



NIOSH Outreach Program Project Workshop on IAAP Technical Basis Document

Date:

July 29, 2004

Meeting with:

A workshop was arranged with the assistance of University of Iowa representatives from the Burlington Atomic Energy Commission Plant – Former Worker Program to assemble former workers with technical expertise to review the Iowa Army Ammunition Plant (IAAP) Technical Basis Document (TBD). The goal of this workshop was to elicit information based on worker's experiences on the site through review of the TBD and to draw upon the collective memories of the experts in their respective areas.

Attendees:

The following are those attendees who elected to sign in of the approximately 15 former workers and survivors who attended the meeting. Some chose not to sign in to protect their privacy and anonymity.

Jack Polson	Kenneth Kirkenslager
Lasca Yerington	Thurman Huffman
Paula Graham	Vaughn Moore
E. D. Webb	Homer L. Ikerd
George Fish	Carl L. Jackson
John Stimpson	Glen Roberts
Sivert Iversen	
University of Iowa representatives attending:	
Laurence Fuortes	Marek Mikulski
Kristina Venzke	Daniel McMillan

NIOSH and ORAU Team Representatives:

Timothy Taulbee – National Institute for Occupational Safety and Health (NIOSH)/Office of Compensation Analysis and Support (OCAS)

Mark R. Rolfes – NIOSH/OCAS

William Murray – Oak Ridge Associated Universities (ORAU)

Melissa Fish – ORAU

Mark Lewis – ATL International Inc.

Dawn Catalano – ATL International Inc.

Proceedings

Mr. Lewis opened the meeting at approximately 10:25 a.m. He welcomed the attendees and thanked all for giving their time to contribute to the important goal of the session. He explained that worker input would be used to supplement the Iowa Army Ammunition Plant Technical Basis Document (TBD). He said the input was critical for accuracy and completeness in describing the daily operations and practices that each person was involved with as part of their duties at the plant. Mr. Lewis then thanked the University of Iowa representatives for their assistance in bringing everyone together. He expressed gratitude and admiration for their



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dedication to the project and to the people it was designed to help. He then introduced Timothy Taulbee and Mark Rolfes from NIOSH.

Mr. Taulbee also thanked everyone for coming and said that he looked forward to hearing about personal experiences to help in developing a better document. He expressed concern about the possibility of classified issues coming up in discussion and he offered to do personal interviews in a secure setting at a later date if necessary. Dr. Fuortes (University of Iowa) immediately objected to the implication that conversation should be guarded, and encouraged the attendees to be as candid as possible within the limitations of their clearance level. Mr. Milkulski added that participants should explain what their exposures have been as accurately as possible, and it would be better to err on the side of saying too much. He said it would be contrary to the intent of the meeting if anyone was to hold back information.

Mr. Lewis asked everyone to introduce themselves. He said that no one would be quoted by name, but that their input is crucial as experts in their fields. He said the idea was to stimulate collective memories, which would jog recall of specific incidents. When the introductions were completed, Mr. Lewis gave an overview of the day's agenda. There would be a brief presentation followed by small group discussion. Mr. Lewis acknowledged that this may be an emotional and upsetting topic of discussion, but he asked that all attendees try to keep anger in check so as not to interfere with NIOSH's and ORAU's ability to document people's input. Mr. Lewis then asked if everyone had had an opportunity to review the TBD. He asked the participants to bear in mind that it was written for a specific target audience of dose reconstructors, and said they should not to be discouraged if they find the TBD difficult to understand. He stated that NIOSH and ORAU are changing the way the TBDs will be written in the future, including getting worker input prior to publication.

Mr. Lewis then turned the meeting over to Mr. Murray for his presentation. Mr. Murray explained ORAU's relationship and responsibilities as a contractor to NIOSH and its role in the Worker Outreach Program. He said that the team has been to numerous meetings at Department of Energy (DOE) sites over the past several months, but that the special workshop session today would be particularly useful to update the TBD. He then explained that there are two types of claims under the Energy Employees Occupational Illness Compensation Program Act (EEOICPA); the one that is administered by the Department of Labor (DOL) and NIOSH that compensates energy workers for radiation-induced cancers, and a separate Workers Compensation program that is run by the Department of Energy (DOE) for illness caused by toxic agents. NIOSH and ORAU work exclusively on the radiation claims.

Mr. Murray then explained that the TBDs can be changed or revised when new information becomes available, and that the updated TBDs can in turn affect the dose reconstructions. He described the types of doses that are examined during the reconstruction process, including the occupational internal and external dose, occupational environmental dose, and occupational medical dose. The dose is the basis for claims, and can be adjusted with more accurate information in the TBD. He then thanked the participants again for their time and assistance.

Mr. Taulbee restated that old claims could be re-evaluated when the TBD is updated. NIOSH completes Program Evaluation reports that are used as a basis for returning to old claims.



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Concern/Comment:

IAAP was the first plant to build bombs; unfortunately, the workers were not advised of the specifics of what we were doing. We knew all along it was dirty, but the plant told us it was so clean you could eat off the floor.

Mr. Lewis:

NIOSH and ORAU asked for this meeting to get information about your experiences at the site. Your collective memories are of great value for developing an accurate and complete TBD. That's why this meeting was set up in a small group format – to stimulate your memories of the plant as you discuss the topics.

Question:

How does NIOSH add new information?

Mr. Taulbee:

There are two ways that information is added to the TBD. One way is through the telephone interview process with individual claimants. The other way is getting information from workers as we are doing today.

Concern/Question:

How can someone have an external dose without an internal dose? Wouldn't it go into your system regardless?

Mr. Taulbee:

That distinction only refers to the source of the radiation dose. The external dose is from radiation emitted by sources that are outside your body. Radioactive material that is in the air or water can get inside the body by inhaling or drinking it and then it can get in your body's organs (internal dose). In both cases, the radiation can deliver a dose to specific organs in the body.

Breakout Group Session

The attendees broke out into small groups for more specific discussions, to be led by Mr. Lewis as the moderator. Each group (a total of five) was given a copy of the TBD for reference and a packet outlining the topics for discussion. The first topic Mr. Lewis asked the groups to discuss was what was not included in the TBD that they thought should be, particularly in reference to *internal and external doses*. He asked that participants consider beta radiation, x-rays, gamma rays, badging practices, and radionuclides among the topics of discussion.

There was some discussion about classification issues. As a cautionary measure, Mr. Taulbee indicated that, if the workers knew classified information that was related to their radiological exposures, a separate interview would be setup with NIOSH to discuss the information. OCAS's major concern is that workers might disclose some classified information in a public setting. Without a controlled environment and clearance verification, this type of a discussion would be in violation of security protocols.

The following concerns were brought up in the ensuing discussions as items that should be in the document. We have sorted them into the sections of the Technical Basis Document for convenience.



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Site Description: Mr. Lewis next asked the groups to address the *Site Description section* of the document. The following issues were discussed:

- Flash x-ray (6 million [mega] electronvolt {MeV}) machines were missing from the document entirely. Explosions in progress were x-rayed weekly, sometimes multiple shots, which would have been a significant dose.
- Building 40 (1-40) was underground and there were two levels to Bldg. 61.
- There were between 300-400 workers on Line 1 at a given time.
- One and two MeV x-ray units were used for high explosives (HE). A six MeV x-ray was used at the firing site on at least a weekly basis to monitor the hydroshots.

Internal Exposure: Mr. Lewis next asked the groups to address the *Occupational Internal Dose section* of the document. The following issues were discussed:

- Baratols are the explosives themselves, not the depleted uranium.
- In the late 1960s or early 1970s, the over pack containers (tritium or pits – not sure) were purged upon opening in case the inner container was leaking.
- The evacuation area had 20% re-circulated air in Bldg. 1-63 area cells; it was not a safe environment. Workers would not be able to evacuate the area in time, anyway, because of the double door system. Everyone had to get into the hallway between the doors before the next set would be opened – it was physically impossible to evacuate six people from the cell in the time allotted. The first door had to close before the second one would open, so there was nowhere to go. Workers ended up staying in the hallway for several minutes waiting for everyone to get into the hallway.
- 701 depleted uranium (DU) shots occurred at Area FS-12 between 1965 and 1974. There is still an open radioactive barrel at the firing site. Seven of the fifteen workers who worked in the area have urinary tract cancer.
- There were leaking cars at the railroad entrance to Yard C, where Line 1 items were stored (Fish).
- Hydroshots were performed between 1965 and 1973 using DU. Test fire workers had to pick up the material left over from the hydroshots without any protective gear and wearing only civilian clothes, working in a cloud of radioactive material. Workers walked in street clothes into hydroshot areas.
- Based on discussions with some assembly and disassembly workers, the first recollection that tritium was on site at IAAP was in the late 1960s. This late time frame could have been due to more acknowledgement of the hazard during disassembly work.
- Tearing down (disassembly) of the weapons was the most dangerous. At times, they would tear down 5 weapons a day. The major hold up was HE loading in the cell.
- There was some discussion that radiation monitors were routinely unplugged or not calibrated properly. Based on discussions with line-one assembly and disassembly workers, this was not routine. There were occasions when monitors were taken out of service for maintenance and calibration, but generally they were plugged in and believed to be functional.



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- The monitoring systems malfunctioned so often they were eventually turned off, even when workers were handling tritium. The tritium triggers leaked, causing the alarms to go off. The workers were told the systems were being “recalibrated,” after which they never sounded again despite the presence of tritium.
- A survivor indicated that “radiation” was found in urine samples. This information was reportedly obtained from a site chemist who analyzed the samples. The survivor however, would not indicate (release) the name of the chemist such that a follow-up interview could be conducted.
- When asked, line-one assembly and disassembly workers did not recall any bioassay monitoring, but indicated that they did have somewhat frequent trips to site medical unit, so there may have been.
- A group of line-one assembly and disassembly workers inquired about “thorium.” They had never heard the term until reading about it in the TBD.
- Tritium exposure was possible, based on workers’ histories of handling tubes and canisters during both assembly and disassembly. Reportedly, there were positive swipe samples for residual radon from containers, but no plant data are available to corroborate this.

External Exposure: Mr. Lewis next asked the groups to address the *Occupational External Dose section* of the document. The following issues were discussed:

- Records of exposure were limited: From 1950 to 1951, no monitoring equipment was used for personal exposures. The only means of measurement during that time was Geiger counters, which would peg at twenty feet.
- Workers were often not badged at all, even when performing disassembly or repair.
- In later years, some line-one assembly and disassembly workers indicated they always wore a film badge, while others indicated they wore one only when given to them. There was some emphasis that they were not always given to them. Other workers indicated that wearing a radiation dosimetry was not enforced. Sometimes workers would leave them in their locker and no one would say anything to them.
- Workers reported experiencing heat and tingling in the pelvic area and legs when working in close proximity to the pits and weapons. Badges were issued to workers in these areas, but the badges were worn on the collar, not the pelvis.
- Workers had to crawl into the back end of the units to repair or disassemble wiring harnesses. They broke jackets apart with wood and rubber mallets to knock off the explosives.
- When doing assembly, workers had to put their hands into the hollow centers of the HE, where the pit was positioned, to clean them out. This was done with acetone, and then the pit had to be examined with bare hands.
- Several workers indicated that they handled “bare” pits. They indicated that the initial cotton gloves did not protect their hands that well from the heat and that the rubber gloves did a much better job.



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- Pits in Bldg. 1-12 south were cleaned using strong chemicals, and then scraped. There was no ventilation for this and workers sometimes passed out. The only time the pits were not hot was when they were capped to hold heat and radiation in.
- Some workers indicated that the “pits” came in at night under heavy guard.
- Lead room and pits in the annex off Building 1-77 were used as a repository. Trigger assemblies were brought in and set off the monitors.
- Badges were worn on Line 1 in the late 1960s and early 1970s, but the placement was wrong for detecting radiation. The badges were worn on the collar, but the workers reported feeling heat from the beltline down. Additionally, outside contractors would be brought in to work on Line 1 and were not told what kind of material they were working around.
- Dosimeter badges were approximately 2 inches in length and one inch wide. Dosimeter badges were generally worn on collars (lapels), however, most of the work and materials were at waist level or below.
- Workers indicated that the increase observed in Figure 5 (trends in measured collective dose) was not due to a production increase. Operations were continuous, not intermittent as indicated in the Site Profile. A group of Line 1 workers indicated that there was a production schedule that was kept and this was followed pretty closely.
- Assemblies from Pantex were received to be refurbished in the 1960s, but workers did not wear badges for the repair and/or disassembly process.
- Guards were not required to wear film badges at any time between 1956 and 1994.
- Between 1967 and 1974, guards would find entire film badges in trash cans after workers completed their shifts.
- No finger or wrist monitors were worn. Workers handled pits with their bare hands. There were occasions when pits may have had shielding (beryllium coat) removed or absent.
- Area measurements from Storage Y facility were relatively high, and these monitors were on walls at a greater distance from the weapons than guards or workers stood.

Medical X-Rays: Mr. Lewis asked the participants to direct their attention to the section of the TBD on the *Occupational Medical Dose*. He asked if there were any inaccuracies or discrepancies that should be noted. The following issues were discussed:

- The plant hospital stopped using the old x-ray machine because it was too old and dirty. Workers never saw the films from their x-rays. There was a question if the machine was photofluorographic but no one was sure; they believed Dr. Joseph Stoivich of Burlington, IA (319-754-8256) might be able to confirm one way or the other.
- Chest x rays didn't start until 1953 and were often more frequent than annual. For example, some workers received two x rays per year for three years running. X rays, blood testing, and urine sampling were conducted every three months for some

workers who handled pits between 1958 and 1962. It would be helpful to know what kind of machine was used for the x rays in determining dose accurately.

- Higher frequency of x rays for some workers. Some radiographers indicated that they received chest x rays on 3-month intervals, while other workers indicated annual or semi-annual (6 months). The University of Iowa indicated that they have a copy of all of the site's x rays; thus the frequency and breakdown by worker category can be determined.
- Products (shells, bombs) were x-rayed on Line 1. Huge machines were used for large pieces that delivered several MeV. Workers were monitored, but the badges did not get changed. So workers had no idea what dose they actually received.
- Illness and exposure coincide in medical records. Deterioration is evident in annual x rays when compared from year to year. This is something that needs to be addressed.

Environmental Dose: Mr. Lewis next asked the groups to address the *Occupational Environmental Dose section* of the document. The following issues were discussed:

- On page 36, the TBD states “In comparison to other sites that handled tritium, this release level is very small and provides some indication that not much tritium escaped containment,” and that “this intake is claimant-favorable because it uses the highest value for tritium releases...” In reality, the tritium alarms went off constantly and were so disruptive that they were eventually unplugged. This would indicate that the true levels were not really monitored.
- Tritium monitors would frequently continue going off until they were recalibrated. Workers believe the monitors had been unplugged.
- There was no mention of the firing site (FS-12) although DU shots were fired from 1965 to about 1974. DU dust and particles were found and the grounds are still hot and off limits. Seven of the 15 workers from that area have been diagnosed with urinary tract cancer.
- There was an HE exposure in FS-12. DU was in a ring surrounding the HE hemisphere. When the HE was exploded, the DU ring broke and was sent flying. This caused concern about airborne exposure.
- In 1970, the water supply (at Mathes Lake) was contaminated with silver; the contaminated water went through the plant and into Middletown. It was not until 1978 that the plant switched to the Burlington water supply. Solutions from x-ray machines on Line 3A leaked from tanks directly into the lake.
- Problems with the burning fields included composition B and flashburns. Burn pits were close to the work lines – plumes of smoke covered the entire area.

Radon:

- Radon exposure is much higher in Iowa than most other areas. Pantex data are not a valid source for radon data since IAAP has the highest levels of radon when background plus exposure are considered. Since concrete has 31 parts per million



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(ppm) already and radon is added in confined areas, there would be high concentrations of radon present that were never monitored.

Attachment A:

- Attachment A indicates several occupations with no potential for radiological exposure. Several workers strongly disagreed with the list. These workers indicated that some trades were cleared so that they could do maintenance and fix things without being escorted. While these trade workers may not have always been exposed, they were intermittently exposed during some work assignments on Line 1.

Miscellaneous:

- There was a high-frequency radio antenna outside Gate 4 that was not mentioned.
- At the antenna farm, the tank and container held 36,000 gallons of oil; there was only a walk-in compartment that workers had to go through.
- Contaminated clothing was sent to Sickles Laundry & Dry Cleaning; there was no mention of possible exposure from contaminated items sent out.
- A small group of assembly and disassembly workers indicated that they felt their Safety Officer (Joe Shannan) generally tried and did a good job protecting them, based on the standards and knowledge at the time.

Question:

How does the Nagasaki model correspond to our situation at the plant? That was a one-time exposure while workers were receiving daily doses so it is not valid for long-term exposure.

Mr. Taulbee:

Information from the Nagasaki model was only one of the factors considered. You can find the additional information that was used on the NIOSH website.

Concern/Comment:

There is a similar discrepancy in the comparison with IAAP and Pantex. There was no experimental work done at Pantex, while it was done here.

Mr. Taulbee:

Data from the National Cancer Institute were used as a basis for the tables that are referenced. This includes information gathered since 1985 from the Department of Veterans' Affairs as well as uranium miners' data.

Question:

Who should be contacted regarding questions or comments on these topics?

Mr. Taulbee:

Mr. Larry Elliott is in charge of the program at NIOSH.

Concern:

The plant raised allowable radiation limits in 1969. There were problems with the monitor/alarm systems. The alarms would go off but management told workers that it was false alarms and they should keep working.



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Concern/Comment:

The TBD does not make any mention of what happened to families and communities as a result of the contamination being tracked out of the plant.

Mr. Taulbee:

Families and communities are not covered under EEOICPA. It would be up to Congress to decide if they should be included. Right now the law pertains strictly to workers and their survivors.

Concern/Comment:

Bonuses were paid to management on the basis of (1) production, (2) security, and (3) safety. That was the order of their priorities. The bonuses were never documented, but everyone knew about them. There were never any warning signs about hazardous material or cancer-causing agents in the plant until it was ready to close. The plant received a safety award for having no time lost due to accidents only because workers involved in accidents were actually clocked in during their hospital stays. The TBD was written according to the Standard Operating Procedures (SOPs), which were never followed in the first place.

Concern:

There were two deaths in the plant from radiation overexposure in the cells, but no records of this incident can be found.

Concern/Comment:

A doctor who was a cancer specialist from the Houston Health cancer clinic was sent to Burlington, Iowa on the premise that it would be a good area with high need for cancer therapy.

Concern:

The aspect of working in an area with high radon levels in combination with the concrete in the tunnel should be considered since concrete block has 31 ppm of radiation.

Concern:

There were two deaths known to be caused by radiation overdose but no records can be found. The only reference is 'an incident in the cell' that does not give details.

Mr. Lewis asked if there were any other issues that had come up in the small group discussions that should be added to the overall record. The following items were thought to be inaccuracies in the TBD:

- On page 16, in the last paragraph of Section 2.2.4, the TBD states: "The frequency of disassembly of old weapons is not known but should have been rare considering that the primary mission at BAECF was assembly. An assumption was made that no single worker was involved in more than two disassemblies per year." The majority of workers were involved in more than two disassemblies per year. Disassembly was mentioned often in the preceding session.



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- One commenter interpreted the TBD as saying that production workers only worked once or twice per week. This was a concern since production workers were on the line daily and often worked double shifts.
- Regarding Table 5 on page 13, the TBD states “There is no record of how many times cleanup of baratol pieces occurred; a claimant-favorable assumption is after each hydroshot.” The reality was that the baratol would be gone after a hydroshot since it is an explosive. There were DU pieces rather than baratol.
- Participants questioned why the maximum dose monitored increased in the 1970s as reflected in Tables 7 and 8 and in Figure 5 on pages 22-23 of the TBD. There was no associated increase in production rate. The technology should be expected to decrease the exposure (smaller weapons).
- Positions and exposures are addressed page 49 of the TDB. Pipefitters working there had to be accompanied by guards, but the dose was never counted for the guards who were assigned to escort. This would cause an underestimated exposure count for guards.
- The general rule for guards following up on incidents was to simply move items back where they belonged and to not write up any report.

Mr. Lewis thanked the attendees for their participation, and thanked the University of Iowa representatives for their help in facilitating the meeting. He said a great deal of valuable information had been discussed that would be very helpful. Mr. Lewis also asked that attendees forward any additional comments to NIOSH. The meeting was adjourned at approximately 3:15 p.m.

Attachment:

Comments from IAAP workshop participants



ATTACHMENT

Comments from IAAP Workshop Participants

Commenter 1:

External Exposure

p. 5, Bullet 5 – ‘pits’ should be units.

Commenter 2:

Site Description

p. 4, Bullet 2 – All Buildings should be referred to as 1-xxx (1-40, 1-61). People looking at line drawings knowing nothing of the place may have trouble finding them.

p. 4, Bullet 4 – We had two, 2 MeV x-ray units in Bldg. 1-100 for x-ray of HE. Also, Bldgs. 1-100-1, 1-100-2 were built for x-ray use and Bldg. 1-12 had one, 2 MeV unit.

Internal Exposure

p. 4, Bullet 3 – Same as for Bullet 2 above.

p. 4, Bullet 5 – there were no railroad entrances to the FS (Firing Site) area. Area C is referring to Yard C, for the storage of Line 1 items.

p. 4, Bullet 8 – There are seven (7) cells, 1-63-1 thru 1-63-7. 1-63-1 thru 1-63-6 were located east of 1-61. Bldg. Cell 1-63-7 was located in plant B area on the east side of 1-19 Bldg. some cells were used for current production and others for tear down.

External Exposure

p. 5, Bullet 5 – I do not believe the word ‘pit’ is correct here. Most pits I saw were about 12” in diameter. I believe they are referring to crawling into a near completed unit to repair, disassemble, or connect wiring.

p. 5, Bullet 6 – I never saw a pit you could clean the inside of. As in the above sentence, pits were about a 12 inch diameter stainless steel ball. It was sealed, and contained the elements that gave the weapon the big bang. I believe they were wiping out the center of the H E where the pit would be positioned.

p. 6, Bullet 8 – S12 is referring to South 1-12 Bldg., double letter bays AA thru FF. I’m not sure of all the cleaning methods or the capping of pits to hold in heat and radiation. Need to talk to some one that did the work.



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p.6, Bullet 10 – Lead room referred to as annex off 1-11 Bldg. is Bldg. 1-77 located North of 1-11.

p. 6, Bullet 11 – Date is wrong. Possibly 1960's not 1906.

Medical X-Rays

p. 6, Bullet 2 – The dates shown, 1958 and 1962, are the dates I worked in x-ray in 1-100 bldg. We did have a chest x-ray, blood, and urine sample every 3 months. I would think that people handling pits would have had these tests as far back as 1950. I'm not sure when the first production unit was built.

p. 7, Bullet 4 – We had two, 2 MeV x-ray units in bldg. 1-100 for x-ray of HE and Bldg 1-12, Bay Y had one, 2 MeV unit used for checking cable placement in near completed units.

Environmental Dose

p. 7, Bullet 3 – There was no FS 701; the 701 is the number of hydro (DU) shots fired from 1965 thru 1974. All Hydro (DU) shots were fired at FS-12. The number of workers diagnosed with urinary tract cancer is now **eight (8) four are deceased !**

p. 7, Bullet 4 – The Burning yard, better known as the Burning Ground has nothing to do with DU shots fired at FS-12. The burning Ground is located about 7 miles East North East of firing site location.

True a DU ring did surround the hydro (DU) shots when fired at FS-12. It did fragment and there is no way of knowing how much DU was lost. Small pieces became molten or vaporized into minute dust particles known as uranium oxide UO_2 and UO_3 .

p. 7, Bullet 5 – This is totally untrue. Water was never furnished to Middletown or Danville till after the Plant was connected to the City of Burlington water supply.

As for the leaking fixer tanks at Line 3A, if you would look at bldg.3A-100 location and a topographical map you would see that it would have gone into Skunk River, not Lake Mathes.

General

p. 8, Bullet 1 – The high-frequency radio antenna system also referred to as the antenna farm set on about 15 acres with five towers inside gate 4 south of Bldg. 500-56.

p. 8, Bullet 2 – The tank which held 36,000 gallons of oil spoken of here is our flash x-ray units we used at FS-12. We had two units each holding 1800 gallons of oil, total of 3600 gallon. This has nothing to do with the antenna farm.

Committer 3:

Internal Exposure

p. 5, Bullet 12 – regular blood tests and x-rays were not done in 1950, 1951, or 1952.



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External Exposure

p. 5, Bullet 1 – Bldg. 1-13.

p. 5, Bullet 6 – in Bldg. 1-13 in 1950, 1951 and early 1952, clean Kemwipes, then double-checked bare handed.

p. 5, Bullet 7 – only had cotton gloves when handling wood boxes.

p. 6, Bullet 11 – 1960s.

p. 6, Bullet 14 – needed repair to be functional.

Medical X-Rays

p. 6, Bullet 2 – every month for workers in Bldg. 1-13 in 1950, 1951 and 1952.

General

p. 9, last paragraph on page – “The majority of workers were involved in more than two disassemblies per year.” The comment is “often two each day.”

p. 10, lines 1-3 – in Bldg. 1-13, workers often worked 10 hour day, 6 days per week in 1951.

Barium nitrate was in baratol.

Dust exposure when making baratol mixes for melt hse(?).

The castings for HE were x-rayed to verify solidity.

Mason Hanger started this operation and they were the first contract operators. It should be pointed out that they did not know and could not cover all the bases in Bldg. 1-13. I never saw safety personnel there in 1950 or 1951.

We need more meetings to cover more.

Commenter 4:

Site Description

After the Atomic Energy Commission (AEC) left, the Army took over the site. Army employees worked in this contaminated area and so did employees who moved the grass, stirring up the DU.

Internal Exposure

p. 4, Bullet 3 – Air was also re-circulated in Buildings 1-13, 1-40, and 1-61.



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p. 5, Bullet 10 – On several occasions, the monitors and T290 were unplugged. Also, the T290s would not give a reading. When we called in to the Line 1 Lieutenant, we were told not to worry about it and carry out our tour.

During 1969 and 1970, we had a lot of monitor alarms. Tour B and Tour D were not able to leave the Building 1-61 and 1-63 areas or the 13 area all the way because of security reasons. You went as far as the Badge Exchange and stayed there the whole time the building was hot. Several times we were told everything was OK inside but don't go back into the area until the day shift reported on duty. Also, sometime no one showed up to check the Building and we were told to stay at Badge Exchange until relieved.

When we brought loads from AEC Couriers at Yard B, we were told by AEC Couriers to watch certain cars because they were leakers. When we took cars into Yard C, the Lieutenant would have the railroad crew place certain cars on sides of Yards from the other cars. Several times we had monitor alarms at the 23-53 Building from the cars that were placed by themselves.

Also, when units were taken to Line 1 from Yard C at Post AX-3 Truck Gate, the T290 would peg out at the Guard Gate at Line 1. This unit was about 15-20 feet from the truck sitting in convoy at Guard Shack. After complaining about this for a while, the unit was taken to the Gauge Shop and the unit was returned and never read hot any more. He was told the recalibrated it, but the alarms were still going off at Yard C and Building 1-13 areas.

General

In the Building 1-13 area, sometimes after working 3 hours in the Building, you would be so tired you could hardly walk to Badge Exchange. When there were a lot of units to be torn down or a lot of units in Bullpen or AA-FF bays, it was like your bones hurt at all your joints.

We did make out incident reports. They were sent to the Guard's Headquarters where they were reviewed by someone on the Lieutenant's staff. A lot of the reports were never seen then or the Lieutenant would say to put the stuff we found into the locked areas or the safe and forget about it because nothing would be done about it anyway.