

IH Referral: General Info & Question Page -

1. Employee Information

Name: _____
 Last Four: XXXXX
 Case File Number: _____
 Date of Birth: **November 21, 1958**

2. Medical Information

Earliest Date of Dx	Diagnosis	ICD-9	Part B information
April 12, 2012	Chronic Obstructive Pulmonary Disease (COPD)	496	N/A
August 1, 2003	BCC of Left Ear Concha	173.2	Denied (PoC below 50%)

3. Employment & Exposure Information - completed exposure worksheet is attached.

<u>Facility</u>	<u>Dates of Employment</u>	<u>Position Title</u>
Hanford	July 18, 1977 to November 8, 1977	Electrician welder, Electrician
	February 26, 1979 to August 15, 1979	Electrician
	March 16, 1984 to November 1, 1984	Electrician
	August 29, 1985 to February 17, 1989	Electrician
	September 1, 1989 to January 5, 1990	Electrician
	August 28, 1991 to April 10, 1992	Electrician
	September 21, 1992 to March 4, 2015	Electrician

4. Other relevant information- SEM search reveals 13 potential exposures for COPD: 1) Ammonia, 2) Cadmium oxide, 3) Cement 4) Chlorine, 5) Diesel exhaust, 6) Nitrogen dioxide, 7) Osmium tetroxide, 8) Phosgene, 9) Silicon dioxide – crystalline, 10) Sulfur dioxide, 11) Vanadium pentoxide, 12) Welding fumes, and 13) Wood dust, yet the focus of this investigation seeks specific analysis to:

- 1) Cement
- 2) Diesel exhaust
- 3) Welding fumes

5. Attach OHQ and DAR (Accompanying this SOAF)

6. Question for IH

Please describe the nature, extent, and duration of potential exposure that the employee would have had to Cement, Diesel exhaust, and Welding fumes during the course of employment at the Hanford Site for the period of July 18, 1977 to December 31, 1995.

7. Prepared by

CE: _____ Unit Mgr. _____
 Review by: _____ (IH Unit POC name)
 Date reviewed: January 21, 2016

Employment/Exposure Worksheet

Case #: 1

Employee Name: [Redacted]

Dates (at facility)	Facility	Labor Category with Dates	Construction ? Y/N	DAR info, job process, etc.	SEM Filters - disease, etc.	Potential Toxic Exposures (SEM)
7/18/1977 to 11/8/1977	Hanford	Electrician, Welder	No	Electrician welder, Electrician	COPD	Cement, Diesel exhaust, and Welding fumes
2/26/1979 to 8/15/1979	Hanford	Electrician	No	Electrician	COPD	Cement and Diesel exhaust
3/16/1984 to 11/1/1984	Hanford	Electrician	No	Electrician	COPD	Cement and Diesel exhaust
8/29/1985 to 2/17/1989	Hanford	Electrician	No	Electrician	COPD	Cement and Diesel exhaust
9/1/1989 to 1/5/1990	Hanford	Electrician	No	Electrician	COPD	Cement and Diesel exhaust
8/28/1991 to 4/10/1992	Hanford	Electrician	No	Electrician	COPD	Cement and Diesel exhaust
9/21/1992 to 3/4/2015	Hanford	Electrician	No	Electrician	COPD	Cement and Diesel exhaust

01/27/2016

From:
Sent:
To:
Cc:
Subject:

Importance:

I have reviewed the attached claim and have the following recommendations:

I would recommend that your IH referral ask for an exposure evaluation for the following agents:

- Asbestos
- Cement
- Diesel exhaust
- Welding fumes

You hadn't mentioned asbestos in your listing, but that is probably due to the circular that provides direction about this agent.

I'm a bit skeptical of the welding fumes, but added it due to his first labor classification being an Electrician/Welder.

All the other agents are only associated with Tank Farm Operations. As we've seen in previous claims of this type, We typically do not assign significant exposure to positions other than those that work directly with wastes stored there (i.e. waste operators, chemical operators, waste samplers, etc.). It also appears to me that [redacted] was a probably a construction-type Electrician based on the multiple short term employments. There were some employments that were credited to Hanford prime contractors (Fluor, Westinghouse etc.); however, it was quite common for Hanford to bring in Union Hall personnel for construction/short term projects.

I hope this is helpful.

Fro
Sen
To:
Sub
Imp

Good morning

RE:

Employee:

Case ID:

Here is a claim for an employee with **chronic obstructive pulmonary disease (COPD)**. The earliest date of diagnosis for his COPD is April 12, 2012.

He worked as follows:

Facility	Dates of Employment	Labor Category
Bechtel	July 18, 1977 to November 8, 1977	Electrician welder
Sundance Electric	February 26, 1979 to August 15, 1979	Electrician
Empire Electric Company/J.A. Jones Construction Services Company	March 16, 1984 to November 1, 1984	Electrician
Empire Electric Company/J.A. Jones Construction Services Company	August 29, 1985 to February 28, 1987	Electrician
Kaiser Engineers Hanford	March 1, 1987 to February 17, 1989	Electrician
Kaiser Engineers Hanford	September 1, 1989 to October 5, 1990	Electrician
Kaiser Engineers Hanford	August 28, 1991 to April 10, 1992	Electrician
Westinghouse Hanford Company/ICF Kaiser Hanford	September 21, 1992 to September 30, 1996	Electrician
Fluor Daniel Hanford Inc.	October 1, 1996 to August 24, 2009	Electrician
CSC Hanford LLC/PAE Hanford LLC	August 24, 2009 to September 28, 2014	Electrician
Mission Support Alliance LLC	September 29, 2014 to March 4, 2015	Electrician

The SEM search under these labor categories reveals 13 potential exposures for Hanford for **COPD**. They are:

1. Ammonia
2. Cadmium Oxide
3. Cement
4. Chlorine

5. Diesel exhaust
6. Nitrogen dioxide
7. Osmium tetroxide
8. Phosgene
9. Silicon dioxide, crystalline
10. Sulfur dioxide
11. Vanadium pentoxide
12. Welding fumes
13. Wood Dust

I'm writing to you to inquire how to best determine which of these 13 toxins, will need an IH opinion for levels and routes of exposure.

OHQ states the following for Personal Protective Equipment utilized:

<u>Equipment</u>	<u>Frequency of Use</u>
Apron or lab coat	Sometimes
Supplied air or SCBA	Often/Always
Face Mask	Often/Always
Safety Glasses	Often/Always
Full Protective Suit	Often/Always

Any help you can give is greatly appreciated. If you need any additional information, don't hesitate to give me a ring.

Thank you,



U.S. Department of Labor EEOICP Site Exposure Matrices

in
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add to "keeper stack"
view "keeper stack"
print-ready view

The site specific information in this database reflects available data and may not be complete. The results should be used with a full understanding of the limitations of the current dataset.

Labor category:

Click here to locate a labor category by alias or description, if you cannot find the labor category you are looking for in the list above.

Secondary filters to apply to lists of related items (from Hanford/PNNL) :

Toxic substance:

Health effect (per associated toxics):

Area:

Building:

Process:

Site: Hanford/PNNL

Labor Category: Electrician

DETAILS	SiteJobAlias: Electrician Journeyman
RECORD HISTORY	Facility Data Last Updated: Nov 5, 2015 (Note: Toxic substance/disease relationships may have changed after this date.)
RELATED ITEMS IN SITE EXPOSURE MATRIX	
Secondary filters applied -- Health effect: Pulmonary disease, chronic obstructive	
HAZARDOUS CHEMICALS POTENTIALLY ENCOUNTERED BY LABOR CATEGORY (13 matching criteria)	<ul style="list-style-type: none"> <input type="radio"/> Ammonia CAS: 7664-41-7 Aliases: Anhydrous ammonia; Ammonia (anhydrous); Nitro-sil; Nitrosil; BO-PEEP ammonia; NH3 Category: Gases <input type="radio"/> Asbestos CAS: 1332-21-4; 14567-73-8 Aliases: Amosite; 16F; Anthophyllite; Anthophyllite UICC; Anthophyllite asbestos; Chrysotile; Crocidolite; Tremolite; Tremolite asbestos; Tremolitena; Filterbestos; Hysol Epoxi-Patch Kit 615, Part A; Epoxi-Patch Kit 615, Part A Category: Dusts and Fibers <input type="radio"/> Cadmium oxide CAS: 1306-19-0 Aliases: Cadmium monoxide; CdO Category: Other Materials <input type="radio"/> Cement CAS: 65997-15-1 Aliases: Portland cement; Cement dust; Concrete; Concrete dust; Mortar; Grout Site Aliases: Grout Category: Dusts and Fibers <input type="radio"/> Chlorine CAS: 7782-50-5 Aliases: Dichlorine; Molecular chlorine; Cl; Cl2 Category: Acids/Caustics/Reducing and Oxidizing Agents <input type="radio"/> Diesel exhaust CAS: CAS Not Found Aliases: Diesel engine exhaust Category: Gases <input type="radio"/> Nitrogen dioxide CAS: 10102-44-0 Aliases: Note: NOx refers to both nitric oxide and nitrogen dioxide and therefore appears as an alias in this

	<p>profile. Azote; Nitrito; Nitrogen peroxide; Nitric dioxide; NOx; NO2 Category: Gases</p> <ul style="list-style-type: none"> ☉ Osmium tetroxide CAS: 20816-12-0 Aliases: Osmium tetroxide; Osmium VIII oxide; Osmium (VIII) oxide; Osmic acid; Osmic acid anhydride; Osmium oxide; Perosmic acid anhydride; Perosmic oxide; OsO4 Category: Other Materials ☉ Phosgene CAS: 75-44-5 Aliases: Carbonyl chloride; Carbon oxychloride; Carbon dichloride oxide; Carbonic acid dichloride; COCl2 Category: Gases ☉ Silicon dioxide, crystalline CAS. 1317-95-9; 14464-46-1; 14808-60-7; 15468-32-3; 308075-07-2 Aliases: Silica sand; Crystalline silica; Flint; Cristobalite; Cristoballite; Cristobalite dust; Crystoballite dust; alpha-Cristobalite; alpha-Crystoballite; Cristobalite; Crystoballite; Crystobalite quartz; Crysvarl; Quartz; Quartz glass; Quartz wool; Tripoli; Tridymite; Free crystalline silica; Sibelite M 3000; Sibelite M 4000; Sibelite M 6000; Silica oxide; Silica flour; Silicious flour; ; Silica, crystalline-cristobalite; Silica quartz; Silica-crystalline quartz; Silica crystalline; Silica, crystalline; Silica crystalline quartz; Crystalline silica, quartz; Silica (flint); Agate; Glass; Glass frit; Silica, crystalline-quartz; Ottawa sand; Sand Ottawa; Sea sand; Silicon IV oxide (crystalline); Silicon (IV) oxide (crystalline); ; Suprasil; Synthetic quartz; Sand; Glass sand; Silica brick; Opal glass; Glass (bottle composition); Holeplug; Sandstone; Tuffaceous sandstone; Kaiser Refractories crystallized silica; NVS, OVB, SVB, and FVB Abrasives; "VX" Super Refractory, HVX; HVX and VX Super Refractory, HVX; SiO2 Category: Other Materials ☉ Sulfur dioxide CAS: 7446-09-5 Aliases: Sulfur oxide; Sulfurous oxide; SOx; SO2 Category: Gases ☉ Vanadium pentoxide CAS. 1314-62-1 Aliases: Divanadium pentoxide; Vanadic anhydride; Vanadium oxide (V2O5); Vanadium pentaoxide; Vanadic acid anhydride; Vanadium V oxide; Vanadium (V) oxide; Vanadium pentoxide (fume); V2O5 Category: Other Materials ☉ Wood dust CAS: CAS Not Found Aliases: Wood dust, all soft and hard woods; Saw dust; Masonite; Masonite dust; Hard wood dust; Maple wood dust; Maple wood flour; Sanderdust; Soft wood dust; Western red cedar dust; Wood flour; Wood meal Category: Other Materials
<p>PROCESSES/ACTIVITIES PERFORMED BY THIS LABOR CATEGORY</p>	<ul style="list-style-type: none"> ☉ Electrical maintenance activities ☉ Emergency/Standby generator operation and maintenance ☉ Tank farm operations and support activities ☉ Thorium campaign activities
<p>AREAS IN WHICH THIS LABOR CATEGORY WAS INVOLVED</p>	<ul style="list-style-type: none"> ☉ 100 ☉ 1100 ☉ 200 East ☉ 200 West ☉ 300 ☉ 3000 ☉ 400 ☉ 600 ☉ 700

Richland Research Complex

BUILDINGS IN WHICH
THIS LABOR
CATEGORY WAS
INVOLVED

- 108-FC Name:Electrical and Glass Shops
- 1171 Name:Main Transportation Shop Building Aliases: Main Shop Building
- 1240 Name:Main Fabrication Shop
- 1621-BA Name:Emergency Gasoline Electrical Generator Shelter
- 1621-BB Name:Emergency Gasoline Electrical Generator Shelter
- 1621-BC Name:Emergency Gasoline Electrical Generator Shelter
- 1621-DA Name:Emergency Gasoline Electrical Generator Shelter
- 1621-DB Name:Emergency Gasoline Electrical Generator Shelter
- 1621-DC Name:Emergency Gasoline Electrical Generator Shelter
- 1621-FA Name:Emergency Gasoline Electrical Generator Shelter
- 1621-FB Name:Emergency Gasoline Electrical Generator Shelter
- 1621-FC Name:Emergency Gasoline Electrical Generator Shelter
- 1717-B Aliases: Combined Shops
- 1717-D Aliases: Combined Shops
- 1717-F
- 200 East Waste Tank Farms Aliases: 241-A; 241-AN; 241-AP; 241-AW; 241-AX; 241-AY; 241-AZ; 241-B; 241-BX; 241-BY; 241-C; A Farm; AN Farm; AP Farm; AW Farm; AX Farm; AY Farm; AZ Farm; B Farm; BX Farm; BY Farm; C Farm
- 200 West Waste Tank Farms Aliases: 241-SX; 241-SY; 241-T; 241-TX; 241-TY; 241-U; SX Farm; SY Farm; T-Farm; TX Farm; TY Farm; U Farm
- 202-A Name:Plutonium-Uranium Extraction Plant A Aliases: A Plant; A-Canyon; Laboratory Annex; Plutonium-Uranium Extraction Plant; PUREX Plant
- 225-B Name:Waste Encapsulation and Storage Facility Aliases: 225-B-DG-1; Manipulator repairman; WESF; WESF Encapsulation Facility
- 225-BE Name:Maintenance Shop Aliases: Repair Shop
- 225-BG-GEN-1
- 252-AB Name:Electrical substation
- 252-AC Name:Surveillance Lighting substation
- 2620-W Name:WRAP Shops
- 2621-DC Name:Emergency Gasoline Electrical Generator Shelter
- 2621-EA Name:Emergency Gasoline Electrical Generator Shelter
- 2621-EB Name:Emergency Gasoline Electrical Generator Shelter
- 2621-WA Name:Emergency Gasoline Electrical Generator Shelter
- 2621-WC Name:Emergency Gasoline Electrical Generator Shelter
- 2713-E Name:Electrical Distribution Shop
- 2721-Z Name:Emergency Generator Service Building
- 2722-E Name:Electrical and Instrument Shop Aliases: Paint and Riggers Shop
- 272-B Name:WESF Support Building Aliases: Operations/Storage Building
- 274-E Name:Maintenance Shop Aliases: Warehouse
- 277-W Name:West Area Shops Building Aliases: Fabrication Shop

- 🔍 **281-A** Name:Emergency Generator Facility
- 🔍 **309** Name:Plutonium Recycle Test Reactor Aliases: Equipment Storage Building; Plutonium Recycle Critical Reactor; Plutonium Recycle Test Reactor Building; PRTR; SP-100 GES Test Facility
- 🔍 **313** Name:Uranium Fuels Fabrication Facility Aliases: Fuels Preparation Building; Metals Fabrication Building; Note: Kaiser Aluminum and Chemical Corporation leased the 313 Building in the 300 Area from 1994 until January 2002 to use an extrusion press that was formerly DOE owned. That work is not covered by EEOICP Part E.
- 🔍 **324** Name:Chemical and Materials Engineering Laboratory Aliases: Chemical Materials Engineering Laboratory; Chemical Processing and Metallurgical Engineering Laboratory; C-MEL; Fuel Recycle Pilot Plant; Solid Storage Engineering Test Facility Chemical and Materials Engineering Laboratory; Waste Technology Engineering Laboratory
- 🔍 **328** Name:Engineering Services and Safety Shop Aliases: 328-A Engineering Management and Technical Shops Annex; Engineering Management and Technical Shops; Mechanical Development Building
- 🔍 **333** Name:Fuel Cladding Facility Aliases: Coextrusion Facility; Fuels Manufacturing Building
- 🔍 **350** Name:Plant Operations and Maintenance Facility
- 🔍 **3708** Name:Radiation Measurements Building Aliases: Radioanalytical Building
- 🔍 **4713-B** Name:FFTF Maintenance Building
- 🔍 **722-N**
- 🔍 **Environmental Restoration Disposal Facility** Aliases: Decontamination Building; ERDF; Landfill; Operations Building; Wastewater Treatment Facility
- 🔍 **ER-001**
- 🔍 **Physical Sciences Laboratory** Aliases: PSL

INCIDENTS INVOLVING
THIS LABOR
CATEGORY

none listed

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| [Tox by Health Effect Text](#) | [Health Effect Search](#) | [SITE \(HANF\) >](#) | [Location Search](#) | [Areas](#) | [Buildings](#)
| [Processes](#) | [Process Alias Search](#) | [Labor Categories](#) | [Labor Category Alias Search](#) | [Incidents](#)
| [Incident Search](#) | [ADMIN >](#) | [HELP >](#) | [Users Guide](#) |

WAS INVOLVED	<ul style="list-style-type: none"> 🔍 200 West 🔍 300
BUILDINGS IN WHICH THIS LABOR CATEGORY WAS INVOLVED	<ul style="list-style-type: none"> 🔍 1717-K Name:Maintenance Shops 🔍 212-H Aliases: 212-HV 🔍 225-B Name:Waste Encapsulation and Storage Facility Aliases: 225-B-DG-1; Manipulator repairman; WESF; WESF Encapsulation Facility 🔍 225-BE Name:Maintenance Shop Aliases: Repair Shop 🔍 231-Z Name:Plutonium Isolation Building Aliases: 231; Isolation Plant; Plutonium Concentration Facility; Plutonium Metallurgy Laboratory 🔍 2709-E Name:Fire Protection Headquarters 🔍 272-U Name:Maintenance Shop Aliases: Hot Shop/Cold Shop 🔍 277-W Name:West Area Shops Building Aliases: Fabrication Shop 🔍 306 Name:Metallurgical Semi-Works Aliases: 306-E; 306-J; 306-W; Materials Development Laboratory; Materials Storage Building; Metal Fabrication Building; Metal Fabrication Development Building; Metallurgical Pilot Plant; Metals Semi Works; N-Fuels Facility; N-Fuels Pilot Plant; Reactor Fuel Manufacturing Pilot Plant 🔍 321 Name:Separation Facility Aliases: Cold Semi-Works; Cold Separations Laboratory; Separation Building 🔍 324 Name:Chemical and Materials Engineering Laboratory Aliases: Chemical Materials Engineering Laboratory; Chemical Processing and Metallurgical Engineering Laboratory; C-MEL; Fuel Recycle Pilot Plant; Solid Storage Engineering Test Facility Chemical and Materials Engineering Laboratory; Waste Technology Engineering Laboratory 🔍 325 Name:Radiochemistry Laboratory Aliases: 325-A; Applied Chemistry Laboratory; Radiochemical Processing Laboratory; Radiochemistry Building 🔍 328 Name:Engineering Services and Safety Shop Aliases: 328-A Engineering Management and Technical Shops Annex; Engineering Management and Technical Shops; Mechanical Development Building 🔍 333 Name:Fuel Cladding Facility Aliases: Coextrusion Facility; Fuels Manufacturing Building 🔍 350 Name:Plant Operations and Maintenance Facility
INCIDENTS INVOLVING THIS LABOR CATEGORY	<i>none listed</i>

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| Tox by Health Effect Text | Health Effect Search | SITE (HANF) > | Location Search | Areas | Buildings
| Processes | Process Alias Search | Labor Categories | Labor Category Alias Search | Incidents
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U.S. Department of Labor EEOICP Site Exposure Matrices

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print-ready view

The site specific information in this database reflects available data and may not be complete. The results should be used with a full understanding of the limitations of the current dataset.

Labor category:

Click here to locate a labor category by alias or description, if you cannot find the labor category you are looking for in the list above.

Secondary filters to apply to lists of related items (from Hanford/PNNL) :

Toxic substance:

Health effect (per associated toxics):

Area:

Building:

Process:

Site: Hanford/PNNL

Labor Category: Welder

DETAILS	SiteJobAlias: Welder Journeyman
RECORD HISTORY	Facility Data Last Updated: Nov 5, 2015 (Note: Toxic substance/disease relationships may have changed after this date.)
RELATED ITEMS IN SITE EXPOSURE MATRIX	
Secondary filters applied -- Health effect: Pulmonary disease, chronic obstructive	
HAZARDOUS CHEMICALS POTENTIALLY ENCOUNTERED BY LABOR CATEGORY (2 matching criteria)	<input type="checkbox"/> Asbestos CAS: 1332-21-4; 14567-73-8 Aliases: Amosite; 16F; Anthophyllite; Anthophyllite UICC; Anthophyllite asbestos; Chrysotile; Crocidolite; Tremolite; Tremolite asbestos; Tremolitena; Filterbestos; Hysol Epoxi-Patch Kit 615, Part A; Epoxi-Patch Kit 615, Part A Category: Dusts and Fibers <input type="checkbox"/> Welding fumes CAS: CAS Not Found Category: Gases
PROCESSES/ACTIVITIES PERFORMED BY THIS LABOR CATEGORY	<input type="checkbox"/> Arc weld aluminum -- This work process has direct disease linkages. <input type="checkbox"/> Arc weld stainless steel -- This work process has direct disease linkages. <input type="checkbox"/> Cesium-137 chloride capsule fabrication <input type="checkbox"/> Metallurgy Laboratory activities - Welding <input type="checkbox"/> Multi-Canister overpack canister storage activities-welding <input type="checkbox"/> PUREX surveillance and maintenance activities - welding <input type="checkbox"/> Spent nuclear fuel canister storage activities - welding <input type="checkbox"/> Weld mild steel -- This work process has direct disease linkages. <input type="checkbox"/> Welding
AREAS IN WHICH THIS LABOR CATEGORY	<input type="checkbox"/> 100 <input type="checkbox"/> 200 East

EEOICPA PART E “DAR (Document Acquisition Request Form) RESPONSE” - Department of Labor Seattle

Pursuant to a Document Acquisition Request, the U.S. Department of Energy, Richland Operations Office has conducted searches for the requested records related to the individual listed below. The searches for record include, but were not limited to, site presence documents, for the Hanford Site and the Pacific Northwest National Laboratory Facility (badging, radiological tracking, and occupational work history), radiological records, occupational health records, workers' compensation records, incident or accident reports, industrial hygiene and safety records, personnel records and job descriptions. The search results are itemized below:

12/23/2015

1:

Radiation Exposure Records (These records may include incident and accident reports) Search Performed and Results of Search: **RECORDS LOCATED**

Industrial Hygiene Search Performed and Results of search: **NO RECORDS LOCATED**

Occupational Medical Records Search Performed and Results of Search: **RECORDS LOCATED**

Personnel file Search Performed and Results of search: **RECORDS LOCATED**

Proof of Presence on the Hanford Site (Non-Verified Employment, however a search was conducted of the Badge, Dosimetry, and Medical databases, which may indicate site presence)

Workers Compensation Records Search Performed and Results of Search: **RECORDS LOCATED**

If you have any questions regarding this shipment, please send correspondence, via SERT System, or contact

OFFICIAL USE ONLY

May be exempt from public release under the Freedom of Information Act (5 U.S.C. 552) (Exemption 6) and the Privacy Act (5 U.S.C 552a). A U.S. Department of Energy review required before public release.

**Energy Employees Occupational Illness Compensation
Program Act (EEOICPA)
Occupational History Interview**

Hand:

DOE Facility

Transmitted to DOL-DO

NEC

Section 1: INTRODUCTION

Employee SSN	Employee Name	DOL District Office	Interview Date/Time
		Seattle	12/02/2005 830am
Interviewer Name	Interviewee Name:	Relationship to Employee	
		Self	
Do I have your consent to conduct this interview?			<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Section 2: EMPLOYEE PERSONAL HEALTH HISTORY

Please the appropriate response.
If yes, indicate relationship.

	Yes	No	Unsure	Relationship (S-Self, P-Parent, G-Grandparent)
Heart disease or Heart Attack	<input checked="" type="checkbox"/>			P-Father, G-both Grandmothers
Asthma		<input checked="" type="checkbox"/>		
High Blood pressure	<input checked="" type="checkbox"/>			P-Father, G-both Grandmothers
Anemia or Blood Disorders		<input checked="" type="checkbox"/>		
Diabetes		<input checked="" type="checkbox"/>		
Stroke			<input checked="" type="checkbox"/>	
Memory Problems		<input checked="" type="checkbox"/>		
Kidney Disease*		<input checked="" type="checkbox"/>		
Liver Disease*		<input checked="" type="checkbox"/>		
Skin Disease*		<input checked="" type="checkbox"/>		
Arthritis		<input checked="" type="checkbox"/>		
Sterility/Infertility**		<input checked="" type="checkbox"/>		
Cancer	<input checked="" type="checkbox"/>			G-Grandfather on fathers side
Specify Type(s): S-Skin (claimed condition)				
Other: (Specify Diagnosed Condition): S-Colon Polyp	<input checked="" type="checkbox"/>			

* Note that we are asking about diseases other than cancer. If you have been diagnosed with a cancer of this organ, please refer to question, 'Cancers,' and note the organ involved in the space provided for "Specified Type".

** Does not mean loss of sexual activity with old age.

Section 3: TOBACCO AND ALCOHOL HISTORY

Did the Employee Ever Use Tobacco products? (Cigarettes, Cigars, Pipe, Snuff, Chewing Tobacco)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Type: Cigarettes
	Age began:	Age Stopped: quit 10 yrs
	Average number used per day:	
Did applicant Ever consume Alcoholic Beverages?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Type: Beer
	Age began:	Age Stopped:
	Average number drank per week: 2-3 per week	

Name:

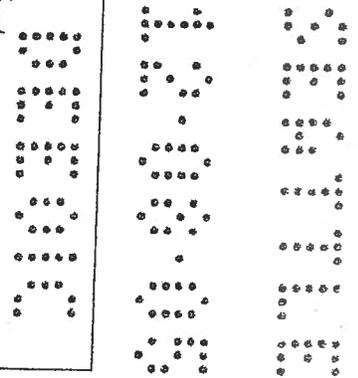
SSN:

Section 4: NON-DOE WORK HISTORY

1. Please list jobs held before or after the employee worked at the DOE Facility.
2. Please list the jobs in employer order, starting with the most recent.

Employer	Job Title(s)/Description(s)	Beginning (mm/yy)	Ending (mm/yy)
Guy F Atkins	WPPS	1981	1982
Fishback & Lord	WPPS	1982	1983
Fishback & Lord	WPPS	1977	1979
Boise Cascade, WSH, & ESCO Electric		1980	1981

Section 5A → Section 8
MUST be Completed for
EACH claimed DOE
 Facility



Name:

SSN:

Section 5 (A): DOE FACILITY (Please complete Section 5 (A) - Section 8 for each DOE facility)

1. DOE Facility: **Hanford**

2. Name of Contractor or Subcontractor and Claimed Employment Dates:
(List all employers and corresponding dates of employment)

Contractor/Subcontractor	Claimed Employment Dates (mm/yy)
Bechtel	1977
Sundance Electric	1979-1981
Empire Electric	1983 - 1992
Westinghouse Hanford Company	1992-1995
Dyncorp/Fluor	1996-2005

Section 5 (B) DOE FORMER WORKER SCREENING PROGRAM

Was the employee a participant in a DOE screening program? if yes, please site and note worker population screened (production vs. construction) (* denotes "New" program)

<input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown	
<input type="checkbox"/> Amchitka <input type="checkbox"/> Rocky Flats <input type="checkbox"/> Idaho National Labs (Production __ Construction* __) <input type="checkbox"/> Nevada Test Site <input type="checkbox"/> Los Alamos Nat. Labs <input type="checkbox"/> INEEL (Production __ Const* __) <input type="checkbox"/> Portsmouth (Production __ Const __) <input type="checkbox"/> SRS (Production __ Const __) <input type="checkbox"/> Oak Ridge K25 (Production __ Const __) <input type="checkbox"/> Oak Ridge Y-12 (Production __ Const __) <input type="checkbox"/> Iowa Army Ammunition Plant. <input type="checkbox"/> Paducah Gaseous (Production __ Const __) <input type="checkbox"/> Pantex <input type="checkbox"/> Hanford (Production __ Const __)	<input type="checkbox"/> Mound* (Production __ Const __) <input type="checkbox"/> Fernald*(Production __ Const __) <input type="checkbox"/> Fermi National Accel.* <input type="checkbox"/> Argonne National Lab* <input type="checkbox"/> Ames Laboratory* <input type="checkbox"/> Kansas City Plant* (Production __ Construction __) <input type="checkbox"/> Lawrence Livermore* <input type="checkbox"/> Lawrence Berkley * <input type="checkbox"/> Pinellas* (Production __ Construction __) <input type="checkbox"/> Princeton Plasma Physics* <input type="checkbox"/> Sandia Nat. Labs* <input type="checkbox"/> Brookhaven Nat. Labs* <input type="checkbox"/> Supplemental Care Program* <input type="checkbox"/> Fernald Settlement Fund

Name: _____

SSN Number: _____

Facility: Hanford

Section 5 (C): LABOR CATEGORY (While employed at a DOE Facility)

Any that apply

<input checked="" type="checkbox"/>	Work Category	Approximate dates of Employment (Example: 11//59 - 02//65)
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Crafts

	Carpenter	
✓	Electrician	1979-2005
	Heating, Ventilating, Air-conditioning maintenance	
	Machinist	
	Mason	
	Mechanic, Instrumental	
	Mechanic, Maintenance	
	Mechanic, Vehicle	
	Millwright	
	Painter	
	Plumber and/or Pipefitter	
	Structural and Metal Worker	
	Tool and Die Maker	
✓	Welder	1977-1979

Engineers

	Chemical Engineer	
	Civil Engineer	
	Construction Engineer	
	Electrical Engineer	
	Industrial Engineer	
	Mechanical Engineer	
	Quality Control Engineer	
	Safety Engineer	

General Managers, Supervisors, and Project Managers

	First line supervisor	•••••	•••••	•••••
	General manager or Executive	•••••	•••••	•••••
	Project or Program Manager	•••••	•••••	•••••

Laborers and General Service Workers

	Change House Attendant	•••••	•••••	•••••
	Decontamination /Decommissioning (D&D) worker	•••••	•••••	•••••
	Firefighter (includes HAZMAT, firefighter/paramedic)	•••••	•••••	•••••
	Food Service Worker	•••••	•••••	•••••
	Janitors and Cleaners	•••••	•••••	•••••
	Laundry Workers	•••••	•••••	•••••
	Landfill worker	•••••	•••••	•••••
	Locksmith	•••••	•••••	•••••
	Handler, Helper, and Laborer (General)	•••••	•••••	•••••
	Light Vehicle Driver	•••••	•••••	•••••
	Security Officer	•••••	•••••	•••••

Name: _____

SSN Number: _____

Facility: Hanford

<input checked="" type="checkbox"/>	Work Category	Approximate dates of Employment (Example: 11//59 - 02//65)
	Security Specialist	
	Truck Driver	
Operators		
	Chemical System	
	Component	
	Driller	
	Explosive Storage Operator	
	Material moving equipment operator	
	Production Systems	
	Utilities operator	
Scientists		
	Chemist	
	Environmental Scientist	
	Geologist	
	Materials Scientist	
	Social Scientist	
Technicians		
	Computer Repair and/or Setup	
	Drafter	
	Engineering Technician	
	Environmental Sciences Technician	
	Fire Systems Testing Technician	
	Industrial Safety and Health Technician	
	Laboratory Technician	
	Quality Control Technician	
	Test Fire Technician	
	X-Ray Technician	
General Administrative and Professional Administrative		
	Accountant or Auditor	..... .
	Buyer, Procurement and Contracting Specialist	..... .
	Compliance Inspector	..... .
	Industrial Hygienist	..... .
	Lawyer	..... .
	Physician	..... .
	Nurse	..... .
	Security Specialist	..... .
	Administrative Assistant	..... .
	Office Clerk	..... .
	Secretary	..... .
	Typist or Word Processor	..... .
Other (List all other positions held)		

Name: _____

SSN Number: _____

Facility: Hanford

Section 5 (D): UNION AFFILIATION

Please All Unions to which you belonged.

- | | | |
|---|---|---|
| <input type="checkbox"/> Carpenters' Union | <input type="checkbox"/> OCAW | <input type="checkbox"/> Teamsters' Union |
| <input checked="" type="checkbox"/> IBEW | <input type="checkbox"/> Operating Engineers' Union | <input type="checkbox"/> Other Union |
| <input type="checkbox"/> IGAN (Guards' Union) | Painter's Union | Name of Union: |
| <input type="checkbox"/> Ironworkers' Union | <input type="checkbox"/> Plumbers' and Pipefitters' Union | _____ |
| <input type="checkbox"/> IAM | <input type="checkbox"/> Sheet metal workers' Union | |
| <input type="checkbox"/> Laborers' Union | | |

Section 6: WORK AREAS (Building Name and Function)

Please note, the building, work activity, years of employment and frequency in which the employee was performing type of work activity in the identified location. If building name or number is unknown, please mark "unknown" and provide description of activities occurring in building.

Use the following key to fill in the "Frequency" box:

- 5 Daily or most days per week
- 4 2-3 days per week
- 3 1-2 days per week
- 2 Few times per month
- 1 Once per month or less

Building Number/Name or Description	Work Activity	Years of Employment	Frequency Pick 1-3
<i>Example:</i> C200 or Process Bld	Maintenance	1952-58	3
PUREX			
PPF			
100N			
K East & West			
309 Bldg			
308 Bldg			

Name: _____

SSN Number: _____

Facility: Hanford

Building Number/Name or Description	Work Activity	Years of Employment	Frequency Pick 1-3
Tank Farms			
B Plant			
222S Lab			
313 Bldg			
FFTF and FMEF during construction			
306 Bldg			
Additional Information:			
Worked throughout site and in most every building as a maintenance electrician. And now currently working HVAC throughout the site.			

Section 7: PERSONAL PROTECTIVE EQUIPMENT (PPE)

Description	Please <input checked="" type="checkbox"/> if utilized	Please <input checked="" type="checkbox"/> frequency of use		
		Often /Always	Sometimes	Infrequent/Never
Apron or lab coat	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
Respiratory Protection				
Supplied air or SCBA (Self Contained Breathing Apparatus)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
Face mask with filter/cartridges Type:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
Disposable mask	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
Gloves Type: Canvas, Doe Skin, Rubber, Latex	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
Eye Protection				
Safety Glasses	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
Face Shield	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	

Name: _____

SSN Number: _____

Facility: Hanford

Goggles	✓		
Full protective suit	✓	✓	
Radiation monitoring badge (including film badge)	✓	✓	
Pencil/Pocket dosimeter	✓	✓	
extremity (finger or wrist) monitor	✓	✓	
none worn			
other (describe): Paddys	✓	✓	
Uniform or Company provided Clothing laundered by plant or third party	✓	✓ - FR rated clothing (flash rated clothing)	
Own clothing and own laundering			

Please describe the work situations and exposures where employee used PPE noted above:

During daily routine electrical work and HVAC work

Were there times when you felt you should have worn any of the above protective equipment but did not? Yes No

If Yes, Please explain:

Section 8: EXPOSURE INFORMATION

1. For each section please review the identified agent and indicate if the employee is aware of exposure
2. Indicate the approximate number of years known to be exposed
3. Indicate if the employee "processed" the agent (i.e. machined, polished, mixed or poured)

METALS			
Agent	Please <input checked="" type="checkbox"/> if you were exposed to this metal	Approximate numbers of years exposed	Please <input checked="" type="checkbox"/> if you ever processed (machine, drill, grind, polish) this metal
Beryllium	✓		
Cadmium	✓		
Chromium	✓		
Lead	✓		
Manganese	N/A		
Mercury	✓		
Nickel	✓		
Zirconium/Zircalloy	✓		
Other			

In what job titles were you exposed to metals? (select job titles from Section 5C--Labor Category)

Name: _____

SSN Number: _____

Facility: Hanford

1. Electrician	2.	3.
4.	5.	6.

HIGH EXPLOSIVES			
Agent	Please <input checked="" type="checkbox"/> if Exposed	Approximate Numbers of Years Exposed	Please <input checked="" type="checkbox"/> if Employee Processed (melt, mix, pour) the Agent
A-6	N/A		
Baritol (barium nitrate+TNT)	N/A		
Boracitol (TNT+boric acid)	N/A		
CH6	N/A		
Comp B (TNT+ RDX)	N/A		
HMX	N/A		
LX-04-1 , LX-07-2(HMX+Viton A)	N/A		
LX-09 (HMX+ pDNPA+ FEFO)	N/A		
Octol	N/A		
PETN	N/A		
PBX	N/A		
RDX	N/A		
TNT	N/A		
XTX (PETN+ silicone rubber)	N/A		
Other explosives			

In what job titles were you exposed to explosives? (select job titles from Section 5C--Labor Category)

1.	2.	3.
4.	5.	6.

RADIOLOGICAL		
Agent	Please <input checked="" type="checkbox"/> if Exposed	Approximate Numbers of Years Exposed
Cesium	✓	
Californium	N/A	
Cobalt machine	N/A	
Plutonium	✓	
Polonium	N/A	
Tritium	✓	
Uranium	✓	
Depleted Uranium	✓	
X-ray machine	✓	
Other radiation Source:		

Name: _____

SSN Number: _____

Facility: Hanford

1. Where you ever involved in a major accident or incident at the site?
Describe incident include approximate dates and location if possible: Yes No

2. Did you ever have your urine tested to measure radiation exposure? Yes No

In what job titles were you exposed to radiation? (select job titles from Section 5C--Labor Category)

1.	2.	3.
4.	5.	6.

PLASTICS / ADHESIVES/ RESINS			
Agent	Please <input checked="" type="checkbox"/> if Exposed	Approximate Numbers of Years Exposed	Please <input checked="" type="checkbox"/> if Ever Processed or otherwise Directly Handled
Adiprene	N/A		
MOCA	N/A		
Isocyanates (TDI)	N/A		
Foams	N/A		
Other			

Did you ever have urine or other medical tests for MOCA exposures?
4,4'-Methylene-bis(2-chloroaniline) Yes No

In what job titles were you exposed to plastics or binders? (select job titles from Section 5C Labor Category)

1.	2.	3.
4.	5.	6.

DUSTS / FIBERS		
Agent	Please <input checked="" type="checkbox"/> if Exposed	Approximate Numbers of Years Exposed
Asbestos (pipe wrap, asbestos board)	✓	
Silica (sand blasting, masonry, concrete)	✓	
Coal dust	✓	
Fiberglass / glass wool / mineral fibers	✓	
Other, metal dusts		

Name: _____

SSN Number: _____

Facility: Hanford

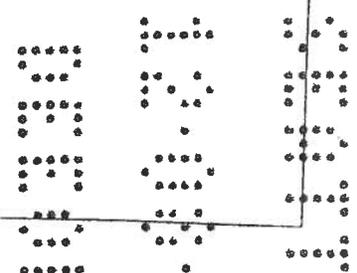
In what job titles were you exposed to dusts or fibers? (Select from list of job titles listed in Section 5C-- Labor Category):

1. Electrician	2. Welder	3.
4.	5.	6.

Other Toxic Substances		
Agent		Approximate Numbers of Years Exposed
Tank farms vapor releases (unknown substances)		
MEK		
Tri Chloroethylene		
Phosgene Gas		
Cutting Oil		
Welding fumes		
Acetone		
Electra Clean		

Do you believe all information relevant to your occupational history was addressed? Yes No
 If no, please provide explain:

Have you included every illness, every exposure, every employer that you want to be included in the occupational history? "yes"



 Date 12-02-05

**THANK YOU
FOR
YOUR PARTICIPATION AND TIME**

Hanford Resource Center
DEC 07 2005

Name: _____

SSN Number: _____

Facility: Hanford

MEMORANDUM

DATE: March 23, 2016

TO: District Director, DEEOIC Seattle District Office

CC: Assistant District Director, DEEOIC Seattle District Office
Claims Examiner, DEEOIC Seattle District Office
Senior Claims Manager, DEEOIC Seattle District Office

FROM: Certified Industrial Hygienist, DEEOIC BPRP

RE: Evaluation of Occupational Exposures to Toxic Materials for DEEOIC Part E Claim for [REDACTED]

I. Issues for Determination

The issues for determination, as described in the Statement of Accepted Facts (SOAF), are:

- 1) Please describe the nature, extent, and duration of potential exposure that the employee would have had to cement, diesel exhaust, and welding fumes during the course of employment at the Hanford Site for the period of July 18, 1977 to December 31, 1995.

II. Background

Mr. [REDACTED] was intermittently employed (seven occasions), between 1977 and 2015, at the Hanford Plant (Hanford). Please refer to the table below for timeframes/durations of employment and labor categories.

Site	Timeframe of Employment	Duration of Employment (approximate)	Job Classification
Hanford	07/18/1977-11/08/1977	4 months	Electrician/Welder (construction)
Hanford	02/26/1979-08/15/1979	6 months	Electrician (construction)
Hanford	03/16/1984-11/01/1984	8 months	Electrician (construction)
Hanford	08/29/1985-02/17/1989	6 months	Electrician (construction)
Hanford	09/01/1989-01/05/1990	4 months	Electrician (construction)
Hanford	08/28/1991-04/10/1992	8 months	Electrician (construction)
Hanford	09/21/1992-03/04/2015	22 years and 6 months	Electrician
	Total	25 years	

Mr. [REDACTED] accumulated approximately 25 years of covered employment (verified). He was diagnosed with a basal cell carcinoma (left ear concha) on August 1, 2003, and with chronic obstructive pulmonary disease (COPD) on April 12, 2012.

III. Discussion

Cement is a gray, odorless powder made by heating limestone with small quantities of other materials (such as clay) in a kiln. The resulting substance is then ground up with a small amount of gypsum to make Portland cement, the most commonly used type of cement. Portland cement is a basic ingredient in concrete, mortar and most grout. Significant exposures are associated with employees who mix dry cement or who engage in aggressive work practices (i.e., grinding, drilling, cutting, etc.) on concrete-containing structures. The primary route of exposure is through inhalation. There are data that support Mr. [REDACTED], in his capacity as an Electrician at the Hanford facility, as having been significantly exposed to cement. Such exposures would have been associated with drilling through cement/concrete as part of installing wiring and/or conduit. His exposures would have likely been frequent (i.e., a daily basis) and would have ranged from low to moderate levels through 1995.

Diesel engine exhaust consists of a complex mixture of vapors, gases and airborne particles that are generated by diesel-powered engines. The primary route of exposure is through inhalation. There is evidence that supports Mr. [REDACTED], in his capacity as an Electrician, as having been significantly exposed to diesel engine exhaust. Such exposures would have been associated with the testing of standby generators (which are powered by diesel fuel). His exposures would have likely been occasional (i.e., a weekly basis) and would have ranged from very low to low levels through 1995.

Welding fumes are a complex mixture of gaseous emissions and particulate matter generated by the welding of metal. The primary route of exposure is through inhalation. There are no data that support Mr. [REDACTED], in his capacity as an Electrician, as having engaged in welding activities. Any exposures that he might have received, as an Electrician, would have been incidental in nature (occurring in passing only) and not significant. Nevertheless, there is evidence that for 4 months in 1977, Mr. [REDACTED] was employed as an Electrician/Welder. Therefore, during this period it is likely that he welded. His exposures would have likely been frequent (i.e., a daily basis) and would have ranged from low to moderate levels during this brief 4-month timeframe.

IV. Conclusion

It is likely that Mr. [REDACTED], while working at the Hanford Site as an Electrician and as an Electrician/Welder, was significantly exposed to cement, diesel engine exhaust and welding fumes. His exposures to cement would have likely been frequent (i.e., a daily basis) and would have ranged from low to moderate levels through 1995. His exposures to diesel engine exhaust would have likely been occasional (i.e., a weekly basis) and would have ranged from very low to low levels through 1995. His exposures to welding fumes, in his capacity as an Electrician, would have been incidental in nature (occurring in passing only) and not significant. His exposures to welding fumes as an Electrician/Welder, for 4 months in 1977, would have likely been frequent (i.e., a daily basis) and would have ranged from low to moderate levels.

This document is for the purpose of providing supplemental information for use by a claims examiner in the development of this specific claim. It is not intended for use on other claims.

V. References

1. US Department of Labor EEOICP Site Exposure Matrices (SEM) Database.
US National Institutes of Health Haz-Map Database.
2. US Department of Labor Energy Compensation System (ECS) Database.
3. US Department of Energy Facility List Database.
4. Proctor and Hughes, "Chemical Hazards of the Workplace," John Wiley and Sons, 5th Edition, 2004.
5. LaDou, Joseph, M.S, M.D., "Introduction to Occupational Health and Safety," National Safety Council, 1986.
6. Harbison, Raymond D., M.S., Ph.D., "Hamilton and Hardy's Industrial Toxicology", 6th Edition, 2015.
7. Baxter, Peter J. et. al., "Hunter's Diseases of Occupations," 10th Edition, 2011.