis.

256 - Princeton Plasma Physics Laboratory

State: New Jersey **Location:** Princeton

Time Period: 1951-present
Facility Type: Department of Energy

Facility Description: In 1951, the Atomic Energy Commission (AEC), a predecessor agency of the Department of Energy (DOE), began operating the Princeton Plasma Physics Laboratory (PPPL) on Site C and Site D of the James Forrestal Campus. This property is owned by Princeton University. Research at PPPL began with construction of the Model-C Stellerator, which was later converted to a pulse-operated device. Today, this laboratory continues to conduct research on nuclear fusion and development of nonweapons applications of this technology.

CONTRACTOR: Princeton University (1951-present)

257 - Project Chariot Site

State: Alaska **Location:** Cape Thompson
Time Period: 1962; 1993 (remediation)
Facility Type: Department of Energy

Facility Description: Project Chariot was part of the U.S. Atomic Energy Commission's Plowshare Program established to test peaceful uses of nuclear explosions. The objective of Project Chariot was to create a deep water harbor for the eventual shipment of coal, oil, and other natural resources thought to exist along this section of the Alaskan coast. In 1962, the U.S. Geologic Survey (USGS) conducted a study to determine the dispersal of radioactive products from a buried nuclear explosion. Later in 1962, before any nuclear explosives were detonated, Project Chariot was canceled. After this cancellation, the USGS excavated and buried the soil contaminated from its study. In 1993, the Department of Energy removed the contaminated soil and shipped it offsite for disposal.

258 - Project Faultless Nuclear Explosion Site

State: Nevada **Location:** Central Nevada Test Site
Time Period: 1967-1974
Facility Type: Department of Energy

Facility Description: Project Faultless was an underground nuclear test explosion conducted at the Central Nevada Test Site, which was part of a program designed to improve the United States' ability to detect, identify,

and locate underground nuclear explosions. The Faultless test was conducted to determine the suitability of the area for additional seismic testing. Non-nuclear experiments designed to determine the behavior of seismic waves were also conducted in the vicinity.

Drilling for this project began July 1967; the operation period began on November 27, 1967. The shot was fired on January 19, 1968. On December 9, 1979, the site was placed in caretaker status and demobilization and restoration work was conducted during fiscal 1974.

259 - Project Gasbuggy Nuclear Explosion Site

State: New Mexico **Location:** Farmington

Time Period: 1967-1973; 1978 ; 1992-present (remediation)

Facility Type: Department of Energy

Facility Description: The Project Gasbuggy site was the location of one of the nuclear test explosions conducted as part of the AEC's Plowshare program that was initiated in 1957 to develop peaceful (industrial and scientific) applications for nuclear explosives. Drilling for this operation began on February 11, 1967. On December 10, 1967, a 29 kiloton nuclear yield device was detonated in an underground shaft in natural gas and shale deposits at the Gasbuggy site. The test was conducted to determine whether nuclear explosives would stimulate the release of natural gas not recoverable by conventional methods. The operation ended in 1973 and the site was on standby until cleanup began in August 1978. A second shot scheduled for this site, named "Coach" was canceled due to the fact that the Gasbuggy shot resulted in a venting to the atmosphere.

260 - Project Gnome Nuclear Explosion Site

Also Known As: Gnome

State: New Mexico **Location:** Carlsbad

Time Period: 1960-1962

Facility Type: Department of Energy

Facility Description: The Project Gnome Test site was the location of one of the nuclear test explosions conducted as part of the part of the AEC's Plowshare program, which was initiated in 1957 to develop peaceful (industrial and scientific) applications for nuclear explosives. Shaft excavation began July 1, 1960. In December 10, 1961, Shot Gnome, a 3

kiloton yield nuclear device, was detonated in an underground shaft to identify the effects and products of an underground nuclear explosion in a salt medium. The shot vented some radioactivity into the atmosphere. Reentry activities were completed in June 1962.

261 - Project Rio Blanco Nuclear Explosion Site

Also Known As: CONOCO

Also Known As: CER Geonuclear Corp.

State: Colorado **Location:** Rifle

Time Period: 1973-1976

Facility Type: Department of Energy

Facility Description: The Rio Blanco site was the location of one of the nuclear tests conducted as part of the AEC's Plowshare program that was initiated in 1957 to develop peaceful (industrial and scientific) applications for nuclear explosives. The operational period began May 2, 1973. On May 17, 1973, three 33 kiloton yield nuclear devices were detonated in a deep well in a test designed to increase natural gas production from low-permeability sandstone. These explosions, known as the Rio Blanco shot, marked the last nuclear test explosions of the Plowshare program. The operation ended in June 1976. The Rio Blanco site was plugged and abandoned in 1976 and returned to the owner in March 1978.

262 - Project Rulison Nuclear Explosion Site

State: Colorado **Location:** Grand Valley

Time Period: 1969-1971; 1972-1978 (remediation)

Facility Type: Department of Energy

Facility Description: The Project Rulison site was the location of one of the nuclear test explosions conducted as part of the AEC's Plowshare program, which was initiated in 1957 to develop peaceful (industrial and scientific) applications for nuclear explosives. Drilling began in May 1968. On September 10, 1969, a forty kiloton yield nuclear device was detonated deep underground in a sandstone formation. The test was designed to increase natural gas production from low-permeability sandstone. Drillback operations began in April 1970 and the rubble chimney was reached on July 28, 1970. Preparation for production flaring continued through August 1970 and included several short flaring tests during August. The production flaring operation began on October 4, 1970. It included for different flaring periods and ended on April 23, 1971. The Rulison site was placed on standby status

in May 1971 until June 1972 when cleanup operations were initiated. The site was returned to its owner in March 1978.

263 - Project Shoal Nuclear Explosion Site

State: Nevada **Location:** Fallon

Time Period: 1962-1964

Facility Type: Department of Energy

Facility Description: Project Shoal was an underground nuclear test explosion which was part of a program designed to improve the United States' ability to detect, identify, and locate underground nuclear explosions. The Shoal test was conducted to determine the behavior and characteristics of seismic signals generated by nuclear explosions in specific geological formations and to differentiate them from seismic signals generated by earthquakes.

Construction for this shot began in late 1962. The shot was fired on October 10, 1963. Post-shot drilling began October 28, 1963; drilling and sampling of one vertical bore hole was completed on December 20, 1963. Reopening and sampling the USBM#1 bore hole was completed on January 15, 1964. Site deactivation of the Shoal Project began on October 28, 1963 and rollup was completed by January 31, 1964.

264 - Puerto Rico Nuclear Center

State: Puerto Rico **Location:** Mayaguez

Time Period: 1957-1976; 1987 (Remediation)

Facility Type: Department of Energy

Facility Description: The Puerto Rico Nuclear Center (also known as the Center for Energy and Environment Research) was established in 1957 as a nuclear training and research institution. The facility included a one megawatt MTR research reactor, which became operational in 1960. During the next ten years, the AEC supported training and research activities at an annual level of approximately \$2 million. The MTR was shut down in 1971 and replaced a two megawatt TRIGA research reactor. Except for brief periods of time, TRIGA was never operated at power levels in excess of 1.2 megawatts.

In 1976, the facility was renamed the Center for Energy and Environmental

Research (CEER) and the mission was broadened to include research, development and training for both nuclear and non-nuclear energy technologies. The programs were transferred to the University of Puerto Rico at that time.

The TRIAGA reactor was shut down on September 30, 1976 and a program for decommissioning and removal of the reactor was initiated.

CONTRACTOR: University of Puerto Rico (1957-1976) , BNI(1987), Cleveland Wrecking Caribe, Inc. (1987).

265 - Purdue University

Also Known As: Chemistry Building

Also Known As: Locomotive Lab

State: Indiana **Location:** Lafayette

Time Period: 1942-1946

Facility Type: Atomic Weapons Employer

Facility Description: Purdue was involved in nuclear physics research during the Manhattan Project.

266 - Quality Hardware and Machine Co.

Also Known As: Ravenswood Venture

Also Known As: Marden Manufacturing

State: Illinois **Location:** Chicago

Time Period: 1944-1945

Facility Type: Atomic Weapons Employer

Facility Description: In 1944, Quality Hardware had a contract to support the University of Chicago. The company canned experimental unbonded uranium slugs for Hanford and may have canned all of the slugs used in the Hanford production reactors during World War II.

267 - R. Krasburg and Sons Manufacturing Co.

State: Illinois **Location:** Chicago

Time Period: 1944

Facility Type: Atomic Weapons Employer

Facility Description: In 1944, R. Krasberg entered into a subcontract with the University of Chicago for services and supplies for the Metallurgical Laboratory. The subcontract required Krasberg to provide necessary personnel, facilities and equipment to produce special machining of parts for special equipment, tools, jigs, fixtures, etc., from materials furnished by the University. It is unclear from the documentation whether Krasberg handled any radioactive materials as part of its work.

268 - R. W. Leblond Machine Tool Co.

State: Ohio **Location:** Cincinnati

Time Period: 1961

Facility Type: Atomic Weapons Employer

Facility Description: National Lead Company of Ohio (Fernald) contracted with Leblond Machine for the purchase of a rapid boring machine. In 1961, acceptance tests, using 17 tons of natural uranium, were conducted at Leblond Machine.

269 - Radium Chemical Co.

Also Known As: Joseph J. Kelly

State: New York **Location:** New York

Time Period: AWE 1943-1950; Residual Radiation 1951-1994

Facility Type: Atomic Weapons Employer Beryllium Vendor

Facility Description: Beginning in 1943, the Radium Chemical Co. supplied most of the radium required for the Manhattan Engineer District. Combinations of material supplied and/or mixed by the Radium Chemical Company included radium bromide and radium bromide mixed with powdered beryllium. Brass was also used.

During the period of residual contamination, as designated by the National Institute for Occupational Safety and Health and as noted in the dates above, employees of subsequent owners and operators of this facility are also covered under the Energy Employees Occupational Illness Compensation Program Act.

270 - Rare Earths/W.R. Grace

State: New Jersey **Location:** Wayne

Time Period: AWE 1950-1960; Residual Radiation 1961-1984; 1988-2001;
DOE 1985 -1987 (remediation)

Facility Type: Atomic Weapons Employer Department of Energy

Facility Description: Rare Earths extracted thorium from monazite sands from 1950-1960 under various contracts with the AEC. The AEC needed the thorium for its weapons program. Although the processing of monazite sands continued at Rare Earths through 1971, it was no longer performed under contract for the AEC, but rather was for commercial purposes.

Remediation activities were conducted from 1985-1987 by Thermo Analytical/Eberline and Bechtel National Inc. (BNI) under the BNI umbrella contract as part of the Formerly Utilized Site Remediation Action Program (FUSRAP).

During the period of residual contamination, as designated by the National Institute for Occupational Safety and Health and as noted in the dates above, employees of subsequent owners and operators of this facility are also covered under the Energy Employees Occupational Illness Compensation Program Act.

271 - Reed Rolled Thread Co.

State: Massachusetts **Location:** Worcester

Time Period: AWE 1955; Residual Radiation 1956-March 1, 2011

Facility Type: Atomic Weapons Employer

Facility Description: In 1955, Reed Rolled Thread and Die was scheduled to thread roll a test lot of 1500 Savannah River plant slugs for National Lead Company of Ohio (Fernald).

During the period of residual contamination, as designated by the National Institute for Occupational Safety and Health and as noted in the dates above, employees of subsequent owners and operators of this facility are also covered under the Energy Employees Occupational Illness Compensation Program Act.

272 - Rensselaer Polytechnic Institute

State: New York **Location:** Troy

Time Period: 1951-1952; 1963

Facility Type: Beryllium Vendor

Facility Description: Under an AEC contract in the early 1950s, researchers at the Rensselaer Polytechnic Institute investigated methods for improving the ductility of beryllium by coating the material with copper. The Brush Beryllium Company supplied the beryllium powder for the project. RPI also borrowed 400 lbs. of beryllium for AEC-sponsored research from Oak Ridge National Laboratory in 1963.

Scientists at RPI conducted a number of AEC-sponsored research studies in the 1950s and 1960s using enriched uranium obtained from commercial sources. Available records provide no evidence of a link between RPI research and the AEC weapons program.

273 - Revere Copper and Brass

State: Michigan **Location:** Detroit

Time Period: BE 1946-1950; AWE 1943-1954; Residual Radiation 1955-1984

Facility Type: Atomic Weapons Employer Beryllium Vendor

Facility Description: Revere Copper and Brass extruded uranium rods at its Detroit plant starting in 1943 under contracts XPG-773-1/2 and RPG-704-1/2 for the Atomic Energy Commission (AEC). Additionally, in October 1964, Revere Copper and Brass produced one thorium bar, which was divided up and sent to a number of AEC facilities.

Revere also extruded beryllium ingots and billets into rods at its Detroit plant between 1946 and 1950. Revere had a contract with the AEC for beryllium work, but not with the MED. Revere also worked with beryllium alloys. Some of the beryllium work was done on parts or components for the Materials Testing reactor.

During the period of residual contamination, as designated by the National Institute for Occupational Safety and Health and as noted in the dates above, employees of subsequent owners and operators of this facility are also covered under the Energy Employees Occupational Illness Compensation Program Act.

274 - Robin Materials

State: California **Location:** Mountain View

Time Period: 1985-1997

Facility Type: Beryllium Vendor

Facility Description: Robin Materials provided metal materials to Sandia National Laboratory, California. This material included beryllium-copper.

275 - Rocky Flats Plant

State: Colorado **Location:** Golden

Time Period: 1951-2006

Facility Type: Department of Energy

Facility Description: [Rocky Flats](#) was built in 1951 as a plutonium and uranium component manufacturing center. From 1952 to 1989, the site's primary mission was to fabricate the "pit" that contains the heavy metals and serves as the trigger device for nuclear warheads. Rocky Flats was also responsible for recycling plutonium from scrap and plutonium retrieved from retired nuclear warheads. The final products of this recycling included components and assemblies manufactured from uranium, plutonium, beryllium, stainless steel, and other metals. Production activities included metalworking, component fabrication and assembly, chemical recovery and purification of plutonium, and associated quality control functions. Research and development in the fields of chemistry, physics, metallurgy, materials technology, nuclear safety, and mechanical engineering were also conducted at the site.

In 1989, many of the site's nuclear component production functions were suspended after a safety review temporarily shut down plutonium operations. Following an extensive review, which included considerable independent oversight, a few buildings were authorized by the Secretary of Energy to resume limited plutonium operations: to stabilize plutonium oxide and repackage plutonium for safe storage. In 1989, as a result of the environmental contamination caused by production activities at the site, Rocky Flats was placed on the Superfund National Priorities List. In January 1992, nuclear component production was terminated and the site's primary mission changed from nuclear weapons production to environmental cleanup and restoration.

Throughout the course of its operations, the potential for beryllium exposure existed at this site, due to beryllium use, residual contamination, and decontamination activities.

CONTRACTORS: Kaiser-Hill Company (1995-present); EG&G Rocky Flats, Inc. (1989-1995); Rockwell International (1975-1989); Dow Chemical (1951-1975)

276 - Roger Iron Co.

State: Missouri **Location:** Joplin

Time Period: 1956

Facility Type: Atomic Weapons Employer

Facility Description: The Roger Iron Company conducted a test operation involving crushing of a dolomite c-liner for the AEC. The liner had trace amounts of uranium and magnesium fluoride. The test involved four individuals, including two employees of National Lead of Ohio (Fernald). NLO also monitored the air during the time of the test.

277 - Ron Witherspoon, Inc.

Also Known As: RWI

State: California **Location:** Campbell

Time Period: 1990-1995

Facility Type: Beryllium Vendor

Facility Description: Ron Witherspoon, Inc. produced beryllium springs for Sandia National Laboratory, California.

278 - S-50 Oak Ridge Thermal Diffusion Plant

State: Tennessee **Location:** Oak Ridge

Time Period: 1944-1951

Facility Type: Department of Energy

Facility Description: The S-50 Plant at Oak Ridge was constructed in 1944 to enrich uranium feed material for the Y-12 electromagnetic facility using a liquid thermal diffusion process. The process was originally developed at the

Naval Research Laboratory in Washington, DC, and tested on a pilot plant level at the Philadelphia Naval Shipyard. Located near the K-25 gaseous diffusion facility, the S-50 Plant operated for a limited period during 1944-1945. The plant was closed in September 1945 because the thermal diffusion process was not as efficient as the gaseous diffusion.

The S-50 plant was reopened in 1946 as part of the joint Air Force/AEC project to investigate the possibility of developing a nuclear-powered airplane. This project, known as Nuclear Energy for the Propulsion of Aircraft (NEPA), was housed at S-50 and the contractor was the Fairchild Engine and Aircraft Corporation. Fairchild's NEPA Division at S-50 conducted a number of experiments involving beryllium powder during the time period 1946-1951.

279 - Sacandaga Facility**

State: New York **Location:** Glenville
Time Period: 1947-1953
Facility Type: Department of Energy

Facility Description: The Sacandaga Facility was operated by the General Electric Company Knolls Atomic Power Laboratory for the AEC from 1947 to 1953. AEC-sponsored research at the facility involved physics studies and sodium technology development in support of breeder reactor design. Work also involved the use of beryllium.

**Consistent with the Act, coverage is limited to activities not performed under the responsibility of the Naval Nuclear Propulsion Program.

280 - Salmon Nuclear Explosion Site

State: Mississippi **Location:** Hattiesburg
Time Period: 1964-1972
Facility Type: Department of Energy

Facility Description: The Salmon Test Site was the location for two nuclear and two methane-oxygen gas explosion tests conducted deep underground in the Tatum Salt Dome. The tests were part of a program designed to detect, identify, and locate underground nuclear explosions

Drilling for the "Salmon" event began in April 1963. The Salmon test shot was fired on October 22, 1964. Post-shot activities were completed by June 30, 1965.

After the Salmon post-shot activities were completed, the Sterling shot was detonated in the Salmon cavity on December 3, 1966. In March 1968, Sterling cavity reentry drilling, surveying, and coring was begun. The facilities were shut down and the site was placed on standby status on April 12, 1968.

In November 1968, the cavity was prepared for the non-nuclear experiment called "Diode Tube." The shot was fired on February 1, 1969; post-shot activities were completed and the operation ended in June 1969.

Another non-nuclear event, called "Humid Water" took place in 1970. The cavity was prepared in February 1970 and the shot was fired on April 19, 1970. The site was decommissioned on June 29, 1972.

281 - SAM Laboratories, Columbia University

Also Known As: SAM Laboratories

Also Known As: Special Alloyed Materials Laboratories

Also Known As: Substitute Alloy Materials Laboratories

State: New York **Location:** New York City

Time Period: 1942-1947

Facility Type: Department of Energy

Facility Description: Columbia University was already researching some of the problems involved in determining whether it was feasible for the United States to build a nuclear weapon prior to the establishment of the Manhattan Engineer District (MED). Once the MED was formed in 1942, Columbia became part of the effort to build the first atomic weapons. At that time, the Columbia effort was reorganized and designated as SAM (Special Alloy Materials or Substitute Alloy Materials) Laboratories. Buildings used as part of the SAM laboratories at Columbia included Pupin, Schermerhorn, Prentiss, Havemeyer and Nash. Work at SAM Laboratories ended in 1947 with the establishment of the AEC. Subsequent work at Columbia University focused on health effects and basic nuclear physics that were not directly related to the production of nuclear weapons.

282 - Sandia Laboratory, Salton Sea Base

State: California **Location:** Imperial County

Time Period: 1946-1961

Facility Type: Department of Energy

Facility Description: The Salton Sea Test Base was used for a variety of activities such as military training and weapons research, development, testing, and evaluation. The base was used by numerous tenant and non-tenant military commands as well as by research divisions of government agencies and private companies working on government projects. The site was established in 1942 as an operational base for seaplanes during World War II. Later, the Atomic Energy Commission renovated and expanded the base for aerodynamic testing of weapons-delivery vehicles. From 1946 to 1961, Sandia National Laboratory operated a testing program at the site. The remoteness of the area was ideal for training and other operations. It is unclear from the documentation whether this testing work involved the use of radioactive materials.

The site (now closed) is being remediated by the Corps of Engineers under the auspices of the Department of the Navy.

283 - Sandia National Laboratories

Also Known As: LANL Z-Division

State: New Mexico **Location:** Albuquerque

Time Period: 1945-present

Facility Type: Department of Energy

Facility Description: [Sandia National Laboratory](#) originated in 1945 as the Z Division of Los Alamos, the engineering arm of the US nuclear weapons development program. Formally established as Sandia National Laboratories in 1949, it was given the mission to design the non-nuclear components for nuclear weapons. Since 1953, areas have been used to test nuclear and non-nuclear weapons components. From 1946-1957, Sandia also housed a weapons assembly line and from 1963-1971, an onsite liquid waste disposal system for liquid radioactive discharges from the Sandia Experimental Reactor Facility.

Throughout the course of its operations, the potential for beryllium exposure existed at this site, due to beryllium use, residual contamination, and decontamination activities.

CONTRACTORS: Lockheed Martin (1995-present); Martin Marietta (1993-1995); AT&T (1949-1993); University of California (1945-1948).

284 - Sandia National Laboratories--Livermore

State: California **Location:** Livermore

Time Period: 1956-present

Facility Type: Department of Energy

Facility Description: [Sandia National Laboratory-Livermore](#) was established in 1956 to conduct research and development in the interest of national security. The principal emphasis was on development and engineering of the parts of nuclear weapons outside the warhead physics package. The site was selected for its proximity to Lawrence Livermore National Laboratory to facilitate a close working relationship between the two laboratories.

Throughout the course of its operations, the potential for beryllium exposure existed at this site, due to beryllium use, residual contamination, and decontamination activities.

CONTRACTORS: Lockheed Martin (1995-present); Martin Marietta (1993-1995); AT&T (1951-1993)

285 - Savannah River Site

State: South Carolina **Location:** Aiken

Time Period: 1950-present

Facility Type: Department of Energy

Facility Description: From 1950 until the late 1980s, the [Savannah River Site](#) conducted multiple operations that played a vital role in the U.S. nuclear weapons complex. Of greatest importance were the production of plutonium and tritium. Many facilities were built at SRS to support these production efforts and to address their resulting environmental impacts. They include five nuclear reactors, two chemical separation plants (also known as canyons), a nuclear fuel and target fabrication facility, a heavy water plant, and waste management facilities. In addition, SRS is the location of the Savannah River Technology Center and the Savannah River Ecology Laboratory.

SRS remains a key Department of Energy facility with an important national security mission of maintaining the nation's nuclear weapons stockpile and ensuring future production capabilities.

Throughout the course of its operations, the potential for beryllium exposure existed at this site, due to beryllium use, residual contamination, and decontamination activities.

CONTRACTORS: Westinghouse Savannah River Company (1989-present); E. I. Du Pont de Nemours and Company (1950-1989)

286 - Sciaky Brothers, Inc.

State: Illinois **Location:** Chicago

Time Period: 1953

Facility Type: Atomic Weapons Employer

Facility Description: In 1953, Argonne National Laboratory suggested that Sciaky Brothers be used to perform a stitch welding operation for a uranium cord, zirconium clad specimen EBR irradiation. The documentation does not indicate whether this work actually took place. The company may also have done electron beam melting or welding of uranium metal on an experimental basis.

287 - Seaway Industrial Park

Also Known As: Charles St. Plant

State: New York **Location:** Tonawanda

Time Period: AWE 1974 ; Residual Radiation 1975-March 1, 2011

Facility Type: Atomic Weapons Employer

Facility Description: In 1974, the Ashland Oil Company constructed bermed areas on the Ashland #1 property to hold two petroleum tanks. Some of the soil removed during construction was disposed of in three areas of the Seaway Industrial Park landfill. Subsequent investigations determined that the soil from the Ashland site contained radioactive contaminants exceeding Department of Energy (DOE) guidelines. This soil came from an area used for disposal of radioactive residues from the nearby Linde Air Products site. This company processed uranium for the Atomic Energy Commission and the Manhattan Engineer District, predecessor agencies of the Department of

the Energy (DOE).

Although the Seaway Industrial Park was designated as part of the Formerly Utilized Site Remediation Action Program (FUSRAP) in 1984, no work under this program was performed prior to its transfer to the Army Corps of Engineers.

During the period of residual contamination, as designated by the National Institute for Occupational Safety and Health and as noted in the dates above, employees of subsequent owners and operators of this facility are also covered under the Energy Employees Occupational Illness Compensation Program Act.

288 - Separations Process Research Unit (at Knolls Lab.)**

State: New York **Location:** Schenectady
Time Period: 1950-1965; Remediation 2007-2011
Facility Type: Department of Energy

Facility Description: In 1950, the Atomic Energy Commission (AEC) constructed the Separations Process Research Unit (SPRU) as a pilot plant for developing and testing two chemical processes to extract both uranium and plutonium from irradiated fuel. This facility was operated by the Knolls Atomic Power Laboratory. Research and development was completed at SPRU in 1953 and the facility was closed. The technology developed at SPRU was transferred to the Hanford site. In March of 1965 the site was taken over by the Naval Nuclear Propulsion Program.

**Consistent with the Act, coverage is limited to activities not performed under the responsibility of the Naval Nuclear Propulsion program.

Contractor: (Remediation) Accelerated Remediation Company, LLC (2007-2010), Washington Group International (2008-2010).

289 - Seymour Specialty Wire

Also Known As: Reactive Metals Inc.
Also Known As: National Distillers and Chemical Co.
Also Known As: Bridgeport Brass Co.
State: Connecticut **Location:** Seymour

Time Period: AWE 1962-1964; Residual Radiation 1965-1991; DOE 1992-1993 (remediation)

Facility Type: Atomic Weapons Employer Department of Energy

Facility Description: From 1962 to 1964, the Bridgeport Brass Company performed contract work at the Seymour site for the Atomic Energy Commission (AEC). This work involved developing an extrusion process for natural uranium metal. After 1964, the work was consolidated at the Reactive Metals site in Ohio. Operation of the Seymour site was later taken over by employees and the facility eventually became the Seymour Specialty Wire Company.

Although this site was designated as part of the Formerly Utilized Site Remediation Action Program (FUSRAP) in 1985, remediation only took place during 1992 and 1993. This work was performed under the Bechtel National Inc. umbrella contract or DOE site environmental remediation.

During the period of residual contamination, as designated by the National Institute for Occupational Safety and Health and as noted in the dates above, employees of subsequent owners and operators of this facility are also covered under the Energy Employees Occupational Illness Compensation Program Act.

290 - Shattuck Chemical

Also Known As: Dawn Mining Corp.

Also Known As: Denn Mining Corp

State: Colorado **Location:** Denver

Time Period: AWE 1950s; 1963; Residual Radiation 1960-1962; 1964-2006

Facility Type: Atomic Weapons Employer

Facility Description: Shattuck Chemical prepared uranium compounds and uranium oxide in the late 1950s. (This was probably done under a Source Materials License issued by the Atomic Energy Commission.) Shattuck also processed refined uranium and produced natural uranium oxides on a commercial basis for the private market, and in 1963, supplied a small quantity of uranium to the Rocky Flats plant.

During the period of residual contamination, as designated by the National Institute for Occupational Safety and Health and as noted in the dates above, employees of subsequent owners and operators of this facility are also covered under the Energy Employees Occupational Illness Compensation

Program Act.

291 - Shippingport Atomic Power Plant **

Also Known As: Shippingport

State: Pennsylvania **Location:** Shippingport

Time Period: 1984-1995 (remediation)

Facility Type: Department of Energy

Facility Description: Shippingport Atomic Power Station, located in Shippingport, Pennsylvania, was one of the first large-scale nuclear power plants in the world.

**Consistent with the Act, coverage is limited to activities not performed under the responsibility of the Naval Nuclear Propulsion program.

292 - Shpack Landfill

Also Known As: Metal and Controls Nuclear Corp.

Also Known As: Texas Instruments

Also Known As: M & C Nuclear

State: Massachusetts **Location:** Norton

Time Period: AWE 1960-1965; Residual Radiation 1966-March 1, 2011

Facility Type: Atomic Weapons Employer

Facility Description: The Shpack Landfill began operating as a private landfill in the early 1960s and received both industrial and domestic wastes. The landfill was closed in 1965 under court order. In 1978, a concerned citizen who had detected elevated radiation levels at the site contacted the Nuclear Regulatory Commission. The Commission investigated the site and confirmed the presence of radioactivity in excess of natural background levels for the area. Exactly when these contaminants were deposited at the site is not known. However, the Nuclear Regulatory Commission determined that the Texas Instruments plant (see Metals and Controls Corp.) of Attleboro had used the landfill to dispose of trash and other materials. The Nuclear Regulatory Commission concluded that the contaminants probably resulted from this waste stream.

During the period of residual contamination, as designated by the National Institute for Occupational Safety and Health and as noted in the dates above,

employees of subsequent owners and operators of this facility are also covered under the Energy Employees Occupational Illness Compensation Program Act.

293 - Simonds Saw and Steel Co.

Also Known As: Simonds Saw and Steel Div., Guterl Special Steel Corp.

Also Known As: Allegheny-Ludlum Steel Corp.

Also Known As: Simonds Steel Division, Wallace-Murray Corporation

State: New York **Location:** Lockport

Time Period: AWE 1948-1957; Residual Radiation 1958-March 1, 2011

Facility Type: Atomic Weapons Employer

Facility Description: Simonds Saw and Steel rolled uranium billets into rods for the AEC as part of the multi-site process overseen by the New York Operations Office for the production of uranium metal for fabrication into slugs for fueling Hanford production reactors. Simonds also rolled thorium metal whose most likely use was irradiation in Hanford reactors for the weapons program. Simonds rolled between 25 million and 35 million pounds of uranium and between 30,000 to 40,000 pounds of thorium.

During the period of residual contamination, as designated by the National Institute for Occupational Safety and Health and as noted in the dates above, employees of subsequent owners and operators of this facility are also covered under the Energy Employees Occupational Illness Compensation Program Act.

294 - South Albuquerque Works

Also Known As: American Car and Foundry

Also Known As: ACF Industries, Inc.

State: New Mexico **Location:** Albuquerque

Time Period: 1951-1967

Facility Type: Department of Energy

Facility Description: The AEC owned the South Albuquerque Works from 1951-1967 and used it to produce weapons components. It was opened in anticipation of the 1952 closing of the Buffalo Works. American Car and Foundry was part of the Buffalo operation and also operated the South Albuquerque Works for the AEC.

CONTRACTOR: American Car and Foundry, Inc. (1951-1967)

295 - Southern Research Institute

Also Known As: Southern Research Institute

State: Alabama **Location:** Birmingham

Time Period: AWE 1955-1958; 1962; 1976; Res. Rad. 1959-1961; 1963-1975; 1977-March 1, 2011

Facility Type: Atomic Weapons Employer

Facility Description: The Southern Research Institute was involved in several AEC projects. During the period from November 10, 1955 through June 1, 1958, it was licensed (License #C-3417) to receive source material from National Lead Company of Ohio (Fernald) for research on the properties of uranium-liquid metal fuel elements. The Institute performed hot tensile tests on uranium metal and was authorized to receive 300 pounds of normal uranium from NLO. Records also indicate that it handled test quantities of radioactive metals for NLO in 1976. The file also contains a proposal to NLO to test uranium workability at elevated temperature, but does not indicate if the work was done.

During the period of residual contamination, as designated by the National Institute for Occupational Safety and Health and as noted in the dates above, employees of subsequent owners and operators of this facility are also covered under the Energy Employees Occupational Illness Compensation Program Act.

296 - Speedring Systems, Inc.

Also Known As: Axsys Technologies

Also Known As: Speedring Systems Inc.

State: Michigan **Location:** Detroit

Time Period: 1963; 1968; 1973-1975; 1992

Facility Type: Beryllium Vendor

Facility Description: Speedring machined beryllium-containing parts for Rocky Flats and Y-12. The Detroit Speedring office designation covers both of the locations to which the Detroit forwarding office sent work, including their locations in Warren, MI and Rochester Hills, MI. There is a separate

Speedring facility in Culman, Alabama.

297 - Speedring, Inc.

Also Known As: Axsys Technologies and General Dynamics Global Imaging Technologies

Also Known As: Speedring, Inc.

Also Known As: Speedring, Inc.

State: Alabama **Location:** Cullman

Time Period: 1971-September 17, 2012

Facility Type: Beryllium Vendor

Facility Description: Speedring has performed work using beryllium for Rocky Flats, Sandia National Laboratory, Idaho National Engineering Laboratory and Oak Ridge National Laboratory. There was another Speedring facility in Detroit, MI.

298 - Spencer Chemical Co., Jayhawks Works

State: Kansas **Location:** Pittsburg

Time Period: 1956-1961; Residual Radiation 1962-1964

Facility Type: Atomic Weapons Employer

Facility Description: The Spencer Chemical Company, Jayhawks Works, processed unirradiated uranium scrap for the AEC, recovering enriched uranium from it for use in the weapons complex. By May 12, 1961, Spencer Chemical had ceased operations and disposed of its nuclear materials.

299 - Sperry Products, Inc.

Also Known As: PCC Technical Industries

State: Connecticut **Location:** Danbury

Time Period: 1952-1953

Facility Type: Atomic Weapons Employer

Facility Description: In 1952 and 1953, Sperry developed processes for testing and examining uranium plates for the Sylvania Corp., a major AEC contractor.

300 - St. Louis Airport Storage Site (SLAPS)

Also Known As: Robertson Airport

Also Known As: Robertson Storage Area

State: Missouri **Location:** St. Louis

Time Period: January 3, 1947 -1973; 1984-1998

Facility Type: Department of Energy

Facility Description: The Manhattan Engineer District (MED) began utilizing the St. Louis Airport Storage Site (SLAPS) in 1946 as a place to store residues from the Mallinckrodt Chemical Works. The MED acquired title to the property on January 3, 1947. In 1973 the property was transferred back to the city of St. Louis. Then in 1984, through the Energy and Water Development Appropriations Act (Public Law 98-3060) the property was returned to the Department of Energy until 1997 when Congress transferred it to the U.S. Army Corps of Engineers.

Although the SLAPS site was designated as part of the Formerly Utilized Site Remediation Action Program (FUSRAP) in 1984, no work under this program was performed prior to its transfer to the Army Corps of Engineers.

During the period of residual contamination, as designated by the National Institute for Occupational Safety and Health and as noted in the dates above, employees of subsequent owners and operators of this facility are also covered under the Energy Employees Occupational Illness Compensation Program Act.

301 - Standard Oil Development Co. of NJ

Also Known As: Bayway, Pilot Plant

Also Known As: Exxon Research and Engineering at Linden

Also Known As: Exxon Chemical Company at Bayway

State: New Jersey **Location:** Linden; Bayway

Time Period: AWE 1942-1945; Residual Radiation 1946-1991

Facility Type: Atomic Weapons Employer

Facility Description: Standard Oil locations at both 1900 East Linden Avenue (Linden) and the property at 1400 Park Avenue (Bayway) performed a variety of tasks for the Manhattan Engineer District (MED) during World War II. The company was contracted to obtain materials for work being done by the Metallurgical Laboratories of the MED. It also conducted studies and performed development work to produce uranium metal through chemical reduction processes and to construct and operate a centrifuge pilot plant for

uranium separation.

The company continued to provide consulting and analytical services for the Atomic Energy Commission, but it is not believed that any radioactive materials were handled at either location after World War II (1945).

During the period of residual contamination, as designated by the National Institute for Occupational Safety and Health and as noted in the dates above, employees of subsequent owners and operators of this facility are also covered under the Energy Employees Occupational Illness Compensation Program Act.

302 - Stanford Linear Accelerator Center

State: California **Location:** Palo Alto

Time Period: 1962-present

Facility Type: Department of Energy

Facility Description: The [Stanford Linear Accelerator Center \(SLAC\)](#) is owned and operated by Stanford University under contract with the Department of Energy. The Stanford Linear Accelerator Center was established in 1962 as a research facility for high energy particle physics. The Center's four major experimental facilities are the Linear Accelerator, the Positron Electron Project Storage Ring, the Stanford Positron Electron Asymmetric Ring, and the Stanford Linear Accelerator Center Linear Collider.

CONTRACTOR: Stanford University (1962-present)

303 - Star Cutter Corp.

Also Known As: Hitachi Farmington Hills Technology Center, Inc.

State: Michigan **Location:** Farmington

Time Period: 1956

Facility Type: Atomic Weapons Employer

Facility Description: The Star Cutter Corporation manufactured machine tools. Records indicate that National Lead of Ohio (Fernald) conducted a one-time test of a Star Cutter drill to hollow uranium slugs.

304 - Staten Island Warehouse

Also Known As: Archer Daniels Midland Co.

State: New York **Location:** New York

Time Period: 1942

Facility Type: Atomic Weapons Employer

Facility Description: This warehouse was used for uranium ore storage from the Belgian Congo. From this warehouse, the ore was transported to various Manhattan Engineer District (MED) sites for long-term storage and/or processing. The ore was the property of the African Metals Corporation and the MED contractor purchased only the U3O8 content of the ore while African Metals retained ownership of the radium and precious metals in the ore.

305 - Stauffer Metals, Inc.

Also Known As: Stauffer-Tenescal Co.

Also Known As: Tenescal Co.

State: California **Location:** Richmond

Time Period: 1961

Facility Type: Atomic Weapons Employer

Facility Description: Stauffer performed electron beam melting tests on uranium metal for National Lead of Ohio (Fernald). The company had performed similar tests for Hanford.

306 - Stevens Institute of Technology

Also Known As: Stevens Institute of Technology

State: New Jersey **Location:** Hoboken

Time Period: 1959-1960

Facility Type: Beryllium Vendor

Facility Description: The Stevens Institute of Technology performed beryllium research and development for the AEC. Researchers at the school's Powder Metallurgy Laboratory experimented with slip casting production techniques as a replacement for the conventional vacuum-hot-pressed block process. Beryllium powder was the primary ingredient in the production process. The laboratory's working inventory during the course of the contract

included approximately 50 pounds of beryllium metal powder produced by the Brush Beryllium Company.

307 - Superior Steel Co.

Also Known As: Copper Weld Inc.

Also Known As: Lot and Block 102J210

State: Pennsylvania **Location:** Carnegie

Time Period: AWE 1952-1957; Residual Radiation 1958-March 1, 2011

Facility Type: Atomic Weapons Employer

Facility Description: Superior Steel produced uranium strip and rolled uranium slabs for use by the Savannah River Laboratory. In 1955, for example, they hot rolled twenty-five tons of uranium into strip.

During the period of residual contamination, as designated by the National Institute for Occupational Safety and Health and as noted in the dates above, employees of subsequent owners and operators of this facility are also covered under the Energy Employees Occupational Illness Compensation Program Act.

308 - Sutton, Steele and Steele Co.

State: Texas **Location:** Dallas

Time Period: 1951; 1959

Facility Type: Atomic Weapons Employer

Facility Description: In 1951, AEC and AEC contractor personnel conducted tests at Sutton, Steele, and Steele, Inc. which were aimed at devising means of recovering uranium from low grade wastes and residues. The tests were to determine the feasibility of separating fused dolomite from magnesium fluoride slag and uranium. In 1959, National Lead of Ohio (Fernald) personnel evaluated Sutton, Steele, and Steele's dry tabling equipment for the separation of normal uranium shot.

309 - Swenson Evaporator Co.

State: Illinois **Location:** Harvey

Time Period: 1951

Facility Type: Atomic Weapons Employer

Facility Description: Swenson Evaporator was scheduled to perform a raffinate spray drying test for National Lead Company of Ohio (NLO) on March 20, 1951. This test would have involved some radioactive residue. The drums containing the raffinate were shipped to Swenson by Mallinckrodt, but it is believed that they were not opened and the test not performed.

310 - Sylvania Corning Nuclear Corp. - Bayside Laboratories

Also Known As: Sylvania Electric Products, Inc

Also Known As: Metallurgical Laboratory

Also Known As: Sylvania Electric Company, Atomic Energy Division

Also Known As: Sylvania Bayside Laboratories

Also Known As: Sylcor

Also Known As: Sylvania Corning Nuclear Corp. - Bayside Laboratories

State: New York **Location:** Bayside

Time Period: 1947-1962

Facility Type: Atomic Weapons Employer Beryllium Vendor

Facility Description: The Metallurgical Laboratory of the Sylvania Electric Company investigated uranium and thorium powder metallurgy. It also produced powdered metal slugs, developed bonding techniques, and plated uranium slugs with nickel. The work with slugs included the conversion of uranium metal to uranium hydride using hydrogen. A February 1948 AEC Monthly Summary of Activities indicates that the Lab's "initial program will involve determining the physical properties and the health hazards of beryllium and uranium powders and the applications of powder metallurgy to these metals and their alloys." In 1948, the work required 315 pounds of raw beryllium metal. Beryllium was handled first in the regular metallurgical building and then, after the objections of the AEC medical division, in a special AEC metallurgical development laboratory.

311 - Sylvania Corning Nuclear Corp. - Hicksville Plant

Also Known As: General Telephone and Electronics Laboratories (GTE)

Also Known As: Sylcor

State: New York **Location:** Hicksville

Time Period: 1952-1966

Facility Type: Atomic Weapons Employer

Facility Description: Under Atomic Energy Commission (AEC) contracts, the facility was used for research and development with radioactive materials, principally uranium and thorium. It was also licensed by the AEC to fabricate reactor fuel elements for the AEC, for Sylvania use, for sale, and for research purposes.

312 - Tapemation

State: California **Location:** Scotts Valley

Time Period: 1990-1995

Facility Type: Beryllium Vendor

Facility Description: Tapemation is a machine shop that provided services to Sandia National Laboratory, California. Several small jobs involved the precision machining of beryllium-copper materials.

313 - Tech-Art, Inc.

State: Ohio **Location:** Milford

Time Period: 1952

Facility Type: Atomic Weapons Employer

Facility Description: In 1952, National Lead Company of Ohio (Fernald) used Tech-Art to grind inserts as part of a study of Firth Sterling HF carbide profile inserts in conjunction with the machining development program. Additional documentation shows that Tech-Art possessed a subcontract with NLO for "[m]achine shop operations on Government owned materials at prescribed hourly rates of pay."

314 - Tennessee Valley Authority

Also Known As: Uranium Recovery Pilot Plant and Laboratory

State: Alabama **Location:** Muscle Shoals

Time Period: 1951-1955

Facility Type: Atomic Weapons Employer

Facility Description: At its National Fertilizer Development Center, the TVA performed research and development on uranium recovery under formal agreement with the AEC. The work involved the extraction of uranium during the production of fertilizer from leached zone phosphate ore.

A laboratory and pilot plant were operated at the fertilizer plant, but little uranium (about 2.5 kilograms of uranium concentrate) was produced.

315 - Texas City Chemicals, Inc.

Also Known As: American Oil Co.

Also Known As: Borden, Inc.

Also Known As: Smith-Douglass

Also Known As: Amoco Chemical Company

State: Texas **Location:** Texas City

Time Period: AWE October 5, 1953 - September 1955; Residual Radiation October 1955-1977

Facility Type: Atomic Weapons Employer

Facility Description: Texas City Chemicals produced uranium by recovery of U3O8 from a phosphate fertilizer production plant. The AEC contracted with Texas City Chemicals for the recovery of uranium which was ultimately used in weapons production.

During the period of residual contamination, as designated by the National Institute for Occupational Safety and Health and as noted in the dates above, employees of subsequent owners and operators of this facility are also covered under the Energy Employees Occupational Illness Compensation Program Act.

316 - The Dayton Project

Also Known As: Runnymede Playhouse

Also Known As: Old Schoolhouse

Also Known As: Units I, III and IV

State: Ohio **Location:** Dayton and Oakwood

Time Period: DOE 1943-1950

Facility Type: Department of Energy

Facility Description: In 1943, the Manhattan Engineer District (MED) began the Dayton Project to investigate the chemistry and metallurgy of polonium. Because Monsanto Chemical Company was already working with polonium, it was chosen as contractor for the project.

In 1943, the MED-contracted work was performed at Monsanto's Nicholas Road location (Unit I). As the project expanded, it moved into an old

building belonging to the Dayton school district at 1601 West First Street, and by October 1944 all operations had been transferred to this location from Unit I. This site became known as Unit III. In early 1944 it became apparent that the space at Unit III was also inadequate, so the U.S. Army Corps of Engineers used a judicial proceeding to obtain ownership of a building known as the former Runnymede Playhouse in Oakwood and turned it over to Monsanto for its use on the Dayton Project. Monsanto operated a laboratory at this second location and referred to it as Unit IV. When project needs again increased beyond the combined capacity of Units III and IV, preparations were made to move the entire operation to the present-day Mound facility in Miamisburg, Ohio. Processing began at Mound in February 1949. By the end of 1950, after either decontamination or demolition, the AEC released its ownership interest in the properties back to the original owners.

Throughout the time period for this facility from 1943 through 1950, the potential for beryllium exposure existed at this site.

Contractors: Monsanto Chemical Company (1943-1950); R.G. Mattern (1950).

317 - The Mill at Moab Utah

State: Utah **Location:** Moab

Time Period: 2001-present

Facility Type: Department of Energy

Facility Description: Under the National Defense Authorization Act for Fiscal Year 2001, Congress authorized the U.S. Department of Energy (DOE) to manage and reclaim the former uranium-ore processing site near Moab, Utah, under Title I of the Uranium Mill Tailings Radiation Control Act. DOE assumed ownership of the facility, now known as the Moab Project, on October 25, 2001. Currently, S.M. Stoller Corporation, under its prime contract with DOE, and its teaming partner MFG Corporation are performing operations and maintenance activities at the site and preparing an Environmental Impact Statement for remediation of the site.

Although this mill had numerous historical contracts with the U. S. Atomic Energy Commission for uranium milling services, the mill was privately owned, and therefore, the designation of this location as a DOE facility cannot be effective until 2001.

Contractors: MACTEC-ERS (October 31, 2001, to July 2002); S.M.

Stoller, MFG Corporation, and Battelle. (July, 2002 - present)

318 - Thomas Jefferson National Accelerator Facility

State: Virginia **Location:** Newport News

Time Period: 1994-present

Facility Type: Department of Energy

Facility Description: The [Thomas Jefferson National Accelerator Facility](#) is a basic research laboratory built to probe the nucleus of the atom to learn more about the quark structure of matter.

CONTRACTOR: Southeastern Universities Research Association, Inc.
(1994-present)

319 - Titanium Alloys Manufacturing

Also Known As: Humphreys Gold Co.

Also Known As: Titanium Alloys Mfg Co, Div. Of National Lead

Also Known As: Titanium Alloy Metals

Also Known As: Titanium Pigment Co.

State: New York **Location:** Niagara Falls

Time Period: 1955-1956

Facility Type: Atomic Weapons Employer

Facility Description: Titanium Alloys Manufacturing (TAM) processed uranium-contaminated scrap associated with the nuclear weapons production process in 1955-1956. TAM also worked with zirconium tetrachloride for National Lead of Ohio starting 1950, but because zirconium tetrachloride is not radioactive, this work is not covered under the Energy Employees Occupational Illness Compensation Program Act (EEOICPA).

320 - Titus Metals

Also Known As: Titus, Inc.

State: Iowa **Location:** Waterloo

Time Period: 1956

Facility Type: Atomic Weapons Employer

Facility Description: Titus Metals performed the extrusion of uranium oxide billets into fuel plates for the Argonaut reactor at Argonne National Laboratory on June 29, 1956.

321 - Tocco Induction Heating Div.

Also Known As: Ohio Crankshaft Co.

Also Known As: Tocco Heat Testing

Also Known As: Park Ohio Industries

State: Ohio **Location:** Cleveland

Time Period: AWE 1967-1968

Facility Type: Atomic Weapons Employer

Facility Description: Tocco had a contract with National Lead of Ohio (Fernald) to develop induction heating coil equipment for heating uranium fuel cores. Tocco performed operational tests of these units at its Ohio facility, which took place during 1967-1968. The company received 2000 pounds of natural uranium machined fuel cores and 5600 pounds of depleted uranium machined fuel cores from NLO for testing.

322 - Tonopah Test Range

State: Nevada **Location:** Tonopah

Time Period: 1956-present

Facility Type: Department of Energy

Facility Description: The Tonopah Test Range was established by Sandia Corporation and continues today as an outpost to Sandia National Laboratories. Tonopah was established to provide an isolated place for the Atomic Energy Commission to test ballistics and non-nuclear features of atomic weapons. The AEC began leasing this isolated 525 square mile property from the Air Force in early 1956. In August of the same year the AEC contracted Reynolds Electrical and Engineering Company (REECO) for the construction of temporary facilities on the test range. The AEC contracted with Lembke Construction for permanent facilities at the site in 1960.

Rocket testing began in 1957 with the series "Doorknob." It is believed that the only operation on site involving radiation occurred in 1963 and was known as Operation Roller Coaster. Studies were also conducted in 1964 at the Tonopah test range as part of the AEC program known as Project

Plowshare. These involved the use of non-nuclear explosives to examine earth cratering patterns.

A separate Air Force installation at the test range, which consisted of housing, hangers, and other facilities standard to modern Air Force bases, was constructed on the Tonopah Test Range in the late 1970s for developmental testing of the Air Force's F-117 Stealth Fighter plane. The Air Force moved its stealth program Holloman Air Force Base and mothballed its Tonopah base in 1994. The Air Force installation does not qualify as a DOE facility.

CONTRACTORS: REECO; Lembke Construction of Las Vegas, EG&G, and Advanced Security. Raytheon also served as a contractor at the site, and in the 1993, KMI received Tonopah's primary support and maintenance contract.

323 - Torrington Co.

State: Connecticut **Location:** Torrington

Time Period: 1951-1953

Facility Type: Atomic Weapons Employer

Facility Description: The Torrington Company performed small-scale swaging experiments on uranium rods in the early 1950s. Torrington conducted this work for two companies: the Bridgeport Brass Company and American Machine and Foundry.

324 - Trinity Nuclear Explosion Site

State: New Mexico **Location:** White Sands Missile Range

Time Period: DOE 1945; DOE remediation 1952; 1967

Facility Type: Department of Energy

Facility Description: The Trinity test was the first nuclear weapons test, which took place in July 1945 at the Alamogordo Bombing and Gunnery Range. It was designed to determine whether the implosion method could be used to detonate a nuclear weapon composed of plutonium. The Trinity test involved the open air detonation of a nuclear device placed on a metal tower.

325 - Trudeau Foundation

State: New York **Location:** Saranac Lake

Time Period: 1950-1957

Facility Type: Beryllium Vendor

Facility Description: The AEC Division of Biology and Medicine supported beryllium research studies at the Trudeau Foundation.

326 - Tube Reducing Co.

State: New Jersey **Location:** Wallington

Time Period: 1952; 1955; 1957

Facility Type: Atomic Weapons Employer

Facility Description: Tube Reducing Co. conducted tests for National Lead of Ohio (Fernald) on shaping and sizing uranium rods. In January 1952, two uranium rods were processed. More tubes were extruded in a reduction experiment in January 1955. Another test was conducted in 1957.

The firm is also mentioned in World War II-era reports as a possible location for uranium machining, but there are no indications that any such work was done at the facility during that time period.

327 - Tyson Valley Powder Farm

State: Missouri **Location:** St. Louis

Time Period: 1942-1949

Facility Type: Atomic Weapons Employer

Facility Description: The Tyson Valley Powder Farm was a storage site for radioactive materials in the late 1940s. Records show, for example, that at the end of 1946, 206,110 pounds of uranium metal were stored at this location for the Manhattan Engineer District.

328 - U.S. Pipe and Foundry

State: New Jersey **Location:** Burlington

Time Period: 1943

Facility Type: Beryllium Vendor

Facility Description: A small amount of beryllium mesh (15 pounds) was sent to U.S. Pipe and Foundry by the MED. Some work was done, but it is unclear whether a satisfactory technique was ever developed beyond this initial attempt to manufacture beryllium tubes.

329 - U.S. Steel Co., National Tube Division

State: Pennsylvania **Location:** McKeesport

Time Period: 1959-1960

Facility Type: Atomic Weapons Employer

Facility Description: Tests at the Christy Park Works, National Tube Division of the U. S. Steel Corporation, conducted in 1959 and 1960, demonstrated that rotary piercing of uranium was possible. The tests were conducted for National Lead of Ohio (Fernald).

330 - United Nuclear Corp.

Also Known As: Mallinckrodt Chemical Works, Chemicals Div.

State: Missouri **Location:** Hematite

Time Period: AWE 1958-1973; Residual Radiation 1974-March 1, 2011

Facility Type: Atomic Weapons Employer

Facility Description: The United Nuclear Corporation in Hematite, Missouri, processed unirradiated uranium scrap for the AEC, recovering enriched uranium from it for use in the nuclear weapons complex. Mallinckrodt Chemical Works owned the Hematite plant until 1961.

During the period of residual contamination, as designated by the National Institute for Occupational Safety and Health and as noted in the dates above, employees of subsequent owners and operators of this facility are also covered under the Energy Employees Occupational Illness Compensation Program Act.

331 - University of Denver Research Institute

State: Colorado **Location:** Denver

Time Period: 1963-1965

Facility Type: Atomic Weapons Employer Beryllium Vendor

Facility Description: The University of Denver Research Institute is listed as a processor of radioactive materials for National Lead of Ohio (Fernald). It appears that the University of Denver handled test quantities of radioactive metal in February 1965.

In 1963, a University of Denver Research Institute researcher (F. Perkins) held an AEC contract for work on intermediate-temperature oxidation of beryllides.

332 - University of Florida

Also Known As: J. Hillis Miller Health Center

Also Known As: College of Medicine, Dept. of Radiology

State: Florida **Location:** Gainesville

Time Period: 1963-1969

Facility Type: Atomic Weapons Employer

Facility Description: Documents indicate that the University of Florida handled test quantities of radioactive material under a National Lead of Ohio (Fernald) sub-contract between 1963 and 1969. Upon completion of the project, the material was sent to the Savannah River Site.

The University also obtained licenses to handle radioactive material from the Nuclear Regulatory Commission. Work done under these NRC licenses was not related to nuclear weapons production and is not covered under EEOICPA.

333 - University of Michigan

State: Michigan **Location:** Ann Arbor

Time Period: 1944

Facility Type: Atomic Weapons Employer

Facility Description: The University of Michigan developed radar fuses and conducted ordnance research to assist Los Alamos in atomic bomb research and production.

Records indicate that small quantities of uranium metal were handled at the University of Michigan under AEC contract. The contract expired April 10th, 1944. It is unknown whether or not similar work was performed before or after this date.

334 - University of North Carolina

State: North Carolina **Location:** Chapel Hill

Time Period: 1949-1954

Facility Type: Beryllium Vendor

Facility Description: The AEC Division of Biology and Medicine supported beryllium research at the University of North Carolina.

335 - University of Rochester Atomic Energy Project

State: New York **Location:** Rochester

Time Period: DOE 1943-1986

Facility Type: Department of Energy

Facility Description: Although much of the early theoretical and experimental work that led to development of the first nuclear weapon was accomplished outside the United States, American researchers made a number of fundamental contributions as well. Prior to 1942, the University of Rochester was one of the institutions that contributed to early nuclear physics research in the United States. The university was responsible for more than a hundred projects in chemistry, physics, biology, medicine and psychology. During the Manhattan Project, it had major responsibility for the medical aspects of the bomb program. After the war, Rochester received an AEC contract to operate the Atomic Energy Project (AEP), which focused on the biomedical aspects of nuclear energy. The University of Rochester also received funding to study the pathology and toxicology of beryllium as well as to study the analytical chemistry of micro-quantities.

336 - University of Virginia

State: Virginia **Location:** Charlottesville

Time Period: AWE 1942-1944; Residual Radiation 1970-1985

Facility Type: Atomic Weapons Employer

Facility Description: The University of Virginia was involved with centrifuge technology prior to the existence of the Manhattan Engineer District (MED). Once established, the MED was interested in this technology and records show that the University of Virginia received UF6 from Harshaw Chemical Company in various shipments as part of the MED's efforts to explore the use of this technology for the production of UF6 in nuclear weapons. The MED ultimately did not choose this method of uranium production for the development of the bomb and work on centrifuges temporarily ceased at the University of Virginia by the end of 1944. The centrifuge work was re-initiated in the mid-1950 but this latter work did not involve the production of nuclear material for use in an atomic weapon.

During the period of residual contamination, as designated by the National Institute for Occupational Safety and Health and as noted in the dates above, employees of subsequent owners and operators of this facility are also covered under the Energy Employees Occupational Illness Compensation Program Act.

337 - Uranium Mill and Disposal Cell in Lakeview

State: Oregon **Location:** Lakeview
Time Period: DOE (Remediation) 1986-1989
Facility Type: Department of Energy

Facility Description: This mill was only operated for three years and these historical mill operations are covered under the auspices of the Radiation Exposure Compensation Act and are not separately covered under EEOICPA. However, DOE environmental remediation contractors performed remediation under the Uranium Mill Tailings Radiation Control Act (Public Law 95-604) at the Lakeview Uranium Mill and Disposal Cell from 1986-1989. DOE and DOE contractor employees who performed this remediation are covered under EEOICPA.

338 - Uranium Mill at Shiprock

State: New Mexico **Location:** Shiprock
Time Period: October 1984 - November 1986
Facility Type: Department of Energy

Facility Description: The former Uranium Mill at Shiprock processed a total of about 1.5 million short tons of uranium ore. This activity is covered under the auspices of the Radiation Exposure Compensation Act and is not separately covered under EEOICPA. However, from October 1984 through November 1986 the Department of Energy and its contractors conducted environmental remediation at this location under the auspices of the Uranium Mill Tailings Radiation Control Act (UMTRCA). DOE employees and DOE contractor employees who performed this remediation are covered under EEOICPA.

Contractor: M.K. Ferguson

339 - Uranium Mill in Ambrosia Lake

State: New Mexico **Location:** Ambrosia Lake

Time Period: DOE (Remediation) July 1987-April 1989 and October 1992-July 1995

Facility Type: Department of Energy

Facility Description: This former mill processed more than 3 million tons of uranium ore between 1958 and 1963. These milling operations are covered under the auspices of the Radiation Exposure Compensation Act and are not separately covered under EEOICPA. However, DOE environmental remediation contractors performed remediation at this location from July 1987 to April 1989 and again from October 1992 to July 1995 under the Uranium Mill Tailings Radiation Control Act (Public Law 95-604). Environmental remediation performed at the site involved the demolition of buildings, construction of decontamination facilities, and the excavation, consolidation and encapsulation of all contaminated material on site in an engineered disposal cell. DOE and DOE contractor employees who performed this remediation are covered under EEOICPA.

340 - Uranium Mill in Converse County (Spook Site)

State: Wyoming **Location:** Converse County

Time Period: DOE (Remediation) April – September 1989

Facility Type: Department of Energy

Facility Description: This mill processing uranium and vanadium ore from 1958 to 1963. These milling operations are covered under the auspices of the Radiation Exposure Compensation Act and are not separately covered under

EEOICPA. However DOE environmental remediation contractors performed remediation under the Uranium Mill Tailings Radiation Control Act (Public Law 95-604) at the Uranium Mill in Converse County, known as the Spook Site, in 1989. DOE and DOE contractor employees who performed this remediation are covered under EEOICPA.

341 - Uranium Mill in Durango

State: Colorado **Location:** Durango

Time Period: 1948-1953; Remediation October 1986 – May 1991

Facility Type: Department of Energy

Facility Description: The AEC purchased the 147-acre uranium mill site in Durango, Colorado, in 1948 from the Vanadium Corporation of America. The AEC leased the facility back to Vanadium that same year, with an option to purchase the facility in 1953. Between 1948 and 1953, Vanadium operated the mill on behalf of the AEC. The company exercised its purchase option in 1953, and thereafter, the mill was operated as a privately owned facility. The company shut down and dismantled the mill in March 1963.

Additionally, from October 1986 through May 1991, DOE environmental remediation contractors performed environmental remediation, under the Uranium Mill Tailings Radiation Control Act (Public Law 95-604) at this mill. DOE and DOE contractor employees who performed this remediation are covered under EEOICPA.

Contractors: The Vanadium Corporation of America (1948-1953).

342 - Uranium Mill in Falls City

State: Texas **Location:** Falls City

Time Period: DOE (Remediation) January 1992- June 1994

Facility Type: Department of Energy

Facility Description: This uranium mill was operated from 191 to 1973 and then some processing of the tailings was performed between 1978 and 1982. These milling operations are covered under the auspices of the Radiation Exposure Compensation Act and are not separately covered under EEOICPA. However, DOE environmental remediation contractors performed remediation under the Uranium Mill Tailings Radiation Control Act (Public Law 95-604) at the Uranium Mill in Falls City from January

1992 through June 1994. DOE and DOE contractor employees who performed this remediation are covered under EEOICPA.

343 - Uranium Mill in Gunnison

State: Colorado **Location:** Gunnison County

Time Period: DOE (Remediation) September 1991- December 1995

Facility Type: Department of Energy

Facility Description: This mill processed approximately 540,000 tons of uranium ore between 1958 and 1962. This ore processing is covered under the auspices of the Radiation Exposure Compensation Act and is not separately covered under EEOICPA. However, DOE environmental remediation contractors performed environmental remediation under the Uranium Mill Tailings Radiation Control Act (Public Law 95-604) at this former uranium ore processing mill from September 1991 through December 1995. DOE and DOE contractor employees who performed this remediation are covered under EEOICPA.

344 - Uranium Mill in Lowman

State: Idaho **Location:** Lowman

Time Period: DOE (Remediation) 1992; 1994 - present

Facility Type: Department of Energy

Facility Description: From 1955 to 1960 columbite/euxenite and monazite concentrates were separated from placer ore. These milling operations are covered under the auspices of the Radiation Exposure Compensation Act and are not separately covered under EEOICPA. However, DOE environmental remediation contractors performed remediation Uranium Mill Tailings Radiation Control Act (Public Law 95-604) at this location in 1992. The remediation involved cleanup of contaminants left over from operation of a mechanical concentrator for extraction of uranium and thorium from sand at this location. In 1998 DOE constructed a water diversion system in furtherance of environmental remediation goals. DOE and DOE contractor employees who performed this remediation and construction are covered under EEOICPA. Additionally, in 1994 ownership of the property was transferred to DOE.

345 - Uranium Mill in Maybell

State: Colorado **Location:** Maybell

Time Period: DOE (Remediation) May 1995 – September 1998

Facility Type: Department of Energy

Facility Description: During its 7 years of operations, this uranium mill processed about 2.6 million tons of ore. This ore processing is covered under the auspices of the Radiation Exposure Compensation Act and is not separately covered under EEOICPA. However, DOE environmental remediation contractors performed environmental remediation under the Uranium Mill Tailings Radiation Control Act (Public Law 95-604) at this former uranium mill from May 1995 through September 1998. DOE and DOE contractor employees who performed this remediation are covered under EEOICPA.

346 - Uranium Mill in Mexican Hat

State: Utah **Location:** Mexican Hat

Time Period: DOE (Remediation) July – October 1987 and September 1992 – February 1995

Facility Type: Department of Energy

Facility Description: This mill conducted ore processing operations from 1957 through 1965. DOE environmental remediation contractors performed remediation under the Uranium Mill Tailings Radiation Control Act (Public Law 95-604) at the Uranium Mill in Mexican Hat for a few months in 1987 and again for a few months of 1995. DOE and DOE contractor employees who performed this remediation are covered under EEOICPA.

347 - Uranium Mill in Monticello

State: Utah **Location:** Monticello

Time Period: 1948-1960; Remediation 1983-2000

Facility Type: Department of Energy

Facility Description: The AEC-owned processing mill at Monticello recovered uranium and vanadium from AEC-furnished ore. The Galigher Company became the Management and Operations (M&O) contractor for the mill in August 1949, one year after the AEC purchased it from the War Assets Administration. The National Lead Company, Inc., assumed responsibility for mill management and operations on April 1, 1956. The

AEC shut down the mill and began decommissioning activities in 1960.

Additionally, from 1983 through 2000, DOE environmental remediation contractors performed environmental remediation under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) at the Uranium Mill in Monticello. DOE and DOE contractor employees who performed this remediation are covered under EEOICPA.

Contractors: Galigher Company (1948-1956); and the National Lead Company, Inc. (1956-1960).

348 - Uranium Mill in Monument Valley

State: Arizona **Location:** Monument Valley

Time Period: DOE (Remediation) May 1989-February 1990; September 1992 – May 1994

Facility Type: Department of Energy

Facility Description: This former uranium-ore processing mill operated from 1955 through 1968. This ore processing is covered under the auspices of the Radiation Exposure Compensation Act and is not separately covered under EEOICPA. However, DOE environmental remediation contractors performed environmental remediation under the Uranium Mill Tailings Radiation Control Act (Public Law 95-604) from May 1989 to February 1990 and then again from September 1992 through May 1994. DOE and DOE contractor employees who performed this remediation are covered under EEOICPA.

349 - Uranium Mill in Naturita

State: Colorado **Location:** Naturita

Time Period: DOE (Remediation) May – November 1994 and June 1996 through September 1998

Facility Type: Department of Energy

Facility Description: This former uranium and vanadium ore processing facility processed about 704,000 tons of ore. This ore processing is covered under the auspices of the Radiation Exposure Compensation Act and is not separately covered under EEOICPA. However, DOE environmental remediation contractors performed environmental remediation under the Uranium Mill Tailings Radiation Control Act (Public Law 95-604) at this

former processing site from May through November of 1994 and again from June of 1996 through September 1998. DOE and DOE contractor employees who performed this remediation are covered under EEOICPA.

350 - Uranium Mill in Riverton

State: Wyoming **Location:** Riverton

Time Period: DOE (Remediation) May 1988- September 1990

Facility Type: Department of Energy

Facility Description: Milling operations were conducted at this location from 1958 to 1963. These milling operations are covered under the auspices of the Radiation Exposure Compensation Act and are not separately covered under EEOICPA. However, DOE environmental remediation contractors performed remediation under the Uranium Mill Tailings Radiation Control Act (Public Law 95-604) at the Uranium Mill in Riverton from May 1988 – September 1990. DOE and DOE contractor employees who performed this remediation are covered under EEOICPA.

351 - Uranium Mill in Tuba City

State: Arizona **Location:** Monument Valley

Time Period: DOE (Remediation) January 1985 –February 1986; January 1988 – April 1990

Facility Type: Department of Energy

Facility Description: During its 10 years of operations, this mill processed about 800,000 tons of uranium ore. This ore processing is covered under the auspices of the Radiation Exposure Compensation Act and is not separately covered under EEOICPA. However, DOE environmental remediation contractors performed environmental remediation under the Uranium Mill Tailings Radiation Control Act (Public Law 95-604) at this former uranium ore processing mill from January 1985 –February 1986 and again from January 1988 – April 1990. DOE and DOE contractor employees who performed this remediation are covered under EEOICPA.

352 - Uranium Mill No. 1 in Slick Rock (East)

State: Colorado **Location:** Slick Rock

Time Period: DOE (Remediation) 1995-1996

Facility Type: Department of Energy

Facility Description: This mill extracted radium salts and vanadium from locally mined ores between 1942 and 1943. These milling operations are covered under the auspices of the Radiation Exposure Compensation Act and are not separately covered under EEOICPA. However, DOE environmental remediation contractors performed remediation under the Uranium Mill Tailings Radiation Control Act (Public Law 95-604) at Uranium Mill No. 1 in Slick Rock from 1995-1996. DOE and DOE contractor employees who performed this remediation are covered under EEOICPA.

353 - Uranium Mill No. 2 in Slick Rock (West)

State: Colorado **Location:** Slick Rock
Time Period: DOE (Remediation) 1995-1996
Facility Type: Department of Energy

Facility Description: Vanadium and uranium was processed at this mill from 1957 through 1961. These milling operations are covered under the auspices of the Radiation Exposure Compensation Act and are not separately covered under EEOICPA. However, DOE environmental remediation contractors performed remediation under the Uranium Mill Tailings Radiation Control Act (Public Law 95-604) at Uranium Mill No. 2 in Slick rock from 1995-1996. DOE and DOE contractor employees who performed this remediation are covered under EEOICPA.

354 - Utica St. Warehouse

Also Known As: Linde Air Products
State: New York **Location:** Buffalo
Time Period: 1945
Facility Type: Atomic Weapons Employer

Facility Description: Residues from Linde Air operations were stored and rebarreled at this location.

355 - Ventron Corporation

Also Known As: Metal Hydrides Corp.
Also Known As: Ventron Div., Morton Thiokol, Inc.

State: Massachusetts **Location:** Beverly

Time Period: AWE August 13,1942-January 30,1950; Res. Rad. 1949-1985; 1987-1995; DOE 1986; 1996-1997 (remediation)

Facility Type: Atomic Weapons Employer Department of Energy

Facility Description: From 1942 to 1948, Metal Hydrides Corp. was under contract to the Manhattan Engineer District and the Atomic Energy Commission to convert uranium oxide to uranium metal powder. This work, as well as later operations to recover uranium from scrap and turnings from a fuel fabrication plant at Hanford, was conducted at a foundry at the site. During this period, Metal Hydrides was the AEC's primary uranium scrap recovery contractor.

Cleanup activities at this location included the removal of an underground storage tank in 1986. Further remediation was performed between May 1996 and August 1997 by Bechtel National Inc. and a number of local subcontractors as part of the Formerly Utilized Site Remediation Action Program (FUSRAP).

The plant is currently owed by the Ventron Division of Morton International.

During the period of residual contamination, as designated by the National Institute for Occupational Safety and Health and as noted in the dates above, employees of subsequent owners and operators of this facility are also covered under the Energy Employees Occupational Illness Compensation Program Act.

356 - Virginia-Carolina Chemical Corp

Also Known As: Conser Dept. of Phillips Brothers Div.

Also Known As: Englehard Minerals and Chemical Corp

Also Known As: Socony Mobile Oil Co.

Also Known As: Virginia-Carolina Chemical Corp

State: Florida **Location:** Nichols

Time Period: AWE 1952-1957; Residual Radiation 1958-1977

Facility Type: Atomic Weapons Employer

Facility Description: The Virginia-Carolina Chemical Corporation produced uranium as a byproduct of the recovery of phosphate chemicals and fertilizers. The AEC contracted with the Virginia-Carolina Chemical Corp. for the recovery of the uranium, which was ultimately used in weapons production.

During the period of residual contamination, as designated by the National Institute for Occupational Safety and Health and as noted in the dates above, employees of subsequent owners and operators of this facility are also covered under the Energy Employees Occupational Illness Compensation Program Act.

357 - Vitro Corp. of America (New Jersey)

Also Known As: Heavy Minerals Co.

Also Known As: Vitro Chemical Co.

State: New Jersey **Location:** West Orange

Time Period: 1951-early 1960s; Residual Radiation 1960's-1977

Facility Type: Atomic Weapons Employer

Facility Description: In December 1951, Vitro was asked to submit a proposal for research on thorium fluoride production, scrap recovery and waste recovery to involve 14 chemists and analysts. Though it is not certain whether this work was undertaken, by the late 1950s and early 1960s, Vitro conducted work under AEC contract converting low-enrichment uranium dioxide to uranium carbide spheres. The uranium dioxide was shipped from Rockwell International (then known as the Atomics International Division of North American Aviation, Inc.) to Vitro for conversion into uranium carbide and was then shipped back to Rockwell. Around 1958, Vitro also conducted work under contract to the AEC Oak Ridge Operations Office for the separation of fission products.

During the period of residual contamination, as designated by the National Institute for Occupational Safety and Health and as noted in the dates above, employees of subsequent owners and operators of this facility are also covered under the Energy Employees Occupational Illness Compensation Program Act.

358 - Vitro Corporation of America (Tennessee)

Also Known As: Chattanooga site now owned by W.R. Grace

Also Known As: Vitro Chemical is subsidiary of Vitro Corp.

Also Known As: Heavy Minerals Co.

State: Tennessee **Location:** Chattanooga

Time Period: BE 1959-1965; AWE 1957- 1968; Residual Radiation 1969-

March 1, 2011

Facility Type: Atomic Weapons Employer Beryllium Vendor

Facility Description: Records indicate that "Vitro Corporation" of Chattanooga, TN performed some beryllium work for Y-12 during the period 1959-1965. A 1962 document also mentions that the AEC met with members of the beryllium industry, including representatives from "Vitro Chemical" (no address), but does not mention whether any contracts were involved in these discussions.

The original owner of this site was Heavy Metals Inc. and possessed an AEC license to process uranium and thorium products beginning as early as 1957. Documentation indicates that the company provided price quotes to the AEC for thorium products as early as 1954, but there is no indication that it received a contract for that work. Vitro Chemical of Chattanooga, TN, a subsidiary of Vitro Corporation, took over the site at the end of 1959 and was under contract to the AEC to produce thorium metal, thorium fluoride and thorium oxide. The current owner, W.R. Grace, purchased the site in 1965 and continued operations until 1983, but records do not reveal any weapons-based link after 1968. The State of Tennessee took over licensing of this site in 1968.

During the period of residual contamination, as designated by the National Institute for Occupational Safety and Health and as noted in the dates above, employees of subsequent owners and operators of this facility are also covered under the Energy Employees Occupational Illness Compensation Program Act.

359 - Vitro Manufacturing (Canonsburg)

Also Known As: Vitro Rare Metals Co.

Also Known As: Vitro Manufacturing (Canonsburg)

Also Known As: Vitro Manufacturing (Canonsburg)

State: Pennsylvania **Location:** Canonsburg

Time Period: BE 1948; AWE 1942-1959; Residual Radiation 1960-1985; DOE (Remediation) 1983-1985; 1996

Facility Type: Atomic Weapons Employer Beryllium Vendor Department of Energy

Facility Description: Starting in 1948, Vitro was under contract to recover uranium from scrap. In the period from 1954-1956, Vitro had a contract to process production quantities of radioactive material (UF4) for National Lead of Ohio (Fernald). Vitro continued to provide uranium to the Atomic

Energy Commission under various contracts through 1959. Additionally, a 1948 document indicates that General Electric shipped scrap containing beryllium to the Canonsburg site.

Canonsburg was a major uranium milling facility and although the EEOICPA definition of an Atomic Weapons Employer excludes mining and milling, this site is covered because of its scrap processing activities performed under contract to the Atomic Energy Commission.

The Canonsburg site is one of 24 former uranium mill sites designated for Department of Energy remediation by the Uranium Mill Tailings Radiation Control Act (UMTRCA). DOE remediation contractors performed environmental remediation under UMTRCA at the Canonsburg site from 1983-1985 and in 1996. This work involved consolidating and encapsulating all contaminated materials from the Canonsburg site into an on-site engineered disposal cell.

During the period of residual contamination, as designated by the National Institute for Occupational Safety and Health and as noted in the dates above, employees of subsequent owners and operators of this facility are also covered under the Energy Employees Occupational Illness Compensation Program Act.

360 - Vulcan Tool Co.

State: Ohio **Location:** Dayton
Time Period: 1959
Facility Type: Atomic Weapons Employer

Facility Description: At the request of National Lead Company of Ohio (Fernald), Vulcan Tool Company conducted experiments involving the cutting of normal uranium slugs and tubes on a Brehm cutter in October 1959.

361 - W.E. Pratt Manufacturing Co.

Also Known As: William E. Pratt Manufacturing Co.
Also Known As: Klassing Handbrake
Also Known As: Altrachem, Inc.
Also Known As: subsidiary of Joslyn Mfg and Supply
State: Illinois **Location:** Joliet

Time Period: AWE 1943-1946; Residual Radiation 1947-1989

Facility Type: Atomic Weapons Employer

Facility Description: The W.E. Pratt Manufacturing Company performed metal fabrication tasks (machining and grinding) for the University of Chicago Metallurgical Laboratory beginning in the spring of 1943. The purpose of the machining done by Pratt was to speed up delivery of pieces for the experimental pile and to learn all that could be learned about handling uranium metal in turret lathes and automatic screw machines. In 1944, Pratt was subcontracted by the University of Chicago to finish “short metal rods” by centerless grinding. This work continued until June 30, 1946. The Manhattan Engineer District History indicates that DuPont placed an order with Pratt to turn and grind unbonded Hanford slugs.

During the period of residual contamination, as designated by the National Institute for Occupational Safety and Health and as noted in the dates above, employees of subsequent owners and operators of this facility are also covered under the Energy Employees Occupational Illness Compensation Program Act.

362 - W.R. Grace (Tennessee)

Also Known As: Nuclear Fuels Services

Also Known As: Davison Chemical

State: Tennessee **Location:** Erwin

Time Period: AWE 1958-1970; Residual Radiation 1971-March 1, 2011

Facility Type: Atomic Weapons Employer

Facility Description: The Davison Chemical Division of W.R. Grace Co. (later Nuclear Fuel Services) processed unirradiated uranium scrap for the AEC, recovering enriched uranium from it for use in the nuclear weapons complex. Correspondence from 1963 also indicates that the company also worked with thorium, which was associated with their work for the civilian nuclear reactor industry and the naval reactors program.

During the period of residual contamination, as designated by the National Institute for Occupational Safety and Health and as noted in the dates above, employees of subsequent owners and operators of this facility are also covered under the Energy Employees Occupational Illness Compensation Program Act.

363 - W.R. Grace and Company (Maryland)

Also Known As: Davison Chemical Corp.

Also Known As: Agri-Chemicals Div.

State: Maryland **Location:** Curtis Bay

Time Period: AWE 1955-1958; Residual Radiation 1959-March 1, 2011

Facility Type: Atomic Weapons Employer

Facility Description: Processing of radioactive materials at W.R. Grace began in July 1955 when Rare Earths, Inc. (W.R. Grace's predecessor) entered into a contract with the Atomic Energy Commission to extract thorium and rare earths from naturally-occurring monazite sands. In 1956, the Atomic Energy Commission contract and Rare Earths' license to possess, transfer, and use radioactive thorium were transferred to W.R. Grace & Company. The facility where thorium processing took place (Building 23) operated until late spring of 1957, when W.R. Grace and the Atomic Energy Commission agreed to terminate the contract, effective January 31, 1958.

During the period of residual contamination, as designated by the National Institute for Occupational Safety and Health and as noted in the dates above, employees of subsequent owners and operators of this facility are also covered under the Energy Employees Occupational Illness Compensation Program Act.

364 - W.R. Grace Co., Agricultural Chemical Div. (Florida)

State: Florida **Location:** Ridgewood

Time Period: 1954; Residual Radiation 1955 - March 1, 2011

Facility Type: Atomic Weapons Employer

Facility Description: For one month in 1954, W.R. Grace performed the pilot plant work on solvent extraction for Armour Fertilizer, which used the solvent process to extract uranium from phosphates.

365 - Wah Chang

Also Known As: Teledyne Wah Chang

State: Oregon **Location:** Albany

Time Period: AWE 1971-1972; Res. Rad. 1973-March 1, 2011

Facility Type: Atomic Weapons Employer

Facility Description: In 1971 and 1972, Wah Chang was subcontracted to Union Carbide Corporation to melt uranium-bearing materials for the Oak Ridge Y-12 plant.

During the period of residual contamination, as designated by the National Institute for Occupational Safety and Health and as noted in the dates above, employees of subsequent owners and operators of this facility are also covered under the Energy Employees Occupational Illness Compensation Program Act.

366 - Waste Isolation Pilot Plant

Also Known As: WIPP

State: New Mexico **Location:** Carlsbad

Time Period: 1999-present

Facility Type: Department of Energy

Facility Description: The [Waste Isolation Pilot Plant \(WIPP\)](#) was designed for the disposal of transuranic radioactive waste resulting from the research and production of nuclear weapons. It is the world's first underground repository licensed to safely and permanently dispose of transuranic radioactive waste left from the research and production of nuclear weapons. WIPP began operations on March 26, 1999.

CONTRACTOR: Westinghouse WIPP Company (1999-present)

367 - Weldon Spring Plant

Also Known As: Mallinckrodt

Also Known As: Weldon Spring Chemical Co.

Also Known As: Weldon Spring Site Remedial Action Project (WSSRAP)

Also Known As: WSS

State: Missouri **Location:** Weldon Spring

Time Period: 1955-1966; October 1, 1985–2002 (remediation)

Facility Type: Department of Energy

Facility Description: In 1955, the U.S. Department of the Army (Army) transferred 217 acres of what had been the Weldon Springs Ordnance Works to the U.S. Atomic Energy Commission (AEC) for construction of a uranium feed materials plant. The AEC constructed the Weldon Spring Uranium Feed

Materials Plant at this location and contracted with the Mallinckrodt Chemical Company to operate the plant starting in June 1957. The plant was used for uranium refining activities in support of the national defense program. The AEC closed the plant in December 1966 after deciding it was obsolete.

After closing the plant, the AEC transferred the plant and the land back to the Army on December 31, 1967. On October 1, 1985, custody of the chemical plant was retransferred from the Army back to the DOE, which was given responsibility for remediation of the plant.

The surface decontamination of the plant was completed in October 2002.

CONTRACTORS: Mallinckrodt Chemical Company (1957-1966); Bechtel National Inc. (1981-1985); MK-Ferguson Company and Jacobs Engineering Group (1986-2002)

368 - Weldon Spring Quarry

State: Missouri **Location:** Weldon Spring
Time Period: DOE 1958–1966; 1967–2002 (remediation)
Facility Type: Department of Energy

Facility Description: In 1958, the U.S. Atomic Energy Commission (AEC) acquired title from the U.S. Department of the Army (Army) to an inactive quarry that had been on the Weldon Springs Ordnance Works land. The quarry was used by the AEC as a dumping ground for chemical and radiological waste products, including the demolished Destrehan Street Plant in St. Louis.

Surface decontamination of the quarry was completed in October 2002.

Contractors: Mallinckrodt Chemical Company (1958–1966); National Lead of Ohio (1966–1981); Bechtel National, Inc. (1981-1985); MK-Ferguson Company and Jacobs Engineering Group (1986–2002)

369 - Weldon Spring Raffinate Pits

State: Missouri **Location:** Weldon Spring
Time Period: DOE 1955–1966; 1967–2002 (remediation)

Facility Type: Department of Energy

Facility Description: In 1955 the U.S. Department of the Army (Army) transferred 217 acres of what had been the Weldon Springs Ordnance Works to the U.S. Atomic Energy Commission (AEC) to construct a uranium feed materials plant. In addition to the plant, the AEC also constructed four raffinate pits adjacent to the plant between 1958 and 1964. The pits were used as collection points and settling basins for chemical and radioactive waste streams coming from the plant.

After closing the plant (including the associated raffinate pits) in December 1966, the AEC transferred the land back to the Army, but retained ownership and control of the wastes in the raffinate pits. On October 1, 1985, the land was retransferred from the Army back to the DOE, which was given responsibility for remediation of the pits.

Surface decontamination of the pits was completed in October 2002.

Contractors: Mallinckrodt Chemical Company (1957–1966); National Lead of Ohio (1966–1981); Bechtel National, Inc. (1981–1985); M-K Ferguson Company and Jacobs Engineering Group (1986–2002.)

370 - West Valley Demonstration Project

Also Known As: Nuclear Fuels Services, West Valley

Also Known As: Western New York Fuel Services Center

State: New York **Location:** West Valley

Time Period: AWE 1966-1973; Residual Radiation 1974-1979; DOE 1980-present

Facility Type: Atomic Weapons Employer Department of Energy

Facility Description: From 1966 to 1972, Nuclear Fuel Services, Inc., under contract to the State of New York, operated a commercial nuclear fuel reprocessing plant at the Western New York Nuclear Services Center. The plant reprocessed uranium and plutonium from spent nuclear fuel; sixty percent of this fuel was generated at defense facilities. Spent nuclear fuel reprocessing generated approximately 600,000 gallons of liquid high-level radioactive waste; this waste was stored onsite in underground tanks.

In 1980, the United States Congress passed the [West Valley Demonstration Project Act](#) (Public Law 96-368), which authorized the Department of Energy (DOE) to conduct a technology demonstration project to solidify the liquid high-level waste at the Western New York Nuclear Services Center.

Under this act, DOE is also responsible for developing containers suitable for the permanent disposal of the solidified high-level waste at an appropriate Federal repository; transporting the containers to this repository; disposing of low level waste and transuranic waste generated by high level waste solidification; and decontaminating and decommissioning facilities used for the solidification. DOE is also responsible for dispositioning the spent nuclear fuel stored at the site.

In 1982, DOE selected vitrification as the treatment process for high level waste. This process solidifies and stabilizes nuclear waste by mixing it with molten glass. Pretreatment of the high-level waste began in 1988 and was successfully completed in 1995. DOE expects to complete the West Valley Demonstration Project by 2005.

During the period of residual contamination, as designated by the National Institute for Occupational Safety and Health and as noted in the dates above, employees of subsequent owners and operators of this facility are also covered under the Energy Employees Occupational Illness Compensation Program Act.

CONTRACTOR: CH2M Hill-B&W (2011-present); West Valley Nuclear Services, Inc. (1982-2011)

371 - Westinghouse Atomic Power Development Plant

Also Known As: East Pittsburgh Plant
State: Pennsylvania **Location:** East Pittsburgh
Time Period: 1942 -1944
Facility Type: Atomic Weapons Employer

Facility Description: Westinghouse prepared uranium metal for Enrico Fermi's Stagg Field experiment and conducted development and pilot-scale production of uranium oxide fuel elements.

372 - Westinghouse Electric Corp. (New Jersey)

Also Known As: North American Phillips Lighting
State: New Jersey **Location:** Bloomfield
Time Period: AWE 1942 -1949; Residual Radiation 1950-March 1, 2011
Facility Type: Atomic Weapons Employer

Facility Description: Westinghouse Electric, located in Bloomfield, NJ, was one of the large commercial contributors to Manhattan Project research. Specific tasks related to uranium metal production and enrichment. Because developing the technology to produce pure uranium metal became a priority for the Manhattan Project, universities, and private companies with experience in related chemical processes participated in the task. From 1942-1943, Westinghouse used a photochemical process for metallic uranium and supplied metallic uranium for the first self-sustaining chain reaction in Chicago. In addition to contributing to uranium metal production, Westinghouse Electric participated in activities related to uranium enrichment.

Westinghouse also worked with thorium under contract W-7409-ENG-31 for the Manhattan Project at this location.

During the period of residual contamination, as designated by the National Institute for Occupational Safety and Health and as noted in the dates above, employees of subsequent owners and operators of this facility are also covered under the Energy Employees Occupational Illness Compensation Program Act.

373 - Westinghouse Nuclear Fuels Division

Also Known As: Westinghouse Commercial Manufacturing

State: Pennsylvania **Location:** Cheswick

Time Period: AWE 1971-1972; Residual Radiation 1973-1979

Facility Type: Atomic Weapons Employer

Facility Description: The Westinghouse Nuclear Fuels Division received shipments of nuclear materials from the AEC nuclear weapons complex in 1971 and 1972. The Cheswick site received a shipment of enriched uranium from the AEC's Fernald plant in 1971. It also received a shipment of plutonium in 1972 from the West Valley facility. This plutonium originated out of Hanford. Because this material came from the nuclear weapons complex, the site qualifies as an Atomic Weapons Employer for these years.

Although the Westinghouse facility in Cheswick, PA, conducted substantial work with radioactive materials in other years, this work is not covered under EEOICPA because it was not related to nuclear weapons production. This includes the fabrication of nuclear fuels and reactor subsystems for naval, space, and civilian applications. Among the projects to which the Cheswick facility contributed were the Naval Nuclear Propulsion Program, the Nuclear Engine for Rocket Vehicle Application (NERVA) program, and the Liquid

Metal Fast Breeder Reactor (LMFBR) program.

During the period of residual contamination, as designated by the National Institute for Occupational Safety and Health and as noted in the dates above, employees of subsequent owners and operators of this facility are also covered under the Energy Employees Occupational Illness Compensation Program Act.

374 - Winchester Engineering and Analytical Center

Also Known As: U.S. Public Health Service; N.E. Radiological Laboratory

Also Known As: Northeastern Radiological Health Laboratory

Also Known As: National Lead Co.

Also Known As: AEC Raw Materials Development Laboratory

State: Massachusetts **Location:** Winchester

Time Period: 1952-1961

Facility Type: Department of Energy

Facility Description: The Winchester Engineering and Analytical Center, built in 1952 under sponsorship of the AEC, was used to continue development of methods for extraction of uranium and thorium from ore and to prepare metal grade uranium tetrafluoride. Massachusetts Institute of Technology (MIT) began the work in 1946 at Cambridge, MA and continued the work after it was transferred later that year to Watertown Arsenal, Watertown, MA. American Cyanamid Company succeeded MIT in operating the project at Watertown Arsenal from 1951 until October 1952, when it was transferred to the Winchester Facility. In 1954, National Lead Company, Inc. took over operations under AEC contract AT(49-6)-924. Beginning in 1959, facility use shifted to laboratory testing of environmental analysis methods pertaining to uranium waste. In 1961, the work was discontinued, and the facility was transferred to the Department of Health, Education and Welfare (HEW) for use as a low-level environmental radiation surveillance laboratory and for analysis of radiopharmaceuticals. The facility is now run by the Food and Drug Administration.

CONTRACTORS: National Lead Company (1954-1961); American Cyanamid (1952-1954)

375 - Woburn Landfill

Also Known As: Winchester Engineering Vicinity Property

Also Known As: Woburn Dumpsite

State: Massachusetts **Location:** Woburn

Time Period: 1955-1960

Facility Type: Atomic Weapons Employer

Facility Description: Fifty 55-gallon drums of low grade uranium ore were buried at the Woburn site. The material came from the AEC Raw Materials Development Laboratory (see the Winchester Engineering and Analytical Center) operated by the National Lead Company under contract from 1955-1960.

376 - Wolff-Alport Chemical Corp

State: New York **Location:** Brooklyn

Time Period: AWE 1949-1950; Residual Radiation 1951-March 1, 2011

Facility Type: Atomic Weapons Employer

Facility Description: Wolff-Alport Chemical Corporation was under contract with the AEC (#AT-30-1-Gen-287) for the procurement of thorium containing sludge for stockpiling by the AEC. A March 1949 document mentions, "current contract expires June 30, 1949 and will probably be extended for another year. Cost is approximately \$50,000 annually." This same document shows that almost 30,000 pounds of thorium oxalate sludge was provided the AEC that year.

During the period of residual contamination, as designated by the National Institute for Occupational Safety and Health and as noted in the dates above, employees of subsequent owners and operators of this facility are also covered under the Energy Employees Occupational Illness Compensation Program Act.

377 - Wolverine Tube Division

Also Known As: Div. Of Calumet Hecia Consolidated Copper Co.

Also Known As: Hermes Automotive

Also Known As: Mamif Corp.

State: Michigan **Location:** Detroit

Time Period: BE 1943-1946; AWE 1943-1946; Residual Radiation 1947-1989

Facility Type: Atomic Weapons Employer Beryllium Vendor

Facility Description: In 1943, the University of Chicago subcontracted to Wolverine Tube of Detroit, Michigan, for help in extrusion of metals that were needed as part of the Manhattan Project. Wolverine Tube performed research on the fabrication of aluminum slugs and the process of aluminum canning and also experimented with thorium and beryllium. This contract ended in 1946. Wolverine Tube received other AEC contracts because of its extrusion expertise.

During the period of residual contamination, as designated by the National Institute for Occupational Safety and Health and as noted in the dates above, employees of subsequent owners and operators of this facility are also covered under the Energy Employees Occupational Illness Compensation Program Act.

378 - Wyckoff Drawn Steel Co.

Also Known As: Wyckoff Steel Co.

Also Known As: Ferranti Steel & Aluminum Co.

State: Illinois **Location:** Chicago

Time Period: 1943

Facility Type: Atomic Weapons Employer

Facility Description: In 1943, the Metallurgical Laboratory conducted experiments of centerless grinding equipment on uranium. Wyckoff Drawn Steel surfaced two tubes and one rod, but their process was deemed to be too expensive and too slow to be used in production.

379 - Wykoff Steel Co.

State: New Jersey **Location:** Newark

Time Period: 1950

Facility Type: Atomic Weapons Employer

Facility Description: Wykoff Steel conducted tests of methods to straighten and finish uranium rods on September 6, 1950.

380 - Wyman Gordon Inc.

State: Massachusetts **Location:** Grafton, North Grafton

Time Period: 1959-1965

Facility Type: Beryllium Vendor

Facility Description: Wyman-Gordon supplied beryllium powder forgings and beryllium blanks to the Rocky Flats plant and beryllium metal and parts to the Y-12 plant.

381 - Y-12 Plant

State: Tennessee **Location:** Oak Ridge

Time Period: 1942-present

Facility Type: Department of Energy

Facility Description: Built in a rural section of East Tennessee, the [Y-12 National Security Complex](#), previously known as the Oak Ridge Y-12 Plant, was part of the Manhattan Project. Its job was to process uranium for the first atomic bomb. Construction of Y-12 started in February 1943; enriched uranium production started in November of the same year. Construction, however, was not entirely finished until 1945. The first site mission was the separation of uranium-235 from natural uranium by the electromagnetic separation process. The magnetic separators were taken out of commission at the end of 1946 when gaseous diffusion became the accepted process for enriching uranium.

Since World War II, the number of buildings at Y-12 has doubled. Its missions have included uranium enrichment, lithium enrichment, isotope separation and component fabrication. For more than 50 years, Y-12 has been one of the DOE weapons complex's premier manufacturing facilities. Every weapon in the stockpile has some components manufactured at the Y-12 National Security Complex.

Throughout the course of its operations, the potential for beryllium exposure existed at this site, due to beryllium use, residual contamination, and decontamination activities.

CONTRACTORS: BWXT (2000-present); Lockheed Martin Energy Systems (1994-2000); Martin Marietta Energy Systems (1984-1994); Union Carbide & Carbon Corp. (1947-1984); Tennessee Eastman Corp. (TEC) (1943-1947)

382 - Yucca Mountain Site Characterization Project

State: Nevada **Location:** Yucca Mountain

Time Period: 1987-present

Facility Type: Department of Energy

Facility Description: The purpose of the [Yucca Mountain Site Characterization Project](#) is to determine if Yucca Mountain, Nevada, is a suitable site for a spent nuclear fuel and high-level radioactive waste repository. The project involves extensive scientific study on Yucca Mountain's geology, hydrology, biology, and climate. Radioactive materials have not been used in the study. No radioactive materials have been shipped to Yucca Mountain for storage.
