

SEC00246

Special Exposure Cohort Petition
under the Energy Employees Occupational
Illness Compensation Program Act

U.S. Department of Health and Human Services
Centers for Disease Control and Prevention
National Institute for Occupational Safety and Health

Special Exposure Cohort Petition – Form B

OMB Number: 0920-0639

Expires: 10/31/2019

Page 1 of 7

Use of this form is voluntary. Failure to use this form will not result in the denial of any right, benefit, or privilege to which you may be entitled.

General Instructions on Completing this Form (complete instructions are available in a separate packet):

Except for signatures, please **PRINT** all information clearly and neatly on the form.

Please read each of Parts A – G in this form and complete the sections appropriate to you. If there is more than one petitioner, then each petitioner should complete those sections of Parts A – C of the form that apply to them. Additional copies of the first two pages of this form are provided at the end of the form for this purpose. A maximum of three petitioners is allowed.

If you need more space to provide additional information, use the continuation page provided at the end of the form and attach the completed continuation page(s) to Form B.

For Further Information: If you have questions about the use of this form, please call the following NIOSH toll-free phone number and request to speak to someone in the Division of Compensation Analysis and Support about an SEC petition: 1-877-222-8570.

If you are:	<input type="checkbox"/> A Labor Organization,	Start at D
	<input type="checkbox"/> An Energy Employee (current or former),	Start at C
	<input type="checkbox"/> A Survivor (of a former Energy Employee),	Start at B
	<input checked="" type="checkbox"/> A Representative (of a current or former Energy Employee);	Start at A

A. Representative Information Complete Part A if you are authorized by an Energy Employee or Survivor(s) to petition on behalf of a class.

A.1 **Are you a contact person for an organization?** Yes (Go to A.2) No (Go to A.3)

A.2 Organization Information:

Name of Organization

Position of Contact Person

A.3 Name of Petition Representative:

Mr./Mrs./Ms. First Name Middle Initial Last Name

A.4 Address of Petition Representative:

Street Apt # P.O. Box

City State Zip Code

A.5 **Telephone Number of Petition Representative:** (_ _) _____

A.6 **Email Address of Petition Representative:** _____

A.7 Check the box at left to indicate you have attached to the back of this form written authorization to petition by the survivor(s) or energy employee(s) indicated in Parts B or C of this form.

**if you are representing a Survivor, go to Part B;
if you are representing an Energy Employee, go to Part C.**

Special Exposure Cohort Petition
under the Energy Employees Occupational
Illness Compensation Program Act

U.S. Department of Health and Human Services
Centers for Disease Control and Prevention
National Institute for Occupational Safety and Health

Special Exposure Cohort Petition — Form B

OMB Number: 0920-0639

Expires: 10/31/2019

Page 2 of 7

B. Survivor Information Complete Part D if you are a Survivor or representing a Survivor.

B.1 Name of Survivor:

Mr./Mrs./Ms. First Name Middle Initial Last Name

B.2 Address of Survivor:

Street Apt # P.O. Box

City State Zip Code

B.3 Telephone Number of Survivor: ()

B.4 Email Address of Survivor:

B.5 Relationship to Energy Employee: Spouse Son/Daughter Parent
 Grandparent Grandchild

Go to Part C.

C. Energy Employee Information Complete Part C UNLESS you are a labor organization.

C.1 Name of Energy Employee:

Mr./Mrs./Ms. First Name Middle Initial Last Name

C.2 Former Name of Energy Employee (e.g., maiden name/legal name change/other):

Mr./Mrs./Ms. First Name Middle Initial Last Name

C.3 Address of Energy Employee (if living):

Street Apt # P.O. Box

City State Zip Code

C.4 Telephone Number of Energy Employee: ()

C.5 Email Address of Energy Employee:

C.6 Employment Information Related to Petition:

C.6a Energy Employee Number (if known): _

C.6b Dates of Employment: Start 1975 End 1996

C.6c Employer Name: ROCKWELL INTERNATIONAL

C.6d Work Site Location: DESOTO FACILITY
LOS ANGELES COUNTY, CALIFORNIA

C.6e Supervisor's Name:

Go to Part E.

D. Labor Organization Information Complete Part D ONLY if you are a labor organization.

D.1 Labor Organization Information:

Name of Organization

Position of Contact Person

D.2 Name of Petition Representative:

Mr./Mrs./Ms. First Name Middle Initial Last Name

D.3 Address of Petition Representative:

Street Apt # P.O. Box

City State Zip Code

D.4 Telephone Number of Petition Representative: (_____) _____

D.5 Email Address of Petition Representative: _____

D.6 Period during which labor organization represented energy employees covered by this petition
(please attach documentation):

Start _____ End _____

D.7 Identity of other labor organizations that may represent or have represented this class
of energy employees (if known):

Go to Part E.

E. Proposed Definition of Energy Employee Class Covered by Petition Complete Part E.

E.1 **Name of DOE or AWE Facility:** DESOTO FACILITY

E.2 **Locations at the Facility relevant to this petition:**

DESOTO FACILITY - LOS ANGELES COUNTY, CA

E.3 **List job titles and/or job duties of energy employees included in the class. In addition, you can list by name any individuals other than petitioners identified on this form who you believe should be included in this class:**

ALL JOB TITLES - ALL LOCATIONS

E.4 **Employment Dates relevant to this petition:**

Start JAN. 1, 1965 End DEC. 31, 1995

Start _____ End _____

Start _____ End _____

E.5 **Is the petition based on one or more unmonitored, unrecorded, or inadequately monitored or recorded exposure incidents?:** Yes No

If yes, provide the date(s) of the incident(s) and a complete description (attach additional pages as necessary):

NIOSH has determined it cannot reconstruct radiation dose for americium, thorium, or associated progeny at SSFL Area IV,

1965-1988. Based on shared contractor and operational history, shared data limitations between SSFL Area

IV / DeSoto Facility, and the established presence of americium, thorium and associated progeny at DeSoto Facility until at

least 1995, the following petition is submitted. Supplemental documentation is attached, in support of this petition.

Go to Part F.

F. Basis for Proposing that Records and Information are Inadequate for Individual Dose Reconstruction Complete Part F.

Complete **at least one** of the following entries in this section by checking the appropriate box and providing the required information related to the selection. You are not required to complete more than one entry.

- F.1 I/We have attached either documents or statements provided by affidavit that indicate that radiation exposures and radiation doses potentially incurred by members of the proposed class, that relate to this petition, were not monitored, either through personal monitoring or through area monitoring.

(Attach documents and/or affidavits to the back of the petition form.)

Describe as completely as possible, to the extent it might be unclear, how the attached documentation and/or affidavit(s) indicate that potential radiation exposures were not monitored.

Historical Facility Records and Other Documentation

- F.2 I/ We have attached either documents or statements provided by affidavit that indicate that radiation monitoring records for members of the proposed class have been lost, falsified, or destroyed; or that there is no information regarding monitoring, source, source term, or process from the site where the energy employees worked.

(Attach documents and/or affidavits to the back of the petition form.)

Describe as completely as possible, to the extent it might be unclear, how the attached documentation and/or affidavit(s) indicate that radiation monitoring records for members of the proposed class have been lost, altered illegally, or destroyed.

Historical Facility Records and Other Documentation

F.3 I/We have attached a report from a health physicist or other individual with expertise in radiation dose reconstruction documenting the limitations of existing DOE or AWE records on radiation exposures at the facility, as relevant to the petition. The report specifies the basis for believing these documented limitations might prevent the completion of dose reconstructions for members of the class under 42 CFR Part 82 and related NIOSH technical implementation guidelines.

(Attach report to the back of the petition form.)

F.4 I/We have attached a scientific or technical report, issued by a government agency of the Executive Branch of Government or the General Accounting Office, the Nuclear Regulatory Commission, or the Defense Nuclear Facilities Safety Board, or published in a peer-reviewed journal, that identifies dosimetry and related information that are unavailable (due to either a lack of monitoring or the destruction or loss of records) for estimating the radiation doses of energy employees covered by the petition.

(Attach report to the back of the petition form.)

Go to Part G...

G. Signature of Person(s) Submitting this Petition Complete Part G.

All Petitioners must sign and date the petition. A maximum of three persons may sign the petition.

_____	_____	12-13-17
Signature		Date
_____	_____	_____
Signature		Date
_____	_____	_____
Signature		Date

Notice: Any person who knowingly makes any false statement, misrepresentation, concealment of fact or any other act of fraud to obtain compensation as provided under 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 affirm that the information provided on this form is accurate and true.

Send this form to: SEC Petition
Division of Compensation Analysis and Support
NIOSH
1090 Tusculum Ave, MS-C-47
Cincinnati, OH 45226

If there are additional petitioners, they must complete the Appendix Forms for additional petitioners. The Appendix forms are located at the end of this document.

Public Burden Statement

Public reporting burden for this collection of information is estimated to average 5 hours per response, including time for reviewing instructions, gathering the information needed, and completing the form. If you have any comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, send them to CDC Reports Clearance Officer, 1600 Clifton Road, MS-E-11, Atlanta GA, 30333; ATTN: PRA 0920-0639. Do not send the completed petition form to this address. Completed petitions are to be submitted to NIOSH at the address provided in these instructions. Persons are not required to respond to the information collected on this form unless it displays a currently valid OMB number.

Privacy Act Advisement

In accordance with the Privacy Act of 1974, as amended (5 U.S.C. § 552a), you are hereby notified of the following:

The Energy Employees Occupational Illness Compensation Program Act (42 U.S.C. §§ 7384-7385) (EEOICPA) authorizes the President to designate additional classes of employees to be included in the Special Exposure Cohort (SEC). EEOICPA authorizes HHS to implement its responsibilities with the assistance of the National Institute for Occupational Safety (NIOSH), an Institute of the Centers for Disease Control and Prevention. Information obtained by NIOSH in connection with petitions for including additional classes of employees in the SEC will be used to evaluate the petition and report findings to the Advisory Board on Radiation and Worker Health and HHS.

Records containing identifiable information become part of an existing NIOSH system of records under the Privacy Act, 09-20-147 "Occupational Health Epidemiological Studies and EEOICPA Program Records and WTC Health Program Records, HHS/CDC/NIOSH." These records are treated in a confidential manner, unless otherwise compelled by law. Disclosures that NIOSH may need to make for the processing of your petition or other purposes are listed below.

NIOSH may need to disclose personal identifying information to: (a) the Department of Energy, other federal agencies, other government or private entities and to private sector employers to permit these entities to retrieve records required by NIOSH; (b) identified witnesses as designated by NIOSH so that these individuals can provide information to assist with the evaluation of SEC petitions; (c) contractors assisting NIOSH; (d) collaborating researchers, under certain limited circumstances to conduct further investigations; (e) Federal, state and local agencies for law enforcement purposes; and (f) a Member of Congress or a Congressional staff member in response to a verified inquiry.

This notice applies to all forms and informational requests that you may receive from NIOSH in connection with the evaluation of an SEC petition.

Use of the NIOSH petition forms (A and B) is voluntary but your provision of information required by these forms is mandatory for the consideration of a petition, as specified under 42 CFR Part 83. Petitions that fail to provide required information may not be considered by HHS.

File Number:

AUTHORIZATION FOR REPRESENTATION & PRIVACY ACT WAIVER

_____, _____ of

_____, _____ do hereby authorize
Address, City, State, & Zip of Claimant

to serve as my representative in all matters pertaining to the adjudication of my claim under the Energy Employee Occupational Illness Compensation Program Act of 2000 (EEOICPA), and to receive copies of all factual and medical evidence contained in my claim filed under the Energy Employee Occupational Illness Compensation Program Act of 2000 (EEOICPA) from the Office of Workers' Compensation Programs, U.S. Department of Labor.

I declare that the foregoing is true and correct. This authorization is effective on the date it is signed, and is effective until specifically revoked by me in writing.

Claimant Signatur

_____ Date: 6/18/17

**Special Exposure Cohort (SEC) Petition
DeSoto Facility
1965-1995**

For Review by:
National Institute for Occupational Safety and Health (NIOSH)
Presidential Advisory Board on Radiation and Worker Health (ABRWH)

Presented to NIOSH / ABRWH December 13, 2017

Introduction to the SEC Petition for DeSoto Facility: 1965-1995

I respectfully submit a Special Exposure Cohort (SEC) Petition for DeSoto Facility (1965-1995).

Based on the circumstances described herein, I respectfully ask that the National Institute for Occupational Safety and Health (NIOSH) and the Presidential Advisory Board on Radiation and Worker Health (ABRWH) engage in an expeditious evaluation of the petition.

This petition honors the contributions of _____ one of the pioneering _____ of the nuclear industry during the Cold War, and a claimant under the Energy Employee Occupational Illness Compensation Program Act (EEOICPA, or "the Act").¹

In addition, this petition is submitted on behalf of all employees of North American Aviation Atomic International / Rocketdyne, its corporate successors and its subcontractors, whose efforts during the Cold War and Race to Space often came at great personal sacrifice.

It is a privilege to represent the workers of Santa Susana Field Laboratory (SSFL) and its associated sites under EEOICPA. I thank you for the opportunity to provide the following information.

Sincerely,

The Proposed Class Definition

The proposed class includes all employees of the Department of Energy (DOE), its predecessor agencies, their contractors and subcontractors who worked at the DeSoto Facility in Los Angeles County, California from January 1, 1965 through December 31, 1995 for a number of work days aggregating at least 250 work days, occurring either solely under this employment or in combination with work days within the parameters established for one or more other classes of employees included in the Special Exposure Cohort (SEC).

Basis for the Class

Between January 1, 1965 and December 31, 1995 DeSoto Facility and Santa Susana Field Laboratory (SSFL) were involved in operations with shared contractors and subcontractors, including nuclear research and development, fuel fabrication, gamma irradiation, mass spectroscopy of neutron-irradiated samples, various radiochemistry operations, decontamination and decommissioning (D&D), Site Remediation, and other operations conducted in concert with and in support of DOE programs at SSFL Area IV. DeSoto Facility routinely used and handled americium, thorium and its associated progeny, for which NIOSH determined cannot reconstruct radiation dose with sufficient accuracy at SSFL Area IV.

In 2017, NIOSH acknowledged that SSFL and DeSoto Facility "really represent a single entity, when it comes to operating contractor and employment." NIOSH stated that, since both sites are related and operated under the same Health Physics oversight program, NIOSH uses a single Technical Basis Document (TBD) for both sites.

In addition, NIOSH stated that SEC-00156 and SEC-00168 were initiated to cover the same time period, at both sites, because the same data limitations that affected SSFL Area IV also affected DeSoto Facility. Further, all data used for dose reconstruction for employees at SSFL Area IV / DeSoto Facility comes from the same place; The Boeing Company ("Boeing").²

NIOSH acknowledged that when it initiated SEC-00156 (SSFL Area IV, 1959-1964), it recognized the need to initiate SEC-00168 (DeSoto Facility, 1959-1964) based on shared contractor operations, joint participation in DOE programs, shared work processes and rotating personnel, shared materials and practices between the sites, the same radiological record-keeping programs, and the same data limitations in dose reconstruction. Through the course of ongoing dose reconstruction, data capture efforts and investigations associated with SEC-00156 / SEC-00168, NIOSH found the following issues at SSFL Area IV and DeSoto Facility, for the time period 1959-1964:

- Insufficient controls employed at both sites, resulting in some employees who should have been monitored but were not, and who could have received unmonitored intakes of radioactive materials.
- Inability to track worker movements throughout either site, or between the sites.
- Inability to identify a specific workgroup that was not potentially exposed to radioactive materials, releases or possible subsequent contamination resulting from DOE operations at SSFL Area IV or DeSoto Facility.
- Insufficient information available for NIOSH to associate job titles / job assignments with specific radiological operations or conditions.

- Insufficient site-specific and claimant-specific data to define potential radiation exposure conditions based on worker job descriptions.
- A lack of access to sufficient personnel monitoring, workplace monitoring, or source term data to bound potential unmonitored internal exposures that may have occurred for workers at SSFL Area IV or DeSoto Facility, between the years 1959-1964.

On August 2, 2016 NIOSH initiated SEC-00234 (SSFL Area IV, 1965-1988) based on the inability to reconstruct dose for americium and thorium with sufficient accuracy. NIOSH stated that it decided not to initiate an SEC class for DeSoto Facility for the same time period because DeSoto Facility "did not work with" americium or thorium.

The following documentation clearly shows the presence and use of americium and thorium at DeSoto Facility. Current TBD's considered to be part of the SSFL Site Profile and used by NIOSH in dose reconstruction for SSFL Area IV and DeSoto Facility workers reference americium, thorium and associated progeny at DeSoto Facility.

ORAUT-TKBS-0038-4: "Energy Technology Engineering Center (ETEC) Occupational Environmental Dose" (2006) verifies that Th-228, Th-230, Th-232 and Am-241 were present in stack effluent at DeSoto Facility and SSFL Area IV between 1959-1999.³

"A Review of ORAUT-OTIB-0800, Rev. 00: Internal Coworker Dosimetry Data for Area IV of the Santa Susana Field Laboratory and the DeSoto Avenue Facility" (2014) describes work processes that involved the grinding of thorium at DeSoto Facility Building 001 in 1979, supported by a citation to historical facility documentation.^{4 5}

The U.S. Environmental Protection Agency (EPA) listed americium, thorium and associated progeny as "Radionuclides of Concern" at over 60 SSFL Area IV locations during the Area IV Historical Site Assessment and Radiological Characterization Study. The majority of the locations were excluded from the SSFL Site Profile. Many were directly involved in processes and operations that required the participation of DeSoto Facility.⁶

NIOSH has not demonstrated that it can reconstruct dose for americium or thorium after 1988, although it is reasonable to assume that Site Remediation workers (many of whom rotated between DeSoto and SSFL on an as-needed and undocumented basis) would encounter the materials during the course of D&D. As NIOSH has acknowledged the presence of americium, thorium and its associated progeny at both SSFL Area IV and DeSoto Facility until at least 1999, it raises questions about NIOSH's decisions to end SEC-00234 at 1988 and not to initiate a similar SEC class for DeSoto Facility.

The Boeing Incident Report Database, which is in the possession of NIOSH, contains numerous incident reports that document the use of americium, thorium and associated progeny at DeSoto Facility well into

³ Oak Ridge Associated Universities (ORAU), "ETEC - Occupational Environmental Dose," 2006. Document No. ORAUT-TKBS-0038-4.

⁴ S. Cohen & Associates (SC&A), "A Review of ORAUT-OTIB-0080, Rev. 00: Internal Coworker Dosimetry Data for Area IV of the Santa Susana Field Laboratory and the DeSoto Avenue Facility," SCA-TR-OTIB2014-0080, Revision 0, 11/2014. sca-ortib80r0-r0.pdf

⁵ Begley, F.E., 1979b. Internal letter from F.E. Begley to R.J. Tuttle, "Thorium Grinding Operation Use Authorization 120," March 20, 1979.

⁶ U.S. Environmental Protection Agency (EPA), Draft Final Historical Site Assessment (HSA), Santa Susana Field Laboratory (SSFL) Area IV Radiological Characterization Study, Ventura County, CA. 2012.

the Site Remediation period. In addition, supportive documents referenced in this petition show that DeSoto Facility:

- Participated in the fabrication, examination, reprocessing, and storage of spent nuclear fuel including uranium-thorium (U-Th) Fuel associated with the Sodium Reactor Experiment (SRE), fabrication and analysis of Systems for Nuclear Auxiliary Power (SNAP) fuel, and transuranic materials containing americium (Am-241) under the Transuranic Management Pyropartitioning (TRUMP-S) program.
- Routinely accepted waste generated by all DOE Atomic International programs at SSFL Area IV
- Rotated waste and radioactive materials between the DeSoto Facility Building 001 SS Vault and various Area IV locations, where americium and thorium are among the established "Radionuclides of Concern."
- Was licensed to store and to use special nuclear materials including americium and thorium
- Routinely handled and shipped americium and thorium.

Based on the documented presence of americium, thorium and its associated progeny at DeSoto Facility and NIOSH's acknowledgment that it cannot conduct dose reconstruction for americium or thorium with sufficient accuracy, the basis for the SEC class at DeSoto Facility is firmly established.

Supportive Documentation

Facility records show that DeSoto Facility engaged in processes including the acceptance and analysis of spent uranium-thorium (U-Th) fuel from the Sodium Reactor Experiment (SRE), and that it was stored at the DeSoto Facility Building 001 SS Vault.^{7 8 9 10}

DeSoto Facility maintained a dedicated area to fabricate fuel associated with the Systems for Nuclear Auxiliary Propulsion (SNAP) program at Buildings 001 and 004. Based on the characteristics of Americium-241 (Am-241), its relationship to plutonium, its use in conjunction with beryllium, its presence in relation to SNAP operations at DeSoto Facility should be closely examined. All SSFL Area IV locations affiliated with SNAP operations are sites where americium and thorium were identified as "Radionuclides of Concern" by EPA.¹¹

The DeSoto Facility Log Book details acceptance and routine rotation of radioactive and contaminated materials from the SSFL Area IV Special Nuclear Materials Handling Facility (Building 4064) to and from the DeSoto Facility Building 001 SS Vault. SSFL Area IV Building 4064 was built to house fissionable material and to store special nuclear materials and source radioactive material (enriched uranium, plutonium, thorium, and U-233) in various forms and configurations. It also housed spent fuel casks and radioactive wastes generated by all DOE Area IV programs. Building 4064 processes included the

⁷ Atomic International, Atomic Energy Commission (AEC) Research and Development Report, "SRE Fuel Element Damage, Final Report," 1961. NAA-SR-4488_Suppl.pdf

⁸ Atomic International, "Design Modifications to the SRE During FY 1960," NAA-SR-5348. NAA-SR-5348.pdf

⁹ Rockwell International to Atomic Energy Division, Re: Letter J.F. Proctor to W.F. Heine, 7/2/75. HDMSE00024566.pdf

¹⁰ Atomic International - Log Book, DeSoto Facility. 1964-1965. HDMSPO1640471.pdf

¹¹ Atomic International, "Feasibility Report for Fabrication of SNAP Fuel Elements," 12/11/1963. 4078934.pdf

opening, splitting, and repackaging of radioactive materials, and the storage of 55-gallon drums of low-level enriched recoverable scrap.¹²

It is reasonable to review the documented materials and working conditions at SSFL Area IV and to consider the likelihood of potential exposure and cross-contamination between the worksites. In 1988, Rockwell International conducted a radiological survey of Building 4064 and found it to be contaminated with normal and depleted uranium and thorium, thought to be the result of dust associated with the handling of bare metallic pieces.¹³

The DeSoto Facility and SNAP Building 4012 Log Books show materials transfer between SSFL Area IV / DeSoto Facility routinely relied on the reuse of containers known as "birdcages," which were used to transport radioactive materials and frequently found to be severely contaminated with various radionuclides as they circulated among and between all SSFL Area IV / DeSoto radiological locations.¹⁴

Atomics International and its corporate successors maintained current Special Nuclear Materials Licenses (SNM-21 / 1059-59), issued by the Nuclear Regulatory Commission (NRC). The licenses specified nuclear materials, including americium and thorium, that would be stored and used across a broad application of nuclear research and development, handling and processes. The licenses also specified the locations of materials use and storage: DeSoto Facility and SSFL Area IV. In 1995, Rockwell International renewed and modified the licenses to include activities related to D&D activities / Site Remediation at both facilities.¹⁵

A 1999 radiological survey of the Mass-Spectroscopy Laboratory at DeSoto Facility Building 104 confirmed the presence of Th-232 and Th-238. The document also confirms that waste generated by D&D efforts at DeSoto Facility Building 104 was sent to SSFL Area IV, further supporting the established longevity and continuity of shared operations and processes at both sites through the Site Remediation period.¹⁶

DeSoto Facility Log Books

In 2016, the DeSoto Facility Log Book was provided to NIOSH as part of a larger compilation submitted to correct the SSFL Site Profile. The document, "2016 SSFL: Proposed Corrections to Technical Basis Documents 1 & 2 (ORAUT-TKBS-0038-1 / ORAUT-TKBS-0038-2)" was uploaded to the NIOSH docket.

A section on DeSoto Facility contains select Log Book entries. A complete copy of the DeSoto Facility Log Book is respectfully provided again, in support of this petition.¹⁷

¹² Montgomery Watson Harza, DOE Leach Fields (Area IV AOC) RCRA Facility Investigation Report, SSFL, Ventura County, CA, Draft, October 2003.

¹³ Chapman, J.A., Radiological Survey of the Source and Special Nuclear Material Storage Vault- Building 4064, 8/19/88. GEN-ZR-0005. HDMSP00023980.pdf

¹⁴ Log Book, SSFL Area IV Building 4012 (SNAP), 1962-1966. HDMSP001852993.pdf

¹⁵ State of California Department of Public Health, Applications for License Renewal. M.E. Remley, 1/7/1969. HDMSP001812995.pdf

Rockwell International / Department of Health Services, Updated Application for Broad Scope "A" License 0015-70, Reference to 95RC-04277. 8/10/95. HDMSP001865866.pdf

¹⁶ Lupo, R.K., "Confirmatory Survey of Mass Spectroscopy Laboratory, Building 104 DeSoto Facility, Boeing-Rocketdyne," 7/30/99. DHS_Verification_Survey_MSL.pdf

¹⁷ Atomics International - Log Book, DeSoto Facility. 1964-1965. HDMSP01640471.pdf

The DeSoto Facility Log Book contains daily entries describing routine work processes and materials used at the worksite during the mid-1960's. There are several references to americium and thorium, SRE U-Th fuel processes, and materials transport between SSFL Area IV Building 4064 / DeSoto SS Vault. In addition, the Log Book contains entries that describe lapses in the control of radiological materials, inconsistent monitoring practices, and inconsistent training of new employees in radiation safety.

Although some of the Log Book entries were made prior to 1965, they still validate the presence of americium and/or thorium at the worksite. Entries made after 1965 further confirm that processes remained routine and continuous; there is no evidence to suggest that the operational relationship between SSFL Area IV and DeSoto Facility changed after January 1, 1965.

Select Entries - DeSoto Facility Log Book

November 12, 1964: Thorium contamination resulted from thorium oxide sifting with sieves that did not fit tightly. An airborne release of thorium caused the room to become contaminated. The description of the work process suggests that the sifting of thorium oxide was a routine procedure at DeSoto Facility.

March 30, 1965: Contaminated "cans" from the SRE, containing U-Th fuel elements, were removed from the DeSoto Facility SS Vault and transported to the DeSoto Facility Machine Shop, for cutting and removal of the elements. After 1964, activities involving the reprocessing of irradiated SRE fuel assemblies were assumed to have been confined to SSFL Area IV Building 4003 (ETB, Hot Cave).

April 13, 1965: A container of Am-241 crystals logged for transfer, DeSoto Bldg. 001 to DeSoto Bldg. 004.

May 20, 1965: A shipment of thorium oxide logged at DeSoto Facility SS Vault.

May 21, 1965: A box of thorium oxide logged for transport to an outside contractor.

May 28, 1965: Four shipments, SRE U-Th fuel elements, surveyed prior to DeSoto SS Vault storage.

May 28, 1965: Milling depleted uranium in the "cold" machine shop occurred.

June 4, 1965: "Cans" of enriched-U fuel taken to DeSoto Building 005 for weighing in clean area.

August 23, 1965: 55-gallon drum, SRE radioactive material, shipped from DeSoto Vault to SSFL Area IV.

Boeing Incident Report Database

NIOSH is in possession of the Boeing Incident Report Database. Several incident reports reference the use of americium and thorium at DeSoto Facility. Some of the incident reports are referenced below, and copies of the reports have been provided to support this petition.

1959 Incidents at Headquarters: A "can" containing 10 U-Th fuel slugs was removed from the DeSoto Facility SS Vault without notifying Health Physics (HP). The employee took the container of U-Th into the SNAP II area of DeSoto Facility. According to the HP, such an amount of fuel in the SNAP II area was, "bordering a definite possibility of criticality." Although the event occurred during the SEC period at DeSoto Facility, it verifies the storage of U-Th fuel at the DeSoto Facility SS Vault.¹⁸

¹⁸ Boeing Incident Report Database, Incident Reports at HQ 1959. NIOSH is in possession of the Boeing Incident Report Database.

1970 - Incident Report #A0328 - DeSoto Facility Building 001: Cutting of wires contaminated with UAix, indicating work with spent nuclear fuel.¹⁹

1986 - Incident Report #A0154 - DeSoto Facility Building 106: Radioactive source of Am-241 taken offsite without authorization or license.²⁰

1989 - Incident Report #A0200 - DeSoto Facility Building 106: A shipment of radioactive materials containing plutonium and Am-241, used for the Transuranic Management Pyropartitioning Program (TRUMP-S) was delivered to the address listed on SNM-21: The DeSoto Facility "Receiving Area," Building 106. It was subsequently transferred to SSFL Area IV Building 4064. The incident report identifies poor management of special nuclear materials due to inadequate training, new employees, and a lack of apprenticeship programs. It confirms that radioactive and transuranic materials were received at DeSoto Facility ("Headquarters") prior to shipment to SSFL Area IV.²¹

Historical Facility Documents

1971: Internal Letter Re: Inspection of SNM Vault Rooms & Vault Pad

An internal letter verifies storage of thorium and several "birdcages" containing SNAP fuel at the DeSoto SS Vault and various other locations at DeSoto Building 001. The document describes the inventory of the vault, involvement of the Security Department (Protective Services) in transport of materials to SSFL's Radioactive Materials Disposal Facility (RMDF) and/or vault located at SSFL Area IV Building 4064.²²

1972: Annual Fuels Committee Inspection of DeSoto Facility and SSFL

The NAA Atomics International Fuels Committee conducted an annual review and inspection of DeSoto Facility and SSFL Area IV during which the presence of SNAP fuel stored in "birdcages" in the mezzanine area of DeSoto's SNAP Fuels Fabrication Area at the DeSoto Building 001 Storage Vault is documented. The document references various DeSoto Facility locations where SNAP fuel was fabricated and stored, and the [then] current inventory of enriched SNAP fuel at each location:²³

Vault Pad	Building 001
Vault	Building 001
SNAP Vault	Building 001
SNAP Fuel Fabrication	Building 001
QC Lab	Building 001
Analytical Chem Lab	Building 004

¹⁹ Boeing Incident Report Database, Report #A0328: Exposure of Individual During Cut-Off Operation. May 6, 1970. a-0328_pii-redacted.pdf

²⁰ Boeing Incident Report Database, Report #A-0154: Radiological Safety Incident Report. DeSoto Building 106 - Americium-241. March 7, 1986. a-0154.pdf

²¹ Boeing Incident Report Database, Report #A-0200: Delay in Performing Required Radiological Survey of a R/A Materials Package. TRUMP-S. July 20, 1989. a-0200.pdf

²² Atomics International Internal Letter, H.E. Clow, Criticality & Nuclear Materials Controls, NAA-AI. 11/11/1971. HDMSPO01839892.pdf

²³ North American Aviation Atomics International, "Safeguards Annual Facilities Review: Fuels Committee Annual Review and Inspection of Facilities at Headquarters and Nuclear Field Laboratory," M.E. Remley, 9/20/72. HDMSPO01807625.pdf

1973: Internal Letter Re: SNAP Program Close-Out

The document describes actions that would be taken involving the close-out of the SNAP program at DeSoto Facility / SSFL Area IV. At DeSoto Facility Building 001, general actions included the removal of all SNAP building improvements; walls, ceiling and utilities to point of connection (POC) to restore the area to original condition. The processes described are consistent with SNAP D&D / Site Remediation. In potentially contaminated areas, surveyed were ordered with decontamination as recommended.²⁴

1973: Internal Letter Re: Weekly Highlights - Criticality & Nuclear Materials Controls

During the SNAP close-out, un-irradiated enriched archive samples of U-235 at the SSFL Area IV Hot Laboratory (Building 4020) were transferred to DeSoto Facility Building 001 SS Vault MBA 01 for later shipment to scrap recovery, or to be reprocessed. The consolidation of SNAP natural uranium (U) had begun. Some had been transferred to the DeSoto Building 001 SS Vault. The document describes the preparation of general criteria for the storage of SNAP fuel in "birdcages," drums and on shelves at the SS Vaults at DeSoto and SSFL Area IV.²⁵

1973: Criteria for the DeSoto Facility SS Vault Storage / SNAP "Birdcages"

Thorium was stored at DeSoto Facility during the close-out of the SNAP program. NAA Atomics International studied the combined storage of fuels in their storage containers on vault shelves, as well as in SNAP "birdcages" and in approved shipping containers using the reduced safety factors allowable for storage at a facility. The document, "Criteria for the SS Vault Storage (SNAP and Other Fuels)" establishes the storage criteria for SNAP and other types of fuel during SNAP's close-out phase. It was recommended that the central shelf section (in the middle of the DeSoto Vault, MBA-01) be used to store **thorium**, natural and depleted uranium, only. An earlier document, entitled, "DeSoto SS Vault Criticality Operating Criteria," NAA-001-140-003 (11/13/1970) is also referenced.²⁶

1983: Worker Rotation Between SSFL and DeSoto Facility

It has been established that employees routinely rotated between SSFL and DeSoto Facility without appropriate identifiers, documentation, or even adequate monitoring. Documentation continues to surface that details the inability to reliably track worker movements between SSFL and DeSoto Facility.

1983: Rockwell Internal Letter, Re: Listing of Personnel Assigned to Nuclear Facilities

An internal letter authored by _____ indicates that a list of personnel assigned as "radiation workers" was discovered, for a project that "does not exist." According to the author of the correspondence:

"... Such a list is easy to generate at the beginning of a program, but falls into disuse even more easily with time. While managers generally inform RNS of assignments of personnel to a nuclear facility, this information often does not get recorded. To correct this, please make a list of radiation workers at your facility and periodically (or as people come and go) update it. This should not be a problem, except for RMDf [Area IV

²⁴ North American Rockwell Internal Letter, "SNAP Program Close-Out," M.E. Remley, 1/9/1973. HDMSP001841591.pdf

²⁵ North American Rockwell Internal Letter, "Weekly Highlights - Criticality and Nuclear Materials Controls - SNAP Close-Out," M.E. Remley, 2/9/1973. HDMSP001856250.pdf

²⁶ Atomics International Supporting Document # TI-652-240-019, "5 Kwe / TE Unmanned System Test, Criteria for the SS Vault Storage (SNAP and Other Fuels)," M.E. Remley. 3/15/73. HDMSP001856058.pdf

Radioactive Materials Disposal Facility], NMDF [Area IV Nuclear Materials Development Facility] and RIHL [Area IV Rockwell International Hot Laboratory] where people shift a lot.”

The document includes a list of DeSoto Decommissioning Radiation Workers. Several of these individuals are also listed on SSFL Area IV documents, and shown to have performed job duties at Area IV radiological facilities during the same time period; further supporting poorly documented worker rotation between SSFL Area IV and DeSoto Facility well into the Site Remediation period.²⁷

Boeing Employment Verification Confirms Inability to Determine Worker Locations

Boeing states that after 1999, employee work locations “were the same for Canoga Facility as they were for DeSoto Facility,” indicating that it is unable to verify work locations, and cannot determine which employees rotated between Canoga and DeSoto Facilities.

In a growing number of cases, workers who clearly meet established eligibility criteria (and even qualify for an existing SEC) are disqualified from EEOICPA in error. Boeing routinely provides misleading and inaccurate information in lieu of authentic employment records. Boeing’s information misrepresents the employee as affiliated with a non-covered location or facility; however when authentic records are obtained they routinely verify covered employment (and even radiation monitoring). The inability to obtain authentic employment records, or to rely on Boeing’s information to be accurate, compromises dose reconstruction. I can provide multiple examples where this has occurred, upon request.²⁸

DOE - SSFL Former Worker Interviews, Final Report

In 2009, as part of the Historical Site Assessment and Area IV Radiological Characterization Study, DOE and EPA conducted formal interviews with former employees of SSFL, Canoga and DeSoto Facility. The employees provided consistent testimony describing joint projects, undocumented worker rotation between SSFL areas and associated facilities, and their recollection of working conditions at the sites. The DOE SSFL Former Worker Interview Final Report has been provided to NIOSH on two occasions, since 2014. I respectfully provide another copy in support of this petition.²⁹

DOE Interviewee #106

A former NAA states that he began working for NAA in 1954, and routinely worked back-and-forth between SSFL, DeSoto and VanOwen facilities. He stated that many times, workers weren’t even clocked in; they used “the honor system” and many times, he worked “off the clock.” The employee stated that workers were not exclusive to one department, as NAA would move employees around based on skill set and phase of project / program development. In addition, the employee states that work was done at both SSFL and DeSoto because, “it was easier to move the piece that needed tooling, rather than the tooling to the work.”

It appears that the employee is referencing the transport of certain components, assemblies, or other equipment / materials in need of machining or other processes, between SSFL / DeSoto, as required.

²⁷ Rockwell International, Internal Letter Re: Listing of Personnel Assigned to Nuclear Facilities,” R.J. Tuttle, 1983. HDMSP001815173.pdf

²⁸ Redacted, The Boeing Company “Time Clock Location Summary.” DAR2.pdf

²⁹ U.S. Department of Energy (DOE), Santa Susana Field Laboratory (SSFL) Former Worker Interviews, November 2011. Interviewee #106.