Niosh meeting

Terrie, Mark, Stu, Jim,

Terrie says "I'm gonna let Stephanie take the lead on talking about the Criticality Lab, since she's been working with Dr.

Stephanie: Yeah I also have a question about the Tritium exposure one of my clients who has since passed did an affidavit describing tritium work that he did. And he felt that his monitoring wasn't sufficient – right before he passed away, he told me that he was working I think it was in 776 repackaging something that had tritium exposure and he called it a "nemo". He was repackaging it from a drum. He described it as popping a bunghole at the top. The bubblers were 30 feet away from him but they wouldn't go off often, even though he knew he was being exposed and it was under a downdraft hood that he was doing this work so I wanted to know what is a nemo and what does it have to do with tritium?

Joe: I can't] answer that. This is Joe. That is a sensitive application.

Stephanie: Ok, so if it was tritium, does that mean it gets ignored in the SEC evaluation? If it does have something to do with tritium does that mean it's not evaluated – if we can't talk about it?

Joe: No no I think the tritium source as far as a source term would need to be characterized and reflected in any dose reconstruction I'm just saying that getting into what it is, you know, we can't do that. But certainly as a source for tritium, that would need to be characterized and reflected and anything that niosh would do in dose reconstruction – that's not the issue there.

Stephanie: So anything to do with a product or that thing, whatever it is, that's already in the doe reconstructions?

Joe: I have to defer to niosh I'm saying that certainly as a source of potential tritium exposure that would have to be considered.

Stu: Yeah this is Stu and it would probably be better if were able to be here for the research on that. For instances of shipping containers being opened and some tritium being present, the opening of the container. I'm not real clear on timeframes I'm pretty sure after the 73 event when they had found contamination around the plant of the environment. They instituted a number of monitoring processes to watch out for things like this and they didn't see some tritium sometimes and I believe our methods incorporate that into dose reconstruction.

Stephanie: Now if other workers tell me about exposure to these in different areas of the plant, then how will we know that it is being documented with dose reconstruction if it's something that can't be discussed

Joe. Levon and I both have clearances to access any information that would be necessary so I think when Levon is available he and I can consult and he would be able to look into it.

Stephanie: If I have other issues with that how will I be able to communicate that with someone?

Joe: Well I think Levon is the natural point person because both the lead person for the SEC process at rocky flats as well has the necessary clearance to access whatever information would be necessary. And this is not to say that's what's reflected but in terms of follow up I would think he'd know _ I'll defer to Stu – but I think he'd be the natural person to contact

Stu?: I think the issue here is that yes, there, on occasion was the potential for tritium exposure at rocky flats and does our approach suitably capture that – would be based probably on monitoring results that were collected at the site from 73-4 time period in particular. Monitoring results that were collected without a detailed discussion of source term.

Stephanie: It just makes it more difficult for us because when we're doing our research, we're trying to find well where are the other areas that perhaps tritium was located that people were not monitored for and we don't know if you have added that to the dose reconstruction method. But I could talk to Levon too about some of those other issues with tritium.

Joe: That might be stretching my knowledge of our research at Rocky to get into that very far.

Stephanie: Okay. Thank you. And is it okay if I [share a couple of documents from workers].. One of the things that I have is an April 3rd, 1984 document written by who was a senior radiation monitor and he discusses an incident that happened in 707 annex plenum, it was pretty significant we have 75,000 counts per minute found at the height of I think it's about 6 workers. Anyway, at the very bottom he says March 4th 1984, midnight shift following incident, filled out reports for told me to through them away – said would fill them out. So this I guess would be addressing the documentation that perhaps wasn't reliable, because was not party to the incident and did not want this report to be official. And what I have is a typed letter that wrote for his own records so that he could remember the incident and also document that who I think might be a site expert – I don't know – that's concerning to me that he would say, in essence, "destroy that record – I'm gonna have someone who wasn't there write it." So that's one thing I have.

The other is miscellaneous issues brought up by radiation monitors, and that was written January 25th, 89. This was brought by the union and written by union at the time. So I guess he must've had a meeting with the monitors but he says (they're just numbered): "Lack of probes, cables and surgeon gloves; training inadequate for supply breathing air; also inadequate OJT training; new instruments not being demonstrated to monitors; still no safety meeting in 371; major problem with lack of communication between company and union - example: restart of 771 on midnight last night"

This was dated on January 25, 89 so I guess restart, but hadn't had good communication. (Continuing with list)...

"Building indoctrination and walkthroughs not being done – who does it? Use of coleman lantern filament to proof check equipment and, suggestion that radiation monitors who so desire to be given opportunity to test out a new certification program without attending 3 weeks of classes."

Those are just some of the issues that the monitors had, and one or two more documents:

I have a date December 10th 1991 an air sample direct alpha counting system report for 707. What I found interesting in this report, it looks like it was run by a computer and shot out, so what I'm noticing is the date of the run was 5-12-91, May 12th until June 12th. But the date and time of the count was December 10th 1991 so the count had a pretty big lag time there. I also noticed the airhead locations are listed. The one that was an outlier – it was pretty high: 565.64 – an automatic note was put on here that says recount filter. So it looks to me like whenever there was a high count or an outlier, they would recount it but recounting it means they're gonna be recounting it 5 or 6 months after they even took the reading.

And then one more, it looks like . took a group to a few different sites to do a lung counter inter-comparison study. And I have the results of that for his count. And it isn't consistent. So, amongst all the sites, it looks like the lung counters are inconsistent, so I have that. And then, are you guys ok there?

Joe: Well Stephanie I think if you want to have all these issues addressed, you'll need to provide all this stuff to SCNA and to Baumer. We can't address all this stuff on the phone today.

Stephanie: Ok. Well the other thing I have is an affidavit for r that he turned in when he did his other affidavit. It includes incidents that happened until 1-13-88 in 771. Many many incidents and a list of production material that includes neptunium, plus the OR alloy was being worked with until 89 and I believe that's where some U2-33 would've been still located on site and in production.

The other issue is . He was a criticality mass And I have some of his –of course I think you guys have had the technical useful history of the critical mass lab at Rocky Flats turned in, I think Terrie did that.

Joe: Yeah, when it was first published.

Stephanie: So I have a copy of that book and some of the things it does leave out is any reference to actinide and daughter products and fission products from the highly enriched uranium, uranyl nitrate, that he was working with for so many years. And that's I think my big concern because it wasn't discussed much what was happening at the cml. I've interviewed him, I have all my notes from my interview. He was saying that he was creating these fission products that were remaining in the uranyl nitrate for the whole life of the time that they were in those tanks. And he was actually adding fission products every time he would do an experiment. None of those fission products are really addressed in the waste stream that came from the cml, and also just monitoring the workers for those fission products and that includes strontium90, cesium, yttrium, and I had a whole list of fission products that came from reactor fuel. And the other things that I noticed were later on when they were emptying out the tanks they were using FL-10 containers. Well I just learned that those FL-10 containers were used over and over again. So I guess they were being delivered and then brought back to be used over again. And I'm concerned about the leftovers in those FL-10 containers and of course all of the packaging, transport and the fact that all of those fission products were in that uranyl nitrate. So the uranyl nitrate in those 9 or 10 tanks that he had. It was different than the other uranyl nitrate on site. And what I'm wondering is has that been addressed, and also the daughter products and actinides from all that – has that been addressed in dose reconstruction?

Joe:Well I'm not particularly [versed?] in the details about Rocky flats research. I would suspect that the inventory of fission products would be almost vanishingly small from experiments that ran essentially at

zero power, meaning there were not that many fissions going on. But I'm speaking just off the top of my head now. And I haven't really researched that. And actinides would be the same way it just wouldn't generate enough to be dose-[?] consequential.

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