

Charles Saunders  
Rocky Flats SEC Petitioner



Terrie Barrie  
Rocky Flats SEC Co-Petitioner



December 8, 2017

Ann Agnew  
Executive Secretary to the Department of Health and Human Services  
Room 603-H  
200 Independence Avenue, S.W.  
Washington, DC 20201

Subject: Request for Administrative Review of the denial of Rocky Flats Special  
Exposure Cohort Petition 0192

Dear Ms. Agnew:

I, Charles Saunders, Special Exposure Cohort (SEC) petitioner for the Rocky Flats site and Terrie Barrie, co-petitioner respectfully requests a full review of the Advisory Board on Radiation and Worker Health's (Board) decision to deny expanding the SEC years for the Rocky Flats facility beyond December 31, 1983.

On May 8, 2017, the Advisory Board on Radiation and Worker Health (Board) agreed with DCAS's assessment in a close vote (8 to 5 with two abstentions).

On November 16, 2017, Acting Secretary, Eric D. Hargan, determined that, based on documents provided by the National Institute for Occupational Safety and Health's Division of Compensation and Analysis Support (DCAS), that DCAS has sufficient data to reconstruct dose for the Rocky Flats Workers after December 31, 1983.

We object to this decision and respectfully request that this decision be reversed and SEC status be awarded to all claimants from Rocky Flats employed after December 31, 1983. As will be shown below, we submit that DCAS failed to uphold their primary responsibility under the Energy Employees Occupational Illness Compensation Act of 2000, as amended (EEOICPA) and their own regulations. DCAS also violated the mandates of the Administrative Procedures Act (APA) by ignoring evidence and misleading the Board and the Acting Secretary on the facts of the petition.

### **Applicable Laws**

When DCAS investigates the merits of an SEC petition they are governed by two federal statutes and two federal regulations. In the following discussion we will show that DCAS has violated these statutes and regulations.

1. Section 7384 (d) (b) explains the purpose of EEOICPA,

*(b) PURPOSE OF PROGRAM—The purpose of the compensation program is to provide for **timely, uniform, and adequate** compensation of covered employees and, where applicable, survivors of such employees, suffering from illnesses incurred by such employees in the performance of duty for the Department of Energy and certain of its contractors and subcontractors. (Emphasis added)*

Additionally, Section 7384q (3) (b) of the EEOICPA, states,

*DESIGNATION OF ADDITIONAL MEMBERS—Subject to the provisions of section 7384l(14) (C) of this title, the members of a class of employees at a Department of Energy facility, or at an atomic weapons employer facility, may be treated as members of the Special Exposure Cohort for purposes of the compensation program if the President, upon recommendation of the Advisory Board on Radiation and Worker Health, determines that—*

- (1) it is not feasible to estimate with **sufficient accuracy** the radiation dose that the class received; and
- (2) there is a reasonable likelihood that such radiation dose may have endangered the health of members of the class. (emphasis added).

2. DCAS is charged with the development of dose reconstruction methodology under EEOICPA. Under the Final Rule, it is DCAS' responsibility to determine whether,

*“...it has access to sufficient information to estimate the maximum radiation dose, for every type of cancer for which radiation doses are reconstructed, that could have been incurred in plausible circumstances by any member of the class, or if NIOSH has established that it has access to sufficient information to estimate the radiation doses of members of the class more precisely than an estimate of the maximum radiation dose. NIOSH must also determine that it has information regarding monitoring, source, source term, or process from the site where the employees worked to serve as the basis for a dose reconstruction. This basis requirement does not limit NIOSH to using only or primarily information from the site where the employee worked, but a dose reconstruction must, as a starting point, be based on some information from the site where the employee worked.”* (Emphasis added)

3. The APA places certain responsibilities on federal agencies when adjudicating claims. We assert that petitioning for a site to be included in the SEC, while more complicated, is nothing more than an individual filing a claim for compensation. DCAS is bound to obey the adjudication process under the APA. Otherwise DCAS's conclusions could be considered to be arbitrary and capricious under 5 USC 5 if DCAS,

*[1] has relied on factors which Congress has not intended it to consider, [2] entirely failed to consider an important aspect of the problem, [3] offered an explanation for its decision that runs counter to the evidence before the agency, or [4] is so implausible that it could not be ascribed to a difference in view or the product of agency expertise.*

4. 42 CFR 83, Procedures for Designating Classes of Employees as Members of the Special Exposure Cohort Under EEOICPA states that an appeal can be submitted if, “substantial factual errors or substantial errors in the implementation of the rules” can be established.

### **Issues Petitioners Raised but Were Unresolved or Inappropriately Dismissed**

During the course of the SEC petition investigation, we identified specific issues where we felt that DCAS could not reconstruct dose with sufficient accuracy because monitoring records were inadequate, faulty or non-existent. We also provided documents to support our position and, in some cases, facilitated classified interviews with former workers who had first had knowledge of the situation. Those issue are:

- Large Cobalt 60 source – Building 779 and site wide
- Metal Tritides – Site Wide
- Safety concerns including the possible criticality in the year 1986 and falsification of records.
- Neptunium – Site Wide
- Critical Mass Lab (CML) – Building 886
- Plutonium and other radioactive materials in “cold area” buildings – Buildings 440, 444, and 460.
- Magnesium/thorium alloy plates used in Building 440

These issues are discussed in detail further in this request for review. We will also explain our contention that DCAS misled the Working Group and the Board itself on these issues.

### **DCAS Failed to Review Relevant Documents**

While this issue arose before the vote on the petition by the full board, we lead with it because it affects every other issue raised.

On March 23, 2017 Dr. David Kottelchuck, the Rocky Flats Workgroup (WG) Chair, acknowledged that DCAS had located approximately 400 boxes of Rocky Flats documents in

storage at Los Alamos National Laboratory, but did not review them. Please see pages 36 and 37 of the following report

<https://www.cdc.gov/niosh/ocas/pdfs/abrwh/2017/tr032317.pdf>.

*Two years ago on 3/17/15, the Working Group decided not to ask NIOSH or SC&A to pursue this issue further and to close the issue. And our reasons were the failure of intensive, year-long searches for documentation at the plant and agency levels. This had been going on since 2007. So, it was ten years of looking at data.*

Additionally, it is our understanding that it *is* DCAS's intent to review those boxes, when resources become available, but *only* for documentation related to the presence of magnesium/thorium alloy plates in Building 440. It is our opinion that there very well could be records which would support the petitioners' position on many issues. For instance, there could very well be a follow-up report on the possible criticality in 1986 or more detailed information on tritium production and storage.

While the idea of 400 boxes sitting in storage without review is disconcerting enough, the Director of DOE's Office of Worker Screening and Compensation Support on August 23, 2017 informed the co-petitioner, Terrie Barrie, that LANL is the repository of over **5,000** boxes of Rocky Flats documents, which have languished without review. Ms. Barrie referred to the thousands of boxes of Rocky Flats documents that have yet to be reviewed by DCAS in her public comments that night.

Page 307 <https://www.cdc.gov/niosh/ocas/pdfs/abrwh/2017/tr082317-508.pdf>

Subsequent private conversations with two Work Group members confirmed that they were unaware of the amount of documents which were not reviewed by DCAS.

Because then-Secretary Price did not make a decision on the Board's recommendation, we faxed the attached letter (Attachment 1) to him on September 11, 2017. We asked him to reject the Board's recommendation and award SEC status to all workers at Rocky Flats after December 31, 1983 "...because of DCAS's negligence in reviewing all of the evidence."

This letter should be considered as part of the administrative record and reviewable by the panel. This should not be considered "new" evidence. While it is true that this information that there were 5,000 boxes of document provided by DOE was not relayed to the Board or the Rocky Flats Work Group during the petition's deliberations, this information *was* relayed to the Secretary's office prior to the Secretary making a decision on the petition. We not only faxed the letter before the Secretary made a decision but we also, on October 3, 2017, asked that the letter be posted to the NIOSH Docket 032 (Attachment 2). More than two months have passed and this letter has yet to be posted to the NIOSH Docket.

Please note that on June 19, 2017 a Freedom of Information Act (FOIA) request was submitted by the co-petitioner requesting the unclassified indices of the 400 boxes provided to DCAS by the Los Alamos National Lab. Those documents have not yet been released by DOE. In addition, Dr. Daniel McKeel, Jr., MD, co-petitioner for Dow Madison SEC petition 0079, filed a similar request with the National Nuclear Safety Administration. (Attachment 6)

DCAS's failure to research these aforementioned documents, despite knowing of their existence for many years, and routine dismissal of specific issues raised, demonstrates that science behind this program is not based on a thorough review of records. Therefore, the efficacy of their dose reconstruction methodology for former Rocky Flats workers will be questionable, depending on the size of any one box and how full the boxes are, there are potentially millions of documents that have not been analyzed.

It is quite possible that in the trove of documents there is *at least one*, and likely more, pieces of paper that confirms that magnesium thorium alloy plates were used in Building 440 to modify the rail cars and truck transports. It's possible there is *at least one* document that explains why plutonium or other radioactive materials were present in the "cold" buildings of 444 and 460.

It's possible there is *at least one* document providing evidence that metal tritides were present at Rocky Flats after December 31, 1983. These possibilities are not dreamed up to keep this petition alive; these possibilities are supported by worker interviews and testimony as to being factual, to which DCAS routinely has responded with an institutional bias, wrongdoing, and arrogance which dismissed hard evidence and discredited testimony from site experts, including a senior scientist, who were hands on at Rocky Flats.

NIOSH is knowingly creating dose reconstruction models based on incomplete information, which is likely to result in an inaccurate characterization of working conditions at the site. Thus, all subsequent technical basis documents fall victim to the "garbage in, garbage out" principle. Depending on the size, quantity and quality of each box's contents, it is reasonable to assume that facility information exists to challenge NIOSH's rejection of the SEC. By rejecting the SEC without reviewing facility information, NIOSH has abandoned its obligation to claimant favorability. When the purpose of the SEC classification is to acknowledge absence of sufficient data, a decision to ignore 5,000 boxes of data that may influence the application and outcome of dose reconstruction in and of itself becomes grounds to establish the SEC.

The APA states that a federal agency's decision is made in an arbitrary and capricious manner if that decision,

"...relied on factors which Congress has not intended it to consider, [2] entirely failed to consider an important aspect of the problem, [3] offered an explanation for its decision that runs counter to the evidence before the agency, or [4] is so implausible that it could not be ascribed to a difference in view or the product of agency expertise."

DCAS "entirely failed to consider an important aspect of the problem" by not reviewing the thousands of boxes. DCAS is aware that thousands of boxes full of documents may provide a more robust understanding of the Rocky Flats plant. DCAS failed to evaluate these documents and failed to provide a complete assessment of the evidence to the Work Group and the Board.

## **Pattern of Institutional Bias and Wrongdoing**

After the Rocky Flats SEC petition 0030 was decided on October 3 2007, the co-petitioner filed a Freedom of Information Act Request (FOIA) for all emails related to that debate. A selected group of emails can be found near the bottom of this page, “Emails obtained through FOIA Request”, <http://www.coldwar patriots.org/does-facilities-rocky-flats-colorado>.

For background, SEC petition 0192 was filed on August 23, 2011. DCAS qualified this petition because methodology for tritium exposure was not developed. The original Evaluation Report (ER) was issued on September 5, 2012 which determined that DCAS had sufficient data to reconstruct dose for tritium exposure.

It was discovered, through the documents obtained through the FOIA request, that relevant information was withheld from the Board’s Rocky Flats Work Group, specifically, the number of thorium strikes performed at Rocky Flats during. This was first brought to the Board’s attention on September 18, 2012.

Page 338 <https://www.cdc.gov/niosh/ocas/pdfs/abrwh/2012/tr091812.pdf> Also see attached Power Point Presentation to the Board (Attachment 3)

The revelation that vital information was withheld from the Board was not acted upon by either the Board or DCAS. Because of this inaction, the Alliance of Nuclear Worker Advocacy Groups (ANWAG) filed a complaint with the Health and Human Services’ Inspector General on February 18, 2013. [http://www.eecap.org/PDF\\_Files/ANWAG/2013-2-18\\_ANWAG\\_%20IG.pdf](http://www.eecap.org/PDF_Files/ANWAG/2013-2-18_ANWAG_%20IG.pdf)

Subsequently and, possibly coincidentally, DCAS revised the ER on September 20, 2013 and determined that DCAS cannot reconstruct dose for thorium, U233 and neptunium exposures through December 31, 1983. DCAS admitted that they did make a mistake about the number of thorium strikes they relied on for Petition 0030.

The above information is relevant because it appears that DCAS was also not forthcoming with the Work Group or Board during this year's deliberations. We are not saying that DCAS deliberately withheld information from the Board. However, there were factual misrepresentations especially during the deliberations this year which probably swayed the Board's majority and even Acting Secretary Hargan. The most obvious misrepresentation(s): classified interview regarding the Cobalt 60 source exposures; that exposure to metal tritides was *decided* during Petition 0030; that radiation exposure in the "cold buildings" was *decided* during Petition 0030; and all safety concerns were *decided* during the Petition 0030 deliberations.

### **The Cobalt 60 Source**

DCAS provided an incorrect response to the Board regarding a classified interview that was to take place concerning the large Cobalt 60 source.

During the February 9, 2017 Work Group meeting, DCAS informed the Chair that the current custodian of the source had information on exposures that could only be relayed in a classified interview.

Page 27 2/9/17 transcript.

MR. RUTHERFORD: Okay. Now, I do have to say during that - during our interview with the source custodian, the person indicated that they were a [identifying information redacted] and that they had other exposure concerns that they could not discuss over the phone. Given the status of this petition evaluation I thought it was - you know, we - and I discussed this with both Stu and Jim and we felt it was important to conduct this interview. So we are currently working on setting up a classified - or a secure interview and we would like to have a cleared Work Group Member and SC&A present for the interview as well.

The co-petitioner inquired whether a classified interview was held with the custodian before this meeting. The co-petitioner did not receive a response, however, Member Kotelchuck followed up with this question from the March 23, 2017 meeting:

<https://www.cdc.gov/niosh/ocas/pdfs/abrwh/2017/tr032317.pdf>

Page 76 MEMBER KOTELCHUCK: Yeah, I mean, if I may say, on the cobalt-60, the assertion is that may say, on the cobalt-60, the assertion is that we didn't interview someone.

DCAS's responded with a summary of a completely different, and unrelated, classified interview. It appears that this interview was conducted with a former Rocky Flats employee years before.

MR. RUTHERFORD: Actually, the cobalt-60 source, the person did request an interview. That interview was conducted in a classified setting. The individual was not concerned with Cobalt-60. She was concerned with a tritium capture system that was employed during the production years. She did not identify any situation where exposures could have been received from work with that unit. I can't discuss all of it, but I can give you that much. But, in fact, her interview said she had no issues with the cobalt gamma cell. It was routinely surveyed. We could only come up with two or three of the leak checks, but we did find the complete work package for the removal of the gamma cell and we had no indications there was ever any problems with that.

Even if this was an honest mistake and Mr. Rutherford confused a completed classified interview with a former Rocky Flats employee with the proposed interview with the custodian of the Cobalt-60 source, this response misled the Board to assume the classified interview concerning additional exposures from the source was completed and nothing relevant was discovered. We still do not know what exposure concerns the custodian has.

### **Metal Tritides**

DCAS reported during the March 23, 2017 meeting that they assessed the presence of metal tritides at Rocky Flats.

Page 75 Metal tritides, we actually assessed the metal tritide issue. I actually did get the documents from Terrie. The only period where we initially thought there could possibly be was the mid-'70s time era when some activities were going on. However, when we did classified search on that and discussions, we concluded that this was not a concern during that period. And so we have assessed that and it was reported to the Work Group. And we also gave SC&A the opportunity to rebut that.

We have no recollection of verbal report nor did we locate a white paper on the presence of metal tritides. In fact, we only learned of the possibility that metal tritides could have been at Rocky Flats on March 17, 2015, when Sanford Cohen and Associates made this comment,

Page 188, <https://www.cdc.gov/niosh/ocas/pdfs/abrwh/2015/wgtr031715.pdf>

“...some language that appears that there was some metal tritides associated with what was handled at the facility. And, of course, as we know, metal tritides are a lot different than tritiated water or elemental tritium. And I'd like to hear a little bit more about tritides and how that fits into this idea that really other than the 1984 --- I'm sorry, the August 1974 incident, how does that play out, the idea that some of this might have been tritides?”

DCAS acknowledges that tritium was present at Rocky Flats during its entire operation, yet they only investigated the presence of tritides during the mid-1970s. DCAS failed to thoroughly investigate the presence of tritides at Rocky Flats after December 31, 1983. They ignored a document provided by Jon Lipsky, former FBI agent who led the raid on Rocky Flats. This was an interview conducted on June 11, 1991 and provided to NIOSH. The former worker, who was a chemical engineer, stated, “the tritium site was separate. Due to the ongoing practice of conducting Classified Projects at Rocky Flats, tritium was *produced* and disposed of at the plant, in the area of the 207 ponds.” (Emphasis added)

A criminal charge can be filed against a person who provides false information to the FBI. Both DCAS and the Board chose to overlook this important document. The assumption for dose

assignment for tritium exposure is based upon the 1973 incident. DCAS failed to further investigate whether there was an ongoing process of tritium production, storage (which could be the creation of metal tritides) and disposal.

It also sheds a new light on the March 21, 2006 email shown on slide 3 of the petitioners' September 18, 2012 Power Point Presentation. DCAS obviously had some information about tritium stripping. In fact, it is mentioned on page 22 of the April 7, 2006 ER of the 0030 SEC petition, <https://www.cdc.gov/niosh/ocas/pdfs/sec/rocky/rockyer.pdf>

*“444/445 DU and Beryllium Metallurgy: DU processing operations have included casting and machining. Beryllium operations began in 1958; blanks received from commercial supplier were machined. BE casting ended in 1980. Production plating laboratory began operating in 1981 and ended in 1990. **Tritium stripping began in 1987 and U foundry shut down in 1989.**”*

The explanation given much later was that this was probably a typo and that the process was, in fact, “titanium stripping.”

However, this argument no longer holds water. DCAS would not be interested in titanium. Their only concern is radioactive materials. There would be no need for the author of the email to make an inquiry for titanium stripping. It makes perfect sense to ask for more information on tritium stripping. And obviously, this process was confirmed before the ER of April 7, 2006 was issued.

DCAS failed to fully research the issue of whether metal tritides were present at Rocky Flats. To the best of our knowledge, they did not report their findings to the Work Group, Board or to the petitioners. This violates the Final Rule because despite having information on tritium storage and stripping they neglected to identify the process, duration and location. DCAS also violated the APA because DCAS ignored the evidence before them and did not adequately address the petitioners' concern.

## **Safety Concerns/Record falsification/Record destruction**

Two issues that will permit a group of workers to be included in an SEC is evidence of falsification of records and destruction of records. The petitioners provided evidence of both.

DCAS asserts that Local 8031's safety concerns were fully reviewed and closed out in 2007. However, we would like to point out that the safety concerns discussed in 2007 did not include the possible criticality which occurred in 1986, <http://rockyflatsambushedgrandjury.com/wp-content/uploads/R19861117-TF-Audits-771-774.pdf> or the falsification of plutonium weights on run sheet, <http://rockyflatsambushedgrandjury.com/wp-content/uploads/R1985-087-SC.pdf>

If there was a criticality in 1986 and ignored by DCAS, then it is likely that the methodology to reconstruct dose is woefully underestimated. Likewise, it is likely that if the plutonium weights were falsified, it would not be a stretch to conclude that dosimetry records for that incident were also altered.

Several workers provided examples of dosimetry documents that showed cross-outs and white-outs. One worker had a classified interview which she related that a grievance was filed by the Local concerning using a pencil to record dose.

The petitioners provided a Department of Energy (DOE) document concerning the destruction of records. That document was confirmed to be originated by DOE,

[https://www.lm.doe.gov/land/sites/co/rocky\\_flats/closure/references/199-Rocky%20Flats%20History%20Thru%201-2002.pdf](https://www.lm.doe.gov/land/sites/co/rocky_flats/closure/references/199-Rocky%20Flats%20History%20Thru%201-2002.pdf)

“April 25, 1996 — A moratorium was placed on the destruction of all records at the Site, including records located at the Denver Federal Record Center. No destruction would take place of any records unless approved by the RFFO Chief Counsel.”

In addition, a former worker came forward and testified before the full Board that she destroyed records under orders from her superiors. The worker also agreed to be interviewed in a classified setting.

As is common with DCAS, when it comes to worker testimony (similar to how they treated the sworn affidavits from Dow Madison concerning magnesium/thorium alloy plate shipments to Rocky Flats), DCAS rejected these two former workers account and explained away their knowledge of the practices at Rocky Flats.

## **Neptunium**

The Evaluation Report issued on September 9, 2012 stated that neptunium was handled in small quantities at Rocky Flats. An internet search provided a document which showed that there was a process for neptunium production. This document was provided to DCAS and the Work Group on February 26, 2013, eight days after ANWAG submitted their complaint to the Health and Human Services Inspector General.

Again, seven months after the submission of the DOE document, DCAS determined they were unable to reconstruct dose with sufficient accuracy for neptunium exposure prior to January 1, 1984. This was accepted by the Board.

The assertion that DCAS can reconstruct dose for workers after December 31, 1983 is based on the premise that they can use plutonium bioassay data for this purpose. DCAS had plutonium bioassay results prior to December 31, 1983. If those records were not sufficient then, why are they now sufficient after that date? According to a 2005 DOE document, "Inspection of Environment, Safety and Health Programs at the Los Alamos National Laboratory" DOE determined that plutonium bioassay cannot be used to reconstruct neptunium exposure.

## **Critical Mass Lab (CML) -Building 886**

A few months before the March 23, 2017 meeting, DCAS released their final white paper on the Critical Mass Laboratory, Building 886.

The petitioners consulted with Dr. Robert Rothe, the senior scientist at the CML. He participated in a number of meetings and was interviewed by NIOSH. He voiced a number of concerns with the November 2016 white paper, “Reassessment of Internal Radiation Dose from Sources at the Rocky Flats Critical Mass Laboratory”. For instance, NIOSH focused only on HEUN. He reminded us that CML also had 375 kg of very old Pu because it was rich in Am-241. He also explained that workers would have been exposed to HEUN when there were no experiments being conducted. He said that the CML staff was required to inventory HEUN “which would have exposed workers to 4 months of daily hands on contact with irradiated radioactive material.” He also questioned NIOSH’s assumption that the average experiment lasted 70 minutes. He believes this is a low estimate. He contends that about 15 to 20 minutes would be devoted to the “slightly super and slightly subcritical conditions” alone. It would not have been safe to just ramp it up to just below criticality too fast. He also recalls a few experiments which were “intentionally kept at or near criticality for hours.”

It is important that the panel reviews additional objections to DCAS’s assessment of the ability to reconstruct dose for the CML posted to the NIOSH docket,  
<https://www.cdc.gov/niosh/ocas/pdfs/d32/carroll-043017-1.pdf>

More importantly, page 30 of the November 2016 white paper, “Reassessment of Internal Radiation Dose from Sources at the Rocky Flats Plant Critical Mass Laboratory”,  
<https://www.cdc.gov/niosh/ocas/pdfs/dps/dc-rfpirdcml-r0.pdf>, states,

*“However, NIOSH has found no indication that confirmatory bioassays were performed for employees involved in the clean-up of any of the accidental UNH spills. Fission and activation products, which decay primarily by beta/gamma emission, are not likely in any*

*case to have been detected by bioassay intended to detect alpha particles emitted by uranium or transuranic radionuclides.”*

The Final Rule demands that DCAS, ““...has access to sufficient information to estimate the maximum radiation dose, for every type of cancer for which radiation doses are reconstructed, that could have been incurred in plausible circumstances by any member of the class.”

DCAS failed to obtain the most basic evidence to substantiate that adequate documents are available to reconstruct dose for the workers who cleaned up spills in Building 886.

The petitioners question why NIOSH was unable to locate bioassay for these workers. Was the bioassay protocol violated? Did Building 123, the dosimetry lab, misplace the urine and fecal samples? Were the bioassay records destroyed? And, if fission and activation products can't be detected by bioassay, how does NIOSH plan to reconstruct dose for beta/gamma exposures for these workers?

These questions remain unanswered. And because they are, DCAS has violated the Final Rule as mentioned above.

#### **Neutron exposure to workers in Building 444**

Since 2009, the petitioners have raised the concern that radioactive materials were present in non-radiological buildings. This stems from the Department of Labor's Site Exposure Matrix (SEM) which lists the thousands of toxic substances, by building, in this data base. SEM was developed using approved DOE documents.

As recently as June 12, 2017, plutonium was listed as being present at some point in Building 444. This was presented to DCAS and the Board before the Board meeting in March of 2017. DCAS has not responded whether their dose reconstruction methodology incorporates plutonium exposure for workers in Building 444.

Another recent development was whether workers in Building 444 were monitored for neutron dose. This question arose when the petitioners realized that both beryllium and depleted uranium were present in that building.

The petitioners reviewed the National Institute for Occupational Safety and Health's (NIOSH) document, "Health Hazard Evaluation Report No. 96-0198-2651 authored by John Cardarelli, II, M.S., and asked whether it applied to Rocky Flats Building 444, since that is where the majority of the depleted uranium was located. The Cardarelli report states, "For example, an equal number of neutrons can be produced with either a large amount of low-enriched or depleted uranium ( $^{238}\text{U}$ ) or a small amount of highly enriched uranium ( $^{235}\text{U}$ )." We wondered, at the time of our inquiry, whether workers in Building 444 were monitored for neutron exposure.

DCAS responded in an email to the Work Group on 3/10/2017 (Attachment 4). DCAS stated, "A search of the Site Research Database (SRDB) has found no documents indicating that there was a neutron monitoring program in Rocky Flats Building 444." They also stated that they located a little more than 60 documents in the SRDB related to Building 444 but none were relevant.

An advocate for this program reviewed the Comprehensive Epidemiologic Data Resource (CEDR) for Rocky Flats. Her analysis shows 874 records for workers who were monitored and had neutron exposure between 1984 and 1989. At least 64 of those records showed 100 mrem or more of neutron exposure. It is obvious that there was some kind of monitoring program for the workers in 444. (Attachment 5 provided to the Board March 23, 2017)

DCAS's email of 3/10/17 also states, "***Therefore, it would take about 1,000 kg of DU in intimate contact with Be to give a dose rate of 1 mrem/hr at a meter.***"

Rocky Flats had an annual inventory of over 300 metric tons of DU between 1984 and 1988, with three of those years exceeding 400 metric tons annually. The petitioners believe that it was likely that at least 1,000 kg of DU was present on any given day.

<https://www.osti.gov/opennet/forms.jsp?formurl=document/press/pc19.html>

It is our opinion that DCAS glossed over this evidence, too, because it did not fit in with their accepted dose reconstruction methodology. Again, violating the Final Rules and APA.

### **Magnesium/Thorium Alloy Plates**

This is another long-standing issue that has yet to be resolved satisfactorily. This issue originally arose from fourteen former workers from the Dow Madison Company who offered sworn affidavits that truckloads of this material was shipped to the Rocky Flats plant. DCAS, in 2007, suggested that the Dow workers were mistaken and that the shipments actually went to the Rocky Mountain Arsenal (see second email attached to ANWAG's letter to the IG).

One former Rocky Flats worker came forward in 2013 and alluded that special, classified materials were used in the Modification Center located in Building 440. The worker was willing to be interviewed in a classified setting, however, we do not know if this interview took place or what information this worker provided to DCAS. Please see details in Attachment 6 as provided by Dr. Daniel McKeel, Jr., MD, co-petitioner for Dow Madison SEC petition 0079. This information was provided to the Board on March 21, 2017 prior to the Board's decision on March 23, 2017 to deny expanding the SEC years for Rocky Flats.

As noted above, DCAS admitted that there were approximately 400 boxes of documents located at LANL which might contain information on magnesium/thorium alloy plates usage at Rocky Flats. Yet, despite knowing of these records for years, DCAS has yet to review them and doesn't plan to do so until January 2018.

### **Additional Evidence of Ignored or Rejected Documentation**

Former Rocky Flats workers advised NIOSH and the Board during both SEC petition discussions about inadequate air monitoring and reading of dosimetry badges. We provided DCAS and the Board during the evaluation of the 0192 petition numerous documents from government agencies including the Government Accountability Office and the Defense Nuclear Facilities Safety Board confirming the 0030 petitions and the former workers' testimonies that

the Rocky Flats monitoring programs which were intended to protect the workers were deficient and inadequate, <https://www.cdc.gov/niosh/ocas/pdfs/d32/barrie071813.pdf>.

The former FBI agent who led the raid on Rocky Flats in 1989 provided numerous documents to NIOSH. He explained, in an email to NIOSH dated (Attachment 7) that,

*The document in question was released to the public through the hearing held in 1992 by Subcommittee on Investigations and Oversight of the Committee on Science, Space, and Technology (Chairman Howard Wolpe), U.S. House of Representatives, One Hundred Second Congress, Second Session which resulted in the report entitled Environmental Crimes at the Rocky Flats Nuclear Weapons Facility.*

In addition to FBI interviews, the former FBI agent provided other documentation to support the SEC petition. Dominic Sanchini was the President of Rocky Flats from 1986 and through the time of the raid. He kept a contemporaneously written diary on the day-to-day activities at the plant. Excerpts of this hand-written diary which supported our position were provided to NIOSH.

<https://rockyflatsambushedgrandjury.com/dominic-j-sanchini-rockwell-president-rocky-flats-1986-1989-diary-book-1-13/>

The documentation was obtained from government sources yet, inexplicitly, this and other evidence located in the Site Research Data Base has been ignored by DCAS and the Board.

We strongly recommend that the panel review every meeting where the Rocky Flats workers provided comments and documentation to the Board.

## **Summary**

Acting Secretary Hargan detailed seven Findings on which he based his decision to deny expanding the SEC years for Rocky Flats claimants. Below is our response to the first five Findings.

1. “The potential sources of internal radiation that NIOSH investigated during its evaluation of the proposed class included exposures to tritium, neptunium, thorium, uranium-233, and fission and activation products of the Critical Mass Laboratory (CML). The modes of exposure for the radionuclides of concern were ingestion and inhalation.”

**Petitioners’ response:** DCAS neglected to inform the Acting Secretary that they also investigated Cobalt-60 and magnesium/thorium alloy plates. Because DCAS failed to investigate the thousands of boxes of documents located at LANL, these two issues have not yet been resolved.

2. “NIOSH concluded that tritium doses from the on-site, environmental release in 1973 can be reconstructed using the bioassay results collected after the release. Bioassay results from potentially exposed individuals can be used to reconstruct their tritium doses for the time period from January 1, 1974, through December 31, 2005.”

**Petitioners’ response:** DCAS was aware of the petitioners’ issues of the presence of metal tritides and on-site production and storage of tritium. DCAS failed to fully explore these issues. It failed to review the thousands of documents located at LANL to determine whether those documents would provide a better understanding of the presence of tritium at Rocky Flats. Therefore, it is impossible to tell if their dose reconstruction methodology for tritium exposure is sufficiently accurate.

3. “Likewise, NIOSH concluded that doses from fission and activation products at the CML can be reconstructed using workplace air monitoring results coupled with information about the power level and duration of CML experiments.”

**Petitioners’ response:** DCAS completely ignored Dr. Robert Rothe’s testimony and oral history of the experiments which were conducted in CML. DCAS normally substantiates the majority of their dose reconstruction methodology for Rocky Flats based solely on bioassay results. For those exposures which do not have bioassay information, SEC status was granted (neutron, neptunium, thorium and uranium-233 exposures, e.g.). Yet, for CML, DCAS asserts that the limited air monitoring documentation (page 24, <https://www.cdc.gov/niosh/ocas/pdfs/dps/dc-rfpirdcml-r0.pdf>) is sufficient to reconstruct dose for the exotic fission and activation products produced during criticality experiments performed

by CML between December 31, 1983 and the last day radionuclides were present in Building 886.

4. “The principal sources of external radiation doses for members of the proposed class were evaluated in the SEC-00030 RFP evaluation report. SEC-00030 concluded that all external doses except those for neutrons could be estimated with sufficient accuracy. Therefore, with respect to SEC-00192, NIOSH concluded that there is no need to again assess external exposures and dose reconstruction feasibility at RFP.

**Petitioners’ response:** Cobalt-60 is a gamma emitter. Questions remain about the other exposures the source custodian offered to share with DCAS. We also raised whether neutron dose is assigned to workers in building 444, where tons of depleted uranium and the fact that plutonium was present.

5. “NIOSH also concluded that operations that posed significant potential for internal and external exposure to neptunium, thorium, and uranium-233 had ended by December 31, 1983. Consequently, there is no need to reconstruct dose for the time period.”

**Petitioners’ response:** This is not accurate. DCAS, in fact, identified one additional operation after December 31, 1983. DCAS also asserts that they can capture neptunium exposure through plutonium bioassay. We supplied a 2005 DOE document, “Inspection of Environment, Safety and Health Programs at the Los Alamos National Laboratory” where on Page 37, DOE found that “Standard plutonium controls, such as plutonium bioassays, would not be adequate for neptunium but were not evaluated and/or modified for this operation.” The panel should also note that the SEC petition for the Los Alamos National Laboratory was granted through 1995, in part, due to the inability to reconstruct dose for neptunium.

## Conclusion

DCAS has violated both the Final Rule and the ACA. They failed to identify all processes that occurred at Rocky Flats, locate necessary source documents needed to develop a method to reconstruct dose for each and every cancer. They have ignored evidence submitted to them or provided an explanation as to why they rejected evidence in a way that ***"...is so implausible that it could not be ascribed to a difference in view or the product of agency expertise."***

The petitioners respectfully request that the denial to expand the SEC class beyond December 31, 1983 be voided and that the class be expanded through the date the Rocky Flats Plant closed.

Sincerely,



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Charles Saunders

Rocky Flats SEC petitioner



Terrie Barrie

Rocky Flats SEC co-petitioner