Energy Employees Occupational Illness Compensation Program

Claims Examiners Part B Training

Appendices

Revised 2006

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Appendix A – List of Covered Facilities

DOE Covered Facility List

(From Federal Register of Friday, December 27, 2002)

DEPARTMENT OF ENERGY

Energy Employees Occupational Illness Compensation Act of 2000; Revision to List of Covered Facilities

AGENCY: Department of Energy.
ACTION: Notice of revision of listing of covered facilities.

SUMMARY: On January 17, 2001, and again on June 11, 2001, the Department of Energy (''Department'' or ''DOE'') published a list of facilities covered under the Energy Employees Occupational Illness Compensation Act of 2000 (''Act''), title 36 of Public Law 106–398. (66 FR 4003; 66 FR 31218). The Act establishes a program to provide compensation to individuals who developed illnesses as a result of their employment in nuclear weapons production-related activities and at certain federally-owned facilities in which radioactive materials were used. This notice revises the previous lists and provides additional information about the covered facilities, atomic weapons employers, and beryllium vendors. The original notice provides detailed background information about this matter.

FOR FURTHER INFORMATION CONTACT: Office of Worker Advocacy, 1–877–447–9756.

ADDRESSES: The Department welcomes comments on this list. Individuals who wish to suggest additional facilities for inclusion on the list or indicate why one or more facilities should be removed from the list should provide information to the Department. Comments should be addressed to: Office of Worker Advocacy (EH–8), U.S. Department of Energy, 1000 Independence Avenue, SW., Washington, DC 20585. Email: *worker_advocacy@eh.doe.gov.* Tollfree: 1–877–447–9756.
URL: *http://tis.eh.doe.gov/advocacy/.*

SUPPLEMENTARY INFORMATION:

Purpose

The Energy Employees Occupational Illness Compensation Act of 2000 (''Act''), title 36 of Public Law 106–398, establishes a program to provide compensation to individuals who developed illnesses as a result of their employment in nuclear weapons production-related activities and at certain federally-owned facilities in which radioactive materials were used. On December 7, 2000, the President issued Executive Order 13179 (''Order'') directing the Department of Energy (''Department'' or ''DOE'') to list covered facilities in the **Federal Register,** which the Department did on January 17, 2001, and again on June 11, 2001. This notice revises the previous lists and provides additional information about the covered facilities, atomic weapons employers, and beryllium vendors. Section 2. c. iv of the Order instructs the Department to designate, pursuant to sections 3621(4)(B) and 3622 of the Act, atomic weapons employers and additions to the list of designated beryllium vendors. In addition, section 2. c. vii of the Order instructs the Department to list three types of facilities defined in the Act:
(1) Atomic weapons employer facilities, as defined in section 3621(4);
(2) Department of Energy facilities, as defined by section 3621(12); and
(3) Beryllium vendors, as defined by section 3621(6).
Compensation options and mechanisms are defined differently for each of these facility categories. The atomic weapons employer category includes atomic weapons employer facilities in which the primary work was not related to atomic weapons, and consequently these facilities are not commonly known as atomic weapons facilities. Their inclusion in this list is consistent with the Act, and is not intended as a classification for any other purpose.
The list at the end of this notice represents the Departments best efforts to date to compile a list of facilities under these three categories. This listing includes 350 facilities in 42 jurisdictions. It designates 29 additional beryllium vendor facilities, two additional Atomic Weapons Employer facilities and clarifies the status as Department of Energy facility for 13 facilities. The designation of the 29 additional beryllium vendor facilities represents the Departments best efforts to meet its statutory deadline in Pub. L. 106–398 § 3622 which sets a December 31, 2002, deadline for designating additional beryllium vendors.

To assist the public in understanding changes made in this list, the Department has prepared a description of these changes and made it available at the website noted. A copy may also be obtained by request to the Office of Worker Advocacy. The Department is continuing its research efforts, and continued revisions to this list should be expected. The public is invited to comment on the list and to provide additional information.
In addition to continuing its research efforts, the Department has developed information dissemination mechanisms to make facility-specific data available to the public. Information about each listed facility, including the dates and type of work done there, is available by contacting the Office of Worker Advocacy. These descriptions are available in print form and also electronically (via the World Wide Web at *http://tis.eh.doe.gov/advocacy/*).
The list that follows covers facilities under the three categories of employers defined by the Act: atomic weapons employers (''AWE''), Department of Energy facilities (''DOE''), and beryllium vendors (''BE''). Each of the categories has been defined in the original notice and include:
1. Atomic Weapons Employers and Atomic Weapons Employer Facilities
The lines between research, atomic weapons production, and non-weapons production are often difficult to draw. For the purposes of this notice, and as directed by the Act, only those facilities whose work involved radioactive material that was connected to the atomic weapons production chain are included. This includes facilities that received radioactive material that had

been used in the production of an atomic weapon, or the back end of the production cycle, such as waste handling or reprocessing operations. For the purposes of this listing, the Department considers commercial nuclear fuel fabrication facilities to be covered facilities for those periods when they either supplied radioactive materials to the Department or received radioactive materials that had been used in the Departments production reactors. Corporate information regarding many of the listed facilities is often not readily available. The Department welcomes comments or additional information regarding facilities that may have supported atomic weapons production that are not on this list, as well as information that clarifies the work done at facilities named below.

2. Department of Energy Facilities

The listing of Department of Energy facilities is only intended for the context of implementing this Act and does not create or imply any new Departmental obligations or ownership at any of the facilities named on this list.

3. Beryllium Vendors and Beryllium Vendor Facilities

Section 3621(6) of the Act defines beryllium vendor as the following:

"(A) Atomics International.

(B) Brush Wellman, Incorporated, and its predecessor, Brush Beryllium Company.

(C) General Atomics.

(D) General Electric Company.

(E) NGK Metals Corporation and its predecessors, Kawecki-Berylco, Cabot Corporation, BerylCo, and Beryllium Corporation of America.

(F) Nuclear Materials and Equipment Corporation.

(G) StarMet Corporation, and its predecessor, Nuclear Metals, Incorporated.

(H) Wyman Gordan, Incorporated.

(I) Any other vendor, processor, or producer of beryllium or related products designated as a beryllium vendor for purposes of this title under Section 3622."

The list identifies facilities that processed, produced, or provided beryllium metal for the Department, as defined by the Act.

Jurisdiction and facility name	Location	Facility type	State
AL— Southern Research Institute	Birmingham	AWE	Alabama.
AL— Speedring, Inc	Culman	.BE	Alabama.
AL— Tennessee Valley Authority	Muscle Shoals	AWE	Alabama.
AK— Amchitka Nuclear Explosion Site	Amchitka Island	DOE	Alaska.
AK— Project Chariot Site Cape	Cape Thompson	DOE	Alaska.
CA— Arthur D. Little Co	San Francisco	AWE	California.
CA— Atomics International	Los Angeles County	BE DOE	California.
CA— California Research Corp	Richmond	AWE	California.
CA— Ceradyne, Inc	Costa Mesa	BE	California.
CA— Ceradyne, Inc	Santa Ana	BE	California.
CA— City Tool & Die MFG	Santa Clara	BE	California.
CA— C.L. Hann Industries	San Jose	BE	California.
CA— Dow Chemical Co	Walnut Creek	AWE	California.
CA— EDM Exotics	Hayward	BE	California.
CA— Electro Circuits, Inc	Pasadena	AWE	California.
CA— Electrofusion	Fremont	BE	California.
CA— Energy Technology Engineering Center (ETEC)	Santa Susana, Area IV	DOE	California.
CA— General Atomics	La Jolla	AWE BE DOE	California.
CA— General Electric Vallecitos	Pleasanton	AWE DOE	California.
CA— Hafer Tool	Oakland	BE	California.
CA— Hexcel Products	Berkeley	BE	California.
CA— Hunter Douglas Aluminum Corp	Riverside	AWE	California.
CA— Jerry Carroll Machining	San Carlos	BE	California.
CA— Lab. for Biomedical & Environmental Sciences	Los Angeles	DOE	California.
CA— Lab. for Energy-Related Health Research	Davis	DOE	California.
CA— Lab. of Radiobiology and Environmental Health	San Francisco	DOE	California.
CA— Lawrence Berkeley National Laboratory	Berkeley	DOE	California.
CA— Lawrence Livermore National Laboratory	Livermore	DOE	California.
CA— Lebow	Goleta	BE	California.
CA— Philco-Ford	Newport Beach	BE	California.
CA— Pleasanton Tool & Manufacturing	Pleasanton	BE	California.
CA— Poltech Precision	Fremont	BE	California.
CA— Robin Materials	Mountain View	BE	California.
CA— Ron Witherspoon, Inc	Campbell	BE	California.
CA— Sandia Laboratory, Salton Sea Base	Imperial County	DOE	California.
CA— Sandia National Laboratories Livermore	Livermore	DOE	California.
CA— Stanford Linear Accelerator	Palo Alto	DOE	California.
CA— Stauffer Metals, Inc	Richmond	AWE	California.
CA— Tapemation	Scotts Valley	BE	California.
CA— University of California	Berkeley	AWE DOE	California.
CO— Coors Porcelain	Golden	BE	Colorado.
CO— Grand Junction Operations Office	Grand Junction	DOE	Colorado.
CO— Project Rio Blanco Nuclear Explosion Site	Rifle	DOE	Colorado.
CO— Project Rulison Nuclear Explosion Site	Grand Valley	DOE	Colorado.

Jurisdiction and facility name	Location	Facility type	State
CO— Rocky Flats Plant	Golden	DOE	Colorado.
CO— Shattuck Chemical	Denver	AWE	Colorado.
CO— University of Denver Research Institute	Denver	AWE BE	Colorado.
CT— American Chain and Cable Co	Bridgeport	AWE	Connecticut.
CT— Anaconda Co	Waterbury	AWE	Connecticut.
CT— Bridgeport Brass Co., Havens Laboratory	Bridgeport	AWE	Connecticut.
CT— Combustion Engineering	Windsor	AWE DOE	Connecticut.
CT— Connecticut Aircraft Nuclear Engine Laboratory	Middletown	BE DOE	Connecticut.
CT— Dorr Corp	Stamford	AWE	Connecticut.
CT— Fenn Machinery	Hartford	AWE	Connecticut.
CT— Machlett Laboratories	Springdale	BE	Connecticut.
CT— New England Lime Co	Canaan	AWE	Connecticut.
CT— Seymour Specialty Wire	Seymour	AWE DOE	Connecticut.
CT— Sperry Products, Inc	Danbury	AWE	Connecticut.
CT— Torrington Co	Torrington	AWE	Connecticut.
DE— Allied Chemical and Dye Corp	North Claymont	AWE	Delaware.
DC— National Bureau of Standards	Washington	AWE	District of Columbia.
DC— Naval Research Laboratory	Washington	AWE DOE	District of Columbia.
FL— American Beryllium Co	Sarasota	BE	Florida.
FL— Armour Fertilizer Works	Bartow	AWE	Florida.
FL— Gardinier, Inc	Tampa	AWE	Florida.
FL— International Minerals and Chemical Corp	Mulberry	AWE	Florida.
FL— Pinellas Plant	Clearwater	DOE	Florida.
FL— University of Florida	Gainesville	AWE	Florida.
FL— Virginia-Carolina Chemical Corp	Nichols	AWE	Florida.
FL— W.R. Grace Co., Agricultural Chemical Div.	Ridgewood	AWE	Florida.
HI— Kauai Test Facility	Kauai	DOE	Hawaii.
ID— Argonne National Laboratory—West	Scoville	DOE	Idaho.
ID— Idaho National Engineering Laboratory	Scoville	DOE	Idaho.
ID— Northwest Machining & Manufacturing	Meridian	BE	Idaho.
IL— Allied Chemical Corp Plant	Metropolis	AWE	Illinois.
IL— American Machine and Metals, Inc	E. Moline	AWE	Illinois.
IL— Argonne National Laboratory—East	Argonne	DOE	Illinois.
IL— Armour Research Foundation	Chicago	AWE	Illinois.
IL— Blockson Chemical Co	Joliet	AWE	Illinois.
IL— C–B Tool Products Co	Chicago	AWE	Illinois.
IL— Crane Co	Chicago	AWE	Illinois.
IL— ERA Tool and Engineering Co	Chicago	AWE	Iowa.
IL— Fansteel Metallurgical Corp	North Chicago	BE	Illinois.
IL— Fermi National Accelerator Laboratory	Batavia	DOE	Illinois.
IL— Granite City Steel	Granite City	AWE DOE	Illinois.
IL— Great Lakes Carbon Corp	Chicago	AWE	Illinois.
IL— GSA 39th Street Warehouse	Chicago	AWE	Illinois.
IL— International Register	Chicago	AWE	Illinois.
IL— Kaiser Aluminum Corp	Dalton	AWE	Illinois.
IL— Lindsay Light and Chemical Co	W. Chicago	AWE	Illinois.
IL— Madison Site (Spectrulite)	Madison	AWE DOE	Illinois.
IL— Metallurgical Laboratory	Chicago	AWE BE DOE	Illinois.
IL— Midwest Manufacturing Co	Galesburg	AWE	Illinois.
IL— Museum of Science and Industry	Chicago	AWE	Illinois.
IL— National Guard Armory	Chicago	AWE DOE	Illinois.
IL— Podbeliniac Corp	Chicago	AWE	Illinois.
IL— Precision Extrusion Co	Bensenville	AWE	Illinois.
IL— Quality Hardware and Machine Co	Chicago	AWE	Illinois.
IL— R. Krasburg and Sons Manufacturing Co	Chicago	AWE	Illinois.
IL— Sciaky Brothers, Inc	Chicago	AWE	Illinois.
IL— Swenson Evaporator Co	Chicago	AWE	Illinois.
IL— W.E. Pratt Manufacturing Co	Joliet	AWE	Illinois.
IL— Wyckoff Drawn Steel Co	Chicago	AWE	Illinois.
IN— American Bearing Corp	Indianapolis	AWE	Indiana.
IN— Dana Heavy Water Plant	Dana	DOE	Indiana.
IN— General Electric Plant	Shelbyville	AWE	Indiana.
IN— Joslyn Manufacturing and Supply Co	Ft. Wayne	AWE	Indiana.
IN— Purdue University	Lafayette	AWE	Indiana.
IN— Wash-Rite	Indianapolis	AWE	Indiana.
IA— Ames Laboratory	Ames	DOE	Iowa.

Jurisdiction and facility name	Location	Facility type	State
IA— Bendix Aviation (Pioneer Division)	Davenport	AWE	Iowa.
IA— Iowa Ordnance Plant	Burlington	DOE	Iowa.
IA— Titus Metals	Waterloo	AWE	Iowa.
KS— Spencer Chemical Co., Jayhawk Works	Pittburg	AWE	Kansas.
KY— Paducah Gaseous Diffusion	Paducah	DOE	Kentucky.
LA— Ethyl Corp	Baton Rouge	BE	Louisiana.
MD— Armco-Rustless Iron & Steel	Baltimore	AWE	Maryland.
MD— W.R. Grace and Company	Curtis Bay	AWE DOE	Maryland.
MA— American Potash & Chemical	West Hanover	AWE	Massachusetts.
MA— C.G. Sargent & Sons	Graniteville	AWE	Massachusetts.
MA— Chapman Valve	Indian Orchard	AWE DOE	Massachusetts.
MA— Edgerton Germeshausen & Grier, Inc	Boston	AWE	Massachusetts.
MA— Fenwal, Inc	Ashland	AWE	Massachusetts.
MA— Franklin Institute	Boston	BE	Massachusetts.
MA— Heald Machine Co	Worcester	AWE	Massachusetts.
MA— La Pointe Machine and Tool Co	Hudson	AWE	Massachusetts.
MA— Massachusetts Institute of Technology	Cambridge	AWE BE	Massachusetts.
MA— Metals and Controls Corp	Attleboro	AWE	Massachusetts.
MA— National Research Corp	Cambridge	AWE	Massachusetts.
MA— Norton Co	Worcester	AWE BE	Massachusetts.
MA— Nuclear Metals, Inc	Concord	AWE BE	Massachusetts.
MA— Reed Rolled Thread Co	Worcester	AWE	Massachusetts.
MA— Shpack Landfill	Norton	AWE	Massachusetts.
MA— Ventron Corporation	Beverly	AWE DOE	Massachusetts.
MA— Watertown Arsenal	Watertown	AWE	Massachusetts.
MA— Winchester Engineering & Analytical Center	Winchester	DOE	Massachusetts.
MA— Woburn Landfill	Woburn	AWE	Massachusetts.
MA— Wyman Gordon Inc	Grayton, North Grafton	BE	Massachusetts.
MI— AC Spark Plug	Flint	AWE BE	Michigan.
MI— Baker-Perkins Co	Saginaw	AWE	Michigan.
MI— Bridgeport Brass Co	Adrian	AWE DOE	Michigan.
MI— Brush Beryllium Co	Detroit	AWE	Michigan.
MI— Carboloy Co	Detroit	AWE	Michigan.
MI— Extruded Metals Co	Grand Rapids	AWE	Michigan.
MI— Gerity-Michigan Corp	Adrian	BE	Michigan.
MI— Mitts & Merrel Co	Saginaw	AWE	Michigan.
MI— Oliver Corp	Battle Creek	AWE	Michigan.
MI— Revere Copper and Brass	Detroit	AWE BE	Michigan.
MI— Speedring Systems, Inc	Detroit	BE	Michigan.
MI— Star Cutter Corp	Farmington	AWE	Michigan.
MI— University of Michigan	Ann Arbor	AWE	Michigan.
MI— Wolverine Tube Division	Detroit	AWE BE	Michigan.
MN— Elk River Reactor	Elk River	DOE	Minnesota.
MS— Salmon Nuclear Explosion Site	Hattiesburg	DOE	Mississippi.
MO— Kansas City Plant	Kansas City	DOE	Missouri.
MO— Latty Avenue Properties	Hazelwood	AWE DOE	Missouri.
MO— Mallinckrodt Chemical Co., Destrehan St. Plant	St. Louis	DOE	Missouri.
MO— Medart Co	St. Louis	AWE	Missouri.
MO— Roger Iron Co	Joplin	AWE	Missouri.
MO— Spencer Chemical Co	Kansas City	AWE	Missouri.
MO— St. Louis Airport Storage Site (SLAPS)	St. Louis	AWE DOE	Missouri.
MO— Tyson Valley Powder Farm	St. Louis	AWE	Missouri.
MO— United Nuclear Corp	Hematite	AWE	Missouri.
MO— Weldon Spring Plant	Weldon Spring	DOE	Missouri.
NE— Hallam Sodium Graphite Reactor	Hallam	DOE	Nebraska
NV— Nevada Test Site	Mercury	DOE	Nevada.
NV— Project Faultless Nuclear Explosion Site	Central Nevada Test Site	DOE	Nevada.
NV— Project Shoal Nuclear Explosion Site	Fallon	DOE	Nevada.
NV— Yucca Mountain Site Characterization Project	Yucca Mountain	DOE	Nevada.
NJ— Alumium Co. of America (Alcoa)	Garwood	AWE	New Jersey.
NJ— American Peddinghaus Corp	Garwood	AWE	New Jersey.
NJ— Baker and Williams Co	Newark	AWE	New Jersey.
NJ— Bell Telephone Laboratories	Murray Hill	AWE	New Jersey.
NJ— Bloomfield Tool Co	Bloomfield	AWE	New Jersey.
NJ— Bowen Laboratory	North Branch	AWE	New Jersey.

Jurisdiction and facility name	Location	Facility type	State
NJ— Callite Tungsten Co	Union City	AWE	New Jersey.
NJ— Chemical Construction Co	Linden	AWE	New Jersey.
NJ— Du Pont Deepwater Works	Deepwater	AWE DOE	New Jersey.
NJ— International Nickel Co., Bayonne Laboratories	Bayonne	AWE	New Jersey.
NJ— J.T. Baker Chemical Co	Philipsburg	AWE	New Jersey.
NJ— Kellex/Pierpont	Jersey City	AWE DOE	New Jersey.
NJ— Maywood Chemical Works	Maywood	AWE DOE	New Jersey.
NJ— Middlesex Municipal Landfill	Middlesex	AWE DOE	New Jersey.
NJ— Middlesex Sampling Plant	Middlesex	DOE	New Jersey.
NJ— National Beryllia	Haskell	BE	New Jersey.
NJ— New Brunswick Laboratory	New Brunswick	DOE	New Jersey.
NJ— Picatinny Arsenal	Dover	AWE	New Jersey.
NJ— Princeton Plasma Physics Laboratory	Princeton	DOE	New Jersey.
NJ— Rare Earths/W.R. Grace	Wayne	AWE DOE	New Jersey.
NJ— Standard Oil Development Co of NJ	Linden	AWE	New Jersey.
NJ— Stevens Institute of Technology	Hoboken	BE	New Jersey.
NJ— Tube Reducing Co	Wallington	AWE	New Jersey.
NJ— U.S. Pipe and Foundry	Burlington	BE	New Jersey.
NJ— United Lead Co	Middlesex	AWE BE	New Jersey.
NJ— Vitro Corp of America (New Jersey)	West Orange	AWE	New Jersey.
NJ— Westinghouse Electric Corp (New Jersey)	Bloomfield	AWE	New Jersey.
NJ— Wykoff Steel Co	Newark	AWE	New Jersey.
NM— Accurate Machine & Tool	Albuquerque	BE	New Mexico.
NM— Albuquerque Operations Office	Albuquerque	DOE	New Mexico.
NM— Chupadera Mesa	Chupadera Mesa	DOE	New Mexico.
NM— Los Alamos Medical Center	Los Alamos	DOE	New Mexico.
NM— Los Alamos National Laboratory	Los Alamos	DOE	New Mexico.
NM— Lovelace Respiratory Research Institute	Albuquerque	DOE	New Mexico.
NM— Project Gasbuggy Nuclear Explosion Site	Farmington	DOE	New Mexico.
NM— Project Gnome Nuclear Explosion Site	Carlsbad	DOE	New Mexico.
NM— Sandia National Laboratories	Albuquerque	DOE	New Mexico.
NM— South Albuquerque Works	Albuquerque	DOE	New Mexico.
NM— Trinity Nuclear Explosion Site	White Sands Missile Range	DOE	New Mexico.
NM— Waste Isolation Pilot Plant	Carlsbad	DOE	New Mexico.
NY— Allegheny-Ludlum Steel	Watervliet	AWE	New York.
NY— American Machine and Foundry	Brooklyn	AWE	New York.
NY— Ashland Oil	Tonawanda	AWE DOE	New York.
NY— Baker and Williams Warehouses	New York	AWE DOE	New York.
NY— Bethlehem Steel	Lackawanna	AWE	New York.
NY— Bliss & Laughlin Steel	Buffalo	AWE DOE	New York.
NY— Brookhaven National Laboratory	Upton	DOE	New York.
NY— Burns & Roe, Inc	Maspeth	BE	New York.
NY— Carborundum Company	Niagara Falls	AWE	New York.
NY— Colonie Site (National Lead)	Colonie (Albany)	AWE DOE	New York.
NY— Crucible Steel Co	Syracuse	AWE	New York.
NY— Electro Metallurgical	Niagara Falls	AWE	New York.
NY— Environmental Measurements Laboratory	New York	DOE	New York.
NY— Fairchild Hiller Corporation	Farmingdale	BE	New York.
NY— General Astrometals	Yonkers	BE	New York.
NY— Hooker Electrochemical	Niagara Falls	AWE	New York.
NY— International Rare Metals Refinery, Inc	Mt. Kisco	AWE	New York.
NY— Ithaca Gun Co	Ithaca	AWE	New York.
NY— Lake Ontario Ordnance Works	Niagara Falls	DOE	New York.
NY— Ledoux and Co	New York	AWE	New York.
NY— Linde Air Products	Buffalo	AWE	New York.
NY— Linde Ceramics Plant	Tonawanda	AWE DOE	New York.
NY— New York University	New York	AWE	New York.
NY— Peek Street Facility [1]	Schenectady	DOE	New York.
NY— Radium Chemical Co	New York	AWE BE	New York.
NY— Rensselaer Polytechnic Institute	Troy	BE	New York.
NY— Sacandaga Facility [1]	Glenville	DOE	New York.
NY— SAM Laboratories, Columbia Univeristy	New York	DOE	New York.
NY— Seaway Industrial Park	Tonawanda	AWE DOE	New York.
NY— Seneca Army Depot	Romulus	AWE	New York.
NY— Separations Process Research Unit (at Knolls Lab.) [1]	Schenectady	DOE	New York.

Jurisdiction and facility name	Location	Facility type	State
NY— Simonds Saw and Steel Co	Lockport	AWE	New York.
NY— Staten Island Warehouse	New York	AWE	New York.
NY— Sylvania Corning Nuclear Corp.—Bayside Lab	Bayside	AWE BE	New York.
NY— Sylvania Corning Nuclear Corp.— Hicksville Plant	Hicksville	AWE DOE	New York.
NY— Titanium Alloys Manufacturing	Niagara Falls	AWE	New York.
NY— Trudeau Foundation	Saranac Lake	BE	New York.
NY— University of Rochester Atomic Energy Project	Rochester	DOE	New York.
NY— Utica St. Warehouse	Buffalo	AWE	New York.
NY— West Valley Demonstration Project	West Valley	AWE DOE	New York.
NY— Wolff-Alport Chemical Corp	Brooklyn	AWE	New York.
NC— Beryllium Metals and Chemical Corp	Bessemer City	BE	North Carolina.
NC— University of North Carolina	Chapel Hill	BE	North Carolina.
OH— Ajax Magnethermic Corp	Youngstown	AWE	Ohio.
OH— Alba Craft	Oxford	AWE DOE	Ohio.
OH— Associated Aircraft Tool and Manufacturing Co	Fairfield	AWE DOE	Ohio.
OH— B & T Metals	Columbus	AWE DOE	Ohio.
OH— Baker Brothers	Toledo	AWE DOE	Ohio.
OH— Battelle Laboratories—King Avenue	Columbus	AWE BE DOE	Ohio.
OH— Battelle Laboratories—West Jefferson	Columbus	AWE DOE	Ohio.
OH— Beryllium Production Plant (Brush Luckey Plant)	Luckey	BE DOE	Ohio.
OH— Brush Beryllium Co. (Cleveland)	Cleveland	AWE BE	Ohio.
OH— Brush Beryllium Co. (Elmore)	Elmore	BE	Ohio.
OH— Brush Beryllium Co. (Lorain)	Lorain	BE	Ohio.
OH— Cincinnati Milling Machine Co	Cincinnati	AWE	Ohio.
OH— Clifton Products Co	Painesville	BE	Ohio.
OH— Copperweld Steel	Warren	AWE	Ohio.
OH— Du Pont-Grasselli Research Laboratory	Cleveland	AWE	Ohio.
OH— Extrusion Plant (Reactive Metals Inc.)	Ashtabula	DOE	Ohio.
OH— Feed Materials Production Center (FMPC)	Fernald	DOE	Ohio.
OH— General Electric Company (Ohio)	Cincinnati/Evendale	AWE BE DOE	Ohio.
OH— Gruen Watch	Norwood	AWE	Ohio.
OH— Harshaw Chemical Co	Cleveland	AWE	Ohio.
OH— Herring-Hall Marvin Safe Co	Hamilton	AWE DOE	Ohio.
OH— Horizons, Inc	Cleveland	AWE	Ohio.
OH— Kettering Laboratory, University of Cincinnati	Cincinnati	BE	Ohio.
OH— Magnus Brass Co	Cincinnati	AWE	Ohio.
OH— McKinney Tool and Manufacturing Co	Cleveland	AWE	Ohio.
OH— Mitchell Steel Co	Cincinnati	AWE	Ohio.
OH— Monsanto Chemical Co	Dayton	AWE	Ohio.
OH— Mound Plant	Miamisburg	DOE	Ohio.
OH— Painesville Site (Diamond Magnesium Co.)	Painesville	AWE DOE	Ohio.
OH— Piqua Organic Moderated Reactor	Piqua	DOE	Ohio.
OH— Portsmouth Gaseous Diffusion Plant	Piketon	DOE	Ohio.
OH— R. W. Leblond Machine Tool Co	Cincinnati	AWE	Ohio.
OH— Tech-Art, Inc	Milford	AWE	Ohio.
OH— Tocco Induction Heating Div	Cleveland	AWE	Ohio.
OH— Vulcan Tool Co	Dayton	AWE	Ohio.
OK— Eagle Picher	Quapaw	BE	Oklahoma.
OK— Kerr-McGee	Guthrie	AWE	Oklahoma.
OR— Albany Research Center	Albany	AWE DOE	Oregon.
OR— Wah Chang	Albany	AWE	Oregon.
PA— Aeroprojects, Inc	West Chester	AWE BE	Pennsylvania.
PA— Aliquippa Forge	Aliquippa	AWE DOE	Pennsylvania.
PA— Aluminum Co of America (Alcoa) (Pennsylvania)	New Kensington	AWE	Pennsylvania.
PA— Beryllium Corp. of America (Hazleton)	Hazleton	BE	Pennsylvania.
PA— Beryllium Corp. of America (Reading)	Reading	BE	Pennsylvania.
PA— Birdsboro Steel & Foundry	Birdsboro	AWE	Pennsylvania.
PA— C.H. Schnoor	Springdale	AWE DOE	Pennsylvania.
PA— Carnegie Institute of Technology	Pittsburgh	AWE	Pennsylvania.
PA— Carpenter Steel Co.	Reading	AWE	Pennsylvania.
PA— Chambersburg Engineering Co	Chambersburg	AWE	Pennsylvania.
PA— Foote Mineral Co	East Whiteland Twp	AWE	Pennsylvania.
PA— Frankford Arsenal	Philadelphia	AWE	Pennsylvania.
PA— Heppenstall Co	Pittsburgh	AWE	Pennsylvania.
PA— Jessop Steel Co	Washington	AWE	Pennsylvania.

Appendix B - SELECTED FACILITIES

The facilities below are referenced in the DEEOIC Basic CE Training Course:

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: Oregon Metallurgical Corp.
State: Oregon **Location:** Albany
Time Period: AWE 1948-1978; DOE 1987-1993 (remediation)
Facility Type: Atomic Weapons Employer Department of Energy

Facility Description: From 1948-1978, the Bureau of Mines conducted metallurgical research at the Albany Research Center for the AEC and ERDA. Beginning in 1955, the site performed research on alloys of uranium and thorium under an AEC contract. Metallurgical operations also included melting, machining and welding. Documentation indicates that the Oregon Metallurgical Corp. possessed production quantities of radioactive materials for work requested by National Lead of Ohio in November 1958.
The Albany Research Center continues as a DOE materials research center under the Office of Fossil Fuels.

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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: 1944-1945
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.

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Aliquippa Forge

Also Known As: Vulcan Crucible Steel Co.
Also Known As: Universal Cyclops, Inc.
State: Pennsylvania **Location:** Aliquippa
Time Period: AWE 1947-1950 ; DOE 1988 (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.
Although this site was designated as part of the Formerly Utilized Site Remediation Action Program (FUSRAP) in 1983, the only year in which remediation work took place was in 1988. This work was performed under the Bechtel National Inc. umbrella contract for DOE site environmental remediation.

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Allied Chemical Corp. Plant

Also Known As: General Chemical Division
State: Illinois **Location:** Metropolis
Time Period: 1959-1976
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 hexafloride 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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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: 1965-1972 ; 1995-present (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 was completed with the demobilization of drilling equipment on February 23, 1972.

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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.

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B & T Metals

State: Ohio **Location:** Columbus
Time Period: 1943
Facility Type: Atomic Weapons Employer

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.

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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 1947-1961; DOE 1986-2000
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 1947 until at least 1961.

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Beryllium Metals and Chemical Corp.

Also Known As: BERMET
State: North Carolina **Location:** Bessemer City
Time Period: 1963-1969
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.

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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)

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Brush Beryllium Co. (Cleveland)

Also Known As: Brush Wellman Co.
Also Known As: Motor Wheel Corp.
Also Known As: Magnesium Reduction
State: Ohio **Location:** Cleveland
Time Period: AWE 1942-1943;1949-1953 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 tetrafloride). 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?).

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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.

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Ceradyne, Inc.

State: California **Location:** Costa Mesa
Time Period: 1990-1996
Facility Type: Beryllium Vendor

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

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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.

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Clifton Products Co.

State: Ohio **Location:** Painesville
Time Period: 1940-1952
Facility Type: Beryllium Vendor

Facility Description: In the 1940's, 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.

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Coors Porcelain

Also Known As: Coors Ceramic
State: Colorado **Location:** Golden
Time Period: 1947-1975
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 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 though 1975, presumably for the AEC/DOE.

****

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.

****

Dana Heavy Water Plant

Also Known As: Wabash River Ordance 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)

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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. This plant was to take uranium tetrafluoride and convert it to uranium metal.
Developing the technology to produce pure uranium metal was a priority for the Manhattan Project. ElectroMet accomplished this conversion by taking the uranium tetrafluoride received from Union Carbide's Linde Air Products Division and reacting it with magnesium in induction furnaces. Once the metal was created, 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.

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Extrusion Plant (Reactive Metals Inc.)

Also Known As: Reactive Metals, Inc.
Also Known As: RMI
State: Ohio **Location:** Ashtabula
Time Period: 1962-1988; uncertain-present (remediation)
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.
Ashtabula 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.

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Feed Materials Production Center (FMPC)

Also Known As: Fernald
Also Known As: Fernald Environmental Management Project (FEMP)
Also Known As: FERMCO
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)

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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: AWE 1960-1969; BE 1959-1967; 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.

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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; AWE/DOE 1961-1970
Facility Type: Atomic Weapons Employer 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 facilty was also involved in the refining or fabrication of beryllium or beryllium oxide.

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Grand Junction Operations Office

State: Colorado **Location:** Grand Junction
Time Period: 1947-1971
Facility Type: Department of Energy

Facility Description: The Grand Junction Office of the AEC was the headquarters for the uranium procurement program from 1947-1970. One of the principal functions of the GJO was the receipt, sampling, and analysis of uranium and vanadium concentrates from the numerous (32) ore processing operations in the western US. More than 347 million pounds of uranium oxide and 28 million pounds of vanadium oxide were received during the period from 1948-1971.
In 1951 the AEC built a concentrate sampling plant and assay laboratory in the Grand Junction compound. This was operated by Ledoux company under a management and operating contract.
In addition, the AEC built two ore-testing pilot plants in its compound in Grand Junction. These were, in effect, miniature processing plants in which approximately 30,000 tons of ore from 40 different uranium mines were tested between the years of 1953-1958.
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.
CONTRACTORS: American Cyanamid Company (1953-1954) (pilot plant); American Smelting and Refining Company (1949-1956) (ore buying station, sampling, and assaying); Ledoux and Company (1948) (sampling); Lucius Pitkin, Inc. (1956-1971) (ore buying station, sampling, and assaying); National Bureau of Standards (1948) (analyses); National Lead Company (1954-1958) (pilot plant); and U.S. Vanadium Corporation (1943-1946) (green sludge mill).

****

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.
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)

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Iowa Ordnance Plant

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 Burlington Assembly Plant was built in 1947 as a final warhead assembly plant. Assembly functions that were performed by Los Alamos at Sandia Base in New Mexico were transferred to Burlington by 1949. Burlington continued to perform this work until 1974. The Burlington Plant also made high explosive main charges for nuclear weapons from 1947 to 1974. The AEC may have also performed weapons modifications, stockpile sampling, new material system testing, repairs, and weapons retirement activities at the plant. 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 (1953-1974)

****

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)

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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.

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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.

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Lawrence Berkeley National Laboratory

Also Known As: Radiation Laboratory
Also Known As: LBL
Also Known As: Lawrence Radiation Laboratory
Also Known As: Lawrence Berkeley National Laboratory
State: California **Location:** Berkeley
Time Period: 1939-present
Facility Type: Department of Energy

Facility Description: Since the early 1930s, the University of California has leased the Lawrence Berkeley National Laboratory to the Department of Energy for a wide range of energy- related research activities, including research in nuclear and high energy physics, accelerator research and development, materials research, and chemistry, geology, molecular biology, and biomedical research. Scientists at Berkeley developed the electromagnetic enrichment process that was installed and operated at the Y-12 plant in Oak Ridge from 1943-1947.
Throughout the course of its operations, the potential for beryllium exposure existed at this site, due to beryllium use, residual contamination, and decontamination activities.

****

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.

****

Lovelace Respiratory Research Institute

Also Known As: Inhalation Toxicology Research Institute
Also Known As: ITRI
State: New Mexico **Location:** Albuquerque
Time Period: 1960-present
Facility Type: Department of Energy

Facility Description: The Lovelace Respiratory Research Institute (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 is operated for Department of Energy (DOE) by the non-profit Lovelace Biomedical and Environmental Research Institute.
Throughout the course of its operations, the potential for beryllium exposure existed at this site, due to beryllium use, residual contamination, and decontamination activities.

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Mallinckrodt Chemical Co., Destrehan St. Plant

Also Known As: St. Louis Downtown Site
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.
Throughout the course of its operations, the potential for beryllium exposure existed at this site.

****

Middlesex Municipal Landfill

Also Known As: MML
State: New Jersey **Location:** Middlesex
Time Period: AWE 1948-1960; DOE 1980-1998
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.

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Middlesex Sampling Plant

Also Known As: MSP
State: New Jersey **Location:** Middlesex
Time Period: 1943-1967; 1980-1998 (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.
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)

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National Beryllia

Also Known As: Cercom Quality Products
Also Known As: General Ceramics
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 1984-1986 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.

****

Nevada Test 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: Bechtel Nevada (1996-present); Reynolds Electrical & Engineering Company (1952-1995)
Holmes and Narver was an architectual 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 facilites 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.

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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 at East Tennessee Technology Park (ETTP) was built as part of the World War II Manhattan Project to supply enriched uranium for nuclear weapons production. Construction of the ETTP started in 1943 with the ETTP Building, the first diffusion facility for large-scale separation of uranium-235. The ETTP Building was 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 ETTP 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.
CONTRACTORS: Bechtel Jacobs (1998–present); Lockheed Martin Eenrgy Systems, Inc. (1994-1998); Martin Marietta Energy Systems, Inc. (1984-1994); Union Carbide & Carbon Corp. (1943-1984)

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Oak Ridge National Laboratory (X-10)

Also Known As: Clinton Laboratories
State: Tennessee **Location:** Oak Ridge
Time Period: 1943-present

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: Bechtel Nevada (1996-present); Reynolds Electrical & Engineering Company (1952-1995)
Holmes and Narver was an architectual 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 facilites 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.

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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 at East Tennessee Technology Park (ETTP) was built as part of the World War II Manhattan Project to supply enriched uranium for nuclear weapons production. Construction of the ETTP started in 1943 with the ETTP Building, the first diffusion facility for large-scale separation of uranium-235. The ETTP Building was 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 ETTP 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.
CONTRACTORS: Bechtel Jacobs (1998–present); Lockheed Martin Eenrgy Systems, Inc. (1994-1998); Martin Marietta Energy Systems, Inc. (1984-1994); Union Carbide & Carbon Corp. (1943-1984)

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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)

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Paducah Gaseous Diffusion Plant

State: Kentucky **Location:** Paducah
Time Period: 1952-1998
Facility Type: Department of Energy

Facility Description: The Department of Energy's 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. Uranium enriched at the site today is used as nuclear fuel in commercial power plants. The Paducah plant performs the first step in the uranium enrichment process, followed by further enrichment at the Ohio plant.
Construction of the Paducah plant began in 1951 in response to the increased demand for highly-enriched uranium resulting from nuclear weapons production. Initial operations began in 1952 and full operation was reached by 1955.
In addition to producing enriched uranium for weapons production, the plant also supplied enriched uranium for the Navy and for commercial fuel. The Paducah Plant also acted as the uranium hexafluoride feed point for all gaseous diffusion plants until 1964. Since 1991, the Paducah Plant has only produced low-enriched uranium for use as fuel in commercial nuclear power plants.
Throughout the course of its operations, the potential for beryllium exposure existed at this site.
The plant was taken over by the United States Enrichment Corporation in 1998.
CONTRACTORS: Lockheed Martin Energy Systems, Inc. (1984-1998); Union Carbide Corporation Nuclear Division (1952-1984)

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Portsmouth Gaseous Diffusion Plant

State: Ohio **Location:** Piketon
Time Period: 1954-1998
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 (which contains more than 20 percent uranium-235) 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. In 1954, the plant also began producing low-enriched uranium (which contains about three percent uranium-235 and ninety-seven percent uranium-238) for use as fuel by commercial nuclear power plants. In the early 1980's, a gas centrifuge uranium enrichment program was initiated at Portsmouth, however, this process was never fully implemented.
Only July 1, 1993, the U.S. Enrichment Corporation (USEC), a government-owned corporation formed under the Energy Policy Act of 1992, assumed control of the plant's production activities. Under USEC control, the plant continues to produce low-enriched uranium for commercial use. The Department of Energy maintains responsibility for addressing the environmental legacy left by historic plant operations. Throughout the course of its operations, the potential for beryllium exposure existed at this site.
CONTRACTORS: Lockheed Martin Energy Systems, Inc. (1986-1998); Goodyear Atomic Corporation (1956-1986)

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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.

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Project Faultless Nuclear Explosion Site

State: Nevada **Location:** Central Nevada Test Site
Time Period: 1967-1974

Facility Type: Department of Energy

Facility Description: Project Fautless 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 exposions. The Faultess test was conducted to determine the suitablity 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.

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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 expolsions 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.

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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, devlopment 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).

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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, acceptances tests, using 17 tons of natural uranium, were conducted at Leblond Machine.

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Rare Earths/W.R. Grace

State: New Jersey **Location:** Wayne
Time Period: AWE 1955-1967; DOE uncertain-1998
Facility Type: Atomic Weapons Employer Department of Energy

Facility Description: From 1948 to 1971, Rare Earths, Inc. and W.R. Grace and Co. operated a plant at the Wayne site to extract thorium and rare earth elements from monazite sand ore, primarily for commerical purposes. The company entered into an agreement with the AEC in 1955.

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Rocky Flats Plant

State: Colorado **Location:** Golden
Time Period: 1951-present
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)

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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.

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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)

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Speedring, Inc.

Also Known As: Axsys Technologies
State: Alabama **Location:** Culman
Time Period: 1971-1998
Facility Type: Beryllium Vendor

Facility Description: Brush Beryllium sublet some jobs for Dow/Rocky Flats to Speedring. More recently, Speedring performed work for Sandia National Laboratory. Speedring's beryllium dust and sampling practices are documented in Battelle's Defense Metals Information Center publication on "Some Notes on Safe Handling Practices for Beryllium." Speedring was part of the U.S. commercial beryllium industry in 1961 and receiving beryllium at this time, but records indicate that this beryllium was for use under another Government contract, possible for the Department of Defense. There is another Speedring facility in Detroit, MI.

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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.

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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: AWE 1957-uncertain; BE uncertain
Facility Type: Atomic Weapons Employer Beryllium Vendor

Facility Description: Records indicate that "Vitro Corporation" of Chattanoga, TN performed some beryllium work for Y-12. 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. This site is now owned by W.R. Grace.

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W.R. Grace (Tennessee)

Also Known As: Nuclear Fuels Services
Also Known As: Davison Chemical
State: Tennessee **Location:** Erwin
Time Period: 1958-1970
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.

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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: 1955-1958
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.

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W.R. Grace Co., Agricultural Chemical Div. (Florida)

State: Florida **Location:** Ridgewood
Time Period: 1954
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.

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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; 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.
CONTRACTOR: West Valley Nuclear Services, Inc. (1982-present)

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W.R. Grace (Tennessee)

Also Known As: Nuclear Fuels Services
Also Known As: Davison Chemical
State: Tennessee **Location:** Erwin
Time Period: 1958-1970
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.

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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 fabircation. 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); Bechtel Jacobs (1998-2000); Lockheed Martin Energy Systems (1994-1998); Martin Marietta Energy Systems (1984-1994); Union Carbide & Carbon Corp. (1947-1984); Tennessee Eastman Corp. (TEC) (1943-1947)

Appendix C - ORISE DATABASE PROCEDURES BULLETIN

EEOICPA BULLETIN NO. 02-34

Issue Date: September 300, 2002

Expiration Date: September 30, 2003

Subject: Procedures for using the on-line ORISE database.

Background: The program has been receiving employment information from a database maintained by the Oak Ridge Institute for Science and Education (ORISE) by sending lists of claims for employment verification directly to ORISE rather than the Department of Energy (DOE) point of contact.

The ORISE database includes over 400,000 employees from the 1940's until the early 1990's and has been an effective tool in verifying employment for EEOICP claimants. In order to streamline the use of the database, DEEOIC and the DOE have established an Internet-based means of access to the data. Claims Examiners will be able to access the database with an individual password and acquire employment data for a specific claim, eliminating the need to send individual requests to ORISE.

Reference: EEOICPA Bulletin No. 02-28; Interim procedures for obtaining employment verification from ORISE. ECMS Resource Users Guide and ECMS FAQ's.

Purpose: To provide procedures for obtaining employment verification information from the online ORISE database.

Applicability: Claims Examiners, Senior Claims Examiners, All Supervisors, ADP Coordinators and Technical Assistants.

Action:

1. At the time that a claim is initially reviewed, if the claims examiner (CE) determines that a request for employment verification is appropriate, the CE must first check the list of facilities that are included in the ORISE database (Attachment 1).

2. If the employee worked at a facility that is not included in the ORISE database, the CE should request employment verification through the usual manner, depending on the routing instructions for that particular facility.

3. If the employee worked at one of the facilities on the attached list, the CE should log on to the ORISE database through the secure web site address which can be obtained from the ECMS Resource Users Guide and ECMS FAQ's on the secure shared drive.

4. Upon accessing the web site, a security alert screen will come up which assigns a security certificate that authenticates that the CE is an authorized user and is using a secure site. The CE will have a choice of YES, NO or View Certificate. Please select Yes to continue.

5. A web page "The Department of Energy, Case Management System", with the login and password field at the bottom will be displayed. The CE will be required to enter his/her user name and password. Instructions for the username and temporary password can be obtained through the ECMS Resource Users Guide and ECMS FAQ's on the secure shared drive.

6. Once logged in, a web page that lists privacy and security information will appear. On the left side of the web page the CE will see buttons for *Search ORISE*, *Change Password* and *Logout*.

7. For security reasons, the CE should change his/her password by selecting the *Change Password* button.

8. To search the ORISE database, the CE must select the *Search ORISE* button. A screen will appear which provides fields for the first name, last name and social security number of the employee. The CE must enter at a minimum a partial last name and social security number for the individual for whom the search is being conducted.

9. Once the employee name and social security number is entered, the system will search the database and provide the results at the bottom of the page under *ORISE Search Results*. If the database finds a match, the name and social security number will appear. The CE must select the result to review the employment data.

10. The ORISE data is categorized in two rows of data. The first row is categorized by Facility and lists all the facilities where the employee worked. The second row is categorized in columns by Facility, Hire/Terminate Dates, Dept. Code, Job Title, and Badge Number and provides employment data specific to the facility(s) where the employee worked. For example, if the employee worked at three facilities, then the CE would see three rows of information pertaining to each of the identified facilities, hire/terminate dates, dept. code, job title and badge number.

11. If the information from the ORISE database is used for employment verification, the CE should print a copy of the ORISE employment results, and place it in the case file along with the EE-5, and the memorandum from DOE stating that data contained in

the ORISE database is reliable and may be used as affirmation of employment. (Attachment 2).

12. The CE should enter the status code **OR** in ECMS only if ORISE information is used to verify employment. It will no longer be necessary to enter an OS (ORISE sent) status code.

13. Some of the data will show the employee's name and facility, but do not have any specific dates. These are individuals that worked at the facility, but for whom the database contains no specific dates.

14. The information available on the database is limited to certain time periods, which are different for each facility. Attachment 1 shows the earliest hire date and the latest termination date in the database for each facility. If an individual employee worked prior to or after those dates, that employment would not be reflected in the ORISE information. These dates do not necessarily correlate with the dates the facility was in operation.

15. If the claim is for a member of the SEC, and is for a specified cancer, the CE must determine whether the ORISE information confirms employment for the required number of days at the facility, during the required timeframe. If yes, place a memorandum in the file describing the relevant dates and facilities.

16. If the claim is for chronic beryllium disease or beryllium sensitivity, the CE should determine whether the ORISE information confirms employment at a DOE facility for at least one day when beryllium was present. If yes, place a memorandum in the file describing the relevant information.

17. If the claim is for non-SEC cancer, the CE must determine whether the ORISE information is sufficient to confirm each period of claimed DOE employment, and that the individual is a "covered employee." If yes, place a memorandum in the file describing the relevant information in the file. The dates provided by ORISE need not be precisely the same as those reported on the EE-3, however, they should be within 6 months of each other. For example, if an employee claims employment at a facility from 2/1/63-3/4/68, and ORISE confirms 3/1/63-5/1/68, the employment is confirmed. The most generous interpolation of those dates, e.g. 2/1/63-5/1/68, should be used as the period of employment in the NIOSH Referral Memo.

18. If the claim is for chronic silicosis, the CE must determine whether the ORISE information confirms employment for the required number of days at the facility. If yes, place a memorandum in the file describing the relevant dates and facilities.

19. If the CE is unable to verify or can only partially verify employment through use of the ORISE information, the CE will send an EE-5 and a copy of the ORISE information to the appropriate DOE records contact. The CE will send a cover memo to DOE indicating that the ORISE information is incomplete and thus additional information is required by the DOE. The CE must enter the status code **ES** (Employment Sent) in ECMS with the effective date as the date indicated on the cover memo. In addition, once the verification is received from the DOE, the CE must enter the status code **ER** (Employment Received) in ECMS with the status effective date as the date received and reflected by the mailroom staff.

20. Effective this bulletin, ORISE will not process or return outstanding requests sent by the CE. The CE should search the online database for employment information pertaining to the outstanding requests sent to ORISE; and enter the status code of OR (ORISE received) regardless if employment information was obtained.

21. The absence of data from ORISE may not be used as the basis for stating that an employee did NOT work at a given facility.

22. As a reminder, if the CE sends an employment verification package to DOE, and he/she does not receive a response within 30 days, the CE must follow up with DOE by submitting a cover memo and a EE-5. The cover memo must state it is a follow up to a previous request and include the DOE point of contact and the date it was originally sent to the DOE. The CE must enter the status code of **DE**(Developing Employment)in ECMS with the status effective date as the date indicated on the cover memo. In addition, once the CE receives the EE-5 back from the DOE, he/she must enter the status code of **ER** in ECMS with the status effective date as the date received and reflected by the mailroom staff.

Please Note- The employment history as described on the EE-3 and the employment information as reflected in the ORISE data do not have to match exactly in order for the actions described above to take place.

In addition, it should be noted that the absence of information on the ORISE database should not in and of itself be the basis for a denial of the claim. (You stated this above - are you repeating it on purpose?)

The data that was used for this exercise was obtained from ECMS on approximately May 13, 2002. If cases were coded inaccurately, or if DOE has responded since that time, the information from ORISE may not be useful.

ADP coordinators should contact the Energy Tech Support for application and/or technical questions at: ENERGY-TECH-SUPPORT@fenix2.DOL-ESA.gov.

Training should be conducting on these procedures as soon as possible.

Disposition: Retain until the indicated expiration date.

PETER M. TURCIC
Director, for Division of Energy Employees
Occupational Illness Compensation

Distribution List No. 1: Claims Examiners, Supervisory Claims Examiners District Medical Advisers, Systems Managers, Technical Assistants, Rehabilitation Specialists, and Staff Nurses, Technical Assistants, Customer Service Representatives, Fiscal Officers, FAB District Managers, Operation Chiefs, Hearing Representatives, District Office Mail & File Sections, ADP Coordinators

Contents of CER Data Model - 4/1/2002					
Facility Name	**Total**	**# with Hire Date**	**Earliest Hire**	**# with Term Date**	**Latest Term**
Argonne	4994	4999	03/05/1942	163	09/30/1988
Baneberry	891	0			
Battelle-Columbus	90	90	05/05/1952	68	08/29/1986
Bethlehem	57	0			
1Bettis	12462	3587	07/22/1940	138	02/01/1984
Brookhaven	155	154	11/11/1946	136	09/30/1985
CARL	3	3	07/15/1949	3	03/31/1976
CEER	5	5	02/01/1960	5	12/31/1981
Charleston NS	167	167	03/29/1938	88	09/17/1979
Electro Met	329	292	07/15/1933	177	07/23/1947
Energy Systems Group	45	45	06/11/1952	39	10/20/1978
Fermi Lab	10	10	07/01/1968	3	11/08/1985
Fernald	7300	7290	08/29/1950	6298	12/26/1989
General Dynamics-Groton	295	294	06/01/1939	220	11/30/1978
Hanford	7	7		5	04/29/1977
Hanford	129	0			
Hanford-Construction	13206	12953	02/13/1947	8651	09/30/1982
Hanford-Operations	56588	51734	01/01/1944	37724	01/02/1983
Harshaw	757	0			
Holmes&Narver	20644	20380	08/10/1933	19140	04/03/1980
INEEL	66	153	03/22/1951	111	01/30/1981
Ingalls	7163	0			
K-25	47941	47809	01/04/1943	44683	01/31/1993
KAPL	10432	9918	09/15/1943	6826	12/29/1979
Knolls-Idaho	2	2	03/01/1967	1	11/30/1972
Knolls-Kesserling	3	3	08/15/1974	3	09/30/1976
Knolls-Windsor	12	12	07/12/1956	11	04/16/1979
Lawrence Berkeley	434	429	01/01/1942	367	12/31/1984
Lawrence Livermore-NTS	485	482	01/10/1952	380	04/29/1986
Lawrence Livermore-NTS	21738	21621	01/01/1942	13981	07/18/1987

Contents of CER Data Model - 4/1/2002					
Facility Name	**Total**	**# with Hire Date**	**Earliest Hire**	**# with Term Date**	**Latest Term**
Linde	1551	1550	01/13/1941	1545	12/31/1949
Los Alamos	23288	428	01/25/1943	341	01/31/1990
Mallinckrodt	3259	3503	09/30/1930	2907	07/15/1986
Mare Island Shipyard	127	126	02/12/1940	79	09/13/1979
Middlesex	387	39	12/11/1943	8	04/30/1948
Mound	7415	6299	09/05/1940	4524	07/15/1987
MREM -Hanford	8	0	12/01/1944		
Naval Reactor Facility	61	61	09/19/1951	49	02/01/1979
New Brunswick Lab	10	0			
Newport News	180	180	04/13/1936	76	06/01/1979
Norfolk Shipyard	115	110	04/08/1940	65	08/10/1979
ORNL	26940	26694	01/29/1943	22143	02/03/1993
Pacific Test Site	5	0			
Paducah	5727	3902	01/12/1944	2494	07/31/1991
Pantex	7422	0			
Pearl Harbor Shipyard	58	58	07/15/1939	21	07/15/1979
PETC	1156	1146	09/30/1935	817	09/17/1993
PNL	3	3	04/07/1947	1	08/15/1980
Portsmouth Gas Diff	9237	8	08/03/1953	10	07/15/1980
Portsmouth Shipyard	21226	171	07/28/1939	88	08/30/1979
REECO-NTS	132	78	02/02/1952	67	05/30/1980
Rocky Flats	9586	920	07/15/1951	905	10/15/1988
Rust Engineering	2686	2678	11/20/1962	2349	12/22/1985
SAM Labs	2309	2174	01/15/1940	2093	12/15/1964
Sandia	24685	24681	07/16/1939	17742	07/29/1981
Savannah River	21472	21049	11/06/1950	14328	03/31/1989
Savannah River Lab	111	1			
Shippingsport	17	17	01/16/1942	6	08/01/1978
TEC	47107	47126	01/12/1941	47120	12/14/1947
Y-12	23773	23473	05/04/1947	17774	10/04/1992
Zia	15310	0			

Appendix D - REFERRAL LIST KEY

6/23/2003

Worksite Name/Description	City	State	Refer List	DOE Action Site
A.O. SMITH	MILWAUKEE	WI	4	Germantown Facility (Roger Anders)
AC SPARK PLUG	FLINT	MI	1	
ACCURATE MACHINE & TOOL	ALBUQUERQUE	NM	4	Germantown Facility (Roger Anders)
AEROPROJECTS, INC	WEST CHESTER	PA	4	Germantown Facility (Roger Anders)
AJAX MAGNATHERMIC CORP	YOUNGSTOWN	OH	4	Germantown Facility (Roger Anders)
ALBA CRAFT	OXFORD	OH	4	Germantown Facility (Roger Anders)
ALBANY RESEARCH CENTER	ALBANY	OR	3	
ALBUQUERQUE OPERATIONS OFFICE	ALBUQUERQUE	NM		Albuquerque Operations Center
ALIQUIPPA FORGE	ALIQUIPPA	PA	1	
ALLEGHENY-LUDLUM STEEL	WATERVLIET	NY	2	
ALLIED CHEMICAL + DYE CORP	NORTH CLAYMONT	DE	4	Germantown Facility (Roger Anders)
ALLIED CHEMICAL CORP PLANT	METROPOLIS	IL	2	
ALLIS-CHALMERS CO	WEST ALLIS	WI	1	
ALUMINUM CO OF AMERICA (ALCOA) Garwood NJ	GARWOOD	NJ	4	Germantown Facility (Roger Anders)
ALUMNM CO OF AMERICA (ALCOA) New Kensington PA	NEW KENSINGTON	PA	2	
AMCHITKA ISLAND NUCLEAR EXPLOSION SITE	AMCHITKA ISLAND	AK		Nevada Operations Office
AMCOT	FORT WORTH	TX	4	Germantown Facility (Roger Anders)
AMERICAN BEARING CORP	INDIANAPOLIS	IN	1	
AMERICAN BERYLLIUM CO	SARASOTA	FL	1	
AMERICAN CHAIN AND CABLE CO	BRIDGEPORT	CT	2	

Worksite Name/Description	City	State	Refer List	DOE Action Site
AMERICAN MACHINE AND FOUNDRY	BROOKLYN	NY	1	
AMERICAN MACHINE AND METALS, INC	E MOLINE	IL	4	Germantown Facility (Roger Anders)
AMERICAN PEDDINGHAUS CORP	MOONACHLE	NJ	4	Germantown Facility (Roger Anders)
AMERICAN POTASH + CHEMICAL	WEST HANOVER	MA	4	Germantown Facility (Roger Anders)
AMES LABORATORY	AMES	IA		Chicago Operations Office
ANACONDA CO	WATERBURY	CT	1	
ARGONNE NATIONAL LABORATORY-EAST	ARGONNE	IL		Chicago Operations Office
ARGONNE NATIONAL LABORATORY-WEST	SCOVILLE	ID		Chicago Operations Office
ARMCO-RUSTLESS IRON + STEEL	BALTIMORE	MD	2	
ARMOUR FERTILIZER WORKS	BARTOW	FL	4	Germantown Facility (Roger Anders)
ARMOUR RESEARCH FOUNDATION	CHICAGO	IL	1	
ARTHUR D LITTLE CO	SAN FRANSCISO	CA	4	Germantown Facility (Roger Anders)
ASHLAND OIL	TONAWANDA	NY	2	
ASSOCIATED AIRCRAFT TOOL AND MANUFACTURING CO	FAIRFIELD	OH	1	
ATOMICS INTERNATIONAL	CANOGA PARK	CA	4	Germantown Facility (Roger Anders)
B + T METALS	COLUMBUS	OH	2	
BABCOCK + WILCOX CO	LYNCHBURG	VA	2	
BAKER AND WILLIAMS CO	NEWARK	NJ	4	Germantown Facility (Roger Anders)
BAKER AND WILLIAMS WAREHOUSES	NEW YORK	NY	4	Germantown Facility (Roger Anders)
BAKER BROTHERS	TOLEDO	OH	1	
BAKER-PERKINS CO	SAGINAW	MI	2	
BATTELLE LABORATORIES-KING AVENUE	COLUMBUS	OH	3	
BATTELLE LABORATORIES-WEST JEFFERSON	COLUMBUS	OH	3	

Worksite Name/Description	City	State	Refer List	DOE Action Site
C H SCHNOOR	SPRINGDALE	PA	1	
C I HAYES, INC	CRANSTON	RI	2	
C.L. HANN INDUSTIRES	SAN JOSE	CA	4	Germantown Facility (Roger Anders)
CALIFORNIA RESEARCH CORP	RICHMOND	CA	4	Germantown Facility (Roger Anders)
CALLITE TUNGSTEN CO	UNION CITY	NJ	4	Germantown Facility (Roger Anders)
CARBOLOY CO	DETROIT	MI	2	
CARBORUNDUM COMPANY	NIAGARA FALLS	NY	2	
CARNEGIE INSTITUTE OF TECHNOLOGY	PITTSBURGH	PA	1	
CARPENTER STEEL CO	READING	PA	4	Germantown Facility (Roger Anders)
C-B TOOL PRODUCTS CO	CHICAGO	IL	4	Germantown Facility (Roger Anders)
CERADYNE INC	SANTA ANA	CA	2	
CERADYNE INC - COSTA MESA	COSTA MESA	CA	4	Germantown Facility (Roger Anders)
CHAMBERSBURG ENGINEERING CO	CHAMBERSBURG	PA	4	Germantown Facility (Roger Anders)
CHAPMAN VALVE	INDIAN ORCHARD	MA	2	
CHEMICAL CONSTRUCTION CO	LINDEN	NJ	4	Germantown Facility (Roger Anders)
CHUPADERA MESA	CHUPADERA MESA	NM	4	Germantown Facility (Roger Anders)
CINCINNATI MILLING MACHINE CO	CINCINNATI	OH	2	
CITY TOOL & DIE MFG	SANTA CLARA	CA	4	Germantown Facility (Roger Anders)
CLARKSVILLE FACILITY	CLARKSVILLE	TN		Pantex Plant
CLIFTON PRODUCTS CO	PAINESVILLE	OH	4	Germantown Facility (Roger Anders)
COLONIE SITE (NATIONAL LEAD)	COLONIE (ALBANY)	NY	1	

Worksite Name/Description	City	State	Refer List	DOE Action Site
COLUMBIA UNIVERSITY	NEW YORK CITY	NY	3	
COMBUSTION ENGINEERING	WINDSOR	CT	2	
CONNECTICUT AIRCRAFT NUCLEAR ENGINE LAB, CANEL	MIDDLETOWN	CT	2	
COORS PORCELAIN	GOLDEN	CO	2	
COPPERWELD STEEL	WARREN	OH	2	
CRANE CO	CHICAGO	IL	1	
CRUCIBLE STEEL CO	SYRACUSE	NY	4	Germantown Facility (Roger Anders)
DANA HEAVY WATER PLANT	DANA	IN	2	
DORR CORP	STAMFORD	CT	4	Germantown Facility (Roger Anders)
DOW CHEMICAL CO	WALNUT CREEK	CA	1	
DU PONT DEEPWATER WORKS	DEEPWATER	NJ	2	
DU PONT-GRASSELLI RESEARCH LABORATORY	CLEVELAND	OH	2	
EAGLE PICHER	QUAPAW	OK	4	Germantown Facility (Roger Anders)
EDGERTON GERMESHAUSEN + GRIER, INC	BOSTON	MA	1	
EDM EXOTICS	HAYWARD	CA	4	Germantown Facility (Roger Anders)
ELECTRO CIRCUITS INC	PASADENA	CA	4	Germantown Facility (Roger Anders)
ELECTRO METALLURGICAL	NIAGARA FALLS	NY	2	
ELECTROFUSION	FREMONT	CA	4	Germantown Facility (Roger Anders)
ELK RIVER REACTOR	ELK RIVER	MN	2	
ENERGY TECH ENGR'G CTR/ATOMICS INTL/ROCKETDYNE	SANTA SUSANA	CA	3	
ENVIRONMENTAL MEASUREMENTS LABORATORY	NEW YORK	NY		Chicago Operations Office
ERA TOOL AND ENGINEERING CO	CHICAGO	IL	4	Germantown Facility (Roger Anders)
ETHYL CORP.	BATON ROUGE	LA	4	Germantown Facility (Roger Anders)
EXTRUDED METALS CO	GRAND RAPIDS	MI	4	Germantown Facility (Roger Anders)

Worksite Name/Description	City	State	Refer List	DOE Action Site
EXTRUSION PLANT (REACTIVE METALS INC)	ASHTABULA	OH	3	
FAIRCHILD HILLER CORPORATION	FARMINGDALE	NY	4	Germantown Facility (Roger Anders)
FANSTEEL METALLURGICAL CORP	CHICAGO	IL	4	Germantown Facility (Roger Anders)
FEED MATERIALS PRODUCTION CENTER (FMPC)	FERNALD	OH		Ohio Field Office
FENN MACHINERY CO	HARTFORD	CT	2	
FENWAL, INC	ASHLAND	MA	2	
FERMI NATIONAL ACCELERATOR LABORATORY	BATAVIA	IL		Chicago Operations Office
FOOTE MINERAL CO	EAST WHITELAND TWP	PA	4	Germantown Facility (Roger Anders)
FRANKFORD ARSENAL	PHILADELPHIA	PA	1	
FRANKLIN INSTITUTE	BOSTON	MA	4	Germantown Facility (Roger Anders)
GARDINIER INC	TAMPA	FL	4	Germantown Facility (Roger Anders)
GENERAL ASTROMETALS	YONKERS	NY	4	Germantown Facility (Roger Anders)
GENERAL ATOMICS	LA JOLLA	CA	2	
GENERAL ELECTRIC COMPANY	CINCINNATI/EVENDALE	OH	1	
GENERAL ELECTRIC PLANT	SHELBYVILLE	IN	1	
GENERAL ELECTRIC VALLECITOS	PLEASANTON	CA	2	
GERITY-MICHIGAN CORP	ADRIAN	MI	1	
GRAND JUNCTION OPERATIONS CENTER	GRAND JUNCTION	CO		Grand Junction Office
GRANITE CITY STEEL	GRANITE CITY	IL	2	
GREAT LAKES CARBON CORP	CHICAGO	IL	4	Germantown Facility (Roger Anders)
GRUEN WATCH	NORWOOD	OH	4	Germantown Facility (Roger Anders)
GSA 39TH STREET WAREHOUSE	CHICAGO	IL	1	
HAFER TOOL	OAKLAND	CA	4	Germantown Facility (Roger Anders)

Worksite Name/Description	City	State	Refer List	DOE Action Site
HALLAM SODIUM GRAPHITE REACTOR	HALLAM	NE	2	
HANFORD	RICHLAND	WA		Richland Operations Office
HARSHAW CHEMICAL CO	CLEVELAND	OH	2	
HEALD MACHINE CO	WORCESTER	MA	2	
HEPPENSTALL CO	PITTSBURGH	PA	1	
HERRING-HALL MARVIN SAFE CO	HAMILTON	OH	2	
HEXCEL PRODUCTS	BERKELEY	CA	2	
HOOKER ELECTROCHEMICAL	NIAGARA FALLS	NY	2	
HORIZONS, INC	CLEVELAND	OH	1	
HUNTER DOUGLAS ALUMINUM CORP	RIVERSIDE	CA	1	
HUNTINGTON PILOT PLANT	HUNTINGTON	WV	2	
IDAHO NATIONAL ENGINEERING LABORATORY	SCOVILLE	ID		Idaho Operations Office
INTERNATIONAL NICKEL CO, BAYONNE LABORATORIES	BAYONNE	NJ	4	Germantown Facility (Roger Anders)
INTERNATIONAL RARE METALS REFINERY, INC	MT KISCO	NY	1	
INTERNATIONAL REGISTER	CHICAGO	IL	4	Germantown Facility (Roger Anders)
INTERNATL MINERALS + CHEMICAL CORP	MULBERRY	FL	4	Germantown Facility (Roger Anders)
IOWA ORDNANCE PLANT	BURLINGTON	IA	3	
ITHACA GUN CO	ITHACA	NY	4	Germantown Facility (Roger Anders)
J T BAKER CHEMICAL CO	PHILLIPSBURG	NJ	4	Germantown Facility (Roger Anders)
JERRY CARROLL MACHINING	SAN CARLOS	CA	4	Germantown Facility (Roger Anders)
JESSOP STEEL CO	WASHINGTON	PA	2	
JOSLYN MANUFACTURING AND SUPPLY CO	FT WAYNE	IN	2	
KAISER ALUMINUM CORP	DALTON	IL	4	Germantown Facility (Roger Anders)

Worksite Name/Description	City	State	Refer List	DOE Action Site
KANSAS CITY PLANT	KANSAS CITY	MO		Kansas City Plant
KAUAI TEST FACILITY	KAUAI	HI		Albuquerque Operations Center
KELLEX/PIERPONT	JERSEY CITY	NJ	1	
KERR-MCGEE	GUTHRIE	OK	2	
KETTERING LABORATORY, UNIVERSITY OF CINCINNATI	CINCINNATI	OH	1	
KOPPERS CO, INC	VERONA	PA	2	
LA POINTE MACHINE AND TOOL CO	HUDSON	MA	1	
LAB FOR BIOMEDICAL + ENVIRONMNTL SCIENCES	LOS ANGELES	CA	3	
LAB FOR ENERGY-RELATED HEALTH RESEARCH	DAVIS	CA	3	
LAB OF RADIOBIOLOGY + ENVIRONMNTL HEALTH	SAN FRANCISCO	CA	3	
LACROSSE BOILING WATER REACTOR	LACROSSE	WI	2	
LADISH CO	CUDAHY	WI	2	
LAKE ONTARIO ORDNANCE WORKS	NIAGARA FALLS	NY	1	
LANDIS MACHINE TOOL CO	WAYNESBORO	PA	2	
LATTY AVENUE PROPERTIES	HAZELWOOD	MO	4	Germantown Facility (Roger Anders)
LAWRENCE BERKELEY NATIONAL LABORATORY	BERKELEY	CA		Oakland Operations Office
LAWRENCE LIVERMORE NATIONAL LABORATORY	LIVERMORE	CA		Oakland Operations Office
LEBOW	GOLETA	CA	4	Germantown Facility (Roger Anders)
LEDOUX AND CO	NEW YORK	NY	4	Germantown Facility (Roger Anders)
LINDE AIR PRODUCTS	BUFFALO	NY	2	
LINDE CERAMICS PLANT	TONAWANDA	NY	2	
LINDSAY LIGHT AND CHEMICAL CO	CHICAGO	IL	4	Germantown Facility (Roger Anders)
LOS ALAMOS MEDICAL CENTER	LOS ALAMOS	NM		Los Alamos Site Operations
LOS ALAMOS NATIONAL LABORATORY	LOS ALAMOS	NM		Los Alamos Site Operations

Worksite Name/Description	City	State	Refer List	DOE Action Site
KANSAS CITY PLANT	KANSAS CITY	MO		Kansas City Plant
KAUAI TEST FACILITY	KAUAI	HI		Albuquerque Operations Center
KELLEX/PIERPONT	JERSEY CITY	NJ	1	
KERR-MCGEE	GUTHRIE	OK	2	
KETTERING LABORATORY, UNIVERSITY OF CINCINNATI	CINCINNATI	OH	1	
KOPPERS CO, INC	VERONA	PA	2	
LA POINTE MACHINE AND TOOL CO	HUDSON	MA	1	
LAB FOR BIOMEDICAL + ENVIRONMNTL SCIENCES	LOS ANGELES	CA	3	
LAB FOR ENERGY-RELATED HEALTH RESEARCH	DAVIS	CA	3	
LAB OF RADIOBIOLOGY + ENVIRONMNTL HEALTH	SAN FRANCISCO	CA	3	
LACROSSE BOILING WATER REACTOR	LACROSSE	WI	2	
LADISH CO	CUDAHY	WI	2	
LAKE ONTARIO ORDNANCE WORKS	NIAGARA FALLS	NY	1	
LANDIS MACHINE TOOL CO	WAYNESBORO	PA	2	
LATTY AVENUE PROPERTIES	HAZELWOOD	MO	4	Germantown Facility (Roger Anders)
LAWRENCE BERKELEY NATIONAL LABORATORY	BERKELEY	CA		Oakland Operations Office
LAWRENCE LIVERMORE NATIONAL LABORATORY	LIVERMORE	CA		Oakland Operations Office
LEBOW	GOLETA	CA	4	Germantown Facility (Roger Anders)
LEDOUX AND CO	NEW YORK	NY	4	Germantown Facility (Roger Anders)
LINDE AIR PRODUCTS	BUFFALO	NY	2	
LINDE CERAMICS PLANT	TONAWANDA	NY	2	
LINDSAY LIGHT AND CHEMICAL CO	CHICAGO	IL	4	Germantown Facility (Roger Anders)
LOS ALAMOS MEDICAL CENTER	LOS ALAMOS	NM		Los Alamos Site Operations
LOS ALAMOS NATIONAL LABORATORY	LOS ALAMOS	NM		Los Alamos Site Operations

Worksite Name/Description	City	State	Refer List	DOE Action Site
LOVELACE RESPIRATORY RESEARCH INSTITUTE	ALBUQUERQUE	NM		Albuquerque Operations Center
MACHLETT LABORATORIES	SPRINGDALE	CT	4	Germantown Facility (Roger Anders)
MADISON SITE (SPECULITE)	MADISON	IL	2	
MAGNUS BRASS CO	CINCINNATI	OH	4	Germantown Facility (Roger Anders)
MALLINCKRODT CHEMICAL CO, DESTREHAN ST PLANT	ST LOUIS	MO	2	
MANUFACTURING SCIENCES CORP.	OAK RIDGE	TN	4	Germantown Facility (Roger Anders)
MASSACHUSETTS INSTITUTE OF TECHNOLOGY	CAMBRIDGE	MA	2	
MATHIESON CHEMCIAL CO	PASADENA	TX	4	Germantown Facility (Roger Anders)
MAYWOOD CHEMICAL WORKS	MAYWOOD	NJ	4	Germantown Facility (Roger Anders)
MCDANIEL REFRACTORY CO	BEAVER FALLS	PA	2	
MCKINNEY TOOL AND MANUFACTURING CO	CLEVELAND	OH	1	
MEDART CO	ST LOUIS	MO	4	Germantown Facility (Roger Anders)
MEDINA FACILITY	SAN ANTONIO	TX		Pantex Plant
METALS AND CONTROLS CORP	ATTLEBORO	MA	2	
MIDDLESEX MUNICIPAL LANDFILL	MIDDLESEX	NJ	4	Germantown Facility (Roger Anders)
MIDDLESEX SAMPLING PLANT	MIDDLESEX	NJ	3	
MIDWEST MANUFACTURING CO	GALESBURG	IL	4	Germantown Facility (Roger Anders)
MITCHELL STEEL CO	CINCINNATI	OH	1	
MITTS + MERREL CO	SAGINAW	MI	1	
MONSANTO CHEMICAL CO	DAYTON	OH	3	
MOUND PLANT	MIAMISBURG	OH		Ohio Field Office
MUSEUM OF SCIENCE AND INDUSTRY	CHICAGO	IL	4	Germantown Facility (Roger Anders)
NATIONAL BERYLLIA	HASKELL	NJ	1	
NATIONAL GUARD ARMORY	CHICAGO	IL	4	Germantown Facility (Roger Anders)

Worksite Name/Description	City	State	Refer List	DOE Action Site
NATIONAL RESEARCH CORP	CAMBRIDGE	MA	4	Germantown Facility (Roger Anders)
NATL BUREAU OF STANDARDS, VAN NESS STREET	WASHINGTON	DC	1	
NAVAL RESEARCH LABORATORY	WASHINGTON	DC	1	
NEVADA TEST SITE	MERCURY	NV		Nevada Operations Office
NEW BRUNSWICK LABORATORY	NEW BRUNSWICK	NJ		Chicago Operations Office
NEW ENGLAND LIME CO	CANAAN	CT	4	Germantown Facility (Roger Anders)
NEW YORK UNIVERSITY	NEW YORK	NY	4	Germantown Facility (Roger Anders)
NORTHWEST MACHINING & MANUFACTURING	MERIDIAN	ID	4	Germantown Facility (Roger Anders)
NORTON CO	WORCESTER	MA	2	
NOT REPORTED - ENTRY ERROR	ANY	XX		
NOT SPECIFIC IN DOE TABLE - REPORTED ON CLAIM	ANY	XX		
NOT SPECIFIED/CLEAR ON CLAIM	ANY	XX		
NUCLEAR MATL & EQUIP CORP (NUMEC) APOLLO, PA	APOLLO	PA	2	
NUCLEAR MATL&EQUIP CORP (NUMEC) PARKS TWNSHIP	PARKS TOWNSHIP	PA	2	
NUCLEAR METALS, INC	CONCORD	MA	2	
OAK RIDGE GASEOUS DIFFUSION PLANT (K-25)	OAK RIDGE	TN		Oak Ridge Operations Office
OAK RIDGE HOSPITAL	OAK RIDGE	TN		Oak Ridge Operations Office
OAK RIDGE INSTITUTE FOR SCIENCE EDUCATION	OAK RIDGE	TN		Oak Ridge Operations Office
OAK RIDGE NATIONAL LABORATORY (X-10)	OAK RIDGE	TN		Oak Ridge Operations Office
OAK RIDGE THERMAL DIFFUSION PLANT (S-50)	OAK RIDGE	TN		Oak Ridge Operations Office
OLIVER CORP	BATTLE CREEK	MI	1	
PACIFIC NORTHWEST NATIONAL LABORATORY	RICHLAND	WA		Richland Operations Office

Worksite Name/Description	City	State	Refer List	DOE Action Site
PACIFIC PROVING GROUND	MARSHALL ISLANDS	MR		Nevada Operations Office
PADUCAH GASEOUS DIFFUSION PLANT	PADUCAH	KY		Oak Ridge Operations Office
PAINESVILLE SITE (DIAMOND MAGNESIUM CO)	PAINESVILLE	OH	1	
PANTEX PLANT	AMARILLO	TX		Pantex Plant
PEEK STREET FACILITY 1	SCHENECTADY	NY	3	
PENN SALT CO	PHILADELPHIA/WYNDMOO	PA	4	Germantown Facility (Roger Anders)
PHILADELPHIA NAVAL YARD	PHILADELPHIA	PA	1	
PHILCO-FORD	NEWPORT BEACH	CA	4	Germantown Facility (Roger Anders)
PICATINNY ARSENAL	DOVER	NJ	1	
PINELLAS PLANT	CLEARWATER	FL		Albuquerque Operations Center
PIQUA ORGANIC MODERATED REACTOR	PIQUA	OH	2	
PLEASANTON TOOL & MANUFACTURING	PLEASANTON	CA	4	Germantown Facility (Roger Anders)
PODBELINIAC CORP	CHICAGO	IL	4	Germantown Facility (Roger Anders)
POLTECH PRECISION	FREMONT	CA	4	Germantown Facility (Roger Anders)
PORTSMOUTH GASEOUS DIFFUSION PLANT	PIKETON	OH		Oak Ridge Operations Office
PRECISION EXTRUSION CO	BENSENVILLE	IL	4	Germantown Facility (Roger Anders)
PRINCETON PLASMA PHYSICS LABORATORY	PRINCETON	NJ		Chicago Operations Office
PROJECT CHARIOT SITE	CAPE THOMPSON	AK		Nevada Operations Office
PROJECT FAULTLESS NUCLEAR EXPLOSION SITE	C NEVADA TEST SITE	NV		Nevada Operations Office
PROJECT GASBUGGY NUCLEAR EXPLOSION SITE	FARMINGTON	NM		Nevada Operations Office

Worksite Name/Description	City	State	Refer List	DOE Action Site
PROJECT GNOME NUCLEAR EXPLOSION SITE	CARLSBAD	NM		Nevada Operations Office
PROJECT RIO BLANCO NUCLEAR EXPLOSION SITE	RIFLE	CO		Nevada Operations Office
PROJECT RULISON NUCLEAR EXPLOSION SITE	GRAND VALLEY	CO		Nevada Operations Office
PROJECT SHOAL NUCLEAR EXPLOSION SITE	FALLON	NV		Nevada Operations Office
PUERTO RICO NUCLEAR CENTER	MAYAGUEZ	PR	1	
PURDUE UNIVERSITY	LAFAYETTE	IN	4	Germantown Facility (Roger Anders)
QUALITY HARDWARE AND MACHINE CO	CHICAGO	IL	1	
R KRASBURG AND SONS MANUFACTURING CO	CHICAGO	IL	4	Germantown Facility (Roger Anders)
R W LEBLOND MACHINE TOOL CO	CINCINNATI	OH	4	Germantown Facility (Roger Anders)
RADIUM CHEMICAL CO	NEW YORK	NY	4	Germantown Facility (Roger Anders)
RARE EARTHS/ W R GRACE	WAYNE	NJ	4	Germantown Facility (Roger Anders)
REED ROLLED THREAD CO	WORCESTER	MA	2	
RENSSELAER POLYTECHNIC INSTITUTE	TROY	NY	4	Germantown Facility (Roger Anders)
REVERE COPPER AND BRASS	DETROIT	MI	4	Germantown Facility (Roger Anders)
ROBIN MATERIALS	MOUNTAIN VIEW	CA	4	Germantown Facility (Roger Anders)
ROCKY FLATS PLANT	GOLDEN	CO		Rocky Flats Field Office
ROGER IRON CO	JOPLIN	MO	4	Germantown Facility (Roger Anders)
RON WITHERSPOON, INC.	CAMPBELL	CA	4	Germantown Facility (Roger Anders)
SACANDAGA FACILITY 1	GLENVILLE	NY	3	
SALMON NUCLEAR EXPLOSION SITE	HATTIESBURG	MS		Nevada Operations Office
SANDIA LABORATORY, SALTON SEA BASE	IMPERIAL COUNTY	CA		Albuquerque Operations Center

Worksite Name/Description	City	State	Refer List	DOE Action Site
SANDIA NATIONAL LABORATORIES	ALBUQUERQUE	NM		Sandia Office
SANDIA NATIONAL LABS - LIVERMORE	LIVERMORE	CA		Sandia Office
SAVANNAH RIVER SITE	AIKEN	SC		Savanna River Operations Office
SCIAKY BROTHERS, INC	CHICAGO	IL	1	
SEAWAY INDUSTRIAL PARK	TONAWANDA	NY	4	Germantown Facility (Roger Anders)
SENECA ARMY DEPOT	ROMULUS	NY	1	
SEPARATIONS PROCESS RESEARCH UNIT (AT KNOLLS LAB)	SCHENECTADY	NY	3	
SEYMOUR SPECIALTY WIRE	SEYMOUR	CT	1	
SHATTUCK CHEMICAL	DENVER	CO	1	
SHIPPINGPORT ATOMIC POWER PLANT	SHIPPINGPORT	PA	2	
SHPACK LANDFILL	NORTON	MA	4	Germantown Facility (Roger Anders)
SIMONDS SAW AND STEEL CO	LOCKPORT	NY	3	
SOUTH ALBUQUERQUE WORKS	ALBUQUERQUE	NM	1	
SOUTHERN RESEARCH INSTITUTE	BIRMINGHAM	AL	4	Germantown Facility (Roger Anders)
SPEEDRING INC - CULMAN AL	CULMAN	AL	2	
SPEEDRING SYSTEMS INC - DETROIT MI	DETROIT	MI	4	Germantown Facility (Roger Anders)
SPENCER CHEMICAL CO	KANSAS CITY	MO	4	Germantown Facility (Roger Anders)
SPENCER CHEMICAL CO, JAYHAWKS WORKS	PITTSBURG	KS	2	
SPERRY PRODUCTS INC	DANBURY	CT	4	Germantown Facility (Roger Anders)
ST LOUIS AIRPORT STORAGE SITE (SLAPS)	ST LOUIS	MO	4	Germantown Facility (Roger Anders)
STANDARD OIL DEVELOPMENT CO OF NJ	LINDEN	NJ	4	Germantown Facility (Roger Anders)
STANFORD LINEAR ACCELERATOR CENTER	PALO ALTO	CA		Oakland Operations Office
STAR CUTTER CORP	FARMINGTON	MI	2	

Worksite Name/Description	City	State	Refer List	DOE Action Site
STATEN ISLAND WAREHOUSE	NEW YORK	NY	4	Germantown Facility (Roger Anders)
STAUFFER METALS INC	RICHMOND	CA	4	Germantown Facility (Roger Anders)
STEVENS INSTITUTE OF TECHNOLOGY	HOBOKEN	NJ	4	Germantown Facility (Roger Anders)
SUPERIOR STEEL CO	CARNEGIE	PA	2	
SUTTON, STEELE AND STEELE CO	DALLAS	TX	4	Germantown Facility (Roger Anders)
SWENSON EVAPORATOR CO	HARVEY	IL	4	Germantown Facility (Roger Anders)
SYLVANIA CORNING NUCLEAR CORP-BAYSIDE LABORATORIES	BAYSIDE	NY	2	
SYLVANIA CORNING NUCLEAR CORP-HICKSVILLE PLANT	HICKSVILLE	NY	2	
TAPEMATION	SCOTTS VALLEY	CA	4	Germantown Facility (Roger Anders)
TECH-ART, INC	MILFORD	OH	4	Germantown Facility (Roger Anders)
TENNESSEE VALLEY AUTHORITY	MUSCLE SHOALS	AL	2	
TEXAS CITY CHEMICALS, INC	TEXAS CITY	TX	1	
THOMAS JEFFERSON NATIONAL ACCELERATOR FACILITY	NEWPORT NEWS	VA		Oak Ridge Operations Office
TITANIUM ALLOYS MANUFACTURING	NIAGARA FALLS	NY	2	
TITUS METALS	WATERLOO	IA	4	Germantown Facility (Roger Anders)
TOCCO INDUCTION HEATING DIV	CLEVELAND	OH	4	Germantown Facility (Roger Anders)
TORRINGTON CO	TORRINGTON	CT	2	
TRINITY NUCLEAR EXPLOSION SITE	W SANDS MISSILERANGE	NM		Los Alamos Site Operations
TRUDEAU FOUNDATION	SARANAC LAKE	NY	2	
TUBE REDUCING CO	WALLINGTON	NJ	4	Germantown Facility (Roger Anders)
TYSON VALLEY POWDER FARM	ST LOUIS	MO	4	Germantown Facility (Roger Anders)
U S PIPE AND FOUNDRY	BURLINGTON	NJ	4	Germantown Facility (Roger Anders)

Worksite Name/Description	City	State	Refer List	DOE Action Site
U S STEEL CO, NATIONAL TUBE DIVISION	MCKEESPORT	PA	2	
UNITED LEAD CO	MIDDLESEX	NJ	4	Germantown Facility (Roger Anders)
UNITED NUCLEAR CORP	HEMATITE	MO	1	
UNIVERSITY OF CALIFORNIA	BERKELEY	CA	1	
UNIVERSITY OF CHICAGO	CHICAGO	IL	2	
UNIVERSITY OF DENVER RESEARCH INSTITUTE	DENVER	CO	4	Germantown Facility (Roger Anders)
UNIVERSITY OF FLORIDA	GAINESVILLE	FL	4	Germantown Facility (Roger Anders)
UNIVERSITY OF MICHIGAN	ANN ARBOR	MI	4	Germantown Facility (Roger Anders)
UNIVERSITY OF NORTH CAROLINA	CHAPEL HILL	NC	4	Germantown Facility (Roger Anders)
UNIVERSITY OF ROCHESTER MEDICAL LABORATORY	ROCHESTER	NY	3	
UNIVERSITY OF VIRGINIA	CHARLOTTESVILLE	VA	4	Germantown Facility (Roger Anders)
UTICA ST WAREHOUSE	BUFFALO	NY	4	Germantown Facility (Roger Anders)
VENTRON CORPORATION	BEVERLY	MA	2	
VIRGINIA-CAROLINA CHEMICAL CORP	NICHOLS	FL	1	
VITRO CORP OF AMERICA	CHATTANOOGA	TN	4	Germantown Facility (Roger Anders)
VITRO CORP OF AMERICA	WEST ORANGE	NJ	4	Germantown Facility (Roger Anders)
VITRO MANUFACTURING	CANONSBURG	PA	3	
VULCAN TOOL CO	DAYTON	OH	1	
W R GRACE	ERWIN	TN	2	
W E PRATT MANUFACTURING CO	JOLIET	IL	2	
W R GRACE AND COMPANY	CURTIS BAY	MD	1	
W R GRACE CO, AGRICULTURAL CHEMICAL DIV	RIDGEWOOD	FL	4	Germantown Facility (Roger Anders)
WAH CHANG	ALBANY	OR	2	
WASH-RITE	INDIANAPOLIS	IN	4	Germantown Facility (Roger Anders)
WASTE ISOLATION PILOT PLANT	CARLSBAD	NM	3	

Worksite Name/Description	City	State	Refer L st	DOE Action Site
WATERTOWN ARSENAL	WATERTOWN	MA	1	
WELDON SPRING PLANT	WELDON SPRING	MO	3	
WEST VALLEY DEMONSTRATION PROJECT	WEST VALLEY	NY		Ohio Field Office
WESTINGHOUSE ATOMIC POWER DEVELOPMENT PLANT	EAST PITTSBURGH	PA	1	
WESTINGHOUSE ELECTRIC CORP	BLOOMFIELD	NJ	1	
WESTINGHOUSE NUCLEAR FUELS DIVISION	CHESWICK	PA	2	
WINCHESTER ENGINEERING AND ANALYTICAL CENTER	WINCHESTER	MA	1	
WOBURN LANDFILL	WOBURN	MA	4	Germantown Facility (Roger Anders)
WOLFF-ALPORT CHEMICAL CORP	BROOKLYN	NY	4	Germantown Facility (Roger Anders)
WOLVERINE TUBE DIVISION	DETROIT	MI	1	
WYCKOFF DRAWN STEEL CO	CHICAGO	IL	4	Germantown Facility (Roger Anders)
WYKOFF STEEL CO	NEWARK	NJ	4	Germantown Facility (Roger Anders)
WYMAN GORDON INC	GRAYTON	MA	2	
Y-12 PLANT	OAK RIDGE	TN		Oak Ridge Operations Office
YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT	YUCCA MOUNTAIN	NV		Nevada Operations Office

CE CORPORATE CONTACT LIST
for Employment Verification

Facility Name - Contacting Information - Special Instructions
Updated June 23, 2003

186 **ALLEGHENY-LUDLUM STEEL**

Contact Name: Marcy Kline
Current Employer: Allegheny-Ludlum
Title:
Address 1: 100 River Road
Address 2:
City, State, Zip: Brackenridge PA 15154

Phone: 724-226-5809
Fax: 724-226-5165
Email:

Special Instructions:
Fax all requests to Marcy. Include employee name, date of birth, social security number and dates of employment. Include your email address. She will respond via email.

55 **ALLIED CHEMICAL CORP PLANT**

Contact Name: Pat George
Current Employer: Honeywell
Title:
Address 1: Highway 45 North
Address 2:
City, State, Zip: Metropolis IL 62960

Phone: 618-524-6395
Fax: 618-524-6209
Email:

Special Instructions:
Send mail or fax lists of names, SSN, dates of birth and dates of employment

266 **ALUMNM CO OF AMERICA (ALCOA) New Kensington PA**

Contact Name: Anna Mae Litman
Current Employer: ALCOA
Title:
Address 1: 201 Isabella Street
Address 2:
City, State, Zip: Pittsburgh PA 15212

Phone: 412-553-4415
Fax:
Email:

Special Instructions:
Send lists of names, SSN, dates of birth, and dates of employment.

31 **AMERICAN CHAIN AND CABLE CO**

Contact Name: Sally Brennen
Current Employer: FKI
Title:
Address 1: 425 Post Road
Address 2:
City, State, Zip: Fairfield CT 06430

Phone: 203-255-7141
Fax:
Email:

Special Instructions:
She has limited employment information about some American Chain and Cable Workers. If she has no information on a claimant's employment history, then go to the Social Security Administration to confirm his employment.

96 **ARMCO-RUSTLESS IRON + STEEL**

Contact Name: Karen Dearth
Current Employer:
Title:
Address 1:
Address 2:
City, State, Zip:
Phone:
Fax: 513-425-2676
Email:

Special Instructions:
Fax lists of names, SSN, dates of birth and dates of employment. There is no cost unless they have to go off-site to find the records to verify employment.

188 **ASHLAND OIL**

Contact Name: Geneva Massie
Current Employer: Ashland
Title:
Address 1: 5200 Blazer
Address 2:
City, State, Zip: Dublin OH 43017
Phone: 614-790-3333
Fax:
Email:

Special Instructions:
Send lists of names, social security numbers, dates of birth, and dates of employment. Ask for the Human Resources Department.

229 **B + T METALS**

Contact Name: David Tobert
Current Employer:
Title:
Address 1:
Address 2:
City, State, Zip:
Phone: 614-228-5411
Fax:
Email:

Special Instructions:
Call Mr. Toblert and give the name and the SSN for the person whom employjment verification is sought. He will call back with the inforomation.

308 **BABCOCK + WILCOX CO**

Contact Name: Kim Thomas
Current Employer: Framatone
Title:
Address 1: 3315 Old Forest
Address 2:
City, State, Zip: Lynchburg VA 24501
Phone: 434-832-2757
Fax: 434-832-2345
Email:

Special Instructions:
Send lists of names, SSN, dates of birth and dates of employment. If Kim Thomas does not have the employment records, contact Sonya Cox, BWX Technologies, on 434-522-6850 or fax 434-522-6736

119 **BAKER-PERKINS CO**

Contact Name: Chris Linehan
Current Employer: Invensys
Title:
Address 1: 5100 River Road
Address 2:
City, State, Zip: Schiller Park IL 60176
Phone: 847-928-3634
Fax:
Email:

Special Instructions:
Send lists of names, SSN, dates of birth and dates of employment.

267 **BERYLLIUM CORP OF AMERICA - HAZLETON PA**

Contact Name: Faith Kreisz
Current Employer: Cabot Corporation
Title:
Address 1: 157 Concord Road
Address 2:
City, State, Zip: Billerica MM 01821

Phone: 978-670-6243
Fax: 978-667-5260
Email: virginia_leonard@cabot-corp.com

Special Instructions:
Send lists of names, SSN, dates of birth and date of employment.

268 **BERYLLIUM CORP OF AMERICA - READING PA**

Contact Name: Janice Ferguson
Current Employer: NGK Metals Corp
Title:
Address 1: 917 US Highway
Address 2:
City, State, Zip: Sweetwater TN 37874

Phone: 423-351-0366
Fax:
Email:

Special Instructions:
Send lists of names, SSN, date of birth and dates of employment. NGK has no information on employees of the Beryllium Corp. Hazelton, PA plant.

224 **BERYLLIUM METALS AND CHEMICAL CORP**

Contact Name: Taylor Don
Current Employer: Lithium Co.
Title:
Address 1: 449 North Cox Road
Address 2:
City, State, Zip: Gastonia NC 28054

Phone: 704-868-5455
Fax:
Email:

Special Instructions:

233 **BERYLLIUM PRODUCTION PLANT (BRUSH)**

Contact Name: Dennsi Habrat
Current Employer: Brush Wellman
Title:
Address 1: 17876 St. Clair
Address 2:
City, State, Zip: Cleveland OH 44110

Phone: 216-383-6803
Fax:
Email:

Special Instructions:
Send names, SSN, dates of birth and dates of employment. Contact Becky Calhoun in HR on 216-383-6862 and Dennis Habrat (who does the employment verifications) on 216-383-6803.

190 **BETHLEHEM STEEL**

Contact Name: Pat Jaworski
Current Employer: Bethlehem Steel
Title: Customer Call
Address 1: Martin Tower
Address 2:
City, State, Zip: Bethlehem PA 18016

Phone:
Fax:
Email: pat.jaworski@bethsteel.com

Special Instructions:
Send lists of names, SSN, dates of birth, and dates of employment. If possible, include the name of the plant and its location where the employee worked. An alternative contact is Myrna Riveria on 610-694-7222 or Bill Bauer on 610-694-7603

191 **BLISS + LAUGHLIN STEEL**

Contact Name: Sarah Mastrobuono
Current Employer:
Title:
Address 1:
Address 2:
City, State, Zip:

Phone: 330-670-3145
Fax:
Email: smastrobuono@republicengineered.com

Special Instructions:
Email lists of names, SSN, dates of birth and dates of employment. If Sarah is not in, Waneta Negrette can help. Her number is 708-225-8207.

59 **BLOCKSON CHEMICAL CO**

Contact Name: Sherry Cook
Current Employer: Olin Corporation
Title:
Address 1: 501 Merritt 7
Address 2: PO Box 4500
City, State, Zip: Norwalk CT 06856

Phone: 203-750-2725
Fax:
Email:

Special Instructions:
Send lists of names, SSN, dates of birth and dates of employment.

120 **BRIDGEPORT BRASS CO**

Contact Name: Michael Bramnick
Current Employer: Millenium
Title: Management
Address 1: 230 Half Mile Road
Address 2:
City, State, Zip: Red Bank NJ 07701

Phone: 732-933-5170
Fax: 732-933-5270
Email:

Special Instructions:
Send names, SSN, dates of birth and dates of employment.

33 **BRIDGEPORT BRASS CO, HAVENS LAB**

Contact Name: Michael Bramnick
Current Employer: Millenium
Title: Management
Address 1: 230 Half Mile Road
Address 2:
City, State, Zip: Red Bank NJ 07701

Phone: 732-933-5170
Fax: 732-933-5270
Email:

Special Instructions:
Send names, SSN, dates of birth and dates of employment.

234 **BRUSH BERYLLIUM CO - CLEVELAND OH**

Contact Name: Dennis Habrat
Current Employer: Brush Wellman
Title: HR Department
Address 1: 17876
Address 2: St. Clair Ave
City, State, Zip: Cleveland OH 44110

Phone: 216-383-6803
Fax: 216-383-6845
Email:

Special Instructions:
Send lists of names, SSN, dates of birth and dates of employment.

121 **BRUSH BERYLLIUM CO - DETROIT MI**

Contact Name: Dennis Habrat
Current Employer: Brush Wellman
Title: HR Department
Address 1: 17876
Address 2: St. Clair Ave
City, State, Zip: Cleveland OH 44110

Phone: 216-383-6803
Fax: 216-383-6845
Email:

Special Instructions:
Send lists of names, SSN, dates of birth and dates of employment.

236 **BRUSH BERYLLIUM CO - ELMORE OH**

Contact Name: Dennis Habrat
Current Employer: Brush Wellman
Title: HR Department
Address 1: 17876
Address 2: St. Clair Ave
City, State, Zip: Cleveland OH 44110

Phone: 216-383-6803
Fax: 216-383-6845
Email:

Special Instructions:
Send lists of names, SSN, dates of birth and dates of employment.

235 **BRUSH BERYLLIUM CO - LORAIN OH**

Contact Name: Dennis Habrat
Current Employer: Brush Wellman
Title: HR Department
Address 1: 17876
Address 2: St. Clair Ave
City, State, Zip: Cleveland OH 44110

Phone: 216-383-6803
Fax: 216-383-6845
Email:

Special Instructions:
Send lists of names, SSN, dates of birth and dates of employment.

292 **C.I HAYES INC**

Contact Name: JacquelineWeintraub
Current Employer: C.I. Hayes Inc
Title: Human Resources
Address 1: 800 Wellington
Address 2:
City, State, Zip: Cranston RI 02910

Phone: 401-467-5200
Fax:
Email:

Special Instructions:
Call Jacqueline with names, social security numbers, dates of birth and dates of employment. Her extension is 226

122 **CARBOLOY CO**

Contact Name:
Current Employer: General Electric
Title:
Address 1: PO Box

Address 2: 6024
City, State, Zip: Schenectady NY 12301

Phone: 800-367-2884
Fax:
Email:

Special Instructions:
Send lists of names, SSN, dates of birth, names of company worked for and dates of employment. When you call you must have the employees SSN and a person will come to the line. Ask them which facility they can verify employment.

345 **CARBORUNDUM COMPANY**

Contact Name: Lynn Acker
Current Employer: Saint-Gobain
Title:
Address 1:

Address 2:
City, State, Zip: Watervliet NY

Phone: 518-266-2640
Fax:
Email:

Special Instructions:
Call Lynn with the employee name and SSN. She will not have data on employees who terminated without vesting for pension. Nor will she have data on vested pensioners who died.

8 **CERADYNE INC**

Contact Name: Jill Baldwin
Current Employer:
Title:
Address 1:
Address 2:
City, State, Zip:

Phone: 714-549-0421
Fax: 714-549-8573
Email:

Special Instructions:
Jill can usually do it over the phone if given full name and SSN. Her number is 714-549-0421 ext. 234.

100 **CHAPMAN VALVE**

Contact Name: Michael Lande
Current Employer: Pacific Valve
Title:
Address 1: 3201 Walnut Ave
Address 2:
City, State, Zip: Long Beach CA 90807

Phone: 562-426-2531
Fax:
Email:

Special Instructions:
Send lists of names, SSN, dates of birth and date of employment. Michael's extension is 670.

237 **CINCINNATI MILLING MACHINE CO**

Contact Name:
Current Employer: Milacron
Title: Payroll Department
Address 1: 2090 Florence Ave
Address 2:
City, State, Zip: Cincinnati OH 45206

Phone: 513-487-5626
Fax:
Email:

Special Instructions:
Send lists of names, SSN, dates of birth, and dates of employment.

34 **COMBUSTION ENGINEERING**

Contact Name: Jo Ann Berko
Current Employer:
Title:
Address 1:
Address 2:
City, State, Zip:

Phone: 203-750-2359
Fax: 203-750-2283
Email:

Special Instructions:
Call Jo Ann and she will perform the verification over the phone.

35 **CONNECTICUT AIRCRAFT NUCLEAR ENGINE LAB, CANEL**

Contact Name: Becky Landry
Current Employer: United
Title:
Address 1:
Address 2:
City, State, Zip: Middletown CT

Phone: 860-755-4935
Fax:
Email:

Special Instructions:
The phone number goes to directly to a computer. If you have any problems contact her at 860-565-6361

25 **COORS PORCELAIN**

Contact Name: Sue Kadnuck
Current Employer: Coorstek
Title:
Address 1: 600 Ninth Street
Address 2:
City, State, Zip: Golden CO 80401

Phone: 303-277-4080
Fax: 303-277-4060
Email:

Special Instructions:
Send lists of names, SSN, dates of birth, and dates of employment.

239 **COPPERWELD STEEL**

Contact Name: Joyce Heckman
Current Employer: LTV-Copperweld
Title:
Address 1: 2200 Four Gateway
Address 2:
City, State, Zip: Pittsburgh PA 15222-

Phone: 412-263-3218
Fax:
Email:

Special Instructions:
Send lists of names, social security numbers, dates of birth, and dates of employment.

85 **DANA HEAVY WATER PLANT**

Contact Name: Erica Woods
Current Employer: E.I. Du Pont de
Title:
Address 1: 1007 Market Street
Address 2: B4426C
City, State, Zip: Wilmington DE 19898

Phone: 302-774-7725
Fax: 302-773-3649
Email: erica.l.wood@usa.dupont.com

Special Instructions:
Email names, SSN, dates of birth and dates of employment.

157 **DU PONT DEEPWATER WORKS**

Contact Name: Erica Woods
Current Employer: E.I. Du Pont de
Title:
Address 1: 1007 Market Street
Address 2: B4426C
City, State, Zip: Wilmington DE 19898

Phone: 302-774-7725
Fax: 302-773-3649
Email: erica.l.wood@usa.dupont.com

Special Instructions:
Email names, SSN, dates of birth and dates of employment.

240 **DU PONT-GRASSELLI RESEARCH LABORATORY**

Contact Name: Erica Woods
Current Employer: E.I. Du Pont de
Title:
Address 1: 1007 Market Street
Address 2: B4426C
City, State, Zip: Wilmington DE 19898

Phone: 302-774-7725
Fax: 302-773-3649
Email: erica.l.wood@usa.dupont.com

Special Instructions:
Email names, SSN, dates of birth and dates of employment.

197 **ELECTRO METALLURGICAL**

Contact Name: Betty Batista
Current Employer: Union Carbide
Title:
Address 1: 39 Old Ridgebury
Address 2: Human Resources
City, State, Zip: Danbury CT 06817

Phone: 203-794-6531
Fax: 203-794-3106
Email:

Special Instructions:
Ms. Batista has employment verification on Electro Metallurgical employees up to the date when Union Carbide divested the company to Morgan-Crucible. Fax lists of names, social security numbers, dates of birth, and dates of employment.

132 **ELK RIVER REACTOR**

Contact Name: Barbara Theno
Current Employer: Great River Energy
Title: Employee
Address 1: 17845 East
Address 2:
City, State, Zip: Elk River MI 55330

Phone: 763-241-3753
Fax:
Email:

Special Instructions:
Send lists of names, SSN, dates of birth and dates of employment

37 **FENN MACHINERY CO**

Contact Name: Darlene Jones
Current Employer: Fenn
Title:
Address 1:
Address 2:
City, State, Zip:

Phone: 860-594-4418
Fax:
Email:

Special Instructions:
When you call Darlene give her the employee name and SSN. She will confirm employment over the phone

102 **FENWAL, INC**

Contact Name: Phil Mongada
Current Employer: Kidde-Fenwal
Title: Director of Human
Address 1: 400 Main Street
Address 2:
City, State, Zip: Ashland MA 01721

Phone: 508-881-2000
Fax:
Email:

Special Instructions:
Phil's extension is 2486. Send him lists of names, SSN, dates of birth and dates of employment.

12 **GENERAL ATOMICS**

Contact Name: Yolanda
Current Employer:
Title:
Address 1:
Address 2:
City, State, Zip:

Phone: 858-455-2244
Fax: 858-455-2225
Email:

Special Instructions
Fax lists of names, SSN, dates of birth and dates of employment.

13 **GENERAL ELECTRIC VALLECITOS**

Contact Name: Lilly Wilderman
Current Employer: GE Nuclear Energy
Title: HR Specialist
Address 1: 175 Curtner Ave
Address 2: M/C 391
City, State, Zip: San Jose CA 95125

Phone: 408-925-5013
Fax: 408-925-6874
Email: lilly.wilderman@gene.ge.com

Special Instructions:
Lilly will respond to written requests on DOL letterhead only. You may fax or mail the inquiry directly to her.

65 **GRANITE CITY STEEL**

Contact Name: Lydia Kachigian
Current Employer: National Steel
Title:
Address 1: 1951 State Street
Address 2:
City, State, Zip: Granite City IL 62040

Phone: 618-451-4938
Fax: 618-451-4115
Email:

Special Instructions:
Fax lists of names, SSN, dates of birth and dates of employment.

144 **HALLAM SODIUM GRAPHITE REACTOR**

Contact Name: Gary Kruse
Current Employer: Nebraska Public
Title:
Address 1: PO Box 499
Address 2: 1414 15th Steet
City, State, Zip: Columbus NE 68602

Phone: 402-563-5309
Fax:
Email:

Special Instructions:
Send names, SSN, dates of birth and dates of employment

245 **HARSHAW CHEMICAL CO**

Contact Name: Jan Strine
Current Employer: Engelhard Corp
Title:
Address 1: 101 Wood Ave
Address 2: 5th Floor
City, State, Zip: Iselin NJ 08830

Phone: 800-432-9191
Fax:
Email:

Special Instructions:
Send lists of names, SSN, dates of birth and dates of employment.

104 **HEALD MACHINE CO**

Contact Name: Payroll Department
Current Employer: Milacron,
Title:
Address 1: 2090 Florence
Address 2:
City, State, Zip: Cincinnati OH 45206

Phone: 513-487-5626
Fax:
Email:

Special Instructions:
Send list of names, social security sumbers, dates of birth, and dates of employment.

246 **HERRING-HALL MARVIN SAFE CO**

Contact Name: Kim Perry
Current Employer: Diebold,
Title:
Address 1: 5995 Mayfair Road
Address 2:
City, State, Zip: North Canton OH 44720

Phone: 330-490-6941
Fax: 330-490-6943
Email:

Special Instructions:
Call claimant/survivor & get specific date of the last day the person worked for Herring-Hall Marvin Safe Co. The Diebold Co. has the Herring-Hall Marvin Safe Co. records, & files records of retired people who worked in 1940s, 50s,& 60s by last day worked

331 **HEXCEL PRODUCTS**

Contact Name: Ashley Holland
Current Employer: Hexcel Corp
Title: Corporate Human
Address 1: 2 Stamford Plaza
Address 2: 281 Tresser Blvd
City, State, Zip: Stamford CT 06901

Phone: 203-352-6851
Fax: 203-358-3993
Email: ashley.holland@hexcel.com

Special Instructions:
Email names, SSN, dates of birth and dates of employment to Ashley.

199 **HOOKER ELECTROCHEMICAL**

Contact Name: Lu Ann Raymond
Current Employer: Occidental
Title:
Address 1: P.O. Box 344
Address 2:
City, State, Zip: Niagara Falls NY 14302-

Phone: 716-278-7743
Fax:
Email:

Special Instructions:
Send lists of names, social security numbers, dates of birth, and dates of employment

313 **HUNTINGTON PILOT PLANT**

Contact Name: Amy Knight
Current Employer: INCO Limited
Title: Health and
Address 1: 3200 Riverside
Address 2:
City, State, Zip: Huntington WV 25705

Phone: 304-526-5374
Fax: 304-526-5309
Email:

Special Instructions:
Send lists of names, social security numbers, dates of birth, and dates of employment. Amy needs all requests sent via first class mail.

277 **JESSOP STEEL CO**

Contact Name: David Murphy
Current Employer: Allegheny-Ludlum
Title: Director of
Address 1: 100 River Road
Address 2:
City, State, Zip: Brackenridge PA 15154

Phone: 724-226-5809
Fax: 724-226-5173
Email:

Special Instructions:
Send or fax names, social security numbers, dates of birth, and dates of employment.

87 **JOSLYN MANUFACTURING AND SUPPLY CO**

Contact Name: Vivian Curran
Current Employer: Joslyn
Title:
Address 1: 3700 South
Address 2:
City, State, Zip: Chicago IL 60609

Phone: 773-927-1420
Fax: 773-927-6862
Email:

Special Instructions:
Send names, social security numbers, dates of birth, and dates of employment. Her extension is #1274

261 **KERR-MCGEE**

Contact Name: BlackstockJudy
Current Employer: KERR-MCGEE
Title:
Address 1: Human Resources
Address 2: P.O. Box 25861
City, State, Zip: Oklahoma City OK 73125

Phone: 405-270-2993
Fax: 405-270-3884
Email:

Special Instructions:
Fax names, social security numbers, dates of birth, and dates of employment.

278 **KOPPERS CO, INC**

Contact Name: Steve Simond
Current Employer: KOPPERS CO.,
Title:
Address 1: Hansen North
Address 2:
City, State, Zip:

Phone: 732-919-2319
Fax:
Email:

Special Instructions:
Call Steve Simond and give him the worker's name and social security number. If worker got a Koppers pension, Mr. Simond can verify employment over the phone. If a worker didn't get a Koppers pension,we will have to go through SSA to verify employment.

316 **LACROSSE BOILING WATER REACTOR**

Contact Name: Pattilynn Brendum
Current Employer: Dairyland Power
Title:
Address 1: P.O. Box 817
Address 2:
City, State, Zip: LaCrosse WI 54602

Phone: 608-787-1341
Fax:
Email:

Special Instructions:
Send lists of names, social security numbers, dates of birth, and dates of employment

317 **LADISH CO**

Contact Name: Darlene
Current Employer: Ladish Company,
Title:
Address 1: Corporate Offices
Address 2: 5481 S. Packard
City, State, Zip: Cudahy WI 53100

Phone: 414-747-2611
Fax:
Email:

Special Instructions:
Call Darlene (Ladish Corp. personnel office) on 414-747-3488.Give her the name,social security number, dates of employment, and, if you have it, employee number of the person whose employment you need to verify. Darlene will do verification over the phone

279 **LANDIS MACHINE TOOL CO**

Contact Name: Beth Kennett
Current Employer: Landis Threading
Title:
Address 1: Human Resources
Address 2: 360 S. Church
City, State, Zip: Waynesboro PA 17268

Phone: 717-762-3151
Fax: 717-762-3833
Email:

Special Instructions:
Fax names, social security numbers, dates of birth, and dates of employment.

204 **LINDE AIR PRODUCTS**

Contact Name: Tom Dugan
Current Employer: Praxair, Inc.
Title:
Address 1: 175 East Park
Address 2:
City, State, Zip: Tonawanda NY 14151-

Phone: 716-879-2027
Fax: 716-879-7117
Email:

Special Instructions:
Send lists of names, social security numbers, dates of birth, and dates of employment.

205 **LINDE CERAMICS PLANT**

Contact Name: Tom Dugan
Current Employer: Praxair, Inc.
Title:
Address 1: 175 East Park
Address 2:
City, State, Zip: Tonawanda NY 14151-

Phone: 716-879-2027
Fax: 716-879-7117
Email:

Special Instructions:
Send lists of names, social security numbers, dates of birth, and dates of employment.

71 **MADISON SITE (SPECULITE)**

Contact Name:
Current Employer:
Title:
Address 1: 1001 College St.
Address 2: PO Box 258
City, State, Zip: Madison IL 62060

Phone:
Fax:
Email:

Special Instructions:

136 **MALLINCKRODT CHEMICAL CO, DESTREHAN ST PLANT**

Contact Name: Pat Duft
Current Employer: Mallinckrodt
Title:
Address 1: 675 McDonnell
Address 2:
City, State, Zip: St. Louis MO 63042

Phone: 314-654-6314
Fax: 314-654-6486
Email:

Special Instructions:
Send lists of names, social security numbers, dates of birth, and dates of employment.

106 **MASSACHUSETTS INSTITUTE OF TECHNOLOGY**

Contact Name: Sarah Heaney
Current Employer: Massachusetts
Title:
Address 1: 77 Massachusetts
Address 2:
City, State, Zip: Cambridge MA 02139

Phone: 617-253-9489
Fax: 617-258-8501
Email:

Special Instructions:
Send lists of names, job titles, social security numbers, dates of birth, and dates of employment. Also try to indicate whether the claimant was an academic or a nonacademic employee.

280 **MCDANIEL REFRACTORY CO**

Contact Name: Judy Bergman
Current Employer: Vesuvius-McDanel
Title:
Address 1: 510 Ninth Avenue
Address 2:
City, State, Zip: Beaver Falls PA 15010

Phone: 724-843-8300
Fax:
Email:

Special Instructions:
Send lists of names, social security numbers, dates of birth, and dates of employment. The phone number is 724-843-8300, ext. 248.

107 **METALS AND CONTROLS CORP**

Contact Name: Frank Veale
Current Employer: Texas Instruments
Title:
Address 1: MS: 10-2
Address 2: 34 Forest Street
City, State, Zip: Attleboro MA 02703

Phone: 508-236-1804
Fax:
Email:

Special Instructions:
Send lists of names, social security numbers, dates of birth, and dates of employment.

109 **NORTON CO**

Contact Name: Carol Ormand
Current Employer: Saint-Gobain
Title:
Address 1: One New Bond
Address 2: Box Number 15008
City, State, Zip: Worcester MA 01615-

Phone: 508-795-2167
Fax: 508-795-2828
Email:

Special Instructions:
Fax lists of names, social security numbers, dates of birth, and dates of employment.

281 **NUCLEAR MATL & EQUIP CORP (NUMEC) APOLLO, PA**

Contact Name: Pankey Julia
Current Employer: BWXT Services,
Title: Comp. & Benefits
Address 1: 2016 Mt. Athos
Address 2:
City, State, Zip: Lynchburg VA 24504

Phone: 434-522-5501
Fax:
Email:

Special Instructions:
Send lists of names, social security numbers, dates of birth, and dates of employment.

282 **NUCLEAR MATL&EQUIP CORP (NUMEC) PARKS TWNSHIP**

Contact Name:
Current Employer:
Title:
Address 1:
Address 2:
City, State, Zip:

Phone:
Fax:
Email:

Special Instructions:

110 **NUCLEAR METALS, INC**

Contact Name: Janet Hammon
Current Employer: Starmet Corporation
Title:
Address 1: 2229 Main Street
Address 2:
City, State, Zip: Concord MA 01742

Phone: 978-369-5410
Fax:
Email:

Special Instructions:
Send lists of names, social security numbers, dates of birth, and dates of employment. The number is (978) 369-5410, ext. 249.

255 **PIQUA ORGANIC MODERATED REACTOR**

Contact Name: Judy Payner
Current Employer:
Title:
Address 1: Finance Office
Address 2:
City, State, Zip: City of Piqua OH

Phone: 978-778-2069
Fax:
Email:

Special Instructions:
Call in lists of names, social security numbers, dates of birth, and dates of employment. If Judy is busy, Diana in the Human Resources office can help. She is on (937) 778-2052.

111 **REED ROLLED THREAD CO**

Contact Name: Janet Olson
Current Employer: Reed-Rico
Title:
Address 1: 18 Industrial Drive
Address 2:
City, State, Zip: Holden MA 01520-

Phone: 508-926-5273
Fax: 508-926-5383
Email:

Special Instructions:
Fax lists of names, social security numbers, dates of birth, and dates of employment.

285 **SHIPPINGPORT ATOMIC POWER PLANT**

Contact Name: Dave Hershberger
Current Employer:
Title:
Address 1: Duquesne Light
Address 2: Human Resources
City, State, Zip:

Phone: 412-393-6378
Fax:
Email:

Special Instructions:
Give him employee name, employee number, dates of employment, and other info that he might need. He will verify over the phone. For verifications of employees who no longer work for Duquesne, try Dawn Laitres, First Energy on 724-682-5245.

2 **SPEEDRING INC - CULMAN AL**

Contact Name: Judy Bradford
Current Employer: Axsys
Title:
Address 1: P.O. Box 1588
Address 2:
City, State, Zip: Cullman AL 35056-

Phone: 256-737-5200
Fax:
Email:

Special Instructions:
Send lists of names, social security numbers, dates of birth, and dates of employment. (If Judy is out, Christie Mize on 256-737-5282 can help. Her fax number is 256-737-5249).

94 **SPENCER CHEMICAL CO, JAYHAWKS WORKS**

Contact Name: BlackstockJudy
Current Employer: Kerr-McGee
Title:
Address 1: Human Resources
Address 2: P.O. Box 25861
City, State, Zip: Oklahoma City OK 73125

Phone: 405-270-2993
Fax: 405-270-3884
Email:

Special Instructions:
Fax names, social security numbers, dates of birth, and dates of employment.

129 **STAR CUTTER CORP**

Contact Name: Michelle Kamen
Current Employer: Star Cutter
Title:
Address 1:
Address 2:
City, State, Zip:

Phone: 989-345-3732
Fax: 989-345-3719
Email: mkamen@starcutter.com

Special Instructions:
Fax or email names, social security numbers, dates of birth and dates of and place of employment. Michelle's extension is 1422

286 **SUPERIOR STEEL CO**

Contact Name: Joyce Heckman
Current Employer: LTV-Copperweld
Title:
Address 1: 2200 Four Gateway
Address 2:
City, State, Zip: Pittsburgh PA 15222-

Phone: 412-263-3218
Fax:
Email:

Special Instructions:
Send lists of names, social security numbers, dates of birth, and dates of employment.

216 **SYLVANIA CORNING NUCLEAR CORP-BAYSIDE LABORATORIES**

Contact Name: Ken Chovanetz
Current Employer: Verizon
Title:
Address 1: MC;SV1W3ESC
Address 2: 750 Canyon Drive
City, State, Zip: Coppell TX 75019

Phone: 214-285-1381
Fax: 214-285-1746
Email:

Special Instructions:
Send lists of names, social security numbers, dates of birth, and dates of employment. Faxing is OK.

217 **SYLVANIA CORNING NUCLEAR CORP-HICKSVILLE PLANT**

Contact Name: Ken Chovanetz
Current Employer: Verizon
Title:
Address 1: MC;SV1W3ESC
Address 2: 750 Canyon Drive
City, State, Zip: Coppell TX 75019

Phone: 214-285-1381
Fax: 214-285-1746
Email:

Special Instructions:
Send lists of names, social security numbers, dates of birth, and dates of employment. Faxing is OK.

3 **TENNESSEE VALLEY AUTHORITY**

Contact Name:
Current Employer: Tennessee Valley
Title:
Address 1: Attn: Employee
Address 2: 400 West Summit
City, State, Zip: Knoxville TN 37902

Phone: 888-275-8094
Fax: 888-633-0372
Email:

Special Instructions:
Contact phone number and be ready to send lists of names, SSN, dates of birth, dates of employment.

218 **TITANIUM ALLOYS MANUFACTURING**

Contact Name:
Current Employer: Ferro Corporation
Title:
Address 1: PO Box 67
Address 2: 4511 Hyde Park
City, State, Zip: Niagra Falls NY 14305

Phone: 716-278-9400
Fax: 716-285-3026
Email:

Special Instructions:
Send lists of names, social security numbers, dates of birth, and dates of employment.

41 **TORRINGTON CO**

Contact Name: Daisy Decker
Current Employer:
Title:
Address 1: Human Resources
Address 2: The Torrington
City, State, Zip: Torrington CT 06790-

Phone: 860-626-2910
Fax: 860-496-3603
Email: daisy_decker@ingersoll-rand.com

Special Instructions:
Fax names, social security numbers, dates of birth, and dates of employment.

219 **TRUDEAU FOUNDATION**

Contact Name: Amy Richardson
Current Employer: Trudeau Institute
Title: Human Resources
Address 1: PO Box 59
Address 2: 100 Algonquin Ave
City, State, Zip: Saranac Lake NY 12983

Phone: 518-891-3084
Fax: 518-891-5126
Email:

Special Instructions:
Fax names, SSN and dates of employment. Amy's extension is 152.

287 **U S STEEL CO, NATIONAL TUBE DIVISION**

Contact Name: Janet Telech
Current Employer: United States
Title:
Address 1: United States
Address 2:
City, State, Zip: Monroeville PA 15146

Phone: 412-433-6779
Fax:
Email:

Special Instructions:
Fax lists of names, social security numbers, dates of birth, and dates of employment.

81 **UNIVERSITY OF CHICAGO**

Contact Name: Annetha Bartley
Current Employer:
Title:
Address 1: University of
Address 2: 5801 Ellis, Room
City, State, Zip: Chicago IL 60637

Phone: 773-702-8816
Fax:
Email:

Special Instructions:
Send lists of names, social security numbers, dates of birth, and dates of employment.

113 **VENTRON CORPORATION**

Contact Name: Vanessa Gibson-Cooper
Current Employer: Metal Hydrides
Title:
Address 1:

Address 2:
City, State, Zip:

Phone: 215-592-2868
Fax:
Email:

Special Instructions:
Call Vanessa Gibson-Cooper of the Rohm and Hass Corporation human resources on 215-592-2868. Give her name and social security number and she will verify over the phone.

300 **W R GRACE**

Contact Name: Ruth Salts
Current Employer: Nuclear Fuels
Title:
Address 1: Nuclear Fuels
Address 2: 1205 Banner Hill
City, State, Zip: Erwin TN 37650

Phone: 423-743-1712
Fax: 423-743-9025
Email:

Special Instructions:
Send lists of names, social security numbers, dates of birth, and dates of employment.

82 **W E PRATT MANUFACTURING CO**

Contact Name: Vivian Curran
Current Employer: Joslyn
Title:
Address 1: Joslyn
Address 2: 3700 South
City, State, Zip: Chicago IL 60609

Phone: 773-927-1420
Fax: 773-927-6862
Email:

Special Instructions:
Send lists of names, social security numbers, dates of birth, and dates of employment. Vivian Curran telephone number is 773-927-1420, ext. 1274.

263 **WAH CHANG**

Contact Name: Eileen Bowl
Current Employer:
Title:
Address 1: Human Resources
Address 2: PO Box 460
City, State, Zip: Albany OR 97321

Phone: 541-967-6944
Fax: 541-812-7030
Email:

Special Instructions:
Fax request for employment verification on agency letterhead

348 **WESTINGHOUSE NUCLEAR FUELS DIVISION**

Contact Name: Carmen Owens
Current Employer: EMD Curtiss
Title:
Address 1: 1000 Cheswick
Address 2:
City, State, Zip: Cheswick PA 15024

Phone: 724-275-5017
Fax: 724-275-2771
Email:

Special Instructions:
Fax requests for employment verification on signed DOL letterhead. Reference the employee name, SSN, date of birth and dates of employment

117 **WYMAN GORDON INC**

Contact Name: Alice Moore
Current Employer: Wyman Gordon,
Title:
Address 1: 244 Worcester
Address 2:
City, State, Zip: North Grafton MA 01536-

Phone: 508-839-8363
Fax:
Email:

Special Instructions:
Send lists of names, social security numbers, dates of birth, and dates of employment.

DOE OPERATIONS CENTERS/CONTACTS/FACILITIES

CE Employment Verification Referral Sheet

Updated June 23, 2003

AOO Albuquerque Operations Center

Contact Name: Phillip Griego
Address1: MOCD
Address2: PO Box 5400
Address3:
Albuequerque NM 87185
PhoneNum: 505-845-6108
FaxNum: 505-845-7415
prgriego@doeal.gov

ALBUQUERQUE OPERATIONS OFFICE	ALBUQUERQUE	NM
KAUAI TEST FACILITY	KAUAI	HI
LOVELACE RESPIRATORY RESEARCH	ALBUQUERQUE	NM
PINELLAS PLANT	CLEARWATER	FL
SANDIA LABORATORY, SALTON SEA BASE	IMPERIAL COUNTY	CA

COO Chicago Operations Office

Contact Name: Georgett Lane
Address1:
Address2: 9800 South Cass Ave.
Address3:
Argonne IL 60439
PhoneNum: 630-252-8906
FaxNum: 630-252-2855
georgette.lane@ch.doe.gov

AMES LABORATORY	AMES	IA
ARGONNE NATIONAL LABORATORY-EAST	ARGONNE	IL
ARGONNE NATIONAL LABORATORY-WEST	SCOVILLE	ID
BROOKHAVEN NATIONAL LABORATORY	UPTON	NY
ENVIRONMENTAL MEASUREMENTS LABORATORY	NEW YORK	NY
FERMI NATIONAL ACCELERATOR LABORATORY	BATAVIA	IL
NEW BRUNSWICK LABORATORY	NEW BRUNSWICK	NJ
PRINCETON PLASMA PHYSICS LABORATORY	PRINCETON	NJ

GJO

Grand Junction Office

Contact Name: Jeff Tack
Address1:
Address2: 2597 B. Three Quarter Road
Address3:
Grand Junction CO 81503
PhoneNum: 970-248-7714
FaxNum: 970-248-6040
jeffrey.tack@gjo.doe.gov

GRAND JUNCTION OPERATIONS CENTER GRAND JUNCTION CO

IOO

Idaho Operations Office

Contact Name: Katherin Vivian
Address1: Mail Stop 1242
Address2: 850 Energy Drive
Address3:
Idaho Falls ID 83401
PhoneNum: 208-526-0337
FaxNum: 208-526-7407
vivianka@id.doe.gov

IDAHO NATIONAL ENGINEERING LABORATORY SCOVILLE ID

KCP

Kansas City Plant

Contact Name: Alice Lund
Address1: Honeywell Federal Manufactruing &
Address2: Law Dept. 2e50
Address3: 2000 East Bannister Road
Kansas City MO 64131
PhoneNum: 816-997-3316
FaxNum: 816-997-7353
alund@kcp.com

KANSAS CITY PLANT KANSAS CITY MO

LASO

Los Alamos Site Operations

Contact Name: Phillippa Griego
Address1:
Address2: 528 35th Street
Address3:
Los Alamos NM 87544
PhoneNum: 505-665-5331
FaxNum: 505-665-4873
pgriego@doeal.gov

LOS ALAMOS MEDICAL CENTER LOS ALAMOS NM

LOS ALAMOS NATIONAL LABORATORY LOS ALAMOS NM

TRINITY NUCLEAR EXPLOSION SITE W SANDS NM

NOO Nevada Operations Office

Contact Name: Karen Hatch
Address1: PO Box 98518
Address2:
Address3:
Las Vegas NV 89193
PhoneNum: 702-295-3269
FaxNum: 702-295-0877
hatch@nv.doe.gov

AMCHITKA ISLAND NUCLEAR EXPLOSION SITE	AMCHITKA ISLAND	AK
NEVADA TEST SITE	MERCURY	NV
PACIFIC PROVING GROUND	MARSHALL	MR
PROJECT CHARIOT SITE	CAPE THOMPSON	AK
PROJECT FAULTLESS NUCLEAR EXPLOSION	C NEVADA TEST	NV
PROJECT GASBUGGY NUCLEAR EXPLOSION SITE	FARMINGTON	NM
PROJECT GNOME NUCLEAR EXPLOSION SITE	CARLSBAD	NM
PROJECT RIO BLANCO NUCLEAR EXPLOSION	RIFLE	CO
PROJECT RULISON NUCLEAR EXPLOSION SITE	GRAND VALLEY	CO
PROJECT SHOAL NUCLEAR EXPLOSION SITE	FALLON	NV
SALMON NUCLEAR EXPLOSION SITE	HATTIESBURG	MS
YUCCA MOUNTAIN SITE CHARACTERIZATION	YUCCA MOUNTAIN	NV

OROO Oak Ridge Operations Office

Contact Name: Tim Joseph
Address1: Mail Stop CC-10
Address2: PO Box 2001
Address3:
Oak Ridge TN 37830
PhoneNum: 865-574-5600
FaxNum: 865-574-8079
josepht@oro.doe.gov

OAK RIDGE GASEOUS DIFFUSION PLANT (K-25)	OAK RIDGE	TN
OAK RIDGE HOSPITAL	OAK RIDGE	TN
OAK RIDGE INSTITUTE FOR SCIENCE EDUCATION	OAK RIDGE	TN
OAK RIDGE NATIONAL LABORATORY (X-10)	OAK RIDGE	TN
OAK RIDGE THERMAL DIFFUSION PLANT (S-50)	OAK RIDGE	TN
PADUCAH GASEOUS DIFFUSION PLANT	PADUCAH	KY
PORTSMOUTH GASEOUS DIFFUSION PLANT	PIKETON	OH
THOMAS JEFFERSON NATIONAL ACCELERATOR	NEWPORT NEWS	VA
Y-12 PLANT	OAK RIDGE	TN

OOO Oakland Operations Office

Contact Name: Mark Barnes
Address1: HRMD Division
Address2: 1301 Clay Street
Address3:
Oakland CA 94612
PhoneNum: 510-637-1845
FaxNum: 510-637-2008
mark.barnes@oak.doe.gov

LAWRENCE BERKELEY NATIONAL	BERKELEY	CA
LAWRENCE LIVERMORE NATIONAL LABORATORY	LIVERMORE	CA
STANFORD LINEAR ACCELERATOR CENTER	PALO ALTO	CA

OFO Ohio Field Office

Contact Name: Marian Wilcox
Address1: PO Box 3020
Address2: 1 Mount Road
Address3:
Miamisburg OH 45343
PhoneNum: 937-865-4468
FaxNum: 937-865-5087
marian.wilcox@ohio.doe.gov

FEED MATERIALS PRODUCTION CENTER (FMPC)	FERNALD	OH
MOUND PLANT	MIAMISBURG	OH
WEST VALLEY DEMONSTRATION PROJECT	WEST VALLEY	NY

PP Pantex Plant

Contact Name: Mark Blackburn
Address1: US DOE Office of Amarillo Site Operations
Address2: Bldg. 12-36
Address3: Hwy 60 & FM2373
Amarillo TX 79120
PhoneNum: 806-477-3123
FaxNum: 806-477-5894
mblackbu@pantex.doe.gov

CLARKSVILLE FACILITY	CLARKSVILLE	TN
MEDINA FACILITY	SAN ANTONIO	TX
PANTEX PLANT	AMARILLO	TX

ROO

Richland Operations Office

Contact Name: Juli Yamauchi
Address1: PO Box 550
Address2: 825 Jaldwin Ave
Address3: Mail Stop A7-80
Richland WA 99352
PhoneNum: 509-376-1525
FaxNum: 509-376-5378
julianna_w_yamauchi@rl.gov

HANFORD	RICHLAND	WA
PACIFIC NORTHWEST NATIONAL LABORATORY	RICHLAND	WA

RFFO

Rocky Flats Field Office

Contact Name: Dotti Whitt
Address1: 10808 HWY 93 Unit A
Address2: 10808 Highway 93
Address3:
Golden CO 80403
PhoneNum: 303-966-8240
FaxNum: 303-966-6770
dotti.whitt@rf.doe.gov

ROCKY FLATS PLANT	GOLDEN	CO

SAN

Sandia Office

Contact Name: Anna Miller
Address1: Health Services Bldg 831
Address2: PO Box 5800 MS 1015
Address3: 1515 Eubank NE
Albuquerque NM 87123
PhoneNum: 505-844-5411
FaxNum: 505-845-8190
amiller@sandia.gov

SANDIA NATIONAL LABORATORIES	ALBUQUERQUE	NM
SANDIA NATIONAL LABS - LIVERMORE	LIVERMORE	CA

SROO

Savanna River Operations Office

Contact Name: L.P. Singh
Address1: PO Box A
Address2: Road 1A
Address3:
Aiken SC 29802
PhoneNum: 803-952-8351
FaxNum: 803-952-7206
lakshmi.singh@srs.gov

SAVANNAH RIVER SITE	AIKEN	SC
NAH RIVER SITE	AIKEN	SC

Appendix E -DOE VERIFICATION OF EMPLOYMENT MEMO

Department of Energy
Washington, DC 20585

February 27, 2002

MEMORANDUM FOR: Peter M. Turcic
Director
Division of Energy Employee Occupational Illness
Office of Workers' Compensation Programs
U.S. Department of Labor

FROM: Steven V. Cary
Acting Director, Office of Worker Advocacy
U.S. Department of Energy

SUBJECT: Verification of Employment

The Department of Labor (DOL) regulations implementing the Energy Employees Occupational Illness Compensation Program Act (EEOICPA) provide, at 20 CFR § 30.105, that after a claimant files a claim under the EEOICPA, the Department of Energy (DOE) shall complete and transmit to DOL a Form EE-5 in which DOE certifies that it concurs with the employment information provided by the claimant, that it disagrees with such information or that it can neither concur nor disagree after making a reasonable search of its records and a reasonable effort to locate records not in its possession. The purpose of this memorandum is to comply with this requirement by informing DOL of certain facilities for which it has been unable to locate any records that would allow it to concur or disagree with allegations concerning employment at such facilities.

Requests for verification of allegations of employment at facilities not on either list should continue to be routed to DOE in accordance with the directions set forth in EEOICPA Procedure Manual (Chapter 2-400). DOE has not received requests for verification of allegations of employment at many facilities on the covered facility list. When claims concerning such facilities are received, DOE will search relevant records and amend the lists as necessary (provided by Roger Anders to DOL under separate cover.)

This memorandum will serve as DOE's Form EE-5 for any claim alleging employment at the facilities set forth on List 1 and List 2.

- **List 1**--The facilities designated as List 1 are facilities for which DOE has no records that would allow it to verify allegations of employment at those facilities, nor has it been able to locate pertinent records not in its possession. DOL will attempt to obtain any necessary verification of allegations of employment at such facilities through means other than DOE records.

- **List 2**--The facilities designated as List 2 are facilities for which DOE has no records that would allow it to verify allegations of employment at those facilities. However, DOE has information concerning other entities that may be able to locate relevant records concerning allegations of employment at such facilities and has made arrangements for those entities to provide information concerning allegations of employment at the facilities on List 2. DOE will separately provide DOL with instructions for contacting the entities specified on List 2. DOL will contact those entities and request that they provide DOL with information concerning allegations of employment at such facilities and that they forward a copy of such information to DOE.

Appendix F - CONDITION & ICD-9 CODES

The information in this appendix provides ICD-9 Codes for commonly accepted conditions under the Energy Employees Occupational Illness Compensation Program Act. Please note that the following commonly accepted diagnoses are NOT an inclusive listing, nor are they at the most specific 4 –5 digit level in most cases.

This resource provides a starting point to identify a more specific code. In many cases, a range of codes is provided. Please use the Medicode ***ICD-9 CM*** Publication Chapter 2 (Neoplasms), and Chapter 10 (Diseases of the Genitourinary System) to find the specific code within a range. You will find most of what you need in Chapter 2. Chapter 10 will be helpful with renal conditions.

Note: If an ICD-9 code is given as a single number rather than a range, use that number; there is no need to look in the ICD-9 CM publication.

BERYLLIUM

Condition	ICD-9 Code
Beryllium Sensitivity	V81.4 **Note**: this is a special supplementary classification, which indicates circumstances or problems which influence the person's health status but is NOT in itself a current illness or injury.
Chronic Beryllium Disease	503 This category is pneumoconiosis due to other inorganic dust, which includes Berylliosis or CBD.

SILICOSIS

Condition	ICD-9 Code
Chronic Silicosis	502 This category is pneumoconiosis due to other, silica or silicates

Tables continue on the next page

COMMON CANCERS

Type of malignant neoplasm (Listed in order of system, primary site)	**Primary Site ICD-9 Code**	**Secondary Site ICD-9 Code**
Lip	140	
Salivary glands	142.0 - 142.8	
Pharynx	146.0 - 149.8	
Tonsil	146	
Esophagus	150.0 - 150.5	
Stomach	151.0 - 151.8	
Small intestine	152.0 - 152.8	197.4
Colon	153.0 - 153.8	197.5
Rectum	154.1	
Liver (excluding cirrhosis & hepatitis B*)	155.0	155.2
Bile ducts-intrahepatic	155.1	
Gallbladder	156.0	
Bile ducts-extrahepatic	156.1	
Pancreas	157.0 - 157.8	
Mesothelioma	158 or 163	
Bronchus and lung (other than in situ)	162.2 - 162.9	197.0
Bone & articular cartilage	170.0 - 170.8	198.5
Malignant Melonoma	172	
Breast – female	174.0 - 174.9	
Breast – male	175.0 - 175.9	
Ovary	183.0	198.6
Prostate	185	
Urinary Bladder	188.0 - 188.8	
Ureter	189.2	
Urethra	189.3	
Brain	191.0 - 191.8	198.3
Thyroid	193	
Hodgkin's Disease	201.0 – 201.9	
Lymphomas—other than Hodgkin's*	202.0 – 202.9	
Multiple Myeloma	203.0	
Leukemia (excluding Chronic Lymphocytic Leukemia*)	204.0 - 208.0, **except** 204.1*	

Tables continue on the next page.

* Exceptions apply only to SEC cases

COMMON RENAL DISORDERS

Condition	ICD-9 Code
Acute glomerulonephritis	580
Chronic glomerulonephritis	582
Nephritis	583
Acute renal failure	584
Chronic renal failure	585
Infections of the kidney	590
Chronic pyelonephritis	590.0
Acute pyelonephritis	590.1
Cystitis	595.0

Appendix G - NIOSH REFERRAL SUMMARY BULLETIN

EEOICPA BULLETIN NO.02-03

Issue Date: April 1, 2002

Effective Date: March 22, 2002

Expiration Date: April 1, 2003

Subject: NIOSH Referral Summary

Background: The Claims Examiners (CEs) in the District Offices are required by EEOICPA Section 7384n(d)(1) (and 20 CFR 30.115(a)) to forward claimant's application package to NIOSH for dose reconstruction. The NIOSH Referral Summary (shown in Attachment 1) replaces the Statement of Accepted Facts (SOAF), which has been used to transmit case files to NIOSH. The SOAF will now be used primarily for medical referrals. The NIOSH Referral Summary is a tabular form containing the medical and employment information accepted by the CE as factual. This form will provide NIOSH with the necessary information to proceed with the dose reconstruction process.

Much of the information in the NIOSH Referral Summary is entered into ECMS. The intent in the future is to automate the NIOSH Referral Summary and have most, if not all, of the fields entered electronically from ECMS.

Reference: Energy Employees Occupational Illness Compensation Program Act of 2000, As Amended, 42 U.S.C. § 7384 *et seq.*, Section 7384n(d)(1) (and 20 CFR 30.115(a)).

Purpose: To notify the District Offices of the NIOSH Referral Summary to be used for sending cases to NIOSH for dose reconstruction.

Applicability: All staff.

Actions:

1. Attached to this bulletin is the NIOSH Referral Summary (Attachment 1). This tabular form contains the medical and employment information accepted by the CE as factual.

2. The NIOSH Referral Summary should include information on the Energy Employee (EE) including the employee's full name, gender, date of birth, date of death (if applicable), and address and phone number (if applicable). In cases involving survivors (there may be one or more), provide contact information including the full name, address, and phone number. In cases of multiple survivors, indicate which survivor would prefer to be contacted (if known), e.g., because they are the most knowledgeable or accessible by phone. Also, if the CE is aware of other contacts, including other family members, co-workers, representatives, attorneys, and people providing affidavits, the CE should provide the full name, address, and phone number for each person. For all phone numbers discussed above, the phone type should be entered on the form in the block following the phone number, e.g., home, work, cell, day, evening, vacation home. This is helpful when there are multiple contact numbers listed.

3. The NIOSH Referral Summary should include the findings of the CE concerning medical factors. The medical information should include, for each cancer: whether it is primary or secondary (use a "X"), cancer description or type, along with the ICD-9 code, and the date of diagnosis. List all primary cancers, or all secondary cancers if no primary cancers are determined. It is not necessary to list the secondary cancers if there are primary cancers established. For the date of cancer diagnosis, the year of diagnosis is required, but the full date should be entered, if possible. Other covered conditions should be indicated (by a "X") when a SEC cancer claim is submitted, but the claimant is filing for non-SEC cancer medical benefits, or in case of other claim benefits scenarios (details can be provided on the form).

4. The NIOSH Referral Summary should include the findings of the CE regarding the employee's verified employment period for each DOE or AWE employment period. For each employment period include: employer/facility name, start and end date at the

facility, employee number (if available from EE-3), dosimetry badge number (if available from EE-3), and the employee's job title (the description is not required). Verified employment could extend beyond the covered employment periods. It is no longer necessary to provide NIOSH with the covered periods, as dose reconstruction will be performed for all verified employment. When applicable, the CE should select the facility name from the Federal Register Notice of List of Facilities Covered by the Energy Employees Occupational Illness Compensation Act of 2000. Also, indicate information related to the method of employment verification (with a "X"), i.e., DOE could not verify employment, employment verification based on affidavit or other credible evidence, or employee worked for a sub/sub contractor not listed in DOE Office of Worker Advocacy facility online database.

5. Other information that is relevant to NIOSH dose reconstruction includes race/ethnicity information (for skin cancer) and smoking history (for lung cancer). These cancers may be either primary or secondary cancers (sites to which a malignant cancer has spread). The CE should develop this information only for individuals with skin or lung cancers. The CE should request this information from the claimant early in the process so that it is available when the case is sent to NIOSH. A sample development letter for skin cancer claimants is shown in Attachment 2. A sample development letter for lung cancer claimants is shown in Attachment 3. For the race/ethnicity information, mark one or more of the five designations shown on the NIOSH Referral Summary (Attachment 1). For the smoking history, indicate the smoking level (at the time of cancer diagnosis) using one of the seven designations shown in the NIOSH Referral Summary (Attachment 1). The smoking categories include: Never Smoked - employee who smoked no more than 100 cigarettes before the date of cancer diagnosis; Former Smoker - employee who quit smoking more than five years before the date of cancer diagnosis; and Current Smoker - employee who smoked cigarettes at the time of the cancer diagnosis or who quit smoking fewer than five years before the date of the cancer diagnosis (the cigarette smoking level should be designated as one of the following: less than 10 per day, 10 - 19 per day, 20 - 39 per day, or 40 or more per day).

6. For pertinent cases already sent to NIOSH that did not have race/ethnicity or smoking history information, the CEs must develop that information. The National Office will use ECMS to sort cases already sent to NIOSH. The National Office will provide the District Office with a list of cases requiring race or ethnicity information or smoking history. Once received, the DO should send development letters to all of those individuals identified. When the information is received from the claimant, the CE should complete a new NIOSH Referral Summary with the race/ethnicity and smoking history sections completed. The new form should then be forwarded to NIOSH along with the weekly packages.

7. Finally, at the bottom of the NIOSH Referral Summary, provide the information related to the CE's completion of this summary, which includes the District Office, the CE's name and direct dial phone number, and the date prepared. On a temporary basis, a review by the supervisor is required. The reviewer's name and the date of the review should be noted.

8. The evidence in file must support any finding made by the CE and documented in the NIOSH Referral Summary. The CE should make a copy of the NIOSH Referral Summary and place it in the case file record.

Disposition: Retain until incorporated in the Federal (EEOICPA) Procedure Manual.

PETER M. TURCIC
Director, Division of Energy Employees
Occupational Illness Compensation

NIOSH Referral Summary Document

DOL Case Number: [Energy Employee (EE) SSN]

Case File Contact Information:

Energy Employee:

EE Full Name: [First, Middle, Last, Suffix]		
EE Gender: [M, F, U]		
Date of Birth: [Month, Day, Year]		
Date of Death (If applicable): [Month, Day, Year]		
EE Full Address (If applicable): [Street Address, City, State, Zip]		
EE Phone Number (If applicable): [Phone Number, Phone Type]		

Survivor(s) (SV) [Create a table for each SV]:

SV Full Name (s) (If applicable): [First, Middle, Last, Suffix]		
SV Full Address (If applicable): [Street Address, City, State, Zip]		
SV Phone Number (If applicable): [Phone Number, Phone Type]		
SV Relationship (If applicable): [Relationship]		

Other Contact(s) (OC) [Create a table for each OC]:

OC Full Name (s) (If applicable):		
OC Full Address (If applicable): [Street Address, City, State, Zip]		
OC Phone Number (If applicable): [Phone Number, Phone Type]		
OC Relationship (If applicable): [Relationship]		

Medical and Employment Information:

EE Covered Cancer Information [For each cancer, list the following information]:

Primary [ ] or Secondary (Metastatic) [ ]	
Cancer Description / Type	
Associated ICD-9 Code	
Date of Cancer Diagnosis	

Other Covered Condition:

SEC Cancer Claim, but filing for Non-SEC cancer medical benefits [ ]
Other claim for benefits scenario [ ]

Energy Employee Verified Employment History:

Verified Employment Period **(List all breaks in employment at the DOE or AWE Facility):**

Employer / Facility Name	
Start Date at the Facility (Full Date if Possible)	
End Date at the Facility (Full Date if Possible)	
Employment Badge Number (If available)	
Dosimetry Badge Number (If available)	
Job Title (Description not required)	

Employer / Facility Name	
Start Date at the Facility (Full Date if Possible)	
End Date at the Facility (Full Date if Possible)	
Employment Badge Number (If available)	
Dosimetry Badge Number (If available)	
Job Title (Description not required)	

Employer / Facility Name	
Start Date at the Facility (Full Date if Possible)	
End Date at the Facility (Full Date if Possible)	
Employment Badge Number (If available)	
Dosimetry Badge Number (If available)	
Job Title (Description not required)	

Employment Verification Information Valuable to NIOSH:

[ ] DOE could not verify employment
[ ] Employment Verification based upon Affidavit or Other Credible Evidence.
[ ] EE worked for a sub/sub contractor not listed in DOE Office of Worker Advocacy facility online database.

Other Information Relevant to NIOSH Dose Reconstruction, if Available:

If the claim is for skin cancer or a secondary cancer for which skin cancer is a likely primary cancer, list one or more of the following:	[ ] American Indian or Alaska Native [ ] Asian or Native Hawaiian or Pacific Islander [ ] Black [ ] White-Hispanic [ ] White-Non-Hispanic [ ] Not given
If the claim is for lung cancer or a secondary cancer for which lung cancer is a likely primary cancer, select one of the following (Note: Currently refers to time of cancer diagnosis):	[ ] Never smoked [ ] Former smoker [ ] Current smoker (? cig/day) [ ] <10 cig/day (currently) [ ] 10-19 cig/day (currently) [ ] 20-39 cig/day (currently) [ ] 40+ cig/day (currently)

DOL Information:

District Office	
Claims Examiner Name	
Claims Examiner Phone Number	
Date Prepared for NIOSH	
Reviewed By	

U. S. DEPARTMENT OF LABOR

EMPLOYMENT STANDARDS ADMINISTRATION
OFFICE OF WORKERS' COMPENSATION PROGRAMS
DIVISION OF ENERGY EMPLOYEES' OCCUPATIONAL
ILLNESS COMPENSATION
200 CONSTITUTION AVE
ROOM C-4511
WASHINGTON DC 20210
TELEPHONE: (202) 693-0081

March 28, 2002

Employee:
File Number:

JOE CLAIMANT
1234 W. MAIN STREET
WASHINGTON, D.C.

Dear Mr. Claimant:

This letter concerns your claim for compensation under the Energy Employees Occupational Illness Compensation Program. We have reviewed the claim and found that the exposed employee was diagnosed with skin cancer.

The next step in determining whether you are eligible for benefits is calculating whether the diagnosed cancer is reasonably related to exposure to radioactive materials during the course of covered employment. The calculation of probability of causation is based on many factors, such as the length of exposure and proximity to radiological sources, safety protection worn, the type of cancer diagnosed, etc.

We calculate the probability of causation by using a computer program to determine whether the diagnosed cancer is reasonably related to exposure during covered employment. For certain types of cancer, such as skin cancer or a cancer which has spread to more than one location in the body, the computer program requires that we include information about the exposed employee's race or ethnic identification as an additional factor in order to complete the calculation.

Therefore, we are asking you to complete the attached questionnaire in full and return it to the address that appears at the bottom of the questionnaire. Please return the questionnaire within 30 days to avoid any delay in the claims process.

It is important that you complete the questionnaire and return it to us so that we can perform the probability of causation calculation. If we do not receive a fully completed questionnaire,

we will be unable to perform a calculation of probability. Without a calculation of probability, we will not be able to determine whether you are entitled to benefits under this program and no award of benefits will be made.

Remember as the claimant, it is ultimately your responsibility to submit the necessary information to establish a claim under the EEOICPA. If you have any questions or concerns, please contact the District Office at XXX-XXX-XXXX or fax XXX-XXX-XXXX.

Sincerely,

Claims Examiner

Employee:
File Number:

The National Institute for Occupational Safety and Health (NIOSH) has developed a computer program known as the Interactive Radioepidemiological Program (IREP) that is used to calculate the probability of causation between a diagnosed cancer and employment. More information can be obtained about this program by contacting NIOSH at 1-800-35-NIOSH.

For skin cancer claims, racial or ethnic identification is necessary to accurately perform the IREP calculation. It is a required element of the computer program. In order to proceed with a determination of causation, please mark the box(es) that best match(es) the racial or ethnic identification of the employee named above:

- ☐ American Indian or Alaskan Native
- ☐ Asian, or Native Hawaiian or Other Pacific Islander
- ☐ Black or African Decent
- ☐ Hispanic
- ☐ White or Caucasian

Any person who knowingly makes any false statement, misrepresentation, concealment of fact or any other act of fraud to obtain compensation as provided under the EEOICPA or who knowingly accepts compensation to which that person is not entitled is subject to civil or administrative remedies as well as felony criminal prosecution and may, under appropriate criminal provisions, be punished by a fine or imprisonment or both.

I certify that the information provided is accurate and true.

Print Name _____

Signature _____

Date _____

Return to: [Insert District Office address]

U. S. DEPARTMENT OF LABOR

EMPLOYMENT STANDARDS ADMINISTRATION
OFFICE OF WORKERS' COMPENSATION PROGRAMS
DIVISION OF ENERGY EMPLOYEES' OCCUPATIONAL ILLNESS COMPENSATION
200 CONSTITUTION AVE
ROOM C-4511
WASHINGTON DC 20210
TELEPHONE: (202) 693-0081

March 28, 2002

Employee:
File Number:

JOE CLAIMANT
1234 W. MAIN STREET
WASHINGTON, D.C.

Dear Mr. Claimant:

This letter concerns your claim for compensation under the Energy Employees Occupational Illness Compensation Program.

We have reviewed the claim and found that the exposed employee was diagnosed with one of the following:

- Primary Trachea
- Bronchus
- Lung

The next step in determining whether you are eligible for benefits is calculating whether the diagnosed cancer is reasonably related to exposure to radioactive materials during the course of covered employment. The calculation of probability of causation is based on many factors, such as the length of exposure and proximity to radiological sources, safety protection worn, the type of cancer diagnosed, etc.

We calculate the probability of causation by using a computer program to determine whether the diagnosed cancer is reasonably related to exposure during covered employment. For a claim involving primary trachea, bronchus, or lung cancer or cancers that have spread to more than one location in the body, the computer program requires that we include information about the employee's smoking history prior to the diagnosis of cancer.

Therefore, we are asking you to complete the attached questionnaire in full and return it to the address that appears at the bottom of the questionnaire. Please return the questionnaire within 30 days to avoid any delay in the claims process.

It is important that you complete the questionnaire in full and return it to us so that we can perform the probability of

causation calculation. If we do not receive a fully completed questionnaire, we will be unable to perform a calculation of probability. Without a calculation of probability, we will not be able to determine whether you are entitled to benefits under this program and no award of benefits will be made.

Remember as the claimant, it is ultimately your responsibility to submit the necessary information to establish a claim under the EEOICPA. If you have any questions or concerns, please contact the District Office at XXX-XXX-XXXX or fax 202-693-1465.

Sincerely,

Claims Examiner

Employee:
File Number:

1. Check the box that best describes the smoking history of the employee named above.

☐ **Never Smoked** - Employee who smoked no more than 100 cigarettes before the date of cancer diagnosis.

☐ **Former Smoker** - Employee who quit smoking more than five years before the date of cancer diagnosis

☐ **Current Cigarette Smoker** - Employee who smoked cigarettes at the time of the cancer diagnosis or who quit smoking fewer than five years before the date of the cancer diagnosis

2. If you checked **Current Cigarette Smoker** above, please check the box below that corresponds with the number of cigarettes smoked per day at the time of the cancer diagnosis:

☐	Less than 10 per day
☐	10 - 19 per day
☐	20 - 39 per day
☐	40+ per day

* Generally 20 Cigarettes Per Pack

Any person who knowingly makes any false statement, misrepresentation, concealment of fact or any other act of fraud to obtain compensation as provided under the EEOICPA or who knowingly accepts compensation to which that person is not entitled is subject to civil or administrative remedies as well as felony criminal prosecution and may, under appropriate criminal provisions, be punished by a fine or imprisonment or both.

I certify that the information provided is accurate and true.

Print Name _____

Signature _____

Date _____

Return to: [Insert District Office address]

ISSUES CONCERNING CASES SENT TO NIOSH BULLETIN

EEOICPA BULLETIN NO.03-03

Issue Date: October 4, 2002

Effective Date: September 23, 2002

Expiration Date: September 23, 2003

Subject: Issues Concerning Cases Sent to NIOSH

Background: Section 20 C.F.R 30.115(a) of the interim final regulations currently provides that the Office of Workers Compensation Programs (OWCP) will forward eligible claimant application packages to HHS for dose reconstruction. This Bulletin provides additional details related to issues with the NIOSH Referral Summaries sent to NIOSH. For many issues this information reiterates or expands on information supplied in Bulletin 02-03, which was subsequently incorporated into Section 7 of Chapter 2-600 of the Procedure Manual. The last issue listed below alters previous guidance as a result of NIOSH experience gained during the dose reconstruction process.

The items addressed below were discussed in a telephone conference call between DOL National Office staff and NIOSH staff on September 10, 2002, and in subsequent follow-up discussions.

The primary corrective actions for most of these issues involve better quality control during the compilation of the NIOSH Referral Summary, including review by a supervisor or Senior CE before sending the form to NIOSH (required in the Procedure Manual, Chapter 2-600, Section 7(e)).

Reference: Interim final regulation 30 CFR 30.115(a); Procedure Manual, Chapter 2-600, Section 7; and EEOICPA Bulletin 02-03.

Appendix H - STATUTORY VENDOR BULLETIN

EEOICPA BULLETIN NO.02-07

Issue Date: May 7, 2002

Effective Date: May 7, 2002

Expiration Date: May 7, 2003

Subject: Covered time frames for the eight statutory beryllium vendors.

Background: The Energy Employees Occupational Illness Compensation Program Act (EEOICPA) specifically identifies eight corporate entities as beryllium vendors. In doing so, the Act has been interpreted to expand coverage to any employee engaged in beryllium related employment activities occurring concurrently with any period that the company was processing beryllium for the Department of Energy (DOE). These beryllium vendors include the following: Atomics International; Brush Wellman, Incorporated and its predecessor, Brush Beryllium Company; General Atomics; General Electric Company; NGK Metals Corporation and its predecessors, Kawecki-Berylco, Cabot Corporation, Berylco, and Beryllium Corporation of America; Nuclear Materials and Equipment Corporation; StarMet Corporation and its predecessor, Nuclear Metals, Incorporated; and Wyman Gordan, Incorporated.

While the EEOICPA specifically designates these eight corporate entities as beryllium vendors, it is silent on the issue of when each was producing or processing beryllium for sale to, or use by, the DOE. Given this situation, it is within the purview of the Division of Energy Employees Occupational Illness Compensation (DEEOIC) to establish the covered time frames for the statutory beryllium vendors.

The National Office of the DEEOIC has reviewed records maintained by the Department of Energy. Based on this review, the covered time frame for each statutorily named beryllium vendor has been decided. Provided as an attachment to this bulletin is a list of the designated statutory vendors and the corresponding covered time frame for each (Attachment 1). The attachment provides the name of the beryllium vendor, a description of the vendor and a summary of the evidence used to establish the effective date.

The effective dates of coverage are to be used by the Claims Examiner (CE) in determining whether or not an employee, contractor or subcontractor was present at a designated beryllium vendor during a time when the vendor engaged in producing or processing beryllium for use by the Department of Energy.

Reference: 42 USC § 7384l (6) and (7)

Purpose: This bulletin serves to enumerate the covered time frames for the eight statutory vendors named in the EEOICPA. In addition, it provides procedure clarification concerning the use of these time frames in determining covered beryllium employment.

Applicability: All Staff

Actions:

1. Upon receipt of a claim for compensation, the CE reviews the EE-3 Employment History form to determine whether any period of employment for a statutory beryllium vendor is claimed. Consideration should also be granted to contractors or subcontractors of the named vendor.

2. If there is any indication provided on the EE-3 that the named individual was employed at a statutory vendor as an employee, contractor or subcontractor, the CE must verify the employment. The CE should follow the normal routine established in the procedure manual and program bulletins for verifying employment. It is not necessary for the CE to verify the entire period of claimed employment with a beryllium vendor. Once the CE has verified that the individual was employed during any

period of covered employment, the CE need not attempt to verify additional claimed employment.

3. If a claimed period of employment is verifiable and the employee was an employee, subcontractor or contractor of a statutory vendor, the CE must determine whether any period of verified employment occurred during a time when the vendor was engaged in processing or producing beryllium for the DOE. It is only necessary for the CE to establish one instance where the period of verified employment overlaps a covered time frame for the named vendor. The CE must consider the fact that these particular eight statutory vendors have been specifically designated in the statute as covered beryllium vendors. A vendor may contain many different facilities located in various locations. The Act does not limit the covered employer to the particular facilities, thus employment with any facility of a statutory vendor during a period when the vendor was concurrently processing beryllium for the DOE is covered. This is true even if the employee was engaged in processing beryllium unrelated to any DOE operation.

The CE should use the information provided in Attachment 1 in making this determination. The CE should compare the dates of verified employment to the dates that have been determined by the National Office to be the time frame when the vendor was engaged in beryllium work for the Department of Energy. If any period of verified employment falls within the covered time frame for the statutory vendor, the CE can proceed with a finding that the employee is a covered beryllium employee as defined in 42 USC § 7384l (7). If the period of verified employment falls completely outside of the covered time frame for the vendor, the CE should follow the procedure for expanding covered time frames (See EEOICPA Bulletin 02-06).

4. If the claimant desires to review the records maintained by the National Office in regard to the covered time frames for the statutory vendors, a signed written request must be submitted to the appropriate district office. The district office will forward any such request directly to the National Office.

Disposition: Retain until incorporated in the Federal (EEOICPA) Procedure Manual

PETER TURCIC
Director, Division of
Energy Employees Occupational Illness Compensation

Distribution List No. 1: Claims Examiners, Supervisory Claims Examiners, Technical Assistants, Customer Service Representatives, Fiscal Officers, FAB District Managers, Operation Chiefs, Hearing Representatives, District Office Mail & File Sections

Statutory Beryllium Vendors Covered Time Frames

1. Atomics International 1954-1966

Summary Description
Atomics International was contracted by the AEC in the late 1940s to design and test nuclear reactor fuel. Beginning in 1954, some of the work for the contracts was performed at the Van Own building at the Atomics International in Canoga Park. There was a machine shop at this location that processed beryllium components. The last document establishing a beryllium relationship between Atomic International and AEC is an accident report from 1965-66.

Supporting Documentation	
1954	The start date is established in a Tiger Team Assessment from April 1991. They reported that DOE Rockwell's Canoga Park facility (Atomics International was a component of North American Aviation. The parent company eventually became Rockwell International) was used starting in 1954 to work on reactors. This work was conducted in a building where beryllium machining took place.
1966	A report from the AEC lists all accidents and incidents in AEC facilities involving radioactive material. Included in the document is a description of an accident that occurred when two employees were moving an irradiated beryllium temperature probe at the Canoga Park facility.

2. Brush Wellman Inc. and Brush Beryllium Company 1943-2001

Summary Description
Brush Wellman was the largest producer of beryllium related materials used by the AEC. The first contract that was made for the company to provide beryllium metal and beryllium fluoride was dated August 18, 1943. The last shipment of beryllium products to an organization linked to the atomic weapons production was 04/10/2001. This was reported to the Dept. of Energy in a listing provided by the company. There is a large pool of documentation supporting beryllium production for AEC and Dept. of Energy between the start and end dates.

Supporting Documentation	
1943	Excerpt from the Manhattan District History reveals the first contract for beryllium metal and beryllium fluoride was entered into effect on August 18, 1943.
2001	Contract listings from the Brush Wellman company describe shipments of beryllium products to Los Alamos National Lab through April 10, 2001.

3. General Atomics
1959-1967

Summary Description	
General Atomics was involved in the Experimental Beryllium Oxide Reactor Project (EBOR). This was a project to develop a use for beryllium in gas-cooled reactors. General Atomics was awarded the program in January 1958. In September, 1959, General Atomics began using beryllium oxide in the project. The EBOR project was terminated in FY 1967.	
Supporting Documentation	
1959	In a description of the Experimental Beryllium Oxide Reactor Project, a background summation of the project reveals that General Atomics was awarded the project and that use of beryllium oxide began in 1959. This description was included in a Memorandum from the Director of the Division of Reactor Development and Technology.
1967	The same memo as above recommends the termination of the EBOR project in 1967 due to technical problems and other uncertainties.

5. NGK Metals Corporation and Predecessors 1943-1979

Summary Description
NGK and its predecessors produced beryllium for use by the AEC. This relationship began in 1943 as part of the Manhattan Project. The Beryllium Corporation in Hazelton was asked by representatives of the Manhattan Engineering Program to conduct analysis of beryllium. By 1979, only Brush Wellman and Kawecki-Berylco were processing beryllium for the AEC. In September, 1979, KBI terminated its beryllium metal production lines. The NGK predecessor organizations include the following entities: ♦ Berylco ♦ Kawecki-Berylco ♦ Cabot Corporation ♦ Beryllium Corporation of America.

Supporting Documentation	
1943	An excerpt from the Manhattan District History (Addendum 5.16) notes that on August 23, 1943, Lt. Col. Ruhoff to Mr. Gravely, Beryllium Corporation, that an analysis of beryllium material be conducted by the company. This is the first instance of contact between the Manhattan Engineering Project and the Beryllium Corp to engage in work connected to beryllium material
1946	An excerpt from the Manhattan District History (pg. K-17) reveals that Beryllium Corporation of Reading, PA entered into contract to supply AEC with 1,000 pounds of high purity beryllium metal. Although the evidence suggests a contract was never finalized, there is no evidence to support a argument that there was absolutely no beryllium produced for the AEC under those preliminary arrangements.
1947	A monthly status and progress report from New York operations dated 12/8/1947, noted the construction of a beryllium casting plant at the Beryllium Corp in Reading, PA.
1979	End date established in September, 1979. An Information Memorandum from Director of Military Operations to Secretary of Dept. of Energy describes the termination of KBI product lines.

6. Nuclear Materials and Equipment NUMEC 1960-1968

Summary Description	
NUMEC is listed a statutory beryllium vendor under the EEOICPA. The company produced braze materials for use at the Hanford operations. Braze contains zircaloy alloy and **beryllium** powder.	
Supporting Documentation	
1960	A December 3, 1959 Office Memorandum describes a contract that would be coming into effect in 1960 to supply beryllium coatings for UO2.
1960	Atomic Energy Commission Toxic Hazards of Beryllium As Related to the Reactor Development Program (Appendix c).
1961	Regulatory Activities Document indicates that NUMEC was licensed for the production of plutonium-berllium neutron sources.
1962	NUMEC correspondence dated February 19, 1963 reveals contracts existed with the AEC through at lease1962
1965	DOE notes indicate that an order for 5000 braze rings was make in September 1965. (No primary source documents are in file)
1968	An "Information Report on NUMEC Powder Metallurigical Braze Rings" dated March 4, 1968 provides a summary of all of the information to date concerning braze rings fabricated by NUMEC. The report indicates that to date the AEC committed $84,000 in purchase of powered compacts with NUMEC.

7. StarMet Corporation and its Predecessor Nuclear Metals 1954-1986

Summary Description	
Starmet/Nuclear Metals originated out of a MIT laboratory operation. MIT was involved in a variety of beryllium related operations. Nuclear Metals assumed control of the MIT laboratory in 1954. Nuclear Metals produced beryllium products for the AEC until 1986.	
Supporting Documentation	
1954	In a memo discussing a claim for compensation involving a patient with beryllium disease, there is a discussion of the fact that on July 1, 1954, Nuclear Metals took over the MIT beryllium operation.
1984	A September 6, 2001 correspondence noted that Nuclear Metals Incorporated was the sole supplier of Beryllium Braze rings 1962-1984.
1986	An October 11, 2001, letter to Roger Anders reveals that in 1983, Nuclear Metals, Inc received a three-year sub-contract to produce beryllium. Final delivery was made in 1986

8. Wyman Gordon
1959-1965

Summary Description
The dates for Wyman Gordon are derived from notes taken by an employee of the Department of Energy. The notes were taken at a classified records center. While the employee was able to review documents that establish covered dates 1959 to 1965, the source documents could not be copied.

Supporting Documentation	
1959-1965	DOE employee notes

Appendix I - SAMPLE REQUEST FOR RECA AWARD LETTER

U.S. Department Of Labor
Employment Standards Administration
Office Of Workers' Compensation Programs
[District Office Address]

Date
File Number:

Name of Claimant
Address of Claimant

Dear [Name of Claimant]

This letter is about your claim for compensation.

On August 15, 2001, you submitted an EE-1 Claim for Benefits Under the Energy Employees Occupational Illness Compensation Program Act. You claimed that you have developed _____[illness] as a result of your employment as a uranium worker with _____[employer].

Section 3630 of the Energy Employees Occupational Illness Compensation Program Act (EEOICPA) establishes that beneficiaries of $100,000 under section 5 of Radiation Compensation Exposure Act (RECA) can receive an additional $50,000 and medical benefits.

The District Office has reviewed all the evidence presented with your claim. In order to establish a claim, we need a copy of the "Award" Letter that you were sent from the Department of Justice informing you that your claim for compensation under RECA has been approved in the amount of $100,000. We also need you to attach a Privacy Act release so we can verify your award with the Department of Justice.

As the claimant, it is your responsibility to submit the evidence needed to establish a claim under the Energy Employees Occupational Illness Compensation Program Act. You have 30 days from the date of this letter to provide the requested information.

If you have any questions or concerns, please contact the District Office at 202-555-8989 or fax 202-555-8999.

Sincerely,

[Your name]
Claims Examiner
Attachment: Privacy Act Release [Note: not shown in this version of the training material]

Appendix J - EXAMPLE RECOMMENDED DECISION LETTER

[Although based on a real case, this example is fictional]

U.S. DEPARTMENT OF LABOR

EMPLOYMENT STANDARDS ADMINISTRATION
OFFICE OF WORKERS' COMPENSATION PROGRAMS
DIVISION OF ENERGY EMPLOYEES' COMPENSATION
214 N HOGAN STREET, SUITE 910
JACKSONVILLE, FL 32202

COVERED EMPLOYEE: Jared Zaritsky

COVERED CLAIMANT: Flora B. Zaritsky

FILE NUMBER: 111-22-3333
DATE OF FILING: October 11, 2001

DATE OF ISSUANCE: January 11, 2002

NOTICE OF RECOMMENDED DECISION

This is a Recommended Decision of the District Office concerning your claim for compensation under the Energy Employees' Occupational Illness Compensation Program Act (EEOICPA). The District Office recommends acceptance of your claim for survivor benefits.

STATEMENT OF THE CASE

You filed a claim on October 11, 2001 seeking survivor benefits authorized under the Energy Employees' Occupational Illness Compensation Program Act. You submitted evidence that your late husband, Jared Zaritsky, was employed at the K-25 gaseous diffusion plant (GDP) in Oak Ridge, Tennessee. On 11/30/01 the Department of Energy (DOE) confirmed that Jared Zaritsky was employed at the K-25 GDP during the following time periods: 03/02/45 – 07/11/48; 01/22/53 – 02/28/62; and 03/16/73 – 08/02/92. During his employment at the K-25 GDP Jared Zaritsky was monitored through the use of dosimetry badges for exposure to external parts of the body to radiation.

The submitted medical evidence confirms that Jared Zaritsky was diagnosed with lung cancer on 07/19/92. The surgical pathology report by Dr. Anya B. Kaminsky, detailing the findings from a transbronchial biopsy performed on 06/22/92, showed evidence of the presence of poorly differentiated carcinoma. On 07/17/92, Dr. Richard Seaman diagnosed a primary inoperable, poorly differentiated, non-small cell carcinoma of the lung. A short time later, on 09/14/92, Jared Zaritsky died and the death certificate lists lung cancer as one of the conditions leading to the immediate cause of death.

The death certificate, signed 09/14/92, documents that you were the spouse of Jared Zaritsky at the time of his death. A marriage certificate shows that the wedding ceremony took place on 06/04/45.

FINDINGS OF FACT

1. Your claim for benefits on behalf of Jared Zaritsky was filed on October 11, 2001.
2. Jared Zaritsky was employed at the K-25 GDP in Oak Ridge, Tennessee for more than an aggregate 250 workdays prior to February 1, 1992. The DOE confirms this employment for the following time periods: 03/02/45 – 07/11/48; 01/22/53 – 02/28/62; and 03/16/73 – 08/02/92. This establishes eligibility as a member of the Special Exposure Cohort.
3. Jared Zaritsky was employed at the K-25 GDP in Oak Ridge, Tennessee and was monitored through the use of dosimetry badges for exposure at the plant of the external parts of his body to radiation.
4. Medical evidence establishes that Jared Zaritsky was diagnosed with lung cancer on 07/19/92 and all the evidence is consistent with this diagnosis. Accordingly, it is resolved that Jared Zaritsky contracted lung cancer. Lung cancer (other than *in situ* lung cancer that is discovered during or after a post-mortem exam) is a Special Exposure Cohort specified cancer.
5. Your husband died on 09/14/92 and you were his wife at the time of his death and are his widow.
6. You and your husband were married for more than one year immediately before Jared Zaritsky's death. The Zaritskys were, in fact, married for over 47 years prior to Jared Zaritsky's death.
7. You are the only survivor of Jared Zaritsky eligible for compensation.

CONCLUSIONS OF LAW

1. Jared Zaritsky was a member of the Special Exposure Cohort, as that term is defined in § 3621(14) of the EEOICPA, and Jared Zaritsky contracted a specified cancer as that term is defined in § 3621(17) of the EEOICPA.
2. Jared Zaritsky's claim, filed by Flora B. Zaritsky, establishes a compensable claim in the amount of $150,000 pursuant to § 3628(a) of the EEOICPA.
3. You are the only person eligible to receive compensation as a survivor of Jared Zaritsky, as that term is defined § 3628(e) of the EEOICPA.

Cecilia Woods
Senior Claims Examiner

[Notice of Appeal Rights would be included on the next page]

Appendix K - SIMULATED SAMPLE ORISE REPORT

ORISE Report (Simulated Sample) Page 1 of 1

Home Search ORISE Change Password Logon

(Name) (SS#)

Back **PRINT**

Facility
X10-X10 (X10 ONLY ON SSS)

Facility	Hire/ Terminate	Date	Dept. Code	Job Title	Badge Num.
X10 – 10 (X10 ONLY ON SSS)	-	01/21/1959	3078	OPERATORPOWER	12361
X10 – 10 (X10 ONLY ON SSS)	Hired	01/21/1959	-	-	-
X10 – 10 (X10 ONLY ON SSS)	-	06/28/1965	3077	-	-
X10 – 10 (X10 ONLY ON SSS)	-	07/04/1968	3081	-	-
X10 – 10 (X10 ONLY ON SSS)	-	04/17/1978	3016	POWER EQUIPMEN	-
X10 – 10 (X10 ONLY ON SSS)	-	04/01/1980	-	-	07151
X10 – 10 (X10 ONLY ON SSS)	-	10/05/1981	3015	POWER EQUIPMEN	-
X10 – 10 (X10 ONLY ON SSS)	-	05/01/1990	3017	SAFETY SPECIAL	-
X10 – 10 (X10 ONLY ON SSS)	-	01/01/1991	-	-	-
X10 – 10 (X10 ONLY ON SSS)	-	03/01/1991	3024	-	-
X10 – 10 (X10 ONLY ON SSS)	-	04/29/1991	-	TRAINING ASSOC	-
X10 – 10 (X10 ONLY ON SSS)	-	05/01/1991	-	TRAINING COORD	-
X10 – 10 (X10 ONLY ON SSS)	Terminated	12/31/1992	-	-	-
X10 – 10 (X10 ONLY ON SSS)	-	01/01/1993	-	-	007151

Appendix L - NIOSH LETTER ABOUT CLL

DEPARTMENT OF HEALTH & HUMAN SERVICES Public Health Service

National Institute for Occupat
Safety and Health
Robert A. Taft Laboratories
4676 Columbia Parkway
Cincinnati, OH 45226-1998
Phone: 513-841-4498
Fax: 513-458-7125

June 20, 2002

RECEIVED OWCP
2002 JUN 24 P 3:45
DIVISION OF EEOICP
U.S. DOL
WASHINGTON, D.C.

Pete Turcic
Department of Labor
Office of Energy-Related Compensation
200 Constitution Avenue, N.W.
Washington, DC 20210

Dear Mr. Turcic:

The Department of Health and Human Services (DHHS) published a final rule on Guidelines for Determining the Probability of Causation Under the Energy Employees Occupational Illness Compensation Program Act of 2000 on May 2, 2002 (42 CFR 81). Two sections of this final rule contain provisions dealing with chronic lymphocytic leukemia (CLL):

Section 81.21 Cancers requiring the use of NIOSH-IREP
(a) DOL will calculate probability of causation for all cancers, except chronic lymphocytic leukemia as provided under Section 81.30, using NIOSH-IREP.

Section 81.30 Non-radiogenic cancers
The following cancers are considered non-radiogenic for the purposes of EEOICPA and this part. DOL will assign a probability of causation of zero to the following cancers:
(a) Chronic lymphocytic leukemia (ICD-9 code 204.1)

The NIOSH-IREP does not include a dose response model for CLL. This is because no elevation of CLL incidence has been observed in studies of populations exposed to external and internal ionizing radiation. In addition to these studies, most expert committees have listed CLL as a cancer that appears non-radiogenic. In summary, CLL has not been shown to be associated with radiation exposure but is strongly associated with attained age.

Because of the fact that any EEOICPA claim where CLL is the only cancer will always produce a probability of causation of zero, there is no basis for transferring such claims to NIOSH for dose reconstruction.

Sincerely,

Larry Elliott, Director, CIH, MSPH
Office of Compensation
Analysis and Support

Appendix M- NIOSH DOSE RECONSTRUCTION QUESTIONS

List of Information to be Covered
in Dose Reconstruction Telephone Interviews

- **General Employment History**

  - ☐ List jobs held with DOE, DOE contractors, or AWEs (include job title, start date, end date, and supervisor's name)

- **Detailed Work History**

  For **EACH** of the jobs listed above, please provide information on the following:

  - ☐ Number of hours worked per week
  - ☐ Number of hours per week the job involved potential exposure to radiation and/or radioactive materials
  - ☐ Buildings/locations in which you worked (include the type of duty performed at each location)
  - ☐ Types of radioactive material(s) present or processed, and what form(s) (solid, liquid, gas)
  - ☐ Amount of radioactive materials present or processed (ounces, pounds, kilograms, drums, etc.) over what time period
  - ☐ Types of production processes involving radioactive materials in the areas you worked
  - ☐ Types of radiation-generating equipment that were present or used (include description of specific task performed and include information on types of radioactive materials and in what quantities they were used)
  - ☐ Exposure/contamination control measures used (hoods, gloves, respirators, etc.)
  - ☐ Whether or not the work was done under a radiation work permitting system (if yes, state the time frame this occurred)

■ Radiation Monitoring Information

- ☐ State whether you or co-workers (working in the same area as you) routinely wore radiation dosimetry badges
- ☐ Badge information: how often worn, how often exchanged, and where it was worn
- ☐ State whether or not you participated in a biological radiation monitoring program (nasal smears, urine samples, fecal samples, whole body counts)
- ☐ State whether you have copies of your dosimeter badge or biological monitoring records
- ☐ State whether you routinely surveyed yourself (frisked) for external contamination (if yes, indicate if it was before or after showering)
- ☐ State whether there was general area air monitoring for radiation performed in the work environment (if yes, indicate when this occurred)
- ☐ State whether there were any radiation surveys taken to characterize potential for external exposure (if yes, indicate when these occurred)
- ☐ For claimants who worked with radium and/or thorium (Fernald, Malinckrodt, or FUSRAP claimants in particular), state whether there was radon monitoring in any of the buildings or areas you worked
- ☐ State whether you were ever restricted from the workplace or certain job duties because you had reached a radiation dose limit

■ Radiation Incidents

- ☐ State whether you were ever involved in a criticality incident involving radiation exposure or contamination
- ☐ If yes, indicate:
  - what happened
  - when it happened
  - which radioactive materials were involved
  - what form was the radioactive material in, what quantity or radioactive material was present
  - which radiation-generating equipment was involved
  - where it took place
  - who was involved
  - what actions were taken to remedy the exposure contamination

- your location and activities during the incident, precautions taken to protect you
- types of personal protective equipment used
- length of time exposed during the incident
- chelation therapy or other medical treatments, type of biological monitoring after the incident
- indicate whether you have records of the monitoring

■ **Required Medical Screening X-Rays**

☐ State whether you were ever required to have medical x-rays for this job, as a condition of employment

☐ State whether you have records of these x-rays

■ **Other Relevant Information**

☐ State whether we have missed asking you about any conditions, situations, or practices that occurred during this job which you think may be useful to us in estimating your radiation doses (if yes, describe what has been missed with as much detail as possible, in terms of what occurred, where, when, for how long, and who was involved)

☐ State whether you are aware of any records related to the information you have provided that may help us estimate your doses (if yes, indicate the source and/or type of information)

■ **Identifying co-workers and Other Witnesses**

Identify any co-workers or other witnesses, such as radiation safety specialists from the site where you worked, who can confirm or expand upon the information you have provided

Appendix N - SAMPLE DOSE RECONSTRUCTION REPORT

NIOSH **OCAS**

NIOSH Report of Dose Reconstruction under the Energy Employees Occupational Illness Compensation Program Act (EEOICPA)

NIOSH ID:	Social Security No.	DOL District Office
003978	730-60-0913	Cleveland

Energy Employee Name:	Edwards (Last)	Terrence (First)	R. (Middle)	09/12/1919 (Date of Birth)

Covered Employment:

8/15/1952 – 12/15/1981 (Dates)	Blockson Chemical Company (Location)

Cancer:

Non-Hodgkins Lymphoma (Type)	202.0 (ICD Code)	9/13/1993 (Date of Diagnosis)

Dose Reconstruction Completed By:	Ellen K. Barrett (Name)	10/11/2003 (Date)
Peer Review Completed By:	Elizabeth K. Robinson (Name)	10/22/2003 (Date)
Dose Reconstruction Approved By:	Mark R. Rolfes (Signature)	10/23/2003 (Date)
	Mark H. Hill —NIOSH/OCAS (Name)	

Covered Employee	NIOSH ID#	Social Security #
Terrence R. Edwards	3978	730-60-0913

Introduction

The Energy Employees Occupational Illness Compensation Program Act of 2000 (EEOICPA), Executive Order No. 13179 and the Radiation Dose Reconstruction Rule (42 CFR § 82)1

EEOICPA established a compensation program to provide a lump sum payment of $150,000 and medical benefits as compensation to covered employees suffering from designated illnesses incurred as a result of their exposure to ionizing radiation, beryllium, or silica while in the performance of duty for the Department of Energy and certain of its vendors, contractors and subcontractors. This legislation also provided for payment of compensation to certain survivors of these covered employees. In Presidential Executive Order No. 13179, the President designated the U.S. Department of Labor to administer this program for claims by current and former employees of nuclear weapons production facilities and their survivors who seek compensation for cancers caused by radiation exposures sustained in the performance of duty. The Executive Order also directed the Department of Health and Human Services to estimate (reconstruct) the radiation doses received by these employees. The Department of Labor uses the reconstructed radiation dose in evaluating whether the employee's cancer was at least as likely as not related to employment at the facilities covered by EEOICPA. To fulfill the responsibilities assigned to the Department of Health and Human Services, the National Institute for Occupational Safety and Health's (NIOSH) Office of Compensation Analysis and Support (OCAS) completes dose reconstructions using the methods described in the Radiation Dose Reconstruction Rule (42 CFR § 82)1 for the Department of Labor's use in making compensation decisions.

The Purpose of Radiation Dose Reconstruction

A radiation dose reconstruction is used to estimate the radiation dose received by the specific organ(s) in which a worker developed cancer, particularly when radiation monitoring data is unavailable, incomplete, or of poor quality. Even in instances when radiation dosimetry data is available, it rarely specifies dosage to an organ and often is based on monitoring procedures that do not meet modern standards.

The basic principle of dose reconstruction is to characterize the occupational radiation environment to which workers were exposed using available worker and/or workplace monitoring information. In cases where radiation exposures in the workplace environment cannot be fully characterized based on available data, default values based on reasonable scientific assumptions are used as substitutes.

EEOICPA recognized that the process of estimating radiation doses would require dealing with uncertainties and limited data and thus required that the government establish methods for arriving at reasonable estimates of radiation dose received by individuals who were not monitored or inadequately monitored for exposures to radiation, or for whom exposure records are missing or incomplete. To the extent that the science and data involve uncertainties, these uncertainties are typically handled to the advantage, rather than to the detriment, of the claimant. NIOSH has used the best available science to develop the methods and guidelines for dose reconstruction. These methods have been reviewed and commented upon by the public, including experts in the field of dose reconstruction, and the presidentially appointed Advisory Board on Radiation and Worker Health.

How Radiation Doses are Reconstructed

NIOSH reconstructs radiation doses by evaluating all available, appropriate data relevant to the employee's radiation exposure. Some examples of data that may be included in the dose reconstruction include, but are not limited to, internal dosimetry (such as results from urinalysis), external dosimetry data (such as film badge readings), workplace monitoring data (such as air sample results), workplace characterization data (such as type and amount of radioactive material processed) and descriptions of the type of work done at the work location.
Although the specific methods used for each dose reconstruction can vary, after a claim has been referred by the Department of Labor to NIOSH for a dose reconstruction, NIOSH typically requests the worker's personal radiation monitoring information from the Department of Energy.

Upon receipt of the requested information, at least one voluntary informational interview with the claimant and/or survivors is conducted and a copy of the interview report is sent for their review. After all of the necessary and available information is gathered, a dose is estimated, using the methods in the Radiation Dose Reconstruction Rule. After a NIOSH health physicist reviews the information, methods, and results, the claimant receives a draft copy of the dose reconstruction report and a closing interview, during which the claimant can add any additional relevant information that may affect the dose reconstruction. If the claimant certifies that he/she has completed providing information and that the record for dose reconstruction should be closed, the final dose reconstruction report is sent to the claimant, the Department of Labor, and the Department of Energy.

As applied in the EEOICPA, dose reconstructions must rely on information that can be developed on a timely basis and on carefully stated assumptions. Therefore, the guiding principle in conducting these dose reconstructions is to ensure that the assumptions used are fair, consistent, and well-grounded in the best available science, while ensuring that

uncertainties in the science and data are handled to the advantage, rather than to the detriment, of the claim when feasible. When dose information is not available, is very limited, or the dose of record is very low, NIOSH may use the highest reasonably possible radiation dose, based on reliable science, documented experience, and relevant data, to complete a claimant's dose reconstruction. In other instances, NIOSH may not need to fully complete a dose reconstruction because a partial dose reconstruction results in an estimated dose which produces a probability of causation of 50% or greater.

How Radiation Dose Reconstructions Are Used in Final Compensation Determinations
The results of a claimant's dose reconstruction are used by the Department of Labor to determine the probability that a worker's cancer was "at least as likely as not" due to his or her occupational exposure to ionizing radiation during employment at a covered facility. Criteria and guidelines for making this determination are established by EEOICPA and the Probability of Causation Guidelines (42 CFR § 81).2 The dose reconstruction is not the final determination of a claim, but an interim product that is used by the Department of Labor in making its final

decision. Final determinations are made by the Department of Labor based on standards determined by EEOICPA and its implementing regulations.

Dose Reconstruction Overview

The Office of Compensation Analysis and Support has performed a dose reconstruction for Mr. Edwards in accordance with the applicable requirements of the Energy Employees Occupational Illness Compensation Program Act. The Department of Labor (DOL) has verified that Mr. Edwards worked at the Blockson Chemical Company from February 26, 1951 through December 15, 1981 and that he was diagnosed with non-Hodgkin's lymphoma on September 13, 1993. No dosimetry or bioassay records for Mr. Edwards related to Blockson Chemical's work for the Atomic Energy Commission (AEC, one of the predecessor agencies of the present Department of Energy) could be found. The primary source of information used for this dose reconstruction was the document "Basis for Development of an Exposure Matrix for Blockson Chemical Company" prepared for the EEOICPA project. In accordance with NIOSH documentation, the dose to the highest exposed organ that is not described by ICRP metabolic models was assigned as the appropriate internal dose; in this case, the dose to the skin was used to represent the dose received by the tissues of the lymphatic system. The dose to the remainder organs was assigned as the appropriate external dose. Internal doses were evaluated from the potential exposure starting in 1952 until time of cancer diagnosis in 1993. External doses were evaluated for the years 1952 – 1981. For the purposes of this dose

reconstruction, Mr. Edwards was given the highest reasonably possible radiation dose using worst-case assumptions related to radiation exposures and intakes, based on current science, documented experience and relevant data. Even under these assumptions, NIOSH has determined that further research and analysis will not produce a level of radiation dose resulting in a probability of causation of 50% or greater. Based on this efficiency process, the maximum estimated dose to the lymph nodes was 0.022 rem from internal exposures and 2.97 rem from external exposures. In accordance with the provisions of 42 CFR 82.10(k),[1] NIOSH has determined that sufficient research and analysis have been conducted to consider this dose reconstruction complete.

Information Used

The primary data source utilized for this dose reconstruction was the document "Basis for Development of an Exposure Matrix for Blockson Chemical Company" prepared for the EEOICPA project. It presents the evaluation of information regarding the uranium recovery work performed by Blockson Chemical for the AEC. This document includes reports of uranium extraction work done at Blockson Chemical as well as process information from Blockson Chemical and four uranium mills.[4] In addition, limited urinalysis data was available for 25 workers monitored between 1954 and 1958. Conservative (claimant-favorable) values of breathable air concentrations and inhalation times were derived from this information.[4] The type of cancer and the date of diagnosis were obtained from the medical records and/or the death certificate submitted by the claimant.

Personal Background Information

The covered employee, Mr. Edwards , began work at the Blockson Chemical Company, Joliet, Illinois, on 2/26/1951 and continued employment until 12/15/1981. Documentation submitted by the claimant verifies that during this period he was employed in a variety of positions, including laborer, mix operator, rock unloader, furnace operator, and truck driver. Based on information cited above, Mr. Edwards 's potential occupational radiation exposures occurred during 1952 - 1981, with resultant internal dose calculated until the time of cancer diagnosis in 1993.

Dose Estimate

External Dose

External dose is received from radiation originating outside of the body and is typically measured by dosimetry worn on the body. External radiation dose may have been delivered quickly (acute exposure) or slowly over a period of time (chronic exposure). Because no radiation monitoring records were found, worst-case assumptions were used to estimate the

external radiation dose received by Mr. Edwards per the provisions in 42 CFR § 82.10(k)(2).[1] The external dose reconstruction was based on source term information, and the claimant-favorable assumptions and parameters are described in a technical basis document.[4]

Radiation Type, Energy, and Exposure Conditions: Mr. Edwards worked in a variety of positions during his employment at the Blockson Chemical Company. From the records, it was not possible to state whether he was in a position to be exposed to radioactive material or not. Thus, the claimant-favorable assumption was made that he was chronically exposed in close proximity to the source, the yellowcake drums during processing. This assumption will result in an *overestimate* of Mr. Edwards 's dose. The source was composed of natural uranium in the form of yellowcake, with the most significant radiation for external exposure being photons with energies greater than 250 keV. Photon exposures from contaminated surfaces and assumed annual diagnostic x-rays were also considered to contribute to lymphatic tissue dose (based on the remainder organ dose). In addition, residual radioactivity following the end of Blockson's work for the AEC on March 31, 1962 was assumed to result in additional photon exposures until the end of Mr. Edwards 's employment in 1981. The external doses received by the lymphatic tissues due to submersion in air contaminated with yellowcake dust, and contamination on the skin were negligible, and thus, were not considered in the dose calculations. Table 1 below shows the estimated annual doses to the lymphatic tissue due to photon exposures from a drum of yellowcake. Table 2 shows the estimated annual doses to the lymphatic tissue due to photon exposures from contaminated surfaces. Table 3 shows the estimated annual doses to the lymphatic tissue due to the assumed annual x-rays. Table 4 shows the estimated annual doses to the lymphatic tissue due to exposures to residual radioactivity following the end of Blockson's work for the AEC on March 31, 1962.

Covered Employee
Terrence R. Edwards

NIOSH ID#
3978

Social Security #
730-60-0913

Table 1. Estimated remainder organ doses due to photons emanating from drums of yellowcake.

	Annual Organ Doses due to Photons (rem)		
Year	**Photons 30-250 keV**	**Photons > 250 keV**	**Total Dose**
1952	1.21E-02	1.48E-02	2.69E-02
1953	3.21E-02	3.91E-02	7.11E-02
1954	3.21E-02	3.91E-02	7.11E-02
1955	3.21E-02	3.91E-02	7.11E-02
1956	3.21E-02	3.91E-02	7.11E-02
1957	3.21E-02	3.91E-02	7.11E-02
1958	3.21E-02	3.91E-02	7.11E-02
1959	3.21E-02	3.91E-02	7.11E-02
1960	3.21E-02	3.91E-02	7.11E-02
1961	3.21E-02	3.91E-02	7.11E-02
1962	7.70E-03	9.38E-03	1.71E-02

Table 2. Estimated annual remainder organ doses due to photons from contaminated surfaces.

	Annual Organ Doses due to Photons (rem)		
Year	**Photons 30-250 keV**	**Photons > 250 keV**	**Total Dose**
1952	6.31E-03	7.52E-03	1.38E-02
1953	1.67E-02	1.99E-02	3.69E-02
1954	1.67E-02	1.99E-02	3.69E-02
1955	1.67E-02	1.99E-02	3.69E-02
1956	1.67E-02	1.99E-02	3.69E-02
1957	1.67E-02	1.99E-02	3.69E-02
1958	1.67E-02	1.99E-02	3.69E-02
1959	1.67E-02	1.99E-02	3.69E-02
1960	1.67E-02	1.99E-02	3.69E-02
1961	1.67E-02	1.99E-02	3.69E-02
1962	4.01E-03	4.78E-03	8.79E-03

Covered Employee
Terrence R. Edwards

NIOSH ID#
3978

Social Security #
730-60-0913

Table 3. Estimated annual remainder organ doses due to photons from the annual diagnostic x-rays.

Year	Annual Organ Doses due to Photons (rem)
1952	0.110
1953	0.110
1954	0.110
1955	0.110
1956	0.110
1957	0.110
1958	0.110
1959	0.110
1960	0.110
1961	0.110
1962	0.110

Table 4. Annual organ doses due to external exposures to residual radioactivity.

	Annual Organ Doses due to Photons (rem)		
Year	Photons 30-250 keV	Photons > 250 keV	Total Dose
1962	1.04E-02	1.24E-02	2.28E-02
1963	1.67E-02	1.99E-02	3.69E-02
1964	1.67E-02	1.99E-02	3.69E-02
1965	1.67E-02	1.99E-02	3.69E-02
1966	1.67E-02	1.99E-02	3.69E-02
1967	1.67E-02	1.99E-02	3.69E-02
1968	1.67E-02	1.99E-02	3.69E-02
1969	1.67E-02	1.99E-02	3.69E-02
1970	1.67E-02	1.99E-02	3.69E-02
1971	1.67E-02	1.99E-02	3.69E-02
1972	1.67E-02	1.99E-02	3.69E-02
1973	1.67E-02	1.99E-02	3.69E-02
1974	1.67E-02	1.99E-02	3.69E-02
1975	1.67E-02	1.99E-02	3.69E-02
1976	1.67E-02	1.99E-02	3.69E-02
1977	1.67E-02	1.99E-02	3.69E-02
1978	1.67E-02	1.99E-02	3.69E-02
1979	1.67E-02	1.99E-02	3.69E-02
1980	1.67E-02	1.99E-02	3.69E-02
1981	1.67E-02	1.99E-02	3.69E-02

Covered Employee	NIOSH ID#	Social Security #
Terrence R. Edwards	3978	730-60-0913

Internal Dose

Internal dose is received from radiation originating inside the body, i.e., from radioactive material taken into the body in some way. It can be calculated based on bioassay measurements of individual workers or on measurements of radiological conditions in the work place. As noted above, a few internal dose monitoring records were found for individual workers at Blockson Chemical. These urinalysis results, combined with source term estimates and exposure studies from four uranium mills, were used to produce a source term for internal dose estimation.[4]

Radiation Type, Energy, and Exposure Conditions: Mr. Edwards worked in a variety of positions during his employment at the Blockson Chemical Company. From the records, it was not possible to state whether he was in a position to be exposed to radioactive material or not. Thus, it was assumed that he was exposed chronically to the source, the yellowcake powder during uranium recovery operations. The source was natural uranium in the form of yellowcake, and the most significant radiation for internal exposure was alpha radiation. The assumption was made that the source was taken into the body by inhalation during uranium extraction operations. This uranium recovery operation was assumed to occur daily, resulting in a chronic intake of natural uranium. In accordance with the NIOSH Internal Dose Reconstruction Implementation Guideline,[3] the IMBA programs[5] was used to calculate the dose to the skin from exposures to inhaled alpha radioactivity. Doses to the skin were used to estimate doses to the lymphatic tissues. The yellowcake was assumed to be a moderately soluble (i.e., Absorption Type M) material.

The estimated natural uranium intake rate was 24 pCi/day over the course of Mr. Edwards 's employment at Blockson Chemical Company during the period of time that the AEC work was ongoing. This value was used in the IMBA programs[5] to calculate annual skin doses for the determination of a probability of causation. Table 5 shows the annual doses to the skin due to the assumed uranium intake rate of 24 pCi/day.

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Table 5. Annual internal dose to the skin (surrogate for lymphatic tissue) due to a natural uranium intake rate of 24 pCi/day.

Year	Annual Dose (rem)
1952	2.61E-05
1953	1.52E-04
1954	2.26E-04
1955	2.92E-04
1956	3.58E-04
1957	4.22E-04
1958	4.86E-04
1959	5.50E-04
1960	6.15E-04
1961	6.76E-04
1962	6.65E-04
1963	6.18E-04
1964	6.12E-04
1965	6.06E-04
1966	6.02E-04
1967	5.98E-04
1968	5.96E-04
1969	5.90E-04
1970	5.86E-04
1971	5.82E-04
1972	5.80E-04
1973	5.75E-04
1974	5.71E-04
1975	5.67E-04
1976	5.65E-04
1977	5.60E-04
1978	5.56E-04
1979	5.52E-04
1980	5.50E-04
1981	5.45E-04
1982	5.42E-04
1983	5.38E-04
1984	5.36E-04
1985	5.31E-04
1986	5.28E-04
1987	5.24E-04
1988	5.22E-04
1989	5.17E-04
1990	5.14E-04
1991	5.10E-04
1992	5.08E-04
1993	3.52E-04

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Dose from Radiological Incidents

No evidence was provided by the claimant, or any other documented source, that any radiological incidents may have occurred during Mr. Edwards 's employment; there are no such incidents reported in the available records cited in Reference 4. Thus, there was no indication of any incident that should be taken into account.

Summary

Mr. Edwards was assumed to have been exposed internally during his employment at the Blockson Chemical Company to an amount of radiation sufficient to result in a dose to his lymphatic tissues of 0.022 rem (based on dose calculated to the skin). He was assumed to have received an external photon dose of 2.97 rem to the lymphatic tissues (based on dose calculated to the remainder organs). The reported dose is a reasonable overestimate of Mr. Edwards 's occupational radiation dose for claim determination purposes. The attachment contains the dose reconstruction summary sheet that will be used by the Department of Labor to make the final probability of causation determination for the claim.

References

1. 42 CFR § 82, *Methods for Radiation Dose Reconstruction Under the Energy Employees Occupational Illness Compensation Program Act of 2000*; Final Rule, Federal Register/Vol.67, No. 85/Thursday, May 2, 2002, p 22314
2. 42 CFR § 81, *Guidelines for Determining the Probability of Causation Under the Energy Employees Occupational Illness Compensation Program Act of 2000*; Final Rule, Federal Register/Vol.67, No. 85/Thursday, May 2, 2002, p 22296
3. NIOSH, (2002) *Internal Dose Reconstruction Implementation Guideline, Rev 0*, OCAS-IG-002, National Institute for Occupational Safety and Health, Office of Compensation Analysis and Support, Cincinnati, Ohio, August 2002
4. ORAU Dose Reconstruction Team, *Basis for Development of an Exposure Matrix for Blockson Chemical Company*, Rev. 00, J. Anderson, MJW Corporation, Williamsville, NY, and Matt Smith, Dade Moeller & Associates, Richland, WA, October 2003
5. ACJ & Associates and the UK National Radiological Protection Board, Integrated Modules for Bioassay Analysis, (IMBA), Phase 1, Software produced for NIOSH-OCAS as part of the EEOICPA Program, Version 1.0.42, UK, November 2002

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ATTACHMENT 1: IREP Input Tables

PERSONAL INFORMATION								
Claimant Name	NIOSH ID #	Claimant SSN	DOL District Office	Gender	Birth Year	Year of Diagnosis	Cancer Model	Should alt model be run?
Terrence R. Edwards	0003978	730-60-0913	CL	Male	1919	1993	bma and multiple m	No

CLAIMANT CANCER DIAGNOSES						
	Primary Cancer #1	Primary Cancer #2	Primary Cancer #3	Secondary Cancer #1	Secondary Cancer #2	Secondary Cancer #3
Cancer Type	n-Hodgkins lymphor	N/A	N/A	N/A	N/A	N/A
Date of Diagnosis	9/13/1993	N/A	N/A	N/A	N/A	N/A

EXPOSURE INFORMATION							
Number of exposures							
137							
Exposure #	Exposure Year	Exposure Rate	Radiation Type	Dose Distribution Type	Parameter 1	Parameter 2	Parameter 3
1	1952	chronic	alpha	Lognormal	2.61E-05	1.600	
2	1953	chronic	alpha	Lognormal	1.52E-04	1.600	
3	1954	chronic	alpha	Lognormal	2.26E-04	1.600	
4	1955	chronic	alpha	Lognormal	2.92E-04	1.600	
5	1956	chronic	alpha	Lognormal	3.56E-04	1.600	
6	1957	chronic	alpha	Lognormal	4.22E-04	1.600	
7	1958	chronic	alpha	Lognormal	4.86E-04	1.600	
8	1959	chronic	alpha	Lognormal	5.50E-04	1.600	
9	1960	chronic	alpha	Lognormal	6.15E-04	1.600	
10	1961	chronic	alpha	Lognormal	6.76E-04	1.600	
11	1962	chronic	alpha	Lognormal	6.65E-04	1.600	
12	1963	chronic	alpha	Lognormal	6.18E-04	1.600	
13	1964	chronic	alpha	Lognormal	6.12E-04	1.600	
14	1965	chronic	alpha	Lognormal	6.06E-04	1.600	
15	1966	chronic	alpha	Lognormal	6.02E-04	1.600	
16	1967	chronic	alpha	Lognormal	5.98E-04	1.600	
17	1968	chronic	alpha	Lognormal	5.96E-04	1.600	
18	1969	chronic	alpha	Lognormal	5.90E-04	1.600	
19	1970	chronic	alpha	Lognormal	5.88E-04	1.600	
20	1971	chronic	alpha	Lognormal	5.82E-04	1.600	
21	1972	chronic	alpha	Lognormal	5.80E-04	1.600	
22	1973	chronic	alpha	Lognormal	5.75E-04	1.600	
23	1974	chronic	alpha	Lognormal	5.71E-04	1.600	
24	1975	chronic	alpha	Lognormal	5.67E-04	1.600	
25	1976	chronic	alpha	Lognormal	5.65E-04	1.600	
26	1977	chronic	alpha	Lognormal	5.60E-04	1.600	
27	1978	chronic	alpha	Lognormal	5.56E-04	1.600	
28	1979	chronic	alpha	Lognormal	5.52E-04	1.600	
29	1980	chronic	alpha	Lognormal	5.50E-04	1.600	
30	1981	chronic	alpha	Lognormal	5.45E-04	1.600	
31	1982	chronic	alpha	Lognormal	5.42E-04	1.600	
32	1983	chronic	alpha	Lognormal	5.38E-04	1.600	
33	1984	chronic	alpha	Lognormal	5.36E-04	1.600	
34	1985	chronic	alpha	Lognormal	5.31E-04	1.600	
35	1986	chronic	alpha	Lognormal	5.28E-04	1.600	
36	1987	chronic	alpha	Lognormal	5.24E-04	1.600	
37	1988	chronic	alpha	Lognormal	5.22E-04	1.600	
38	1989	chronic	alpha	Lognormal	5.17E-04	1.600	
39	1990	chronic	alpha	Lognormal	5.14E-04	1.600	
40	1991	chronic	alpha	Lognormal	5.10E-04	1.600	
41	1992	chronic	alpha	Lognormal	5.08E-04	1.600	
42	1993	chronic	alpha	Lognormal	3.62E-04	1.600	
43	1952	chronic	hotons E=30-250ke	Lognormal	0.012	2.700	
44	1953	chronic	hotons E=30-250ke	Lognormal	0.032	2.700	
45	1954	chronic	hotons E=30-250ke	Lognormal	0.032	2.700	
46	1955	chronic	hotons E=30-250ke	Lognormal	0.032	2.700	
47	1956	chronic	hotons E=30-250ke	Lognormal	0.032	2.700	
48	1957	chronic	hotons E=30-250ke	Lognormal	0.032	2.700	
49	1958	chronic	hotons E=30-250ke	Lognormal	0.032	2.700	
50	1959	chronic	hotons E=30-250ke	Lognormal	0.032	2.700	
51	1960	chronic	hotons E=30-250ke	Lognormal	0.032	2.700	
52	1961	chronic	hotons E=30-250ke	Lognormal	0.032	2.700	
53	1962	chronic	hotons E=30-250ke	Lognormal	0.008	2.700	
54	1952	chronic	photons E>250keV	Lognormal	0.015	2.700	
55	1953	chronic	photons E>250keV	Lognormal	0.039	2.700	
56	1954	chronic	photons E>250keV	Lognormal	0.039	2.700	
57	1955	chronic	photons E>250keV	Lognormal	0.039	2.700	
58	1956	chronic	photons E>250keV	Lognormal	0.039	2.700	
59	1957	chronic	photons E>250keV	Lognormal	0.039	2.700	
60	1958	chronic	photons E>250keV	Lognormal	0.039	2.700	
61	1959	chronic	photons E>250keV	Lognormal	0.039	2.700	

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62	1960	chronic	photons E>250keV	Lognormal	0.039	2.700
63	1961	chronic	photons E>250keV	Lognormal	0.039	2.700
64	1962	chronic	photons E>250keV	Lognormal	0.009	2.700
65	1952	chronic	hotons E=30-250ke	Lognormal	0.008	4.000
66	1953	chronic	hotons E=30-250ke	Lognormal	0.017	4.000
67	1954	chronic	hotons E=30-250ke	Lognormal	0.017	4.000
68	1955	chronic	hotons E=30-250ke	Lognormal	0.017	4.000
69	1956	chronic	hotons E=30-250ke	Lognormal	0.017	4.000
70	1957	chronic	hotons E=30-250ke	Lognormal	0.017	4.000
71	1958	chronic	hotons E=30-250ke	Lognormal	0.017	4.000
72	1959	chronic	hotons E=30-250ke	Lognormal	0.017	4.000
73	1960	chronic	hotons E=30-250ke	Lognormal	0.017	4.000
74	1961	chronic	hotons E=30-250ke	Lognormal	0.017	4.000
75	1962	chronic	hotons E=30-250ke	Lognormal	0.004	4.000
76	1952	chronic	photons E>250keV	Lognormal	0.008	4.000
77	1953	chronic	photons E>250keV	Lognormal	0.020	4.000
78	1954	chronic	photons E>250keV	Lognormal	0.020	4.000
79	1955	chronic	photons E>250keV	Lognormal	0.020	4.000
80	1956	chronic	photons E>250keV	Lognormal	0.020	4.000
81	1957	chronic	photons E>250keV	Lognormal	0.020	4.000
82	1958	chronic	photons E>250keV	Lognormal	0.020	4.000
83	1959	chronic	photons E>250keV	Lognormal	0.020	4.000
84	1960	chronic	photons E>250keV	Lognormal	0.020	4.000
85	1961	chronic	photons E>250keV	Lognormal	0.020	4.000
86	1962	chronic	photons E>250keV	Lognormal	0.005	4.000
87	1952	acute	hotons E=30-250ke	Normal	0.110	0.300
88	1953	acute	hotons E=30-250ke	Normal	0.110	0.300
89	1954	acute	hotons E=30-250ke	Normal	0.110	0.300
90	1955	acute	hotons E=30-250ke	Normal	0.110	0.300
91	1956	acute	hotons E=30-250ke	Normal	0.110	0.300
92	1957	acute	hotons E=30-250ke	Normal	0.110	0.300
93	1958	acute	hotons E=30-250ke	Normal	0.110	0.300
94	1959	acute	hotons E=30-250ke	Normal	0.110	0.300
95	1960	acute	hotons E=30-250ke	Normal	0.110	0.300
96	1961	acute	hotons E=30-250ke	Normal	0.110	0.300
97	1962	acute	hotons E=30-250ke	Normal	0.110	0.300
98	1952	chronic	hotons E=30-250ke	Lognormal	0.010	4.000
99	1953	chronic	hotons E=30-250ke	Lognormal	0.017	4.000
100	1954	chronic	hotons E=30-250ke	Lognormal	0.017	4.000
101	1955	chronic	hotons E=30-250ke	Lognormal	0.017	4.000
102	1956	chronic	hotons E=30-250ke	Lognormal	0.017	4.000
103	1957	chronic	hotons E=30-250ke	Lognormal	0.017	4.000
104	1958	chronic	hotons E=30-250ke	Lognormal	0.017	4.000
105	1959	chronic	hotons E=30-250ke	Lognormal	0.017	4.000
106	1970	chronic	hotons E=30-250ke	Lognormal	0.017	4.000
107	1971	chronic	hotons E=30-250ke	Lognormal	0.017	4.000
108	1972	chronic	hotons E=30-250ke	Lognormal	0.017	4.000
109	1973	chronic	hotons E=30-250ke	Lognormal	0.017	4.000
110	1974	chronic	hotons E=30-250ke	Lognormal	0.017	4.000
111	1975	chronic	hotons E=30-250ke	Lognormal	0.017	4.000
112	1976	chronic	hotons E=30-250ke	Lognormal	0.017	4.000
113	1977	chronic	hotons E=30-250ke	Lognormal	0.017	4.000
114	1978	chronic	hotons E=30-250ke	Lognormal	0.017	4.000
115	1979	chronic	hotons E=30-250ke	Lognormal	0.017	4.000
116	1980	chronic	hotons E=30-250ke	Lognormal	0.017	4.000
117	1981	chronic	hotons E=30-250ke	Lognormal	0.017	4.000
118	1962	chronic	photons E>250keV	Lognormal	0.012	4.000
119	1963	chronic	photons E>250keV	Lognormal	0.020	4.000
120	1964	chronic	photons E>250keV	Lognormal	0.020	4.000
121	1965	chronic	photons E>250keV	Lognormal	0.020	4.000
122	1966	chronic	photons E>250keV	Lognormal	0.020	4.000
123	1967	chronic	photons E>250keV	Lognormal	0.020	4.000
124	1968	chronic	photons E>250keV	Lognormal	0.020	4.000
125	1969	chronic	photons E>250keV	Lognormal	0.020	4.000
126	1970	chronic	photons E>250keV	Lognormal	0.020	4.000
127	1971	chronic	photons E>250keV	Lognormal	0.020	4.000
128	1972	chronic	photons E>250keV	Lognormal	0.020	4.000
129	1973	chronic	photons E>250keV	Lognormal	0.020	4.000
130	1974	chronic	photons E>250keV	Lognormal	0.020	4.000
131	1975	chronic	photons E>250keV	Lognormal	0.020	4.000
132	1976	chronic	photons E>250keV	Lognormal	0.020	4.000
133	1977	chronic	photons E>250keV	Lognormal	0.020	4.000
134	1978	chronic	photons E>250keV	Lognormal	0.020	4.000
135	1979	chronic	photons E>250keV	Lognormal	0.020	4.000
136	1980	chronic	photons E>250keV	Lognormal	0.020	4.000
137	1981	chronic	photons E>250keV	Lognormal	0.020	4.000

OTHER ADVANCED FEATURES			
Sample Size	Random Seed		
2000	99		
User Defined Uncertainty Distribution			
Dose Distribution Type	Parameter 1	Parameter 2	Parameter 3
Lognormal	1.000	1.000	0.000