

Conference Call - October 21, 1960

Participants: T. B. Conner, R. E. Cunningham, D. I. Walker
George Smith

- Q. What areas of mill had Kerr-McGee not surveyed where they had high readings?
- A. Yellow Cake sample preparation room during operations and the second Yellow Cake packaging area during Yellow Cake drum sampling preparation. You were right in that we did not specify these areas but they are implied between the results given by the licensee in their survey and the samples which he had collected and included in Appendix B, page 3.
- Q. None of the areas referred to - Item 18 of the report - include the sampling Yellow Cake drum area and the area where they were preparing Yellow Cake samples?
- A. He said they definitely were not taken during this time.
- Q. He can testify to that?
- A. Sampling of Yellow Cake materials done at 3 o'clock in the morning and no samples had been taken at that time.
- Q. Is the sample taken from the barrel in Yellow Cake sampling preparation room?
- A. No. It is done in the sample packaging room right after they package it.
- Q. The place they did not take samples were inside the Yellow Cake packaging room - picture No. 11?
- A. No sampling done in room 11. Additionally, what we are saying

is they have done no sampling in the final product packaging area during that time when they took their Yellow Cake sampling of the drum. They do their sampling early in the morning and they have done no sampling during that period.

Q. Is that the place the man wore the respirator?

A. In the packaging room?

Q. Either room.

A. Yes, they did wear respirators.

Q. If this man was wearing a respirator, all bets are off unless somebody else was being exposed.

A. Par. 34 says man did not wear respirator.

Q. The sentence before that says the man wore his respirator, but this was observed in June whereas the survey that you took was done August a year ago. So we don't really know whether he was wearing a respirator when you got the high numbers or not. I mean we are left with an inference, which is against us. The only time an inspector observed this man making a sampling he was wearing a respirator.

A. He referred me to paragraph 21.

Q. On this same question, let's go back to Appendix E. - on the breathing zone sample taken at the Yellow Cake packaging area.

A. We have one breathing zone sample in Appendix E and it shows an exposure of 41×10^{-11} .

- Q. Was the man on whom the breathing zone sample taken wearing a respirator at the time the sample was taken?
- A. Yes, as stated in paragraph 24. This referred back to par. 18 of the report.
- Q. Does Kerr-McGee show exact location, repeats, and duplicates?
- A. We have a copy of their _____. The specific area referred to here is their crushing plant. Crushing plant sampler placed near primary crusher at operator's breathing level. On January 27, 1959 there were three samples taken in crushing plant of 15 minutes each - samples 1, 2 and 3. Presumably all at the same spot.
- Q. He said this was a breathing zone sample?
- A. No breathing _____.
- Q. Was it in the area of operator? My question boils down to this - at what point does this become a breathing zone sample? Was this following an operator or was the sampler stationary just at the breathing zone level?
- A. ~~It~~ All stationary - not taken where the operator was. On Table 18 there were 16 samples taken -- 3 on June 27, 3 on March 15, 3 on April 15, 3 on June 17, 3 on August 17, and 1 additional sample - 24 hour sample - on December 27, 1958. 15 of the samples were each 15 minute samples and 1 was a 24 hour sample.
- Q. You did say that in the first survey presumably these samples were all taken at the same location? Am I correct that all 16 samples were taken at the same location?

A. He was referring to the statement at the bottom of par. 17 where it says "places the pump in a predetermined area, sets the time at 15 minutes and returns at her convenience to collect samples." There was no way of knowing whether these 16 samples were taken at same location or at series of locations.

Q. Is there any explanation in their data as to why they made five samples in the drying room?

A. Only this -- again they took a 24 hour sample on December 20, 1958 and 15 minute samples each - 2 on April 15, 1959 and 2 on August 17, 1959. There is also a ~~misprint~~ notation here on the two dates - March 10, 1959 and June 17, 1959, no samples taken at this time, on each of those two dates.

Q. He doesn't say why.

A. No. I would guess the time a girl has to spend on it determines how many samples she will take.

Q. Let's jump down to Yellow Cake packaging area. Was there a 24 hour sample on that one?

A. There was a one 24 hour sample.

Q. Presumably we have one sample where they include packaging and sample operation.

A. On December 18, 1959 they took a 24 hour sample.

Q. Was that the high one?

A. Yes. This was the highest one. It was taken on December 18, 1959.

A total of 2.85×10^7 milliliters. The uranium was determined to be 1.12×10^{-10} microcuries per milliliter, and this was

determined by gross alpha counting. He is implying if you have that much material on a sample paper there is no telling the amount of self-absorption. There was that one 24 hour sample.

Q. Is the 24 hour aspect of this weighted into the averages taken?

A. Yes.

Gist of following discussion -- Averages are of all 16 samples.

Q. Is the 24th sample the highest sample, doesn't it give it an improper weight?

A. No.

Q. Reason for cessation of surveys after August 17, 1959.

A. They were closed down from October to February last year -- installation for new process for vanadium. They had one heck of a time getting their process in a workable condition. Spending all their time trying to get their process developed. This is ^{why} ~~what~~/they did not survey from October to June.

Q. Who said that?

A. Frank Hanagarne.

Q. Do we have any indication of type of surveys which could be conducted in 1959. Are they making them by the book now or single facts.

A. (George Smith) On my last trip down there two weeks ago I got the impression from Harris they had taken some air samples outside the mill proper - the type of survey they were making in June when we were there. Hanagarne had more or less implied

that it was the same as they had been doing. He also in the report stated they were planning on taking samples outside the mill. They were going to try to determine amounts of licensed material released to unrestricted areas during this June 6 survey. Whether they did or not I have no idea.

Q. Did they take these beyond the mill proper?

A. I don't know.

Q. Back to other question -- when they started the new surveys in June, were they more ~~ak~~ complete than _____? Your impression was that they were continuing the same old routine?

A. I have no positive statement. This is just an impression.

Q. Why did you feel the nurse was incompetent to make surveys?

A. I personally have never said the nurse was incompetent. My feeling was not that she was not qualified. My feeling is, as I expressed in letter of transmittal, it appeared that..

Q. (Conner) Let me state it for you -- your feeling is that the ^{given} survey program is not ~~giving~~/the attention needed and the nurse did it in her spare time.

A. (George Smith) The reason for my recommendation in No. 2 _____ is so we can get away from this halter skelter sampling -- make one person responsible and this be his major job. I feel compliance program is an adequate job for either person.

Q. Did you have anything in your notes about air cleaning equipment these people might have? Filtering prior to discharge into the atmosphere?

A. I don't have it in front of me. I think most of the dust collection equipment is pointed out in first report. We will check it.

Q. We have to be able to show that they might be able to release quantities in excess of Part 20 in unrestricted areas.

Regarding the respirators -- apparently the men working are instructed to keep their own respirator clean and told to replace filters periodically. The implication is they are not checking on men. Did they indicate any type of positive program -- do they ride herd on them?

A. No, not in any way other than stated in par. 24.

Q. Do you have the exact samples packaged?

A. Yes, ~~185~~ 185 packages.