

National Institute for Occupational Safety and Health (NIOSH) SEC Worker Outreach Meeting for the Savannah River Site (SRS)

On Thursday, May 22, 2008 at 1:00 p.m. and 6:00 p.m., the National Institute for Occupational Safety and Health (NIOSH) Office of Compensation Support and Analysis (OCAS) conducted two worker outreach meetings in North Augusta, South Carolina. Current and former workers from the building and construction trades who worked for a time at the Savannah River Site (SRS) and other interested parties participated in a discussion of specific issues relating to the radiation protection program at the site. At both sessions, a NIOSH Health Physicist gave a presentation on the Energy Employees Occupational Illness Compensation Program Act (EEOICPA) Special Exposure Cohort (SEC) and explained the types of information that will be useful to help evaluate the petition to add a proposed class of SRS construction workers to the SEC.

NIOSH Worker Outreach Team:

Timothy “Tim” Taulbee, National Institute for Occupational Safety and Health (NIOSH), Office of Compensation Analysis and Support (OCAS), Health Physicist

Albert “Al” Wolff, Oak Ridge Associated Universities (ORAU) Team, Health Physicist

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Mary Elliott, ATL, Technical Writer/Editor

Proceedings for the 1:00 p.m. meeting:

Buck Cameron opened the meeting at approximately 1:00 p.m. by welcoming the attendees. He explained that the sign-in sheet would be used for future contact if there was a need to follow up for additional information. Mary Elliott explained the NIOSH policy for redacting personal information from the minutes in compliance with the Privacy Act prior to posting them on the NIOSH OCAS Web site. One attendee stated that he did not have access to a computer and asked if hard copies of the minutes could be mailed to the people who signed the meeting roster. Mr. Cameron asked Ms. Elliott to arrange for everyone to be sent a copy after the minutes are reviewed and redacted. He added that NIOSH was not asking the attendees to give sworn testimony, but rather to recall their experiences as best they could remember them. Mr. Cameron encouraged the attendees to urge others who worked at the site but could not attend the meetings to submit information to Tim Taulbee at NIOSH.

[Name Redacted] stated that he had worked for 30 years as an insulator at the Savannah River Site. He said that during the dose reconstruction process, he had told someone from NIOSH that his biggest concern was the monitoring. During his discussion with the NIOSH interviewer, he related that he had been in every “hot hole” in the plant and did not feel that it was possible for NIOSH to accurately estimate his dose. The interviewer had told him that NIOSH uses co-worker data when there is not sufficient individual monitoring information.

[Name Redacted] recalled that when he worked on the tank tops at the Tank Farm, he was given a pencil dosimeter but almost always had to look for a health physics technician (HP) to have it read when it went off scale. He was often told that it showed an elevated reading because he had bumped it. He said that the answer would have been acceptable if it was not such a common

occurrence, but it did not seem appropriate when there might be several workers in the same location with offscale readings at the same time. He stated that the piping on many of the tank tops was covered with lead shields because they were radioactive. He described his career in the construction trades at SRS: he started working in the ditches, was promoted to foreman in the Tank Farms in F Area, and finally made general foreman over the insulator craft. As a general foreman, he was required to look at a jobsite to provide an estimate before he could send a crew in to work. He recalled that he sometimes had nasal or oral swipes or gave urine samples if the monitors or alarms went off in the “hot” canyons, but there were also instances when an HP was not present to monitor the area.

Mr. Cameron asked [Name Redacted] if he could give more detail about working throughout the site. He responded that the insulators were dispatched to any area where repairs were needed, whether it was a ruptured line in the Tank Farm, the “3”, or the “7”, or anywhere else they were needed. When Mr. Cameron asked if most of the work orders involved “problems,” he replied that was true. He stated that the tanks were buried and the only time they were called to work down in that area was if there was a leak or another problem that required their attention. The Tank Farm personnel would dig up the problem and the insulators would report to fix it. He repeated that he did not believe there was anyone alive who could “monitor” how much radiation he got.

[Name Redacted], a local attorney, asked [Name Redacted] if he had been given any written records of incidents in which he was involved. [Name Redacted] replied that he had not. He said that he had been told that his dose reconstruction was in process four to six weeks ago. When [Name Redacted] asked if NIOSH had requested his records from the U. S. Department of Energy (DOE), [Name Redacted] replied that DOE does not have the records.

As a supervisor, [Name Redacted] attended many safety meetings and the lack of adequate monitoring was a routine subject. He said that an HP may or may not have been present while a crew worked on a “hot” tank. Mr. Cameron asked for an approximate time frame for the meetings and [Name Redacted] replied that it would have been around 1989 when Bechtel began to conduct training. [Name Redacted] explained that he had served as the steward for the electricians’ union at the site for 13 years and at one time had 1,100 electricians working under him. Since he also worked in every area of the plant, he was familiar with the monitoring problems during the era that [Name Redacted] had described.

[Name Redacted] explained that safety training prior to that time was limited to what could be learned from a co-worker who may not have had much more experience. [Name Redacted] and [Name Redacted] related that in 1989, Bechtel Corporation had hired a group of radiological controls (radcon) personnel who had little or no experience in radiation monitoring. The radcon group was trained for a short period and then sent into the field to monitor workers’ exposures. [Name Redacted] said that neither he nor the electricians that he represented had much confidence in the radcon technicians’ ability to monitor or protect them. Often, the electricians worked without benefit of any monitoring personnel on their jobs. He recalled that in 1989, Bechtel also began formal radiation protection classes for all workers.

[Name Redacted] said that they had to wear plastic suits in some of the “hot” areas. If the alarms went off, laborers were on hand to remove the plastic suits as the workers left the area. He felt that there was no consistency in the safety practices because sometimes the suits were removed after they left the area, but other times they were taken off right in the room if the readings were high. Both [Name Redacted] and [Name Redacted] stated that they did not always wear badges and sometimes worked without any protection at all if they were working in “clean” areas, even though there were no barriers between the “clean” and “hot” areas. They were not

always issued dosimetry badges while working in areas where SRS employees wore TLDs (thermoluminescent dosimeters) or other types of dosimetry badges. [Name Redacted] said that he sometimes had only a pencil dosimeter when regular SRS employees wore TLDs (thermoluminescent dosimeters). [Name Redacted] stated that the standards were not the same for everyone. [Name Redacted] added that there was no official “dress out” training – an inexperienced worker would be told to have a coworker show him how to wear protective clothing and equipment. He did not learn until he had safety training while working at a commercial nuclear facility that he should have sealed the gaps between the suit and the gloves and boots. [Name Redacted] stated that the lack of training is a common issue for construction workers because their jobs are very mobile.

Tim Taulbee of NIOSH asked if safety training began at SRS in 1989. [Name Redacted] explained that there was no formal training while DuPont ran the plant (1951 to 1989). When DuPont left, many of their experienced workers left with them. Westinghouse took over the contract in 1989 and hired workers to replace the ones that left with DuPont. They also brought Bechtel on board for construction management. Bechtel began formal safety training for all employees. [Name Redacted] related a popular humorous sentiment during the changeover: “That guy was bagging groceries last week and now he’s doing our radiation protection.” He indicated that his workers did not have confidence in the radcon technicians’ ability to provide them with adequate protection. He indicated that [Name Redacted] had made a valid point when he stated that construction workers were often unmonitored while the plant workers in the same area wore dosimetry badges.

Mr. Taulbee asked [Name Redacted] if the radcon technicians ever came to do a survey after the workers went to them to have their pencil dosimeters read. [Name Redacted] recalled having sent three of his workers to the Health Physics Department to have their dosimeters read after they went off scale during a job at the Tank Farm. The HP told them that the readings were high because they had bumped their dosimeters and that they should go back to work. [Name Redacted] insisted that the HP take a counter to the Tank Farm to take a survey.

Mr. Taulbee asked [Name Redacted] to describe the shielding on the tank tops at the Tank Farm. He responded that the half moon-shaped lead shields covered the piping on the “hot tanks.” Mr. Taulbee asked if there were breaks in the shields, to which [Name Redacted] replied that they were “bumped together.” Several other attendees verified his statement.

[Name Redacted] stated that DOE could not find an employment record for one of the jobs he worked at SRS. He said that he had worked with Gillespie and Powers to stress relieve the last new tanks that were put in F & H Area by Neuter Corporation. [Name Redacted] described how the new tanks were installed in a deep hole beside the old tanks holding radioactive waste. He and his crew worked unmonitored 50 to 60 feet below ground level for a long period of time. He continued to work in the area over a period of time until the new tanks were full. He added that someone at NIOSH had told him that they had some information on him from 1970.

[Name Redacted] stated that he was working at the SRS site in November 1989 for Miller-Dunn Electric when Westinghouse took over the contract from DuPont. He witnessed two crews of laborers who worked for six to eight weeks destroying both DuPont and subcontractor documents. [Name Redacted] stated at that either Westinghouse or Bechtel sent a truck to pick up his records for North Brothers and said that they would take custody of them. [Name Redacted] added that prior to Westinghouse taking over, DuPont Construction hired all the crafts but three: Miller-Dunn hired the electricians, B.F. Shaw hired the pipefitters, and North Brothers hired the insulators. [Name Redacted] added that it is very important for insulators to keep records for 30 years in case they are needed for asbestos litigation, but said that he doubts that

they were still available.

Mr. Cameron introduced Mr. Taulbee and turned the meeting over to him for the NIOSH presentation. Mr. Taulbee thanked the attendees for coming to the meeting. He commented that [Name Redacted] statements were the sort of information he needed to determine whether the proposed class would be recommended for inclusion in the SEC. Mr. Taulbee explained that the initial petition was to include all workers at SRS from startup through December 31, 2007, but NIOSH only qualified the petition for building and construction trades workers. The primary reason is that the supporting information provided with the petition was for those types of workers and that is where NIOSH is having the most difficulty in reconstructing doses. An administrative review for the rest of the petition may indicate a need to evaluate all workers, but NIOSH chose not to hold up the evaluation for the construction workers.

Mr. Taulbee began his presentation with a brief explanation of the SEC petitioning process:

- A petition is filed with NIOSH to include a specific group of workers during a specific time period as a class in the SEC.
- NIOSH determines if the petition qualifies the proposed class of workers to be considered as part of the SEC. The original SEC petition for SRS was for all workers for all periods, but NIOSH only qualified the building and construction trades workers because the information in the petition pertained primarily to the lack of sufficient monitoring records for construction workers.
- NIOSH prepares an evaluation report to address the issues raised in the petition and by the Board, and to determine whether dose reconstructions for the proposed class of workers can be done with sufficient accuracy. Input from workers and others who have an interest in the petition is an important part of the development of the evaluation report.
- When the evaluation report is complete, NIOSH presents it to the Advisory Board on Radiation and Worker Health (ABRWH or the Board) at a public meeting. The petitioners also have the opportunity to address the Board at that time.
- The Board reviews the report and makes a recommendation to the Secretary of the U.S. Department of Health and Human Services (HHS) regarding whether or not to add the class to the SEC.
- The HHS Secretary in turn has a set period of time to make a recommendation to Congress. If the Secretary recommends that the class should be added and Congress does not act within 30 days of the recommendation, then the proposed class is added to the SEC.

[Name Redacted] asked Mr. Taulbee if there is a timeframe for the petition evaluation report to be completed. Mr. Taulbee responded that he is hopeful that the report on the SRS petition will be ready at the end of the summer.

Mr. Taulbee reiterated that stakeholder input is very important in addressing the issues of concern in the petition evaluation. He stated that [Name Redacted] had made a very important point when he talked about the pencil dosimeters going off scale while working on the tank tops in the Tank Farm. Mr. Taulbee said that there is a potential for streaming radiation because the construction workers did not wear TLDs or have an HP present to monitor the worksite.

Mr. Taulbee stated that the petitioners and the ABRWH had identified some issues that NIOSH needs to address in the petition evaluation report. The purpose of the SEC Worker Outreach meetings is to get information from construction workers who worked at the site to help address those issues. Mr. Taulbee summarized the issues for which NIOSH is seeking additional input:

Petitioner-Identified Issues and NIOSH Responses:

1. Missing external monitoring data for construction workers is not included in the co-worker model.

NIOSH wants to review the historic records to determine whether this data would change the model. A single box of records has been identified and requested from the site. An additional 11 boxes have been identified at DOE records centers throughout the country. Mr. Taulbee will continue to work with the site to determine if the information is still available. If that information affects the coworker model and has an impact on the dose reconstructions, the results may affect the outcome of the petition.

2. The SRS site profile does not consider radiation incidents or accidents.

NIOSH is reviewing SRS safety incident reports to ensure that the exposure information is in the individual files received from DOE and used in dose reconstruction. Mr. Taulbee indicated that incident or accident reports do not necessarily affect dose reconstruction if monitoring information is included in the worker's DOE file; but those reports can be critical in the dose reconstruction when the monitoring information is not in the worker's file.

3. The site profile is skewed toward production workers and does not account for the different exposure patterns of construction workers.

[Parameters to Consider When Processing Claims for Construction Workers \(ORAUT-OTIB-52\)](#) specifically addresses construction worker exposures and compares them to production workers. The technical information bulletin is being reviewed by the ABRWH to resolve all comments.

Mr. Cameron added that this document assigns an additional dose for construction workers – a factor of 1.4 times the dose of a production worker with similar exposures.

4. The site profile does not describe deficiencies noted in the 1990 Tiger Team Report.

NIOSH is evaluating the 1990 Tiger Team Report for radiological deficiencies.

5. All radionuclides to which workers were potentially exposed are not identified in the site profile.

The only major radionuclide that has potentially not been identified and addressed in the site profile is thorium. NIOSH is currently evaluating the magnitude and effect of this potential exposure.

6. Construction work in non-radiological areas that were later found to be contaminated is not considered in the site profile.

Building and construction trades workers can help NIOSH in its evaluation by providing information on these types of incidents that can be cross-checked. NIOSH would appreciate any help with specific dates and/or locations to help narrow the search through the volumes of incident reports.

One specific example cited in the petition is that work along the railroad lines had been considered to be non-radiological until some railroad ties in a waste pit were found to be contaminated. The site now requires monitoring as well as the use of Tyvek® suits and other protective gear on such jobs. Mr. Taulbee indicated that this change likely evolved after an incident report and that it would be helpful if anyone could provide specific information about the time and circumstances.

ABRWH-Identified Issues Related to the SEC (from the Review of the SRS Site Profile) and NIOSH Responses:

1. Neutron-to-photon (NP) ratios being used for neutron dose suffer from a high degree of uncertainty.

NIOSH is conducting keyword record searches to identify the location of paired neutron and photon survey measurements conducted as part of the radiological monitoring program. The current state and availability of these records is not known.

2. Limitations associated with the assignment of Occupational Environmental Dose. The particular concern is with the resuspension factor used for airborne radioactivity from projects that involved disturbing the soil.

NIOSH is retrieving historic reports and comparisons that may either refute or verify the resuspension factor in the site profile. The current model in the site profile uses a non-disturbed soil resuspension factor, which is not applicable to construction workers who may be digging in an area and resuspending a lot more dirt. NIOSH is searching for air monitoring data that may provide the necessary information to adjust the model.

3. Incidents and high-risk jobs are not adequately addressed in the site profile.

NIOSH is reviewing the site incident reports to either refute or confirm that the information is captured in the individual workers' dosimetry files used for dose reconstruction. This is another area in which building trades workers can assist by providing information that NIOSH can evaluate regarding specific incidents or high-risk jobs.

4. Availability of additional source documents and data that are not currently provided to NIOSH by SRS, but that may be important to dose reconstruction. In addition, the Board questioned the completeness of the Health Protection Annual Radiation Exposure History (HPAREH) database.

NIOSH is reviewing the neutron logbooks and is evaluating the completeness of the HPAREH database through a review of data files in NOCTS (NIOSH OCAS Claims Tracking System). Data for construction workers prior to 1979 is very limited.

Mr. Taulbee emphasized the importance of stakeholder input in the SEC petition evaluation process by asking the attendees the following questions:

- Are there any additional issues that may have been missed?
- Are there any areas at the site that might be a problem from a radiation standpoint?
- Can you tell us about the radiation monitoring you observed around your work sites?
- Did you conduct your work under special work permits or radiation work permits?
- Can you describe specific radiation incidents that you observed?

Mr. Taulbee concluded his presentation with contact information for NIOSH and opened the meeting for discussion.

[Name Redacted] introduced [Name Redacted], who was employed at SRS as a production worker. He explained that he had invited [Name Redacted] to talk about common site practices that carried over to the construction worker population at the plant.

[Name Redacted] stated that he is an EEOICPA claimant whose case has been denied several times. He prefaced a brief history of his employment with DuPont at SRS by stating that there were no safety practices in place when he was hired in 1961 at the age of twenty-two. While the new hires waited for their security clearances, they worked in Central Shops and were well supervised as they worked on the roads and at the burial grounds where they unloaded ingots from trucks. They were supplied with white coveralls and gloves for this work. When his security clearance came through, [Name Redacted] was transferred to the production area on a rotating shift schedule after a short class on security and radiation. He said the class was dull and “above his head.” For the next 10 to 11 months, he worked in the 221-H and 221-F Canyon Buildings. He recalled that the second floor of the 221-H building was flooded at one time and he was sent over to clean up. His main duties involved decontamination and his duties ranged from mask cleaning to sheeting railroad cars. He received no formal training on how to perform his work duties, other than working with some older employees who showed him what he needed to know. Many of the masks that came from out in the “hot” Canyon Areas had to be washed by hand. The workers who cleaned them had no way of knowing how radioactive the masks might be. After the masks were cleaned, they were hung on racks and someone would come the next day to check them for radiation. Often, the detection equipment did not work properly and “had to be beaten against the wall to get them to work.” He and other workers wore film badges in this area, but [Name Redacted] said that he was never issued a pencil dosimeter.

[Name Redacted] described the Canyon Area where railroad cars came from the reactors loaded with cylinders containing the spent fuel rods. Two or three people worked the night shift without supervision, protective clothing, or HP support. [Name Redacted] explained that the cars were covered with plastic when they came in from the reactors. He and his co-workers then moved the railcars into the buildings where the cylinders containing the spent fuel rods were removed by crane operators. [Name Redacted] recalled an incident in which the plastic cover was removed from the railcar and a large volume of “hot” water spilled out on him. He said that when the incident occurred (on the night shift) there were no supervisors or HPs present. During the nightshift, 20 to 30 people might be working in a building without supervision. On dayshift, however, workers were “on their toes” because there were supervisors and HPs to oversee them.

[Name Redacted] stated that workers picked up their film badges at the gate at the beginning of their shifts. He said that if the workers didn’t see a supervisor, they figured that they didn’t need a badge so they just went on through the gate. As long as they were wearing their security badges, the guards let them pass through. [Name Redacted] said that the most disturbing thing to him about the NIOSH dose reconstructions is that if dose data is not available from 1961, how can they assume that dose in documents that they wrote after 2000? He stated that he had been told by people who worked many years after he did that the modern health physics program at SRS was much more thorough than during his employment. He concluded by saying that he never worried about the lack of supervision or monitoring back then. At the time, he was just happy to have the job.

Mr. Taulbee asked [Name Redacted] if he could give the timeframe for the water spill. [Name Redacted] replied he first worked at SRS between March and November 1961, when he was drafted into the Army. He went back to work in December 1963 after being discharged, but was laid off in 1964 when DuPont shut down one of the reactors and laid off new hires. Mr. Taulbee asked if the spill occurred during his employment during 1963 and 1964, to which [Name Redacted] answered, “Yes.” When asked if he had been tested after that incident, he replied that he did not remember having been tested but did recall having to take a shower and change his clothes. He stated that no one ever knew about his incident until he filed his claim and started

his dose reconstruction.

[Name Redacted] recalled another incident in which a railcar loaded with spent fuel rods derailed and tore up the tracks. Workers were kept from the area until the track was rebuilt. He stated that, to the best of his knowledge, the incident was never recorded.

[Name Redacted] explained that he had many precancerous skin tumors removed from his back and legs within a few years of the end of his employment at SRS. One of the tumors on his back had two additional tumors under it. After all of the skin tumors were removed, he did not have any additional medical problems until the late 1980s, when he was diagnosed with colon cancer, which required several surgeries. He said that he feels these illnesses were the direct result of the spill that he had previously described.

Mr. Taulbee asked [Name Redacted] to describe how he cleaned the masks. [Name Redacted] responded that the masks were put into a washing machine for 20 minutes and then heated in a dryer. After the masks came out of the dryer, he had to put them on and breathe into them to make sure that they worked properly. He replaced the filters and any other parts that needed to be replaced. [Name Redacted] stated that other more expensive personal protective equipment (PPE) items were never checked before they were brought to him from the Canyons in plastic bags. He used a variety of chemicals to clean the equipment as best he could. HPs and other technicians came in to check the equipment and perform other maintenance after he finished cleaning and repairing it. [Name Redacted] stated that he had to sign a tag when he finished his part of the job, but that he did not feel that it was always closely checked.

[Name Redacted] expressed much dissatisfaction with the EEOICPA claims process. When he filed his claim shortly after the law was passed, someone from DOL told him that he would receive compensation in about six months. He described the frustration he felt as workers from the gaseous diffusion plants in the original Special Exposure Cohort (SEC) class were quickly compensated while SRS workers suffered through the dose reconstruction process and were often denied compensation.

[Name Redacted] stated that he was told originally that there were no monitoring records for him. He described a long search and bureaucratic problems that eventually led to obtaining his personnel dosimetry records. He said that the reports indicated that he had plutonium in his body as well exposure to 12 different radionuclides, yet he was never informed of the results of any of the tests he had while employed at SRS. He expressed his anger and frustration at having not known until many years later that he had been exposed to hazardous materials that could cause serious medical problems.

After his claim was denied, [Name Redacted] attended a DOL Town Hall Meeting and showed his records to a NIOSH official who told him that he should never have been sent those records. The official told [Name Redacted] that the 12 radionuclides were not present in sufficient quantity to have caused his colon cancer. He said that he had seen statements to the contrary on internet sites that described the decay properties of plutonium and how it first goes through the lungs and may be excreted from the body through the colon, sometime causing intestinal illnesses that include colon cancer as well as liver damage after a number of years. [Name Redacted] stated that the government allowing him to be exposed to plutonium was like someone "putting a gun to my head." He added that he does not think that NIOSH knows what it is doing (with the dose reconstruction process).

[Name Redacted] asked [Name Redacted] if he meant that he had a plutonium uptake while he worked at SRS and did not know about it. [Name Redacted] replied that he remembered having

to give a urine sample, but that he did not find out until many years later that he had plutonium in his body. He said that what disturbed him most about the DOL meeting was that the NIOSH official told him that he should never have gotten the paperwork and that seemed like a cover-up to him. When Mr. Taulbee asked him if he recalled the name of the NIOSH representative, he answered that it was “the guy who did all the talking that night.” [Name Redacted] and others recalled the meeting and stated that the government official that [Name Redacted] was referring to had been from DOE.

[Name Redacted] stated that his first dose reconstruction had a probability of causation (POC) of 24% and the second yielded 37%. He said there was no mention of plutonium in the dose reconstruction reports. His brother, who had worked in the reactor areas at SRS where the plutonium was made, had died of cancer three years before, yet only had a (POC) of 32%. [Name Redacted] said that he finds it very hurtful that both claims could be turned down, especially since his brother’s wife and children need the money. He believes that his brother’s claim may be back at NIOSH to be re-worked. Mr. Taulbee asked for the information so he could check on the claim.

[Name Redacted] asked [Name Redacted] if he wore a film badge when he worked on weekends. [Name Redacted] stated that he didn’t have a film badge if he worked weekends because they were collected on Friday night and not returned until Sunday night or Monday morning. He said that nobody seemed concerned that the shift workers did not have badges during that time and that very often there were no supervisors around on weekends to even notice that they were only wearing their security badges. When [Name Redacted] asked him if he meant that he did not wear any kind of radiation protection badge, [Name Redacted] stated that sometimes he wore a film badge and used a personal contamination monitor (hand-foot monitor). He indicated that, except for weekends when they did not have badges, wearing film badges seemed to be optional and that supervisors never questioned why someone was not wearing a badge.

[Name Redacted] concluded his testimony, stating that he believes there has been a big cover up regarding the processing of plutonium at SRS. He said that many employees have died from lung and liver cancers, including his brother, yet NIOSH continues to deny claims. [Name Redacted] stated that he will continue to research the plutonium issue until he gets the answers that he is seeking.

Mr. Cameron asked several newcomers to introduce themselves. He gave a brief explanation of the SRS SEC petition, stating that EEOICPA claims for workers who are eligible for the proposed class will not have to undergo dose reconstructions if the class is approved. Mr. Cameron stated that the petition had been qualified for building trades workers. He noted that Mr. Taulbee and Mr. Wolff were conducting the petition evaluation and may have questions.

[Name Redacted] asked two former United States Forestry Service (USFS) foresters to speak about the work they did around the SRS installation. [Name Redacted] stated that he worked with [Name Redacted], who was doing experimental work to determine the effects of radiation on the local vegetation. [Name Redacted] stated that the foresters who assisted [Name Redacted] were issued no personal protective equipment (PPE) or film badges. The research entailed taking a radioactive source into the woods, opening it up for a time, and returning to take measurements of the effects of the radiation on the growth of the plant life.

[Name Redacted] stated that the area where they worked was where the first reactor was located and that the reactor leaked from the day that it went online. The foresters worked in a stream that emptied into Three Runs Creek, which emptied into Parr Pond, a man-made cooling reservoir that was constructed after the reactor. Prior to the construction of Parr Pond, [Name

Redacted] and another forester, [Name Redacted], were in the stream “cruising” the timber down to a location where it could be taken out of the water and stored until it could be sold. He recalled that “a jeepload of HPs called us out of the stream and told us that we couldn’t go in there (the stream) because it was highly contaminated.” There were no signs warning of the hazards and the foresters did not have any PPE or film badges during their work in the creek. They found out later that the stream was so highly contaminated that they could no longer sell the lumber – a contractor took it away to be burned.

[Name Redacted] explained that the USFS office was in the Bush Plantation. The sources were kept in a small metal building in a metal pipe in the ground. The foresters took the sources out into the woods and opened them up at night. They did not have any idea they were being exposed to high levels of radiation. [Name Redacted] stated that [Name Redacted] died two years after having been diagnosed with acute leukemia. He stated that [Name Redacted] documented his fears that the radiation exposures were causing his illness, but that he had not been successful in finding [Name Redacted] documentation. Mr. Taulbee asked [Name Redacted] how the sources were opened in the woods. He replied that there was a mechanism that opened up the source container when [Name Redacted] twisted it.

[Name Redacted] said that the foresters also worked near the burial ground. He stated that when they decided to build a new building across from the burial ground, the foresters were sent in to clear the timber from the building site and to prepare the timber for sale, which continued for months. Prior to the sale, an HP had to check the timber for radioactivity before it could leave the plant. The lumber was so contaminated that it could not be sold. The foresters had worked all that time without PPE or film badges to monitor their exposure. [Name Redacted] stated that he had never known about monitoring until 1986 toward the end of his employment. He recalled that DOE did require them to have a yearly physical.

[Name Redacted] asked [Name Redacted] to describe an event during his employment as an escort for construction workers at SRS after his retirement. [Name Redacted] stated that he was escorting AT&T workers who were doing maintenance in the C Reactor Area when one of the workers dropped a box of wire into the water. When the worker pulled the box out of the water, the alarms went off. They were removed from the area so the alarms could be shut off and were allowed to return to work 15 minutes later. They were sent back into the area without TLDs or PPE. When Mr. Taulbee asked when the event occurred, [Name Redacted] told him it would have been during the late 1980s or early 1990s. [Name Redacted] added that the building was the 105C Reactor. [Name Redacted] confirmed that he was inside that building, “right on top of the water.” He added that he could actually see the rods glowing through the metal grate floor. [Name Redacted] said that he had been inside many of the buildings while working as an escort after his retirement. He had never seen inside any of them during his 30 years as a forester.

[Name Redacted] described another work scenario in a contaminated environment. An office trailer that sat on top of one of the reactor buildings in 221H (or 121H) Area had to be evacuated because it was too contaminated to be used any longer. After the workers were relocated, [Name Redacted] escorted an AT&T employee into the trailer to tag the contaminated telephone equipment and remove it from the trailer. Again, they did not wear PPE or TLDs.

[Name Redacted] explained that construction workers and other outside maintenance workers were not security cleared, so the escorts accompanied them everywhere they went onsite at SRS. A short discussion among the attendees addressed the issue that some workers are “left in the lurch” because they are neither building trades workers nor production workers. These workers include the escorts, security guards, laundry workers, janitors, groundskeepers, foresters, and

others who were not directly employed by SRS.

Mr. Taulbee asked [Name Redacted] to continue. [Name Redacted] said that the foresters worked in the area of the Parr Pond (P&H) cooling reservoir. After the construction of the dam, the USFS decided to sell the timber that had been damaged due to thermal heat after erosion caused it to fall into the reservoir. They worked for nearly the entire winter to prepare the timber for the sale before the HPs determined that the timber was too contaminated to sell.

[Name Redacted] described another scenario: In the early days at SRS, the foresters often went to a concrete pad near Central Stores to clean their equipment. The pad was later found to be highly contaminated because the workers who hauled contaminated equipment to the burial grounds also used the pad to clean their vehicles. The area was cleaned up and made off limits. The foresters and many others were never told of the contamination, so they never had any protection from the exposure at that location. [Name Redacted] stated that many areas of the plant were cordoned off and scheduled for clean up.

[Name Redacted] asked [Name Redacted] if he recalled if the foresters ever had equipment, such as wood chippers, that became so contaminated it had to be removed to the burial grounds. [Name Redacted] replied that all of the timber that was cleared away from Parr Pond and the construction site across from the burial ground had to be disposed of properly. When Mr. Taulbee asked him to describe how the timber was destroyed, [Name Redacted] responded that the hardwood timber from the Parr Pond site was burned, but he thought that the softer timber, which was mostly pine, was buried in the burial ground. [Name Redacted] added that some of his clients recalled that HPs had found that wood chippers that were used to chip pine trees at SRS were contaminated and were taken to the burial ground, after which the chips had to be taken to the burial grounds as well.

[Name Redacted] stated that the USFS also supervised controlled hunts for many years at SRS. The foresters had to handle the deer and other animals that were killed during the hunts. He said that the HPs never found any animals that exceeded the allowable limits for human consumption.

[Name Redacted], a USFS employee who worked with [Name Redacted] confirmed his testimony. He added that the small stream that emptied into Three Runs Creek before Parr Pond was known as Ready Branch.

[Name Redacted] introduced [Name Redacted] who worked in the 100 Areas, RDC Areas, 400D, and 412. [Name Redacted] stated that the records used to reconstruct [Name Redacted] radiation dose under EEOICPA had many gaps. There were gaps between 1966 and 1969 to 1980, 1982, 1983, 1985, 1988, and 1989. [Name Redacted] asked [Name Redacted] whether he was badged in the 400 Areas. [Name Redacted] responded that he wore a film badge and was issued a pencil dosimeter on "hot" jobs while he worked as a reactor operator in the 100 Area. After nine years as an operator, he trained to become an "A" mechanic in the Electrical and Instruments (E&I) Department. Since there were no openings in the 100 Areas, he went to work in the 400 Area, where he was not badged. He was not badged after he transferred to the 400 Area. [Name Redacted] described the facility in the 421 Building where they reprocessed the deuterium from the 100 Area reactors. He said that if they needed an HP, they would call one from the 100 Area. Deuterium samples were sent to the 772D lab every day. [Name Redacted] related that when he worked on equipment in the lab, he used a hand and foot meter to check himself for radiation.

[Name Redacted] said that during his dose reconstruction interview, he stated that there were no dosimetry records when he went into the 421 Building often to repair instruments. The original

meters were filled with oil and had diaphragms that had to be replaced after a time. Since the meters were contaminated, the E&I mechanics took the meters to the “hot shop” to repair and recalibrate them. After a time, the meters were replaced with the more modern (sounds like) Foxboro meters. They were not badged while working on the meters. [Name Redacted] contended that dosimetry records were not kept in the 400 Area, which accounts for the gaps in his own dosimetry records.

[Name Redacted] stated that although the site profile accounts for missed dose, he believes that NIOSH cannot account for the missed dose for unmonitored workers who were in and out of the “hot” areas all the time. [Name Redacted] explained that the E&I mechanics were like the construction workers named in the proposed SEC class in that they did not work in a specific area like the production workers did. [Name Redacted] said that when he talked about working in the “hot” building during his dose reconstruction interview, he was told that doses were calculated by area, not building. Mr. Taulbee asked [Name Redacted] if he was ever required to leave bioassay samples when he was working in the 400 Area. [Name Redacted] responded that he was required to leave bioassay samples when he worked in the 100 Area after tritium incidents, and that NIOSH has records of that bioassay. He believes that there are no bioassay records for him from the 400 Areas, because there was no bioassay testing for the E&I mechanics in that area. [Name Redacted] stated that the production workers had a breathing apparatus to use if they had to get out of an area after a release but E&I mechanics had no such equipment.

[Name Redacted] and [Name Redacted] recalled the double towers where excess gas was burned off. [Name Redacted] said that a signal went off during that process. He related that he and other foresters who were working downwind from the tower became violently ill one day from the smelly gas. [Name Redacted] added that the gas was hydrogen sulfide (H₂S).

[Name Redacted] said that the hydrogen sulfide gas used in the deuterium process was originally produced in the 419 Building in the 400 Area, but the company eventually had it brought in from Texas because it was cheaper. He stated that during the time that he worked in the 400 Area, he and another mechanic climbed the 415-foot tower to reinstall the overhauled igniter on nine different occasions, which was an all-day job. They were issued Scott air packs to wear during the work and were informed of the danger if the gas had to be “excessed” while they were on the tower. The igniter was hoisted up in a basket after they were on the tower. Their lunches were sent up in the basket as well.

[Name Redacted] stated that everything in the 400D Area where the tower was located has been torn down except for the Powerhouse. He added that the 400 Area is not on the list of critical areas.

[Name Redacted] explained that when Bechtel began dismantling that area in the late 1990s, the workers were exposed to the hydrogen sulfide gas when they cut into the pipes. The company decided to bid the work to a subcontractor. He stated that the company “turned its head” on subcontracted jobs and did not keep records. [Name Redacted] said that he had interviewed two brothers who worked for the subcontractor tearing down the tower for approximately three months. When they filed EEOICPA claims, the DOL Resource Center sent them to the Building Trades Medical Screening Program for interviews and screenings. The subcontractor had gone out of business and had not paid social security or income taxes, so their employment could not be verified.

[Name Redacted] stated that many subcontracted employees have problems because DOE was never given any records for them. As an example, he cited the statement of a surveyor who

made an affidavit for a co-worker with Power Engineering named [Name Redacted], who died of cancer at age 45. [Name Redacted] also worked as a surveyor in many of the radiation areas at SRS, including K Area, where they had to walk through a two-mile stretch of swamp to the drainage ditch for the K Area. The surveyor attested that [Name Redacted] ate sourweed grass, blackberries, persimmons, and pears that were growing on the SRS site. He recalled that [Name Redacted] had stood on boxes in the H Area after asking an HP if they could set up a “topo” there. The next day the HP said that they should not be around the boxes and the surveyors had to move their equipment. He recounted another incident in which they had been surveying in the burial grounds in K and L Areas. They had a boat in the water in the L Area pond and [Name Redacted] was using a prism rod in the water. When the rod was put back in the boat, the water would get all over them. They had no idea whether or not the water was contaminated. Monitors went off as they left the area because the prism rod that [Name Redacted] had been handling had become contaminated. The surveyors took their lunches with them around the site and ate wherever they happened to be at lunchtime, often without washing their hands since water was not often available. They worked together in many of the radiation zones at SRS from April 1991 until some time in 1995 when the Power Engineering contract concluded. [Name Redacted] stated that the affidavit omitted that the rod had been passed back to the surveyors despite its contamination because it was part of the surveying equipment. He contended that this “laxness” was an everyday condition for SRS subcontractors.

[Name Redacted] stated that the foresters worked in L Area to prepare a building site. The foresters also ate lunch in the area without washing their hands because there were no available facilities to do so. They did not have any way to check for contamination. [Name Redacted] added that contaminated material was scattered all over the site.

[Name Redacted] stated that employees servicing vending machines and truck drivers are also excluded from the proposed SEC class. In a co-worker affidavit for [Name Redacted], a general manager for Servomation Corporation from 1977 to 1981 stated that [Name Redacted] worked for that company servicing vending machines in 10 areas, including F, H, P, K, and 708 Areas from 1977 to 1981. He was issued a special security badge for access to those areas. Since [Name Redacted] was never monitored, DOE has no radiation dose records for him.

Mr. Taulbee asked [Name Redacted] if the foresters cut down the timber as they prepared it for sale. [Name Redacted] responded that they marked it with spray paint to prepare for the sale and then offered local companies the opportunity to bid. The company that was awarded the bid came onto the property to cut and remove the timber. After the timber was prepared for sale, an HP came to survey the timber and the foresters would use a chainsaw to harvest a sample for the HP to take to the lab.

[Name Redacted] stated that another SRS EEOICPA claimant, [Name Redacted], worked in Inventory in Central Shops. After many years of employment, she was informed that materials present in her area were contaminated with radiation. When these materials were identified, they were transported to the burial grounds by employees dressed in protective clothing. Sometimes the material resided in her area for days before an HP surveyed it and found it to be contaminated, yet [Name Redacted] was never monitored so there are no radiation exposure records for her. Workers in her job classification are also excluded from the proposed SEC class.

[Name Redacted] read an excerpt from transcript of a DOL adjudication hearing for the surviving sons of [Name Redacted] who worked at SRS from 1951 until 1959. A grandson of [Name Redacted] contended that he was involved in more than one spill, with one particular incident being so bad that all of his grandfather’s personal belongings were confiscated. The

grandson stated that [Name Redacted], a crane operator who had worked with his grandfather, recalled the incident and indicated that he thought the spill was covered up because it affected the water supply. [Name Redacted] son said that his father was detained for decontamination for 24 hours after the incident. The grandson said that no records exist for either the incident or [Name Redacted] radiation exposure.

[Name Redacted] interjected that there are no records for the incident in which the HPs made them leave the contaminated stream, Three Runs Creek, when they were clearing to build Parr Pond, even though the HPs took their boots because they were so contaminated.

[Name Redacted] read from the transcript of the case of [Name Redacted], a radiological control technician (RCT) who performed sampling for chemical concerns and confined space entries at SRS. [Name Redacted] job was to cover employees entering contaminated or radiation areas, to provide documentation of dose rates and contamination levels, and to ensure that the work was performed safely. [Name Redacted] also performed habitability surveys to update the levels of contamination or radiation around SRS to ensure that the areas remained within the limits of the radiation work permits (RWPs). If the levels exceeded the limits, the RCTs issued Stop Work orders and the workers were taken out of the area until supervision issued a new RWP for the work to be carried out in safe conditions. [Name Redacted] said that the RCTs often did not find out that the limits exceeded the PPE requirements of the job until they were in a contaminated area so they would have to leave the area to don the appropriate respiratory protection or protective clothing. [Name Redacted] concurred when [Name Redacted] asked him if that meant that the RCTs were often exposed to elevated levels of contamination before they were properly protected. [Name Redacted] recalled several incidents where he and others were called into contaminated areas for surveys, yet the events are not mentioned in the RCTs' dose records:

- The contained chromate cooling lines in the Area F Tank Farm became contaminated, indicating a leak. [Name Redacted] and a co-worker [Name Redacted] conducted a radiation and contamination survey of the area that exceeded the RWP limits. [Name Redacted] recalled giving bioassay samples and possibly nasal smears, but the bioassay results were not in his records.
- [Name Redacted] also described the ITP (In Tank Precipitation) Facility where highly contaminated liquid waste from the B Line and the Canyons was stored in million-gallon tanks until it went through the vitrification process to turn it into solid waste glass. The radiation levels were very high in this area.
- Another incident occurred at the CDF (?) transfer hut at the Area H Tank Farm. The transfer hut was a concrete structure containing valves that diverted contaminated waste from the process areas into appropriate storage containers. [Name Redacted] was the only RCT present with the Operations personnel who were changing a filter on one of the sampling systems. He had conducted the survey and the crew was working under respiratory protection. [Name Redacted] stated that while they were doing their work, the operations should have been shut down so that no waste moved through the facility. However, one of the control room operators opened a valve that diverted some waste in the wrong direction and inadvertently dumped sludge onto the ground outside the building, setting off the area radiation and contamination monitors. Unaware that the contamination was outside the building, [Name Redacted] instructed the crew to exit the building immediately, using the step-off pad to remove protective clothing and respiratory protection per the established posted procedure. They realized once they had removed their PPE that the higher contamination was actually where they were standing. [Name Redacted] indicated that his instruments were off scale at that time due to the

radiation levels, so he was unable to take a survey of the area. When asked if he participated in any post event documentation, he stated that the crew members all had to submit bioassay samples, including nasal and saliva smears. The event was a major incident with a great deal of documentation and was the subject of DOE critiques for many weeks.

[Name Redacted] stated that [Name Redacted] recalled that all of these incidents were well documented and meetings were held to resolve the issues, but none of the DOE documents have ever been made available to any of [Name Redacted] clients who were involved. [Name Redacted] added that [Name Redacted] repeatedly told DOL personnel working on his claim that his file was not complete because no documentation for these and other events in his DOE files.

Mr. Taulbee asked [Name Redacted] if he was required to leave a bioassay sample when the HPs confiscated his boots. [Name Redacted] replied that he did not recall. Mr. Taulbee asked him if he recalled having a nasal smear or any other sampling, to which he replied, "No."

[Name Redacted] read from an affidavit for [Name Redacted] who performed administrative and secretarial duties at SRS from 1955 to 1963. She started in steno pool in the 703A building, but was sent out to other areas of the plant. She was not monitored unless she received a visitor badge when she entered certain areas. The only dose records that DOE provided for her were for 1955-56 and showed that she received 30 millirem in 1956, but no records were provided for the visitor badges. During those years, she went into radiation areas (221F, 221H, 100C, 105C, 105K, 100L, 105L, and 400D) to deliver paychecks and other documents. She filed an EEOICPA claim for breast cancer, but her POC was less than 50%. [Name Redacted] stated that since dose records were not kept for the visitor badges, the administrative workers who were only monitored with visitor badges in radiation areas are in the same situation as the unmonitored construction workers. [Name Redacted] later worked as a laboratory technician for most of her employment.

[Name Redacted] introduced [Name Redacted] son, [Name Redacted], who also worked at SRS in the 300 and 700 Buildings. He stated that he is not ill, but he is concerned that there are no records and the safety practices are inconsistent. [Name Redacted] said that he worked without protection on a crew that cut asphalt from the roof of one building, yet was required to wear protective clothing and a respirator working 1,000 yards away on another building.

[Name Redacted] said that DOE has not provided dose records for [Name Redacted] administrative work but they have records for the laboratory work. [Name Redacted] said that her doctor is deceased as well as her friends and co-workers. He noted that the widow of one of his mother's co-workers was one of the first SRS cases to be compensated and he finds it difficult to understand why her case has not been compensated. [Name Redacted] questioned how NIOSH can use a co-worker dose for the administrative personnel if no records were kept. [Name Redacted] added that his mother's medical records do not exist because they were kept in Aiken County Hospital, which has since burned down. He feels that DOL is "holding all the cards" in his mother's case.

[Name Redacted] cited the case of another unmonitored administrative worker who was sent into radiological areas all over the site to install computers. He stated that limiting the proposed SEC class to only construction workers is unfair to all these other workers who are in the same situation because their exposures are undocumented.

[Name Redacted] asked to address the item in Mr. Taulbee's presentation referring to the contaminated railroad ties mentioned in the SRS SEC Petition affidavit of a worker who was at

the site from 1995 to 2004. [Name Redacted] stated that the storage pit with the contaminated ties was discovered in F Area in the latter part of 1995. The workers who removed the contaminated ties from the pit to the burial grounds were required to dress out in plastic suits. After that, SRS began removing contaminated ties from the railroad lines between the areas. [Name Redacted] stated that the foresters often gathered and burned the ties that were discarded along the tracks after repairs prior to the discovery of the contaminated ties. They did not wear any protective equipment while performing that work. [Name Redacted] stated that contaminated material moved over the railroad tracks from 1953 when the R and K reactors first went online, so any workers who removed ties at any time after were potentially exposed to many different contaminants.

[Name Redacted] stated that he served as the steward for the International Brotherhood of Electrical Workers (IBEW) local union for 13 years at SRS. He stated that all new construction at S Area and the Naval Reactor Area was right next to radiation areas and buildings, yet none of his workers were ever issued any protective equipment or TLDs because the construction areas were considered clean areas. [Name Redacted] recalled that it was a common practice for years for electricians and other trades workers to go to Central Shops to get materials or to scavenge something they needed from other areas without being issued TLDs or other monitoring devices, often without anyone else knowing that they were in the radiation areas. SRS maintenance personnel who were monitored often took unmonitored construction workers with them on jobs around the site. [Name Redacted] said that construction work at SRS was a “loose operation” because they just went wherever they were needed to get the job done. If they knew that there was material in H Area that they needed for their work in S Area, they went to get it without ever wearing TLDs. He cited specific examples:

- In 1987 there was a release in H Area and production workers were evacuated to a parking lot for several hours. Other production workers were carried out of the area and taken to the medical building for treatment. Construction workers in S Area, which was separated from H Area only by a chainlink fence, continued to work without protection during the evacuation and were never told the specifics of the release.
- For several years in the late 1980s, construction workers often ate their lunches under a tree that was 10 or 15 feet from a train that sat on the tracks in a material storage area behind H Area. Then the area was roped off because the train was radioactive and it was removed from the area. [Name Redacted] said that he personally had leaned up against the train on several occasions because he was unaware that it was radioactive.
- On another occasion, pipefitters and ironworkers removed a pump from a waste storage area in H Area and put it on the back of a truck without first completely sealing it up. Contaminated water spilled from the pump in the parking lot and on highways on the way to the jobsite. [Name Redacted] was asked to leave when he drove his company truck into the same area, yet he was never monitored and his truck was never checked. The contaminated parking lot and the road were torn up and replaced. He drove the truck for several years after the incident.
- He recalled an incident outside Central Shops where welding machines used by construction workers all over the site were brought for maintenance. An HP was usually called to survey the equipment prior to the maintenance work, even though the machine may have already been in the yard for several months. It was not unusual to find out that the machines were contaminated. Workers often leaned against the machines before they were surveyed.

[Name Redacted] stated that he often worked on the welding machines in the maintenance shop. He recalled that a machine that he was working on was found to be contaminated after they had used an air hose to blow off the dust so they could work on it, contaminating another machine that had already been cleaned up. There were two crews of electricians working in the welding shop at the time. [Name Redacted] was told that the contaminated machines were taken to the burial grounds. When Mr. Taulbee asked if he had been asked for a bioassay sample or a nasal smear on that occasion, [Name Redacted] replied, "None whatsoever. Central Shops was considered a clean area because its primary use was for fabrication, but they brought in equipment there for maintenance from other areas. When I was a foreman, I sent my crew to the 300 and 700 to pick up welding machines that had been brought out of the 'hot' areas to bring them back to Central Shops. The HPs did not tell us if the equipment had been checked."

[Name Redacted] stated that someone had taken tools from a radiation zone and brought them to [Name Redacted] in Central shops for repair. [Name Redacted] recalled that they had brought a flatbed truck with a pallet of tools that were painted for the RZ areas (radiation zones), indicating that the tools were not to be removed from those areas. He had the workers leave the area and called an HP to survey the tools. The HP told [Name Redacted] that the tools were contaminated and sent personnel dressed in plastic suits to put them into plastic bags, but they sat on the pallet for three weeks before they were removed to the burial ground. The four men who had handled the tools were all decontaminated at the HP office in Central Shops. When Mr. Taulbee asked [Name Redacted] if HP had taken bioassay samples or nasal smear from the four men, he indicated that he had no knowledge of any bioassay samples. [Name Redacted] said that it was likely that an unknown number of workers had handled those tools before they were picked up by his crew. He told Mr. Taulbee that he thought that this event happened about 1992 or 1993.

[Name Redacted] stated that one of his clients had purchased tools from SRS that were later found to be contaminated. Apparently, the tools were sold before were surveyed.

[Name Redacted] explained that when Bechtel Corporation came to SRS in 1989, they set up an Excess Yard in Central Shops for all the tools that had been purchased over the years that were not in use in a specific job. Members of the public were permitted to purchase these tools for a fraction of the commercial cost. Materials came into the yard from every area of the plant and were occasionally found to be contaminated, so Bechtel started checking the tools before they left the yard. [Name Redacted] said there should be records on the contaminated tools. [Name Redacted] stated that there is a 100-ton crane buried behind the Ford Building in the Excess Yard. [Name Redacted] added that they had asked DOE for records for all of those incidents but had received nothing.

Mr. Cameron asked [Name Redacted] if monitoring practices for construction workers were as haphazard as those described by [Name Redacted] in his testimony regarding monitoring for the foresters. [Name Redacted] replied that those practices were common practice for all building and construction trades workers. He cited the example of the tools and said that if the workers had known that they were painted to indicate they were to stay in the RZ, they would never have brought them to Central Stores for repair. He compared construction work to a swinging door because the workers may come in for a job for a short period, only to come back six months later for another job. Many of these workers did not receive any radiation safety training, including the workers in the Excess Yard who were generally new hires waiting for their clearances. They had to rely on other workers for guidance on safety issues. [Name Redacted] stated that when Bechtel came on board at SRS in 1989, they started receiving some training; but the people who were hired to follow up on the safety training often did not follow up with the construction trades

for several years after that. He added that the situation improved by the mid-1990s because SRS safety personnel had become better trained during that time.

[Name Redacted] stated that it was common practice for SRS to bid “hot” jobs to the construction trades so production workers did not have to do them. [Name Redacted] said that construction workers often assisted riggers when they changed out massive heat exchangers. [Name Redacted] recalled one such instance in which contaminated water spilled out of the heat exchanger onto the workers and said that a worker involved in that incident had promised to attend the evening meeting. [Name Redacted] stated that the heat exchangers were brought into the Ford Building in Central Shops and were overhauled there primarily by the boilermakers as well as a few other crafts over a period of approximately two years. The Ford Building was sealed up and roped off because it was too contaminated to work in after the heat exchangers were overhauled. [Name Redacted] said that the Ford Building was the only contaminated building that the building trades had to enter in Central Shops; the Excess Yard was adjacent to the Ford Building. [Name Redacted] added that it is difficult to appreciate what a huge undertaking it was to rig the heat exchangers to get them out of the reactor areas. He said that it was “hot” work without any records.

[Name Redacted] said that there was a Line Department within the Electrical Department that maintained the high voltage lines. When they pulled the electric poles out of the ground, it was not uncommon to find that the underground part of the pole was contaminated, especially in F or H Area.

[Name Redacted] described a big pipe full of smaller pipes that sat behind the USFS area for approximately eight to ten years. It came out of H Area and ran down to the power line, and was roped off with contamination signs posted all around it. When the heavy rains came, the flow of the water moved the pipe. [Name Redacted] said that the foresters encountered that type of situation continuously. He indicated that the forester did not have an HP at their disposal unless one happened to come by the forestry office. The forestry supervision was not apprised of the contaminated materials that were carelessly left about the area.

[Name Redacted] described R Area, which had been shut down. Unmonitored construction workers would go into the buildings there to cannibalize parts they needed for a job. When Mr. Taulbee asked him if there was health physics coverage during those instances, he replied that he could not verify that because he was not there.

[Name Redacted] stated that R Area was where he worked in 1954 when he hired in at SRS. As a monitor operator, it was his job to pick up the SWP clothes that were left in barrels at the step-off pads in the RDZ. An HP with a Geiger counter accompanied him on his rounds to check the clothing. If it was “hot,” then it was tagged and a truck would pick it up and take it to the burial ground. If it was not “hot,” it was sent to the laundry to be washed and returned to inventory. When the first reactor shut down, an HP went with him to pick up the contaminated clothing and equipment. He recalled that he inhaled a lot of dust from the contaminated equipment. Mr. Taulbee asked him if he remembered leaving bioassay samples or being monitored during the time when he was handling the contaminated clothing. [Name Redacted] replied that he was not monitored because it was the first reactor. He confirmed [Name Redacted] comments about scavenging parts from the reactor area.

[Name Redacted] commented that the burial grounds are not on the list of critical buildings or areas at SRS.

[Name Redacted] told of an incident in the early 1990s in the L or K Area in which two

electricians were using a core drill. They asked a laborer to bring them a bucket of water to cool the drill and he brought back a bucket of heavy water. [Name Redacted] was not certain how the laborer obtained the heavy water or how many people may have handled it before it got back to the job. One of the electricians died of cancer. He stated that there should be a record of the incident since it was widely known.

Mr. Cameron thanked the attendees for coming to the meeting and adjourned the first meeting at approximately 4:05 p.m.

Proceedings for the 6:00 p.m. meeting:

Buck Cameron opened the meeting at 6:00 p.m. by welcoming the attendees and explaining how their input could help the National Institute for Occupational Safety and Health (NIOSH) in the evaluation of the Special Exposure Cohort petition for a proposed class of construction workers from the Savannah River Site (SRS). He introduced Tim Taulbee, a NIOSH health physicist, and Al Wolff, a health physicist with NIOSH's contractor, the Oak Ridge Associated Universities (ORAU) Team. Mr. Cameron explained that they are looking for information that may help them evaluate the Special Exposure Cohort (SEC) petition. He encouraged the attendees to share any information they felt would assist Mr. Taulbee and Mr. Wolff in evaluating the petition.

Mr. Taulbee thanked the attendees for coming to the meeting and emphasized the importance of their involvement in the evaluation of the SEC petition. He proceeded with the same overview of the EEOICPA SEC petitioning process that he had presented during the 1:00 p.m. meeting (see pages 4 through 6). He explained that the workers who had attended the afternoon meeting had given NIOSH cause to consider other pathways that may increase workers' calculated exposures to radiation at SRS. He gave the following examples to illustrate the type of input that is helpful to NIOSH:

- A former construction worker provided additional information regarding the affidavit submitted with the SEC petition regarding the contaminated railroad ties that had been discovered in a waste pit in the mid-1990s. The discovery had affected new safety procedures calling for workers handling the ties to wear full protective gear, including respirators. The same former worker had voiced his concern that many other unprotected, unmonitored workers may have been exposed in the years before the contaminated ties had been discovered.
- A former U.S. Forestry Service (USFS) worker related that before the contaminated ties had been discovered, forestry workers had piled and burned railroad ties that had been discarded along the tracks. The foresters had also performed this work without benefit of protective gear or monitoring.
- A former construction worker indicated that construction workers had been assigned to assist riggers in disconnecting heat exchangers from the reactors and then working on the heat exchangers in contaminated areas.
- An SRS E&I mechanic stated that he worked unmonitored in the 400 Area while performing hazardous work.

Following the presentation, Mr. Taulbee opened the meeting to discussion and questions.

[Name Redacted] stated that he was involved in an incident in late 1979 on the 221-H B-Line in which he received a plutonium uptake because the air intake was reversed while the plutonium

was being bagged in an adjacent room. He was asked for a nasal smear and the HP covering the shift entered it in his logbook. [Name Redacted] said that the supervisor “did not want the incident recorded in the logbook because he did not want to look bad.” Several months later, the HP who had recorded the incident asked [Name Redacted] to come talk to him. The HP showed him that someone had opened the lock on his desk with a screwdriver and had stolen the logbook while he was away from the site serving with his National Guard unit.

[Name Redacted] became sensitized to beryllium while working at SRS. He described an electrical shop located in Central Shops where tungsten tips were soldered onto beryllium band bus bars and then machined into tips for the tritium reservoir welding machines in 234-H. He said that the same lathe had been used for more than 40 years but had been boarded up about eight years ago.

Mr. Taulbee asked [Name Redacted] if alarms had gone off during the plutonium incident. He responded that when the incident occurred in latter part of 1979, DuPont had an annual dose limit of 3 R (roentgen) per year. It was common practice to remove the experienced hood operators as their limits neared 2R and replace them with less experienced hood operators with lower dose who were not as familiar with the process. He explained that it was standard practice to walk through the building to make sure that no plutonium was being handled in the hoods before the Warm Canyon crane was brought into the building. On the morning of the incident, the less experienced crew did not verify the absence of plutonium in the building. When the barn doors were opened to bring in the crane, the draft created a reversal of airflow in the building and some of the plutonium became airborne. He was working in 410 North and could see the operators bagging the plutonium through the window and a co-worker was in 410 South. An HP wearing a respirator came up the stairs handing out respirators and instructed them to put them on and leave the building. [Name Redacted] said that he had never been fitted for a respirator before so he just left the area, dragging the apprentice with him down the stairwell. Later, the HP department did nasal smears on all workers who were in the area at the time. The HP said that his nasal smear had “it,” and processed the swab. [Name Redacted] was never notified of the results of the smear. Mr. Taulbee asked if he was asked to leave a bioassay sample. [Name Redacted] replied that he had not been asked to leave a special sample for the incident, but participated in a monthly bioassay program. He stated that he had chest counts on occasion when he worked in the 700 Area, particularly if he had worked on other jobs and then come back to SRS. Mr. Taulbee asked if he worked at other DOE sites, to which he responded, “No. I worked at other commercial nuclear plants.” [Name Redacted] added, “That stairwell up to 410 North is really crapped up. They told us to stay away from the walls and walk in the middle of the stairwell.” [Name Redacted] said that he and others had drilled holes through the 3-foot thick walls in the stairwell to install conduit for security cameras and identification badge readers.

[Name Redacted] and [Name Redacted] said that the plutonium storage vault was in a corner near that stairwell and they were told to stay away from that area because it was so “hot.” [Name Redacted] stated that the plutonium containers were kept in a cool water bath in that area. He recalled that once he had helped carry ice from the lunchroom to the plutonium storage area to pack around the containers when the heat exchanger for the water bath was not working properly. The containers were steaming as they packed them in the ice. He added that there was a screen door on the vault since the area was so steamy.

Mr. Taulbee said that he is aware of the plutonium incident on the H B-Line. He asked [Name Redacted] if the HPs told him what they were looking for in the chest counts, to which he responded, “No.” When Mr. Taulbee asked if he knew whether a report had ever been written about the incident, [Name Redacted] replied, “As far as I know, the logbook disappeared.”

[Name Redacted] and [Name Redacted] recalled that a mobile unit was brought into the work areas so all workers could have annual chest X rays, but they had to go to the 700 Area for their chest counts. Mr. Taulbee thanked the two men and stated that the information they had shared was exactly the type of input that NIOSH needs to evaluate the petition.

[Name Redacted] related the predicament of [Name Redacted], a painter who received a settlement and is no longer working. For two years, she wore a full-face respirator so that she would not have to breathe dust while she worked in Building 235-F, scraping and repainting. When the remediation was complete, signs were posted around the building declaring it a beryllium legacy area. After the remediation was complete, [Name Redacted] went to work with a remediation crew in Oak Ridge, but was called back three days later and never returned to work. [Name Redacted] confirmed that it is a common occurrence for the plant to bid out the “dirty work” to the building and construction trades as they had in this instance. [Name Redacted] stated that Building 235 has been shut down and added, “They have been trying since then to get it into safe mode. They figured that if the building was fully involved in a fire, we would all get 300 R in just a few minutes and not even have to go in there – they left so much in the building.” Mr. Taulbee asked [Name Redacted] if Building 235 is considered a high radiation area as well as a beryllium area, to which he replied that he had never been in the process area of 235, but he had worked on the second level in the electrical vaults and the compressor rooms. He stated that [Name Redacted] had gotten her uptake on the second level while working around the maintenance cages. When Mr. Taulbee asked if painters are considered to be part of the construction trades, [Name Redacted] indicated that they are. He also related a conversation he had with (inaudible) some time after [Name Redacted] uptake. The gist of the conversation was that the signs marking it as a beryllium legacy area were not posted until after [Name Redacted] finished her work in the building. [Name Redacted] added that management at the site denied the presence of beryllium for years. He said any exposure he had to beryllium would have been from working around the bus bars.

[Name Redacted] asked [Name Redacted] if he recalled any other occasions when his work had not been properly monitored -- specifically, whether he had ever pulled any contaminated electric poles. [Name Redacted] responded that he had worked on a line crew the previous summer, pulling old poles at Building 105-C, and then cutting them up with a chainsaw, and putting them into rubbish containers to be removed from the area. Mr. Taulbee asked if there was an HP present when the line crew was doing that work, to which [Name Redacted] replied, “No, I never saw any of them when I was working with the line crew.”

[Name Redacted] stated that the Tank Farms were probably the areas where workers were most at risk in the 1970s and early 1980s when they may have worked under a standing Radiation Work Permit for 2 or 3 weeks and only have seen an HP at the beginning of a job; if they needed an HP they had to go find one. He said that the pencil dosimeters that were issued often gave inconsistent results [for example, two electricians working a very short distance from each other might have had pencil dosimeter readings that differed as much as 250 millirem (mrem) in a matter of seconds]. Under drought conditions, the dust around the Tank Farm might cause an elevated reading; but when it rained and the dust settled, the pencils would go back down to a “0” reading. Dogs that wandered away from the controlled deer hunts at SRS and came into the Tank Farms often got so “hot” that they would have to be quarantined. [Name Redacted] said that he is thankful that he hadn’t worked on the Tank Farms since then.

When Mr. Taulbee recapped his statement regarding the lack of HP coverage at the Tank Farm as opposed to heavier coverage at the H B-Line Facility, [Name Redacted] added that the entire operational area on fourth level of H Canyon was only about 4,000 square feet and was divided

into several rooms that were covered by four HPs that did not work in any other areas. The B-Line had Continuous Air Monitors (CAMs), but the Tank Farm only had gamma monitors. He explained that at the old Tank Farm, the tanks were located down in holes and each tank had several gamma monitors around it in cages above the ground, so they were approximately 15 feet above the tank.

[Name Redacted] stated that in the past, the HP department tried to keep the workers' exposures under 150 mR/month and that was usually sufficient, but there were times when that limit could be exceeded in less than an hour. When Mr. Taulbee asked him if the HP department conducted a regular bioassay sampling or whole body counts, [Name Redacted] replied that they had a yearly whole body count and gave urine samples regularly if they worked around tritium. If they worked in a radiation zone requiring them to wear plastic suits, they were required to leave a urine sample each day. If they were working in clean areas, they left a sample weekly or monthly. Mr. Taulbee asked if there were friskers or other devices to check themselves as they exited a radiation zone. [Name Redacted] responded that they had handheld devices to do so if they worked in an area requiring a plastic suit.

[Name Redacted] said that he worked at the Tank Farms in the late 1970s when the tank tops were being changed out to a new design and they were trying to get all of the sludge out of the tanks. Since the tank tops were in a radiation area, the workers dressed out in the RCO trailer that also served as their monitoring station. The trailer was 500 yards away from some of the tanks. No radiation controls were in place consistently and the workers often did not monitor themselves when they left the area. [Name Redacted] said that there was no documentation to let them know if the area had been surveyed. If they went to the RCO trailer to ask about a specific tank, they were told that it had already been checked out, but when they got to the Tank Farm, there might be a stack of lead that had not been there the day before. He said that there was a big difference in how the construction workers and operations personnel were treated by the HPs. He said that he knew of instances where warning signs were taken down before construction workers were brought in to do a job and posted again when the job was done. If they asked about the pre-work survey, they would be told, "It's 5 over 5 to go to work." He said that no one ever explained that statement to them, but they assumed that it meant that the work area was safe. [Name Redacted] recalled that when the filters were taken off the old tanks, the alarms went off and they were told that a power surge had caused it. The alarms were reset and the trades workers were told to get back to work. He said that the HP coverage had improved somewhat by the time he went to work in the Canyons in the 1980s, but unless the construction workers got to know somebody, most of the time there was no HP around to look out for their safety. He said that trades workers relied on their more experienced co-workers to keep them safe.

[Name Redacted] recalled that [Name Redacted], who had been a boilermaker when the plant was built and had later trained as an HP, was one of the best HPs to go to for information because he had been in the same building for 30 years and knew all the contaminated areas. [Name Redacted] stated that the HP area was painted twice a year because the rate in that area was 300,000 dpm (disintegrations per minute) due to the leaking oakum expansion joints in the equipment there. Trades workers went through that area regularly to get to their work areas. He added that some of the earlier HPs at the site had started as construction workers and generally made sure that they looked after their own; but the "corporate mentality" that began in the 1960s when the plant shifted toward more educated supervisors had caused the construction workers to be treated as a lower class of employee.

[Name Redacted] stated that the 221 A-Line behind the F Canyon was another “hot” building. He said that he wore a film badge when he worked there, but he had never seen any reports for the readings. [Name Redacted] added that a thick yellow uranium dust covered the beams in that building as recently as the 2000 upgrade. The A-line has since been torn down except for the 221-F building. The building is so “hot” that they cannot tear it down and it has to be monitored from outside the building.

[Name Redacted] stated that the area had not been roped off for many years when he had worked in that same building in the 1980s on a contract to install a new telephone system. They had to dig under the railroad tracks to come into the building to put the phone system in. He added, “When we hit that, it was trouble.” The area was declared a CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act) site soon afterward. He said that the telephone work was eventually done under special permits. He explained that the contamination resulted from the residue on 55-gallon drums of product that sat by the railroad tracks waiting to be loaded. The drums sometimes sat for days and the ground became contaminated as rainwater washed the residue off the drums. Mr. Taulbee asked if the telephone installers wore any respiratory protection. [Name Redacted] replied that they had not. He said that his wife’s uncle worked in the building for many years and is now suffering from cancer.

[Name Redacted] said that when he worked in the reactor areas, he wore protective clothing and TLDs and gave monthly bioassay samples. He recalled that the biggest problem was that often there were no HPs around to help them stay out of the problem areas. Since construction workers are transient, they come and go on a frequent basis without benefit of the regular safety programs. They have to rely on their co-workers to survive. [Name Redacted] added that when construction workers are brought in for “hot” jobs, they are often hurried in and out. If they are working on a safe job, they do not have much interaction with the HPs.

[Name Redacted] said that he worked most of the time on the B-Line and there were always HPs around. When he worked for a short while at the Tank Farms, as he described earlier, the only safety instructions came from the standing RWP posted on the gate. The RWP listed the protective clothing and equipment that they needed for the job. Mr. Taulbee asked if they received any training for dressing out properly. [Name Redacted] replied that the HPs fitted them with full face respirators, but they had to rely on their co-workers to show them how to dress out. He said that training improved after Bechtel took over the safety operations for Westinghouse.

Mr. Taulbee asked if construction workers had HP coverage when they worked in the reactor areas. [Name Redacted] said that there was none because the HPs generally were “too busy.” He added that things have improved over the years. Mr. Taulbee asked if standing RWPs were posted in the reactor areas, to which [Name Redacted] replied that he didn’t remember seeing any. Mr. Taulbee asked if construction workers had to sign in and out of the work areas, to which [Name Redacted] replied that they did not. [Name Redacted] added that they were given daily dose rate cards and pencil dosimeters, but he did not remember signing in and out of the areas. [Name Redacted] recalled having to go find his own pencil dosimeter and then arguing with the HP to have it calibrated to “0”. The HP told him that he didn’t need one. He told Mr. Taulbee that he wore a TLD as well, but did not trust it because it never left the site and he never got to see any of the reports. They left the TLDs hanging on a board when they left for the day so the background radiation could be checked.

[Name Redacted] said that when he first went to work at the site in 1978, they were installing six new tanks in H Area. If a worker was outside the operations area, he was not issued a TLD or

any other monitoring. The workers were evacuated from the shacks along the railroad lines when the irradiated slugs were being transported from the 100 Area to the 200 Area. An HP walked along the tracks and evacuated workers from their shacks to the parking lots on more than one occasion because the cask cars on the train were so “hot.” The workers had to remain in the parking lots until the cars were brought into the Canyon and the doors were closed. [Name Redacted] said that when he worked in the 100K Area, the workers walked right across the “swimming pool” over the spent fuel rods to get to their shacks every morning.

[Name Redacted] stated that he worked in the F Canyon in 1981 installing a pipeline. He recalled that they did not wear any protective gear because the signs had been taken down and the area appeared to be “clean.” When the work was done, the hazard signs were reinstalled.

[Name Redacted] told about an HP who had issued a Stop Work Order when workers found contaminated railroad ties while they were remediating a rubble pit in F Area. The HP was fired for writing the order and his company was blackballed from bidding on future contracts for Westinghouse.

[Name Redacted], a local attorney, introduced [Name Redacted], an administrative worker for Westinghouse Savannah River Company (WSRC). She explained that while she waited for her clearance, she worked in the clerical pool in H Area. After her clearance was final, she went to work in 700 Area and then was moved offsite to an office in Aiken. She was transferred back to the site for what she thought would be another clerical job, but was told when she reported that she would be installing computer equipment throughout the plant. She was also told that she should dress in jeans, a t-shirt, steel-toed boots, and a hardhat instead of office attire. She was sent to S, F, and Z areas to install the computer equipment, a job for which she had not been trained. When she complained, they moved her back to H Area until a clerical position opened in the D wing of the 700 Area. Her office shared a common wall with the Fabrication Laboratory where the engineers and technicians “melted stuff.” After one experiment, she noticed that there was a cloud hanging below the ceiling of her office. She went to her boss and complained about the cloud, which was causing her to have a headache, burning eyes, and a chemical taste in her mouth. He told her to move to a different office to work. The lab stopped making the chemical. [Name Redacted] stated that there was an investigation and some testing, but she had not been informed of any results because they were “need to know.” Mr. Taulbee asked her if she could give a timeframe, and she replied that it would have been between 1999 and 2001. After the investigation, they built a 10-foot retaining wall between the C and D Wings. [Name Redacted] cited several anomalies in the safety practices in those areas:

- All of the engineers and technicians in the Fabrication Laboratory next to [Name Redacted] office had to be fully dressed out while they were in the lab.
- Technicians in other laboratories in the C Wing also had to be dressed out. [Name Redacted] could walk down the hallway into C Wing and talk to the technician through the glass window in the door that had a vented panel at the bottom for intake.
- The floor in one engineer’s C Wing office was found to be contaminated. While a crew decontaminated his floor, he was working in the office with his feet propped up on a box. The cleaning was done without a barrier being put up or the area being roped off. She walked past the office as it was being cleaned because she was unaware that it was contaminated.

- There were times when contaminated areas were taped or roped off on the lower level of the building where the canteen and the supply room were located. There was nothing except the rope between the contamination and the workers.
- If the alarms went off, the workers would be told that the monitors weren't working that day
- She recalled walking through the S or H (inaudible) and seeing a bulldozer that was "glowing" and was inside a glass enclosure because it was so contaminated that it couldn't be taken out of the building.
- She recalled that a contaminated cockroach and a contaminated rodent had been found on separate occasions in the 700 Area in proximity to where she worked.
- Workers often used paper plates and plastic utensils in the 700 Area cafeteria when the water was contaminated and the dishwasher could not be operated. Workers drank water from the same water supply on a daily basis.
- When the ceiling panel was removed to change a light fixture in [Name Redacted] D Wing office, the maintenance worker saw that there was no barrier between the office and the Fabrication Lab. As she previously stated, the laboratory personnel was always dressed out.
- Since she was not classified as a radiation worker in the 700 Area, she did not get radiation training, give bioassay samples, or regularly wear a TLD, even though her co-workers did. When she asked her supervisors why, she was told that she did not need to participate because she was a clerical worker. Mr. Taulbee asked [Name Redacted] if the other workers in her office wore TLDs because they went into the Fabrication laboratory, to which she replied, "Yes."

[Name Redacted] stated that she is a breast cancer survivor. Her boss and three female co-workers from the D Wing office have also been diagnosed with cancer. [Name Redacted] also said that he is a thyroid cancer survivor and had to have surgery to have his thyroid gland removed after his condition was diagnosed.

[Name Redacted] introduced [Name Redacted], who had worked as a subcontractor employee for more than 10 years at SRS, first with a cleaning company and then as an escort. [Name Redacted] explained that they have had a great deal of difficulty getting his records from DOE.

[Name Redacted] stated that he worked for two cleaning contractors in the K Reactor Area from 1979 until 1999. During that time, he delivered cleaning supplies to supervisors in 16 different areas around the plant, but never wore a film badge or a TLD. He said that the plant started requiring that everyone working at the site had to take radiation safety courses in the mid-1980s; but even so, subcontractor employees were not regularly given TLDs until years later. Since he had taken the classes, he was aware that he was going into radiation zones and finally requested a badge on his own. He worked in the 300 and 700 Areas, so he picked up a film badge every day from the 300 Area and turned it in every night. He never got a report of any of the dosimeter readings.

Several years after he began wearing a TLD, he was present during a radiation incident. He was escorting four construction workers who worked on pipes in the K Area Reactor for about 30 minutes. He exited the area through the monitor after them and the alarm went off. He was taken to the HP department for decontamination that lasted for nearly seven hours. He was allowed to go home after several long showers and a "normal" scan with a hand monitor, but

they confiscated all of his personal belongings. DOE has not been able to find any of [Name Redacted] records or a report of the K Area incident. When he filed his claim, he was told that his employment could not be verified but he produced paycheck stubs that proved that he worked there. Mr. Taulbee asked when the incident occurred, to which [Name Redacted] replied it was probably in the early 1990s. He also recalled that an asbestos abatement crew in Building 703 worked in full PPE while he worked in the vicinity without any protective gear.

[Name Redacted] stated that subcontracted workers often worked in the same areas as construction workers, yet they are not covered in the SEC petition. He asked [Name Redacted] if he could tell Mr. Taulbee about working in the laundry. [Name Redacted] answered that he had worked in the laundry approximately five times to fill in for supervisors who were off work. He stated that the laundry workers who worked for subcontractors often handled contaminated clothing and equipment without wearing any protective gear, alongside DuPont workers who were at least partially protected. The rationale offered by the plant was that the DuPont workers were handling more contaminated items, but the subcontract workers were in immediate proximity to those items. Mr. Taulbee asked if there was a divider between the subcontract workers and the DuPont workers. [Name Redacted] responded that the only divider was a rope.

[Name Redacted] stated that he always checked the clean laundry before dressing out because sometimes even the clean coveralls were still “hot.” He noted that the practice was not mandated by SRS, but was another example of the construction trades workers mentoring each other to keep from getting contaminated. He commented that [Name Redacted] was describing the reactor restart project in early 1990s, when there had been two shifts of construction workers coming into the plant. [Name Redacted] said that he believed there had been three shifts during that period.

[Name Redacted] corroborated [Name Redacted] statement about the water contamination in the lunchroom in Building 703. [Name Redacted] commented that the building has since been torn down due to contamination, as well as the credit union building and others in that immediate area.

[Name Redacted] said that the plant had found cutting oil in the water system in the 1980s. [Name Redacted] said that there had been a problem with solvents from the 300 Area getting into the aquifer and they had tried to clean up the groundwater using steam injection. Mr. Taulbee asked them if the contamination was from the solvents in the water, to which [Name Redacted] replied that it was from the degreasing agents that were used in the 300 Area during the 1950s and 1960s. [Name Redacted] speculated that if the building was so contaminated that it had to be demolished, DOE should have reports on the contamination levels in the water over a period of time, but he has not been able to get them.

When [Name Redacted] asked [Name Redacted] if he had worked in the laundry in the F Area, he replied, “Yes.” [Name Redacted] said that the facility had been torn down and the legacy hotspots were all marked on the slab.

[Name Redacted] cited the example of [Name Redacted], a laundry worker who has since died from cancer. Her daughter had told him that HPs were supposed to check the laundry for radiation before it was washed, but that sometimes piles of laundry would sit for days before the HP would come in and find that it was too contaminated to process. By that time, [Name Redacted] had already worked in it. [Name Redacted] added that the alarms went off all the time. They were told that if they left the area for a time and the all clear was given, they were free to go back to work. If the alarms went off again, they were to contact an HP but it was sometimes difficult to find one. Several attendees agreed that it was common for an HP to

respond that the equipment was broken if an alarm went off or if a hand and foot scan showed contamination. [Name Redacted] stated that he waited for 30 minutes for an HP to show up when the alarms went off during the contamination incident in K Area that he had described earlier.

[Name Redacted] stated that he has filed an EEOICPA claim for his thyroid cancer. His doctor wrote a letter stating that thyroid cancer has been associated with radiation exposure, but that has not caused his claim to be handled expeditiously. He has read about programs where people living near the nuclear weapons plants were given pills to protect their thyroid glands, yet the government did not take such measures to protect the men and women who worked at the plants. He said that the loss of his thyroid gland has shortened his life and that the government should recognize that his work at SRS put him at risk and acknowledge that his life is worth something.

[Name Redacted] stated that in 2002 a NIOSH representative stated at a public meeting of the Advisory Board on Radiation and Worker Health (ABRWH or the Board) that the three most common radiation-induced cancers are thyroid cancers, lymphoma, and leukemia. He stated that leukemia occurs in approximately 7 out of 100,000 people in the general population, but there are 85 cases of leukemia among the SRS claimants. He said that the statistics for all types of cancer are higher among SRS workers than in the general population, but that it does not appear that either DOL or NIOSH has studied the data to determine the incidence of these cancers among nuclear weapons workers. Mr. Taulbee acknowledged that, while he does not disagree, he does not have the ability to go back to NIOSH to request such a study. [Name Redacted] said that he believes the more common cancers should be weighted in the dose reconstructions according to their incidence, to which Mr. Taulbee responded that they are given more weight in the IREP (Interactive Radio Epidemiological Program) model that is used to determine the probability of causation (POC). [Name Redacted] countered that he feels that is not evident in the compensation statistics, given that the denial rate is still over 60% for those cancers.

[Name Redacted] commented that she had been told by someone at NIOSH that outdated data was used to perform dose reconstructions. When Mr. Taulbee asked her to clarify her statement, [Name Redacted] responded that the risk model seems to be based on old data rather than current information from the claims that have been filed. Mr. Taulbee stated that the risk models are being updated with data from the BEIR (Biological Effects of Ionizing Radiation) VII report. He said that the lung model has been updated, but the data in the current models for other cancers are generally more claimant-favorable than the data in the report and result in higher risk estimates than the current BEIR values. NIOSH is also currently evaluating two new studies: updated data from the study of the Hiroshima-Nagasaki bomb survivors, on which the IREP model is based; and a new study on blood organs. Mr. Taulbee added that NIOSH is continually reviewing new data and will continue to do so as long as the program exists.

[Name Redacted] explained that her deceased husband worked at SRS as an E&I machinist. He was diagnosed with lung cancer in October 1992 and passed on in December 1992. She had to make a FOIA (Freedom of Information Act) request to get his records. She stated that there is a gap of about one year in his dosimetry records. She added that another woman who filed a claim for her husband, who worked as a security guard at SRS, told her that she recalled an incident at SRS between July and November 1979 in which at least four men were sent home and not allowed to return because they had received a very high exposure. Her husband had come home still wearing his badge and had told her that he had been told to wear it because he had been exposed to high amount of radiation. The dose reconstruction report stated that there was no report of the incident. [Name Redacted] said that the dose reconstruction report indicated that the man's dosimetry data contained information from the 1979 period that had resulted in the

case being compensated, but did not include a report of the incident. The other woman's husband had retired in 1983 when Wackenhut took over the security for SRS. [Name Redacted] husband started working in the production area at DuPont in 1983.

[Name Redacted] stated that he had come home from work on several occasions to have his wife ask him what had happened at the site because she had seen a news item on CNN about a big release. He found out a week later that the release had happened in F Area where he had been working at the time. [Name Redacted] added that he learned of incidents at SRS on CNN many times without ever hearing about them from SRS management.

[Name Redacted] recalled that construction workers had been kept out of F Area for three hours one morning. [Name Redacted] said that he remembered that incident – the vault inventory had not been reconciled and they locked down the area until all of the material had been accounted for.

[Name Redacted] also recalled that a test had been shut down after its first run because the uranium oxide solution had melted the PVC pipes and gotten all over the floor. Instead of going out into the H waste area, it backed up into the sludge pump. The entire building had to be shut down. After several years, the building was demolished and the area was paved over.

[Name Redacted] asked if anyone remembered an incident in which contaminated water spilled from a pump in a parking lot and on the highway on the way to the jobsite. [Name Redacted] recalled that workers had removed a sludge pump from a waste pit in H Area and were going to install it at the jobsite. He had driven into the parking lot only to be told to leave because it was a contaminated area, but he was never monitored and his truck was never surveyed. The contaminated parking lot and the road were excavated and replaced. He drove the truck for several years after the incident.

[Name Redacted] stated that a client of his had worked for a subcontractor at the site as a backhoe operator and was told to dig under the road so they could install a pipe. After he started digging, an HP told him the area was too contaminated to be digging. The man's supervisor had told him to proceed and they had used an auger to drill a hole under the road so the pipe could be installed. The client had not been monitored.

[Name Redacted] asked Mr. Taulbee who was included in the proposed class of construction workers. Mr. Taulbee responded that all of the building and construction trades were included, but NIOSH is evaluating if others should be included. [Name Redacted] commented that not all of the people who worked on construction-type jobs at SRS were hired through organized union labor entities. Mr. Taulbee stated that NIOSH recognizes that those people will be included in the class as well. [Name Redacted] cited the case of [Name Redacted], who worked not only as a laborer for the cleaning company, but also as an escort. Mr. Taulbee said that he is unsure whether escorts would be included in the class. [Name Redacted] stated that the escorts were hired because they had held security clearances and could accompany workers who did not have security clearances. He said that although they were not classified as construction workers, the escorts were in the immediate area of the construction workers because they were required to keep them in their sight at all times. [Name Redacted] said that the practice had started during the construction boom in the late 1970s and early 1980s because there weren't enough construction workers who held Q clearances. Mr. Taulbee stated that NIOSH would have to examine that issue and make a decision. [Name Redacted] said that other types of workers should be looked at as well, especially those hired by the temporary agencies to perform on short-term contracts as security personnel, laundry workers, and cleaners, to name a few.

[Name Redacted] stated that her husband had been diagnosed with bladder cancer in 1994, several years after his exposure in the K Reactor Area. He underwent seven operations for seven bladder cancers over several years. She said that they had asked for his records and had been told that they could not be found.

Mr. Cameron asked the attendees to remember that they could submit information to NIOSH at any time if they recalled additional incidents or information. He urged them to also share contact information for NIOSH with others who had not been able to attend. [Name Redacted] noted that they could find the contact information on the last page of Mr. Taulbee's presentation.

[Name Redacted] asked if the attendees would receive notice when the petition evaluation report was ready to be presented to the Advisory Board. Mr. Taulbee said that the report would be presented to the Board when it was complete, along with a recommendation from NIOSH whether or not the proposed class should be added to the SEC. [Name Redacted] said that he would appreciate being notified of the outcome when the report is ready. Mr. Taulbee asked him to feel free to send an e-mail requesting an update.

Mr. Cameron stated that minutes would be sent out to the attendees after they were ready to post on the NIOSH OCAS Web site. He promised to keep the building trades informed of the status of the petition. He said that the recommendation may be made to the Advisory Board as early as this fall, but unforeseen problems can cause delays. He thanked the attendees for their input and stated that he felt it would be beneficial in moving the NIOSH evaluation in a favorable direction. He added that the Board is more likely to act quickly on a favorable recommendation.

[Name Redacted] stated that he would be remiss if he did not mention that so many of the claimants are dying from their illnesses, and many surviving children are becoming increasingly frustrated by the slow bureaucratic process.

[Name Redacted] stated that when EEOICPA was first enacted, the sick workers had been told that they would be compensated within nine months if they just filled out the paperwork. She added that her tracking number is among the first 100 that were filed and she has still not been compensated nearly eight years later.

[Name Redacted] asked if the Advisory Board meeting would be held in the Augusta area when NIOSH presents the SEC petition evaluation report. Mr. Taulbee said that is generally the case; the Board considers the regional meeting locations based on some of the petitions being discussed. [Name Redacted] asked if they can be kept informed of the location and dates for the meeting at which their petition will be discussed. Ms. Elliott explained that the Board meetings are listed under the 'Public Meetings' link on the NIOSH OCAS Web site, along with the agenda. She added that there is a call-in number for each meeting so people can participate by phone.

Mr. Taulbee thanked the attendees for coming to share their information and adjourned the meeting at approximately at 8:10 p.m.