Dragon, Karen E. (CDC/NIOSH/EID)

From: Stephanie Carroll
Sent: Sunday, April 30, 2017 11:46 PM
To: NIOSH Docket Office (CDC); James Melius; Katz, Ted (CDC/NIOSH/OD); Rutherford, LaVon B. (CDC/NIOSH/DCAS); Phillip Schofield; Munn, Wanda I. (CDC/NIOSH/DCAS); Loretta Valerio
Subject: Re: Critical Mass Lab Evidence overlooked

National Institute for Occupational Safety and Health
Docket Office
1090 Tusculum Avenue
Cincinnati, OH 45226
Subject: Docket #032 Rocky Flats Plant.

Please see attached comments submitted on May 22 below. Under FOIA I am requesting all documentation electronic or otherwise related to the review and response to my comments. I would also like to know when they will be published.

Thank you

Stephanie Carroll
Atomic Worker Advocate
DEEOIC Intermediary Advisory Board Member

From: Stephanie Carroll
Sent: Wednesday, March 22, 2017 11:45 PM
To: NIOSH DOCKET; James Melius; Ted Katz; LaVon Rutherford; Phillip Schofield; Wanda Munn; Loretta Valerio
Subject: Critical Mass Lab Evidence overlooked

Stephanie Carroll

March 22, 2017

National Institute for Occupational Safety and Health
Docket Office

1090 Tusculum Avenue
Cincinnati, OH 45226
Subject: Docket #032 Rocky Flats Plant
To Whom It May Concern:
Please post this email along with the attached documents regarding Rocky Flats SEC petition 0192 to Docket #032. Please also add to the discussion papers. My contact information can be shared. Also please distribute to the entire Board.

Public Comment March 22, 2017

Thank you for allowing me to comment on the Advisory Boards evaluation of Petition SEC 00192 On October 17th2013 the Board extended the investigation for SEC 00-192 from 1983 until 2005

Note: this fact seems to have changed over time with no explanation. Dr. Kotelchuck expressed his understanding that the investigation was through the 80s in the interview with the Lead Scientist

The February 9th 2017 WG meeting published no transcript for review by stakeholders, and a vote was taken by the WG not to recommend the Rocky Flats SEC expansion. I ask that you table the vote by the full Board until a thourough review of the 35 boxes of documentation of the historical records at the CML have been properly investigated.

During the July 14,2015 WG meeting the Senior Scientist of the CML joined the discussion and expressed strong disagreement with the conclusions of the NIOSH White Paper and requested a personal interview that was conducted and recorded on October 13th 2015. ***See Link to Dropbox containg full recording***

The WG met on October 28th 2015 ***See review summary of investigations outstanding below***

November 19th 2015 the WG presentation for the Full Board was written without resolution of the outstanding issues noted in the October 28th WG meeting.

November 30th I commented with documentation submitted in person to the entire Board, on issues related to the inability of NIOSH to reconstruct Dose. I requested that Ted Katz add the material to the Docket and asked for a response to the issues presented. No response was forthcoming. Did the WG investigate my comments and review the documentation submitted? ***I am adding the documents to the Dropbox link provided***

January 2017 the reassessment CML paper was written and too many unsupported assumptions were made at the direct contradiction of the Site Expert with, hands on, documented knowledge of the CML.

A thorough investigation of the CML was not preformed.

Concerning the Recorded Interview of the CML Lead Scientist See Notes

Lead Scientist: "No one can ever know the radiation levels at the CML, too many variables and insufficient documentation preclude any attempt to do this. Any attempt to define or even bound experimental power levels, neutron fluxes ,gamma exposure from fission fragments or the unavoidable in- growth of unknowable amounts of neptunium 239 has no defensible grounds."
We used different methods of adding reactivity ,by adding more U solution or bringing two split tables closer together. or adding water reflector. and moderator. Every Uranium experiment started with a bath of isotropically ? nuetrons from an external neutron source the sourses were usually 10 to the 7th power nuetrons per second at a close proxinity to the fuel itself even before the fuel gets admitted. originally polonium and BE later we used Californium 252 sources.
Note: After this, he explains the experiments See the recording.
Interviewer: Said: The TLDs would record any gamma exposures
Interviewer: As far as bounding the neutron fluxes and in growth of neptunium and plutonium, this is what we are trying to do with your help.
My statement is that any future white paper must acknowledge that the desired dose reconstruction at Rocky Flats plant could never be known with any reasonable degree of accuracy. The assumed conditions are unlikely to have been the case.
PU metal has not been considered properly even in my book. There were two major incidents. A hemishell metal cylinder completely decomposed (PU Hydride) discovered after some time opened under downdraft table. PU metal cylinder popped open because of water vapor.
The Criticality alarm was shut off during pre - run checks, using Neutron and Gamma Sources, including Cobalt 60, to check instrumentation. Our experiments were designed to make the building alarms go off. We did not want the whole building to be evacuated.
Strip charts were used to tell us if the system is producing more Neutrons than they were losing. Our goal was to grow exponentially until we were **supercritical**. Neutron growth rate would change as we added and removed reactivity. We transcribed the strip chart info into the Log Books.
The Neutron Proportional Counter was kept on the floor under the reactor.
We never new the measurement of the super-criticality levels
Interviewer Question: Can you assume that the neutron flux is fairly uniform in the annular tank.
Interviewer Answer: Absolutly not! We could have a prompt criticality in a region of solution.
The idea was put forth to blend the HEU solution with DU solution for disposal to Savannah River but the concern was that a region of the new solution could have a prompt criticality. This is another reason why you can not reconstruct Dose.

I am in the process of uploading the audio and having problems. I will send in a separate email. In the meantime please review the large documents on the drop box link provided below... Thanks

Review and Summary of investigations outstanding.

See Transcript of the Oct 28, 2015 WG meeting after the interview with the Lead Scientist whom indicated that 35 boxes of documents were sent to the LANL. ***See attached Index and description of the documents created by the Lead Scientist and given to me.***

We will

- Lavon Rutheford (LR): Will search for more documentation on power levels...
- LR: Will retrieve worker's personal bioassay, lung counts, for potential exposures in the CML
- LR: Will research the Site that the HEU had been shipped to for activity concentrations.
- LR: Will Identify product levels generated by other criticality experiments preformed throughout the complex
- An interview was conducted with a post 83 RCT the week before.
- LR: "Our assumption was always that there was little potential for airborne internal exposures to contaminants based on operations and routine monitoring".
- The RCT had issues with this assumption and provided names of coworkers. *Was a Summary of the Interview provided?*
- LR: We have some air monitoring data from the facility but are looking to validate or refute the RCTs testimony...
- LR: We will be interviewing technicians and RCTs that worked during that era
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- LR: I will report back after next week's visit on the research of the 35 boxes and obviously, SC and A and the WG will want to attend during the review of the boxes. *Did they attend and review the documentation?* ***See attached: CML Index and detailed description of contents***
- LR: We will be looking for the Log book recordings of the strip chart recorders. *Note: They were not used in the Power level assumptions*
- *Chairman Kotelchuck asked if we have the Badges* LV: responded that they would look for personal documentation to verify monitoring. ***See Public Comments TLD investigations submitted to the Advisory Board***
- Chairman Kotelchuck: expressed relief that there was a transcript of the lead Scientists interview and that the WG would be able to review them. ***See attached Recorded Lead Scientist NIOSH interview***
- Chairman Kotelchuck stated that the criticality occurrences would make it difficult to assess neutron exposures. *Note: The Lead Scientist agrees!* ***See: attached Summary interview statements transcribed "super criticality could not be measured"***

Concerning the Cobalt Sources

- Phil Schofield: Asked, How were the Sources stored and packaged, encapsulated? What were their age? This will help determine chance of leakage. *Note: Gamma and Neutron Sources were used during pre runs in the CML while the criticality Alarm was turned off. They were used to intentionally create a critical field to test the instrumentation in the CML. The Alarm was turned off so that the Building would not be evacuated.* ***See attached Recorded Lead Scientist NIOSH Interview 1:00***
- LR: We have a good history of when material was brought in and what was stored in the facility up until 1989. *Note: This statement was made erroneously. The investigation is requested by the Board to include the time period up to 2005. The Lead Scientist stated that he received old lot PU from LLNL that was never documented anywhere...*
- *Note: A Cobalt 60 source was found in a cabinet, in room 125. WG asked about the Building it was found in.*
- LR agreed to report back to WG the building associated with room 125 cabinet that held multiple sources including Cobalt 60... NIOSH does not know the size of the source.

- LR says you cannot perform fixed contamination surveys on the 600 curie source because the background is too high. Can only do smear tests for loose contamination.
- LR has drawings of it and the irradiator that it was enclosed in. *Were they provided*?
- Chairman Kotelchuck asks if there is documentation of leak checks.
- LR: "We will see if we can generate some of those"

Sincerely,

Stephanie Carroll
Rocky Flats Worker Advocate
CML Lead Scientist Authorized Rep under EEOICPA

Stephanie Carroll
Atomic Worker Advocate
DEEOIC Intermediary Advisory Board Member