[redacted]

SPECIAL EXPOSURE COHORT PETITION
under the
Energy Employees Occupational Illness Compensation Act

[redacted] former worker at the Rocky Flats, hereby petition the National Institute for Occupational Safety and Health (NIOSH) to designate the following workers from the Rocky Flats facility in Golden Colorado as members of the Special Exposure Cohort (SEC).

All workers employed at Rocky Flats from April 1, 1952 to December 31, 2006.

I was employed by Rockwell International, [redacted] while employed at Rocky Flats. I was a [redacted] I was employed fro[redacted] 78 until [redacted] 93.

I have named [redacted] as the authorized representative for this petition.

PREMISE FOR SEC PETITION

The premise of this SEC petition is threefold. First, NIOSH has failed to reconcile outstanding site profile issues as noted in the February 2007 report to the Advisory Board on Radiation and Worker Health's (Board) contractor, Sanford Cohen and Associates (SC&A). Second, there is a lack of consistency in considering sworn affidavits from former production workers versus NIOSH's reliance on unsworn statements made by former Rocky Flats dosimetry personnel. Lastly, the Board was unaware of some possible exposures before they voted on the SEC petition in June of 2007.

Section 83.1 of the Procedures for Designating Classes of Employees as Members of the Special Exposure Cohort under the Energy Employees Occupational Illness Compensation Program Act of 2000 (EEOICPA), states the purpose of the procedures are "... to ensure that the process is timely and consistent with the requirements specified in EEOCPA." Part of the SEC petition process is to determine which issues reach the level of and SEC issue and which are merely related to the site profile. This petition will show that the SEC process, including resolving site profile issues after the Board voted on the original Rocky Flats SEC petition, is neither timely nor consistent.

OUTSTANDING SITE PROFILE ISSUES

THORIUM USE AT ROCKY FLATS

NIOSH accepted an unsworn statement from the supervisor for the thorium strikes as the basis for their methodology for reconstructing dose for thorium exposure. This unsworn statement contradicts document RFP 5331, which states that thorium was present in Buildings 559, 771, 774, 777, 777A, 779A and 883. This document was reviewed by NIOSH and rejected. Additionally, a representative from SC&A uncovered two NIOSH interviews with this individual which is also contradictory about where tritium strikes were performed at Rocky Flats.

SC&A's report to the Board, dated February 15, 2007, page 3, states that they did not review classified documents for thorium use at Rocky Flats

http://www.cdc.gov/niosh/ocas/pdfs/abrwh/scarpts/rfsecrev/sca-rfspotherad.pdf.

This is unfortunate. They did review the unclassified 1976 report titled, "Thorium Use at Rocky Flats". This report, in part, identifies that the major use of thorium and thorium alloy was to fabricate parts. While NIOSH assumed that only light machining was done, and therefore thorium exposure was low, that assumption has not been verified by the Board. Thorium parts were/are used not only in nuclear weapons but also aircraft. Rockwell International had a contract to fabricate parts for the B 1 B bomber, but it appears that the details of the thorium/thorium alloy parts are still classified information.

NIOSH stated that they interviewed five (5) Rocky Flats personnel that would seem to be familiar with the machining operations at Rocky Flats and therefore knowledgeable as to the presence of thorium at Rocky Flats http://www.cdc.gov/niosh/ocas/pdfs/sec/rocky/ncom2bdrfsec.pdf. This is a very small sampling of interviews. There were hundreds of machinists at Rocky Flats at any one time and literally thousands of people who would have some knowledge of the machining operations for the site. To rely

upon such a small number of people to develop a scientific methodology flies in the face of sound science.

Recently, NIOSH reversed its evaluation report for Savannah River SEC petition after they and SC&A reviewed classified documentation. Because the Rocky Flats SEC petition was the first large facility to be reviewed and because the SEC petition process was in its infancy, classified documentation was not reviewed for Rocky Flats by the Board's technical contractor. The Rocky Flats claimants are denied the consistent investigation afforded to subsequent SEC petitioners.

NIOSH Ignored Sworn Testimony in SEC Petition 00030

Many sworn affidavits were submitted by the Rocky Flats SEC Petitioner attesting to the common practices at the site. These sworn affidavits were largely dismissed by NIOSH because they were not backed up by documentation. Yet, as noted above, NIOSH readily accepted, in at least one instance, an unsworn testimony over a document.

Some of the sworn statements seem to be backed up by SC&A's investigation. As an example, many of the sworn affidavits attested to the fact that despite being in high radiation areas, the workers' dosimetry badges came back as "zero" readings. SC&A confirmed, in their report, Completeness of Records 1969-1970, dated February 6, 2007, http://www.cdc.gov/niosh/ocas/pdfs/abrwh/scarpts/rfsecrev/sca-rfspgap6970.pdf, that many years had a high percentage of badges had "zero" readings. In fact, the highest level during the production years was in 1982 where 63.2% of badges had zero readings. During the cleanup period, in 2004 a full 79.7% of badges had zeros.

NIOSH Class Definition for the approved Rocky Flats SEC is inconsistent with other SECs and difficult for the Department of Labor (DOL) to administer

Recently, NIOSH has determined that they could not determine whether a worker had access to a particular building for General Electric facility in Evendale, OH and the Ames Laboratory in Ames, IA. Therefore, all workers during the SEC time period for those sites, whether or not that worker was actually present in the buildings where the radioactive materials were present, are or can be eligible for compensation if they have one of the specified cancers.

Additionally, DOL has stated in the attached letter to the Director of the Division of Compensation Analysis Support dated May 3, 2010, concerning the Mound Plant:

> ***Because we sometimes have difficulty placing workers in specific buildings,*** (emphasis added) we consulted the Department of Energy (DOE) to determine whether records were available that would enable us to place workers *in* the Rand SW Buildings. DOE checked with their staff and have confirmed that they do not have the ability to validate work locations in support of a building-specific SEC class. In light of these evidentiary challenges, NIOSH may want to reconsider the SEC class definition.

A similar situation exists for the SEC class definition for the Rocky Flats plant. NIOSH's class definition for the current Rocky Flats SEC class is building specific. However, it is known that workers, such as electricians, painters, etc., who were assigned to other buildings, were often detailed to the buildings

covered under the SEC. The Rocky Flats claimants have waited four years or more for the resolution by DOL in applying the Ruttenber database to the SEC class definition. It is obvious that DOL is "having difficulty in placing workers inside" the buildings NIOSH has designated as a member of the Rocky Flats SEC class.

There are other site profile issues, according the SC&A matrix that remain unresolved for four years. This could possibly result in the underestimation of dose for Rocky Flats workers.

INFORMATION THE BOARD DID NOT HAVE WHEN DECIDING THE ROCKY FLATS SEC PETITION

Presence of Plutonium in Building 460

Originally, the DOL Site Exposure Matrix showed that plutonium was present in Building 460. NIOSH was advised of this in the attached email dated December 8, 2009. According to the statement submitted with that email, a former radiation control technician related that waste drums from the 700 complex were stored in Building 460 in 1988 when the governor of Idaho refused to allow shipments of radioactive waste from Rocky Flats into the state. Building 460 was a "cold" building and workers were not monitored for exposure to radiation

Contaminated Equipment Present in Building 440, 444 and 447

According to the attached Radiation Monitor Report dated 2-8-84, an Empire lift-a-loft was shipped from Building 371 to Buildings 440, 444 and 447. These buildings were also considered "cold" buildings and workers were not monitored for radiation exposure. This report was forwarded to NIOSH on 9/26/10 and yet NIOSH has yet to resolve this issue.

Co-worker models are inaccurate for some buildings

NIOSH Site Profile does not include the 1980 fire in Building 771's incinerator – NIOSH was notified of the existence of this incident on 4/11/11, as noted in the attached email. RFP-4969 summarizes an incident where a fire occurred on July 2, 1980 in Building 771's incinerator. This incident is not mentioned in the Rocky Flats site profile. NIOSH does not assign ambient dose because either the worker was monitored or NIOSH uses coworker data to fill in the gaps. However, SC&A found that in 1980 53% of the badges had a zero for radiation reading. If there was a release from the fire (which may be possible looking at the attached pictures of melted HEPA filters), then the coworker badge readings may not be accurate and reflect this incident.

NIOSH Site Profile does not include the plutonium recovery system in Building 440 post 1996 http://faculty.gvsu.edu/thompsoa/Portfolio/htmlpages/RFNWP3.html, http://rockyflats.apps.em.doe.gov/references/126-Chemical%20Decon%20of%20Gloveboxes.pdf – NIOSH was formally notified of this deficiency, also on 9/26/10, in the attached email from Terrie Barrie to Mark Griffon. NIOSH has failed to resolve this issue. This failure to investigate and reise the co-

worker model for claimants who worked in Building 440 may result in the underestimation of radiation dose to the claimants who worked in that building during that time period.

NIOSH Site Profile does not consider high exposures at the stacker retriever -The attached email dated 8/1/06, states that a person who emptied the americium birdcages in the Stack-Retriever would have been exposed to radiation levels as much as "couple of hundred" millirrem per hour. If a "couple of hundred" millirem means 200 millirems, this translates to 2 rems/hour. I was responsible to repair the Stacker-Retriever every time it jammed up. Criticality engineers had to come over to make sure that the materials were not too close to going critical before I could start the re-hanging of the bird cages. Yet, it appears that NIOSH did not consider this relevant information in my dose reconstruction. Therefore, it is quite likely that NIOSH is not considering this value for other Rocky Flats personnel who worked on or near the stacker retriever.

The highest number of zero readings occurred during the D & D period – As noted in SC& A's report, the year with the highest level of zero readings was 2004 which had 79.7% of badges reporting zero readings.

In conclusion, the claimants from the Rocky Flats site should be added as a member of the Special Exposure Cohort without delay.

Signature sheet for the petitioners can be found on the following page.

SIGNATURE OF PERSONS SUBMITTING THIS PETITION

[redacted]

8/13/11
Date

I affirm that the information provided in the petition is accurate and true.

[redacted]

8/16/11
Date

I affirm that the information provided in the petition is accurate and true.

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

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

OMB Number: 0920-0639 Expires: 09/20/2013

Petitioner Authorization Form

Use of this form and disclosure of Social Security Number are voluntary. Failure to use this form or disclose this number will not result in the denial of any right, benefit, or privilege to which you may be entitled.

Instructions:

If you wish to petition HHS to consider adding a class of employees to the Special Exposure Cohort and you are NOT either a member of that class, a survivor of a member of that class, or a labor organization representing or having represented members of that class, then 42 CFR Part 83, Section 83.7(c) requires that you obtain written authorization. You can obtain such authorization from either an employee who is a member of the class or a survivor of such an employee. You may use this form to obtain such authorization and submit the completed form to NIOSH with the related petition. **Please print legibly.**

For Further Information: If you have questions about these instructions, 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.

Authorization for Individual or Entity to Petition HHS on Behalf of a Class of Employees for Addition to the Special Exposure Cohort

I, [redacted]

Name of Class Member or Survivor

[redacted]

Street Address of Class Member or Survivor Apt. # P.O. Box

[redacted]

City, S[redacted]

[redacted]

Apt. # P.O. Box

to petition the Department of Health and Human Services on behalf of a class of employees th[redacted]

Name of Class Member (employee, not the employee's survivor)

for the addition of the class to the Special Exposure Cohort, under the Energy Employee's Occupational Illness Compensation Program Act (42 U.S.C. §§ 7384-7385).

[redacted] **e petitioner named above will have all the rights 83.**

August 12th 2011

Date

[redacted]

Name or Social Security Number of First Petitioner: [redacted]

Public Burden Statement

Public reporting burden for this collection of information is estimated to average 3 minutes 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. 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 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.

Name or Social Security Number of First Petitioner:

Rockwell B-1 Lancer

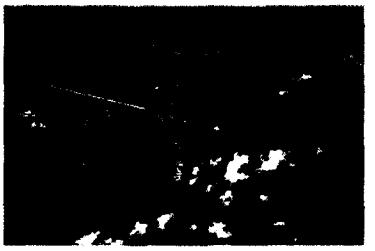
From Wikipedia, the free encyclopedia
(Redirected from B-1 Lancer)

The **Rockwell** (now part of Boeing) **B-1 Lancer**[N 1] is a four-engine variable-sweep wing strategic bomber used by the United States Air Force (USAF). First envisioned in the 1960s as a supersonic bomber with sufficient range and payload to replace the Boeing B-52 Stratofortress, it developed primarily into a low-level penetrator with long range and supersonic speed capability at high altitude.

Designed by Rockwell International, the bomber's development was delayed multiple times over its history, as the theory of strategic balance changed from flexible response to mutually assured destruction and back again. The initial B-1A version was developed in the early 1970s, but its production was canceled, and only four prototypes were built. In 1980, the B-1 resurfaced as the B-1B version with the focus on low-level penetration bombing. It entered service in 1986 with the USAF Strategic Air Command as a nuclear bomber.

In the 1990s, the B-1B was converted to conventional bombing use. It first served in combat during Operation Desert Fox in 1998 and again during the NATO action in Kosovo the following year. The B-1B continues to support U.S. and NATO military forces in Afghanistan and Iraq. The Lancer is the supersonic component of the USAF's long-range bomber force, along with the subsonic B-52 and Northrop Grumman B-2 Spirit. The bomber is commonly called the "Bone" (originally from "B-One"). With the retirement of the General Dynamics/Grumman EF-111A Raven in 1998 and the Grumman F-14 Tomcat in 2006, the B-1B is the U.S. military's only active variable-sweep wing aircraft. The B-1B is expected to continue to serve into the 2020s, when it is to be supplemented by the Next Generation Bomber.

B-1 Lancer



A B-1B flying over the Pacific Ocean.

Role	Supersonic Strategic bomber
National origin	United States
Manufacturer	North American Rockwell/Rockwell International Boeing
First flight	23 December 1974
Introduction	1 October 1986
Status	In service
Primary user	United States Air Force
Number built	B-1A: 4 B-1B: 100
Unit cost	US$283.1 million in 1998 (B-1B)[1]

Contents

Development

Background

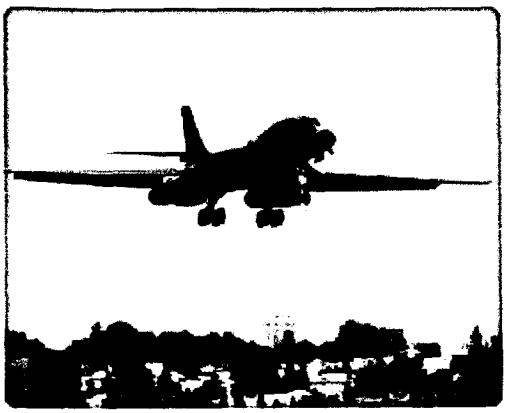
In December 1957, the U.S. Air Force selected North American Aviation's proposal to replace the Boeing B-52 Stratofortress with the B-70 Valkyrie.[2] The Valkyrie was a six-engine bomber that could reach Mach 3 speeds at high altitude (70,000 feet / 21,000 m)[3] to avoid interceptor aircraft, the only effective anti-bomber weapon in the 1950s.[4] Soviet interceptors were unable to intercept the high-flying Lockheed U-2;[5] the Valkyrie was to fly at similar altitudes and much higher speeds.[4] By the late 1950s, however, anti-aircraft surface-to-air missiles (SAMs) could threaten high-altitude aircraft,[6] as demonstrated by the 1960 downing of Gary Powers's U-2.[7]

The USAF Strategic Air Command (SAC) began moving its bombers to low-level penetration before the U-2 downing. This tactic greatly reduces radar detection distances by use of terrain masking.[8] At that time SAMs were ineffective against low-flying aircraft.[8][9] Also during this era, low flying aircraft were difficult to detect by higher flying interceptors since their radar systems could not readily pick out opposing aircraft against the radar clutter from ground reflections. Higher drag at low level operations limited the B-70 to subsonic speed while dramatically decreasing its range.[6] The result would be an aircraft with similar speed but less range than the B-52 it was meant to replace. Unsuited for this new role and because of a growing intercontinental ballistic missile (ICBM) force, the B-70 bomber program was canceled in 1961 by President John F. Kennedy,[4][10] and the two XB-70 prototypes were used in a supersonic research program.[11]

Although never intended for the low-level role, the B-52's flexibility allowed it to outlast its intended successor as the nature of the air war environment changed. The B-52's large airframe with internal room allowed the addition of improved electronic countermeasures suites.[12] During the Vietnam War the concept that all future wars would be nuclear was turned on its head, and the "big belly" modifications increased the B-52's total bomb load to 60,000 pounds (27,215 kg),[13] turning it into a powerful tactical aircraft as well. In spite of its flexibility, the B-52 was far from perfect; higher speed would aid even a low-level approach in the strategic role, something the F-111 took advantage of.[9]

Design studies and delays

BOEING



The B-1 Lancer is a swing-wing bomber intended for high-speed, low-altitude penetration missions. By the end of 1977, three Rockwell International B-1As had made 118 flights with more than 21 hours at supersonic speeds. The next version was the B-1B. It first flew Oct. 18, 1984, could operate at 60,000 feet and had a range of more than 7,000 miles. The U.S. Air Force ordered 100 B-1Bs in 1982 and the first B-1B aircraft was delivered to the Air Force at Edwards Air Force Base, Calif., in October 1984, just 33 months after contract go-ahead.

Initial delivery to the Strategic Air Command took place in June 1985, at Dyess AFB, Texas. On Oct. 1, 1986, the B-1B achieved Initial Operational Capability and by November 1986, B-1Bs were coming off the production line at a rate of four per month. B-1Bs were based at Dyess AFB, Texas; Ellsworth AFB, South Dakota; McConnell AFB, Kansas; Robins AFB, Georgia; and Mountain Home AFB, Idaho. In 2001, the U.S. Air Force decided to retire 33 B-1Bs and remove the aircraft from Mountain Home and the Georgia and Kansas Air National Guard bases. This has now been accomplished and the remaining aircraft were consolidated at Dyess AFB and Ellsworth AFB.

The B-1B holds 61 world records for speed, payload and distance. The National Aeronautic Association recognized the B-1B for completing one of the 10 most memorable record flights for 1994.

The first combat use of the B-1B was in December 1998 during operation Desert Fox, where the aircraft penetrated Iraqi air defenses to destroy Republican Guard barracks. This debut mission validated the B-1B's conventional role and its ability to operate in a force package. In 1999 six B-1Bs were deployed to Royal Air Force Base Fairford, England, to support Operation Allied Force in Kosovo. Those six aircraft dropped more than 20 percent of the total tonnage in the conflict. In operation Enduring Freedom, B-1Bs dropped 40 percent of the weapons and 70 percent of the precision-guided JDAM weapons.

B-1B Home page

Specifications

First flight:	Dec. 23, 1974
Span:	137 feet (extended), 79 feet (swept aft)
Length:	146 feet

Height:	34 feet
Gross weight:	477,000 pounds
Power plant:	Four 30,000-plus-pound-thrust General Electric F-101-GE-102 turbofan engines with afterburners
Speed:	Mach 1.2 at sea level
Crew:	Four
Operating altitude:	30,000-plus feet
Armament:	Up to 84 Mark 82 conventional 500-pounds bombs, or 30 CBU-87/89/97, or 24 JDAMS, or can be reconfigured for wide range of nuclear bombs

U.S. Department of Labor

Employment Standards Administration
Office of Workers' Compensation Programs
Division of Energy Employees Occupational
Illness Compensation
Washington, D.C. 20210

MAY 3 2010

Mr. Stuart L. Hinnefeld, Interim Director
Office of Compensation Analysis and Support
National Institute for Occupational Safety and Health
4676 Columbia Parkway, Mailstop C-46
Cincinnati, OH 45226

Dear Mr. Hinnefeld:

My staff has reviewed the proposed SEC class definition for the Mound site, Miamisburg, Ohio, presented in your letter dated April 12, 2010. NIOSH found that it cannot estimate radiation doses with sufficient accuracy. The proposed class definition is as follows:

> All employees of the Department of Energy, its predecessor agencies, and its contractors and subcontractors who worked in the R and SW Buildings at the Mound site for a number of work days aggregating at least 250 work days from March 1, 1959 through March 5, 1980, or in combination with work days within the parameters established for one or more other classes of employees in the Special Exposure Cohort.

Because we sometimes have difficulty placing workers in specific buildings, we consulted the Department of Energy (DOE) to determine whether records were available that would enable us to place workers in the R and SW Buildings. DOE checked with their staff and have confirmed that they do not have the ability to validate specific work locations in support of a building-specific SEC class. In light of these evidentiary challenges, NIOSH may want to reconsider the SEC class definition.

We appreciate the opportunity to review this SEC definition and look forward to having a similar opportunity as more SEC classes are proposed. As always, we provide comments, if applicable, in the interest of improving the consistency and fairness of claims adjudication carried out in connection with any new SEC class and to speed the process of determining which cases should ultimately be considered a part of the class.

If you have any questions in regard to this matter, please feel free to contact me at (202) 693-0081.

Sincerely,

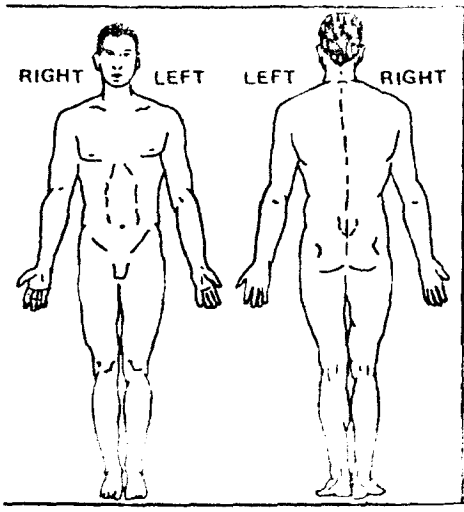
Rachel P. Leiton

Rachel P. Leiton
Director, Division of Energy Employees
Occupational Illness Compensation

RADIATION MONITORING REPORT OF

BLDG. 447
DATE 2-[illegible]

INCIDENT X ACCIDENT ____ POSSIBLE INHALATION ____ TIME OF OCCUR 2200

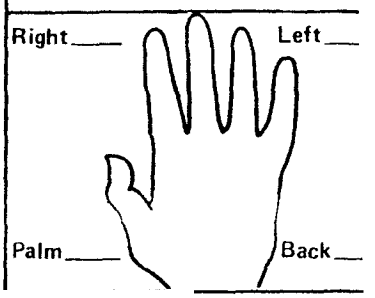


NAME ____ EMPLOY. NO. ____

Sent to medical at ____ hrs. for:
Decontamination ____ Body Count ____ Wound ____
Description of wound:
Abrasion ____ Puncture ____ Laceration ____
Burn ____
Contamination Levels ____

Gamma Survey ____ No. ____

DISTRIBUTION
HP [redacted]
Bldg. Sup
Director ____
Immed. Super. Marcessa
Ind. Safety ____
Other ____



RADIATION MONITORING FINDINGS:

REPORTED BY [redacted] ____
Monitor Signature

LOCATION : Room No. ____ Glove Box No. ____ Other South Lock Bld 447

DESCRIPTION OF FINDINGS: Contamination levels and extent or condition and cause.

Empire Lift-a-Loft # 371-3134-53245 found to be smearing approx ≈ 300 c/m α and direct α ≈ 2000 c/m.
Shipped to 44 as 440 mod area from 371 Bld. approx 2 mos. ago with paint that was not original by maintenance dept.

NUMBER OF P. I. ____ SAAM ALARM LOCATION # ____

Radiation Monitoring Supervisor Signature

THIS FORM TO BE FILLED OUT AND RETURNED WITHIN 24 HRS., ADDITIONAL INFORMATION MAY BE REQUIRED PER HSE 3.0

IMMEDIATE SUPERVISOR'S FINDINGS: REPORTED BY ____
Signature Date

PERSONNEL INCLUDED AT TIME OF INCIDENT (Name & Employee Number) ____

REPORT OF INVESTIGATION ____

CORRECTIVE ACTION ____

PROCEDURE VIOLATION ____ **PROCEDURE NEEDS REVIEWED** ____

COST OF ACCIDENT OR INCIDENT ____

[illegible]466 (Rev. 2-78)

Print - Close Window

Subject:1980 "fire" at Rocky Flats Building 771 incinerator
From:
To: hls8@cdc.gov;
Carolyn_Boller@markudall.senate.gov;
Cc: Adam_Jones@MarkUdall.senate.gov; jonathan.asher@mail.house.gov;
Stuart.feinhor@mail.house.gov;
Date: Mon, 11 Apr 2011 19:57:20

Hello Stu,

Attached is Rocky Flats' document RFP-4969 which summarizes an event (fire?) in Rocky Flats Building 771 in July 2, 1980. I discovered this document fairly recently. This event is not mentioned in DCAS' technical documents, yet it appears to be significant. While the report states that there was no environmental release, I would also like to direct your attention to the second attached document titled RF 1980 fire HEPA filter pictures, which shows the condititon of the HEPA filters after the 1980 "fire". It appears to me, that at the very minimum, some of the worker present in Building 771 during and shortly after this incident may have been exposed to an unmonitored exposure.

I respectfully request that DCAS investigate this incident and determine whether the site profile, and subsequent dose reconstruction methodology, accurately represents the totality of the work environment for the workers at the Rocky Flats site.

Thank you for your consideration and I look forward to your earliest response.

ANWAG

a.w. thompson
photography

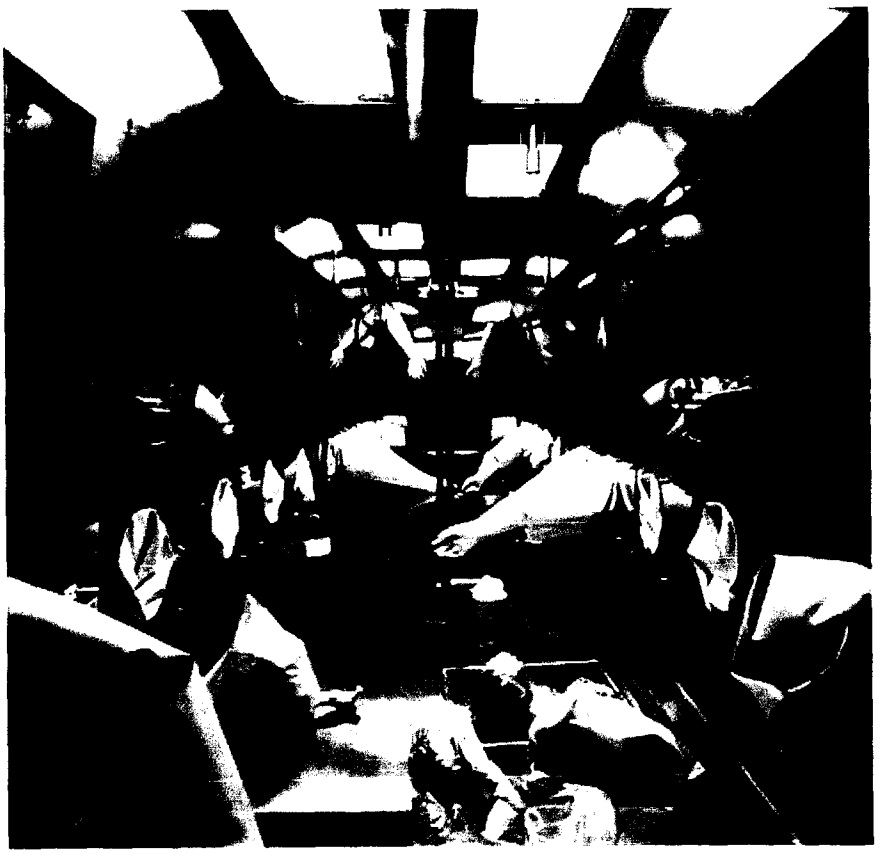
portfolios

biography

exhibitions

links

contact



Nuclear Residues Repacking Glovebox, Building 440
Rocky Flats Nuclear Weapons Plant, 2002

From the Project *Incendiary Iconography: The Nuclear Legacy of the Cold War*

Chemical decontamination of gloveboxes and tanks improves safety, reduces TRU waste

Summary

Using Office of Science & Technology (OST) funding, the Rocky Flats team has developed methods to successfully decontaminate waste to Surface Contaminated Objects (SCOs) hundreds of contaminated gloveboxes and tanks destined for more hazardous and costly size reduction. The single most significant decommissioning innovation, chemical decontamination has slashed months from the site's already accelerated closur

A scrub brush is used during the second step of the decontamination process.

The Need

More than 900 gloveboxes at RFETS were used to protect workers from the hazards of processing plutonium, americium, uranium and other radioactive isotopes. Hundreds of tanks stored plutonium and actinide liquids used for recovery processes. The majority of gloveboxes and tanks were contaminated to Transuranic (TRU) levels and without decontamination would have to be disposed according to the acceptance criteria.

Per acceptance criteria of the Waste Isolation Pilot Plant (WIPP), TRU waste must either be packaged in a Standard Waste Box (SWB), a small metal container that accommodates just 1.9 cubic meters of waste or a 55-gallon drum. Additionally, WIPP requires TRU waste to be counted in an approved assay system and undergo visual examination to verify packaging contents. To meet these requirements, after field characterization, RFETS TRU waste is transferred to buildings 440, 559 or 664 where counters confirm a container's gram loading. Then, before it can be shipped, TRU waste is stored at RFETS for up to 144 days and tested for gas generation. This repeated handling of TRU waste is both costly and poses hazards to workers.

Even more hazardous are activities required to size-reduce tanks and gloveboxes for packaging into the small SWBs. The largest of RFETS gloveboxes was 64-feet long and the largest of tanks had a capacity of more than 20,000 gallons. For equipment that could be moved, a central size-reduction containment enclosure with extensive air handling equipment was utilized. Size-reduction involved using cutting tools like Sawzalls, nibblers and plasma-arc torches to cut through quarter-inch thick stainless steel. Workers in some cases reached through glove ports and exerted great effort in supporting cutting tools. Waste was repeatedly handled en route to the SWB. For gloveboxes too large to be relocated, custom tents were built around them to contain high airborne radioactivity released by cutting contaminated steel. In situ size-reduction evolutions were costly and time consuming because workers must don supplied air suits which requires a series of lengthy entry and exit steps.

Precursors to Chemical Decon Success

In 1996, waste managers began studying alternatives for disposing of large process equipment. They concluded that decontamination would generate excessive secondary waste, be too labor intensive and expose workers to unknown hazards.

After the Department of Transportation (DOT) in 1997 released exceptions to regulations that would allow transporting low-level waste in certain conveyances, decontamination was again studied at RFETS. The DOT exceptions stipulated limits for a waste's removable and total contamination in Disintegrations Per Minute (DPM) averaged over 100 square centimeters. Waste that meets these criteria are called Surface Contaminated Objects (SCOs).

Because waste's contamination had to be characterized in terms of surface area, the ratio of surface area to mass for a variety of materials had to be established. Detailed procedures for characterization were developed that, in part, established surface area to mass ratios for a variety of surfaces so that surface area could easily be established when waste was weighed.

Per DOT guidelines, waste that meets SCO criteria can be packaged in a variety of conveyances. The most accommodating is a cargo container, which has a capacity of 38 cubic meters. Packaging waste as SCO avoids all of the costly and stringent criteria for packaging TRU waste. More importantly, it avoided hazardous and risky size-reduction evolutions for thousands of cubic meters of waste.

The use of chemical to decontaminate gloveboxes is performed manually using existing glove ports

OST funded modifications to the Alpha 12-1A detector so that it could detect higher limits of activity needed to characterize SCO waste. The 12-1A air-proportional ion chamber could previously detect just 2M DPM. With the addition of an attenuator screen to the front of the chamber, its limit of detection was increased to 200M DPM. Also, with OST support, the Ludlum 195 high-range alpha chamber, which can detect up to 1B DPM, was deployed. The Ludlum 195 can be performance tested in the field, an important advantage over the 12-1A since survey equipment frequently becomes too contaminated for release from a contamination area.

The Technology

The first successful decontamination process was developed by Environmental Alternatives, Inc. This process used a complex blend of acids and other chemicals which are applied to equipment's surfaces in a three-step process. This extraction solution used micro-emulsification and chemical ion exchange to bind itself to contaminants. After a 24-hour waiting period, surfaces were surveyed to determine if SCO criteria were achieved.

Another method funded and developed with OST support used Cerium Nitrate (CN) to decontaminate surfaces. During the site's production era, CN was used in Building 771 as a plutonium recovery surrogate in process experiments. For decontamination, CN was first injected with steam into tanks and other equipment. Later methods simply applied diluted solutions of CN to interior surfaces, which were then wiped and rinsed with a neutralizer. Following a 20-30 minute waiting period, surfaces were surveyed to determine if SCO criteria were met.

Case Study: Size-reduction vs. chemical decontamination

This section will compare packaging of two B771 gloveboxes of similar size. One was decontaminated and packaged as SCO. The other one, too highly contaminated to achieve SCO criteria and too large to be re-located to a central size-reduction enclosure, was size-reduced in-place after a containment tent was constructed.

- Line 15 was 14-feet long about 6-feet high and had about 300 square feet of surface area. Line 15 used hydrogen peroxide to convert plutonium nitrate solution into plutonium peroxide cake. A highly volatile process, precipitation created the solid for further processing into metal. After all internal equipment was removed, Line 15 was decontaminated in just over a day and packaged whole in a single cargo container.

- Line SR12 employed a process for converting plutonium oxide into plutonium tetrafluoride using fluorine gas. An 11-foot section of the 25-foot glovebox was decontaminated to SCO and packaged in a cargo container. The interior surfaces of the remaining 14 feet were too highly contaminated to achieve SCO criteria. At over 10-feet high, the remaining sections encompassed about 430-square feet of surface area. To construct the tent and conduct size-reduction operations required 25 working days and more than 1,500 hours. Nine SWBs were required to correctly package SR12's glovebox surfaces.

Although SR12 was slightly larger in this comparison, the advantages of decontamination are evident. Had all 240 gloveboxes in B771 undergone size-reduction, the project would not be ahead of schedule for demolition and would probably be behind schedule.

Summary

Due to the success of chemical decontamination technology, the Rocky Flats Closure Project life-cycle estimates for TRU waste were reduced by nearly 30 percent – from an estimated 17,500 cubic meters to 12,500 cubic meters.

The most significant benefit of chemical decontamination has been thousands of hours of avoided worker exposure to high airborne radioactivity, exertion and several industrial hazards that result from size-reduction evolutions.

After the decontamination process a glovebox is weighted, packaged and loaded into a cargo container.

Technology Supporting the Path to Closure

For more information about Technology at Rocky Flats, contact David Maloney, Kaiser-Hill Company, (303) 966-7566, or Gary Huffman, DOE, Rocky Flats Field Office, (303) 966-7490

Science & Technology

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Subject:RE: Rocky Flats Building 460
From: Rutherford, LaVon B. (CDC/NIOSH/OD)
To:
Cc: low0@CDC.GOV;
Date: Wed, 09 Dec 2009 05:24:42

Thanks for the e-mail and the documents. We will take a look at the information and get back to you. I can't give you a good time line on when, but it should be in the next week or so. If you don't hear from me before that feel free to send me e-mail reminder.

LaVon Rutherford
SEC Health Physics Team Leader

From
Sent: Tuesday, December 08, 2009 10:07 PM
To: Rutherford, LaVon B. (CDC/NIOSH/OD)
Cc: Denise Brock; Mark A. Griffon; Paul Ziemer; Wade, Lewis (CDC/NIOSH/OD) (CTR); Phillip Schofield
Subject: Rocky Flats Building 460

Hello Mr. Rutherford,

Denise Brock, after consulting with you, suggested that I send the attached documents regarding the presence of uranium and plutonium in building 460 at the Rocky Flats facility. Historically, this building was designated a "cold" building, both by the workers and by NIOSH and SC & A.

Some months ago, I was provided with a copy of DOL's Site Exposure Matrix (SEM) for these two elements. The attached copies of the SEM shows that these elements were present in building 460. I thought, for sure, that this information on the SEM was inaccurate. However, Greg Lewis of the DOE was kind enough to contact DOL and request the source document DOL used to determine that these elements were present in 460:

"Rocky Flats Plant Sitewide Process Descriptions, Material Mass Balances, and Operational Emissions Support Document".

A copy of this document was reviewed by Larry Elliott and hopefully is still in your possession. Mr. Elliott reported back that no processing of plutonium or uranium was perfomed in building 460. That is correct, and is something that is common knowledge.

However, it appears that these elements were present in that building via storage of waste machine oils. I have attached two pages of the document for your review. You will note that the attachment titled "DOE doc 460 lube oil storage" clearly states that used oil was stored in that building. And, the second attachment, "DOE doc 460" shows that machine oils from Building 444 (uranium building) and 707 (neutron building) are among the buildings which produced the waste machine oils.

I understand from a couple of former Rocky Flats workers (who wish to remain anonymous fat this time) that the 55 gallon drums leaked occasionally. I also understand that air monitoring may have been performed in the storage area in building 460.

Since this was a "cold" area, it is unlikely that the workers were monitored for radiation exposure. worked in building 460 from 1985, or so, until 1989. He has no internal or external dosimetry records for those years. . I also understand that x-rays were used for non-destructive testing in building 460. I have not found this

information in the site profile, although it is possible that I may have overlooked it.

I respectfully request that you review the above mentioned document, If your conclusions agree with mine, I ask that you seek the most exeditious route to add the workers in Rocky Flats Building 460 as a member of the Special Exposure Cohort.

Respectfully,

Sundin, David S. (CDC/NIOSH/OD)

From:
Sent: Tuesday, August 01, 2006 2:33 PM
To:
Cc:
Subject: RE: Stacker/retriever

Brant,

I finally got to look at your write up.

Looks good to me. If you want to add that during loading and unloading of "materials in birdcages", dose rates right up against the birdcages could have been as high as a couple of hundred mr/hr. This dose rate drops off very quickly as a relationship to where personnel are present.

Only conceivable way he could have measured a 8R/hr field, is a very large Americium can. Did not happen very often

And to add if you are standing working in a 8R/hr field you are not a very good RCT!!!

Talk with you today soon.

Mel

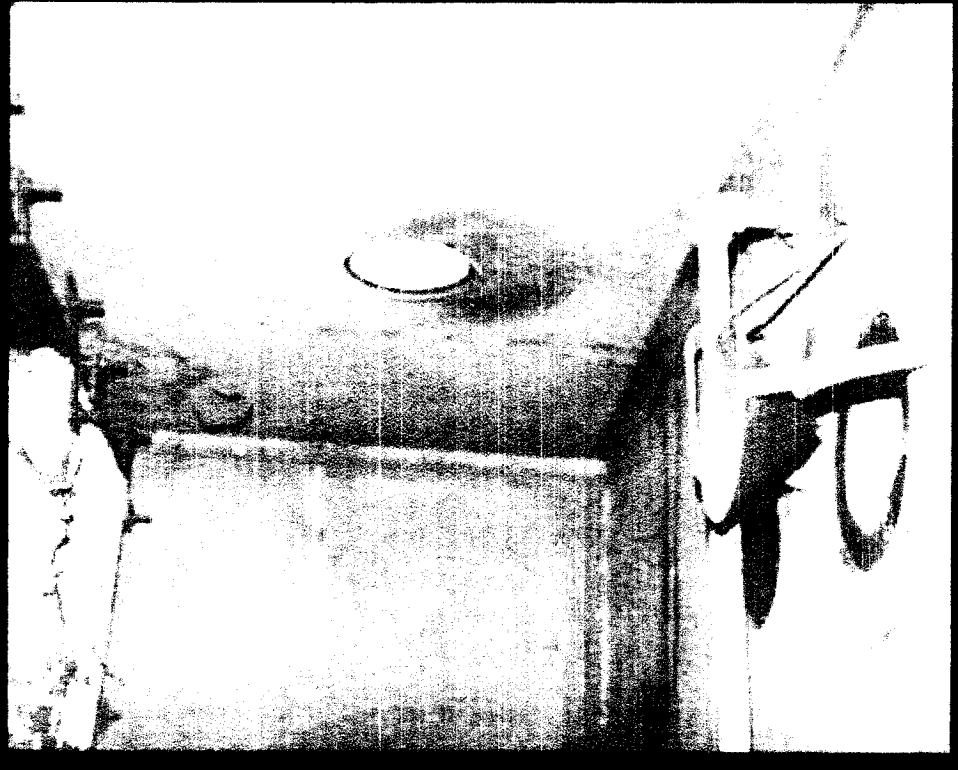
From: Ulsh, Brant A. (CDC/NIOSH/OD)
Sent: Friday, July 28, 2006 10:59 AM
To: Mel Chew
Subject: Stacker/retriever

Mel:
Thanks for the info on the stacker/retriever. I have taken a whack at a rough draft response to this matrix item, but I would welcome your review/comments. MS Word's "track changes" feature would be especially convenient, but I'll take comments in whatever format you can provide. Feel free to share this with Bob Morris if you think that might be helpful.

Thanks,
Brant

<<Matrix item 20 part 1.doc>>

1980 Incinerator Fire: Building 771



- Note inlet baffle and suppression piping

1980 Incinerator Fire: Building 771

- Inside of glovebox with melted ceiling window/light

1980 Incinerator Fire: Building 771

- Note high temperature HEPA filters

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