



## NIOSH Dose Reconstruction Project Rollout Meeting for the Kansas City Plant Site Profile

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### Meeting Date:

October 20, 2005, 10:00 a.m.

### Meeting with:

Greater Kansas City Building and Construction Trades Council (KCBCTC), Independence, Missouri

Name	Organization
Bill Rose	Pipefitters Local 533
Galen Beem	Roofers Local 20
Terry Akins	IBEW Local 124
David Coleman	Ironworkers Local 10
Scott Williams	Insulators Local 27
Steve Howerton	Sheet Metal Workers Local 2
Frank R. Jackson	Plumbers Local 8
Gerald J. Eagan	Sprinkler Fitters Local 314
Kevin Boydston	Laborers
Alice Martini	KCBCTC
Mike Charlton	IUOE Local 101
Garry Kemp	KCBCTC
Kevin Sexton	OPCM Local 518
Bill Tarpley	Plumbers
Chris Mayes	District Council 3
J.J. Jones	BCTC Medical Surveillance Program
Buck Cameron	Center to Protect Workers Rights (CPWR)

### NIOSH and ORAU Team Representatives:

Grady Calhoun – National Institute for Occupational Safety and Health (NIOSH), Office of Compensation Analysis and Support (OCAS)

Jack Fix – Dade Moeller & Associates, Site Profile Team Leader and Author

Mark Lewis – Advanced Technologies and Laboratories International Inc. (ATL)

Mary Elliott – ATL

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### Proceedings

The business manager of the Greater Kansas City Building and Trades Council opened the meeting at 10:00 a.m. He asked Buck Cameron of the Center to Protect Workers' Rights (CPWR) to come forward to address the Council members.

Mr. Cameron explained to the Council that the Worker Outreach Team was present to explain the Energy Employees Occupational Illness Compensation Program Act (EEOICPA). He expressed his hope that none of the attendees would leave the meeting feeling like their questions remained unanswered. He introduced the members of the Worker Outreach Team and asked them to briefly describe their roles in the Program. He also asked the Council members to

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introduce themselves and give their affiliations. After the introductions, Mr. Calhoun, of the National Institute for Occupational Safety and Health (NIOSH), Office of Compensation Analysis and Support (OCAS), came forward to describe the radiation dose reconstruction process:

- A claim is filed with the U.S. Department of Labor (DOL) by an employee or former employee of a Department of Energy (DOE) site or an Atomic Weapons Employer (AWE). If the employee is deceased, the claim may be filed by an eligible survivor.
- DOL verifies that the employee worked at one of the covered facilities and that there is a compensable illness. If both criteria are met, the claim is then sent to the National Institute for Occupational Safety and Health (NIOSH) for a radiation dose reconstruction.
- NIOSH requests the employee's records from the facility through the DOE (radiation dose records, medical records, incident reports, etc.)
- All claimants on the case are interviewed by telephone for exposure history information on the employee.
- Oak Ridge Associated Universities (ORAU) begins the dose reconstruction process using the site profile and other technical documents, as well as the personal information for the employee. A draft dose reconstruction report is written and forwarded to OCAS and to the claimants for review.
- The claimants are contacted again to review the draft dose reconstruction report and to ascertain if all information has been included. If there is any additional information, the dose reconstruction is reworked.
- After the claimants acknowledge that there is no additional information, they are asked to sign a form (OCAS-1).
- The case is then forwarded to the DOL for a final decision on whether or not the claim will be awarded.
- If the case is denied, DOL adjudicates the appeal.

### **Question:**

Is there a list of covered facilities? Who does the claimant first contact? If there is no record of employment at the plant, what kind of union records or affidavits can be used to support their employment there?

### **Grady Calhoun:**

The claimant should contact their regional DOL Resource Center. The Kansas City Plant is assigned to the Paducah office, and contact information is included in the presentation folders. The Resource Center can initiate the claims process while the person is on the phone. Forms can also be found online on the DOL website. In cases where the claimant's employment cannot be confirmed by DOE records, union records and affidavits from co-workers often provide the information needed for employment verification. There is a list of covered facilities on the DOE Office of Worker Advocacy web site: <http://www.eh.doe.gov/advocacy/faclist/findfacility.cfm>. This site provides information on all DOE and Atomic Weapons Employer (AWE) sites covered under EEOICPA.



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**Question:**

Do you have a list of all the contractors that have worked at the plant over the years?

**Grady Calhoun:**

NIOSH does not have that information since employment verification is DOL's responsibility. Often the packets that NIOSH receives from DOL for a case contain union records, social security records, and even signed affidavits used to verify employment.

**Buck Cameron:**

Often the sites do not maintain records of subcontractors who have worked at these sites over the years. The Kansas City Plant may be different because the contractor has been the same throughout the period of operations. I do not know anything about their record retention policy, but if they don't have them, CPWR has found those types of records by going to the National Archives and sorting through boxes of records. But it is DOL's job and if there was an issue we would work through them to initiate a records search.

**Grady Calhoun:**

There are certainly long lists of subcontractors that have worked at these facilities, especially the big DOE facilities.

**Question:**

Can information be added after the OCAS-1 form has been signed?

**Grady Calhoun:**

Yes. That is a really important point. The dose reconstruction process is never "final." There are many things that can cause a case to be reopened after the final decision has been rendered by DOL, including things like additional employment that was never verified because that could possibly increase a claimant's radiation dose and make the probability of causation high enough for the claim to be awarded.

**Question:**

When the claimant signs the form, is that what gets the compensation going?

**Grady Calhoun:**

Compensation is not entirely dependent on the form. Although the form must be signed for the dose reconstruction to be considered complete, the form is only an acknowledgement that the claimant does not have any further information at that time. The claim is actually awarded based on the probability that the cancer was caused by the radiation dose received by the worker during the course of his or her employment. It is not uncommon for a case to be denied and then reopened if additional information becomes available. One example of this is when a claimant develops an additional cancer after the initial dose reconstruction. For example, if you file a case and have basal cell carcinoma, but the probability of causation is not high enough for the claim to be awarded, it may be reopened in the future if you develop another carcinoma. The dose reconstruction will be recalculated based on two cancers rather than one and the likelihood is always greater for multiple cancers. Another reason a case could be reopened would be if new records were found – such as dosimetry records – that had not been considered in the original dose reconstruction.



**Question:**

This is my own circumstance: I have had cancer and I put in a claim for Agent Orange. The claim has been denied, but they keep telling me to reapply as they add new cancers to the list. I worked at the Bendix Plant (Kansas City Plant) quite a few times. If I file an EEOICPA claim, will that affect my claim for Agent Orange?

**Grady Calhoun:**

No, they are two completely different programs. The EEOICPA claim should not affect the other claim at all. For example, there are claimants who file EEOICPA claims that have already been awarded Workers' Compensation benefits. It is a completely separate program. Subtitle B of EEOICPA does not require DOL to look at any other payments that have been made by any other program for offset of benefits.

**Response:**

Let's say that I put in a claim for \$50,000 with this program...

**Grady Calhoun:**

There is only one compensation amount under Subtitle B. It is \$150,000 or nothing in this program.

**Question:**

Will they adjust my Agent Orange claim if my claim is awarded from this program?

**Grady Calhoun:**

I cannot speak for any other compensation program – I do not know their program, so I do not want to speculate. I can only speak for EEOICPA. Claimants are not asked for that information – it is not even taken into consideration. Once the claim gets to NIOSH, all we are concerned with is calculating the radiation dose to the organ affected by the cancer. If the probability of causation is high enough, compensation is \$150,000 plus medical benefits for treatment of that cancer from the day the claim is filed.

**Question:**

What do you get out of the \$150,000?

**Grady Calhoun:**

I do not get anything at all. I work for NIOSH. If you file a claim today for cancer that was diagnosed last week, if your dose reconstruction is not complete for some time, the medical expenses that you incur from the treatment of that cancer from the time you file will be covered if the finding is in your favor.

**Question:**

Is there a fund – such as the Taft-Hartley Health and Welfare Fund – that can claim part of your compensation if they have paid your out-of-pocket expenses during the time you are waiting to receive your award?

**Grady Calhoun:**

I would be hesitant to answer that question because I am not sure. If they actually could do that, it could only be for expenses that were incurred from the time the claim was filed. I am not positive. You would have to ask someone from the DOL. I am not sure how insurance companies would handle that either – I just cannot say. This is a question you should direct to DOL.

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### **Question:**

If the claim is filed by the survivor of a former employee, can they file for medical expenses?

### ***Grady Calhoun:***

If the employee is deceased, no medical expenses are paid. If the finding is in the claimant's favor, only the \$150,000 is paid.

Mr. Calhoun turned the meeting over to Jack Fix for the presentation of the Kansas City Plant Site Profile.

Mr. Fix said that the information packet provided at the beginning of the meeting contains important information, including the Site Profile, the presentation, and information on the dose reconstruction process. The OCAS web site has a great deal of information on EEOICPA: <http://www.cdc.gov/niosh/ocas/ocaseoi.html>.

Mr. Fix stated that the Site Profile is a collection of information about the Kansas City Plant that is used as guidance by the health physicists who perform radiation dose reconstructions for cancer claims filed under Subtitle B. Records from the DOE and its contractors provide much of the technical information that is used in the development of the document, but NIOSH and ORAU recognize that what the workers actually experience in their day-to-day work is not included in those records. Worker Outreach meetings serve as a mechanism to bring the labor perspective into the development process by giving workers the opportunity to share their experiences and concerns.

The Kansas City Site Profile Team began developing the document in May 2004. During a meeting with the Worker Outreach Team on September 15, 2004, union officials from the plant brought forth seven concerns that were considered by the Site Profile Team as they worked on the document. Since the site profile development is an evidentiary process, this information was researched and some of points raised by the union officials were incorporated into the site profile. Although the Kansas City Site Profile is now complete, it is a "living document," which means that it can be modified when new information comes to light that proves relevant to dose reconstruction. Mr. Fix circulated the list of points that had been contributed by union officials among the Council Members (see Attachment A).

EEOICPA has guidelines for compensation under two Subtitles. Although Subtitle B of the Act provides for compensation for radiation-induced cancers, berylliosis and some silicosis claims, NIOSH receives only the radiation claims for dose reconstruction. The program involves three government agencies – the Department of Labor, the Department of Energy and NIOSH. A fourth agency, the National Cancer Institute (NCI), developed radiation risk models that are the central components of the computer program used by dose reconstructors to determine the likelihood that the claimant's cancer is related to radiation.

NIOSH created OCAS to provide oversight for the dose reconstruction process. Due to the large scope of the project, a team of contractors headed by ORAU was brought on board to assist with the dose reconstructions and other associated tasks.

The DOL has forwarded 18,476 cases to OCAS for radiation dose reconstruction. Of those cases, OCAS' recommendations for 10,421 cases have been returned to the DOL. At present, more than



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4,000 dose reconstructions are in process or under review, and the remaining cases are in the fact-finding stages – claimant interviews, gathering radiological records from DOE, etc. The DOL has received more than 50,000 cases for compensation. Awards have been made to nearly 11,000 claimants, totaling an estimated \$1.25 billion.

Mr. Fix said that the purpose of the presentation is to discuss the Kansas City Plant Site Profile. The Site Profile was prepared because it is important for the scientists who calculate the dose reconstructions to have site-specific information about the Kansas City Plant – the radioactive materials present at the site, the workers' job assignments, the dosimetry programs that were in place, the workplace hazards, the types of radiological instrumentation, as well as other statistical information that is necessary to make dose estimates for workers from the site. From this information, the dose reconstructors can determine the possibility of significant exposure based on the types and amounts of radioactive materials handled. The approved Site Profile is posted on the OCAS web site: <http://www.cdc.gov/niosh/ocas/ocastbds.html#kcplant>. Although the Site Profile is complete, it is a “living document,” which means that it can be revised as new information becomes available that could positively impact dose reconstructions.

The Site Description describes the facilities and processes at the Kansas City Plant (KCP) from the beginning of the Atomic Energy Commission (AEC) operations in 1949 through present day. Although it is not highly visible in the nuclear weapons complex, it is a world-class analytical laboratory facility, with the principal role of assuring that the non-nuclear components of the nuclear weapons were manufactured properly. Radiation risk at KCP is relatively low since the primary use of radiation at the plant is from sealed radionuclide sources in devices such as X-ray and neutron radiography equipment, and electron scanning microscopes that are used to examine the integrity of the components.

The occupational medical dose is assigned to workers based on the history of the use of medical X-rays at the site. Although all the details about the X-ray equipment used at KCP are not available, handwritten records found on the exterior of personnel folders indicate the types of devices used. The DOE did not keep records on the medical X-ray programs, but NIOSH assumes one X-ray per year per worker until 1994 and one X-ray every five years thereafter. If records are not available for an employee, a default value for the medical dose is assumed in an effort to be favorable to the claimant.

External radiation doses at KCP are very low, mostly from the diagnostic equipment used to examine the components. KCP provided the site profile team with a database of all of the dosimetry-measured exposures for every worker for every year of employment. The team analyzed that data and came up with statistical profiles for environmental external radiation exposure.

The only significant intakes for environmental internal dose are during the period from 1959 to 1971, when depleted uranium was handled at the plant. Workers received urinalysis every six months to monitor their intake.



### **QUESTION:**

Were the urinalyses that you mentioned ever given to construction workers – or any other workers – from subcontractors outside the plant, or were these mainly given to full-time employees from within the plant?

### **Jack Fix:**

I assume that the data was from full-time employees from within the plant. This kind of information is usually gathered during the interview process. Getting this kind of information from subcontractors – if it is even available – can be a real challenge. NIOSH recognizes this. Distributions are developed from available data and a default value is calculated for unmonitored workers based on the 95% level and assigned just by virtue of their having worked at the plant.

The Site Profile Team has not found any historical data to support evidence of environmental radiation exposure at the Kansas City Plant. No major study by any agency has found any evidence of significant environmental radiological impact. Two changes to the current Site Profile are in the works: one for environmental external dose and another for environmental internal dose. These modifications consider that there may be some potential environmental exposure for non-monitored, non-radiological workers. Even though the evidence concludes that there is no environmental radiological impact from the Kansas City Plant, these workers – for example, an HVAC subcontractor working on a ventilation exhaust system – may have received some exposure. The changes will assign a dose to those workers for each year of employment to ensure that any potential exposure is not underestimated. The basis for these values is the data available for monitored radiological workers at the plant. The calculations used to determine radiation dose to the non-monitored, non-radiation worker are based on the expectation that these workers receive less exposure than the monitored radiation workers. KCP had procedures and practices in place to monitor the workers that they expected to be exposed. The data we have covers a broad spectrum of departments, occupations and years. It appears that KCP had a viable program to monitor the workers that were the most likely to be exposed. Historically, under AEC guidelines, only workers that had the potential to exceed ten percent (10%) of the annual dose guidelines had to be monitored.

### **Buck Cameron, CPWR:**

Jack, is there anything known about the surface contamination from the depleted uranium?

### **Jack Fix:**

We have air sampling data, but we have not seen contamination surveys. As we write the site profiles, one of the challenges we have is “How do you properly represent the radiation safety program?” We know that they go out with their instrumentation to do contamination surveys, workplace zone control, pre-work evaluations to decide what dosimeters and protective clothing a worker will use – but we have not been able to accurately capture that information in this document. This is actually in the claimants’ favor: because we do not have this information, we make default assumptions and assign higher doses than we would if the information was available.

### **Buck Cameron:**

And that is to account for the guy who is pulling up flooring, working in the ventilation systems, or pulling cable. There are some assumptions that there would be environmental dose.

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***Jack Fix:***

I would assume that those people would be the same as non-monitored radiological workers. Those people would be assigned a higher dose -- not an environmental dose, but an actual workplace exposure based on the distribution of measured dose data for monitored workers.

***Buck Cameron:***

Then it is important for claimants to specify the type of work that they actually did there -- what building they worked in...

***Jack Fix:***

Yes. The more information they can provide -- what they did, what activities they were involved in, what they anticipate their exposure may have been, or source of their exposure -- the more accurate the assumptions we can make about their radiation dose. Hopefully these people have been monitored, because that is always an issue.

***Question:***

A lot of us worked for subcontractors at the plant during downtime -- over the Christmas holidays, for example. I know we weren't monitored. As a union, do we need to go back and look in our records for subcontractors? Do we need to start by contacting them, if they are even still in business? If you don't have a database of all the subcontractors, then we are going to have to provide for it. There is a lot going on here...

***Jack Fix:***

Maybe we should go back and look at how the process works. The claimant has to provide the information about where they worked. Union records or co-worker affidavits are accepted as proof of employment, so the process actually starts with the claimant.

***Comment:***

But the reason we are here is that we feel that we are responsible for that claimant. They are members of our local organizations. I think part of the burden for us is to find contractors who worked at the plant and contact them to let them know about the program. Or should we go to our Health & Welfare guy and ask him who has cancer that might be eligible?

***Jack Fix:***

How your organizations decide to handle this is up to you. I am looking at the claim in terms of NIOSH's responsibility in doing the dose reconstruction. In terms of a union's role to decide how to get the word out to those who need to file a claim, I am not sure what would be the best way to communicate that.

***Mark Lewis:***

When I worked with the Medical Surveillance Program for my union, we contacted the DOL Resource Center. I would address this type of question to them. The DOL has the resources to verify a claimant's employment history.

***J. J. Jones, Director, Medical Surveillance Program:***

When I was at the Hanford plant, being trained for my program, there was a database of subcontractors who had worked at the plant over the years. The program even showed where companies merged over the course of time. I will find out if the Kansas City Plant has a similar database. If they do, I will let you know about it.



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***Buck Cameron (to the Council Members):***

There may not be such a database for the Kansas City Plant, but as people come to you, you will build one. Over time, there will be a supporting document that will recall the subcontractors.

**Question:**

I think that we are going to contact our membership through a mailing – a questionnaire asking if they have ever worked at Bendix, Allied Signal, or Honeywell, with a return address for responses. I got the impression from our meeting yesterday afternoon (with CPWR and the Medical Surveillance Program) that these names would be turned over to someone else who would contact them regarding the program. Am I wrong?

***J. J. Jones:***

I would like to meet with your organizations and give you some flyers and postcards to send out to your members. The cards will come back to me, and I will work with the Seattle office (of the Medical Surveillance Program) to set up a date for screenings.

**Question:**

How can we reach survivors of deceased members?

***J. J. Jones:***

I am going to try to work through union retirees' groups and pension funds to achieve this.

***Buck Cameron:***

Keep in mind that there are two programs here: the Medical Surveillance Program and EEOICPA. The most important thing to remember is that if someone has cancer or another illness, the first thing they should do is file the claim. As Grady said earlier, the medical benefits start the day the claim is filed.

***Mark Lewis:***

When our Medical Surveillance Program started, we asked for a flyer on the program to be distributed with the pension checks. We also put ads in the local newspapers and asked local radio stations play public service announcements.

***Buck Cameron:***

Your packet has contact information for the DOL Resource Center in Paducah. They can take a claim over the phone, so you need to encourage anyone who contacts your locals to make that phone call – get the claim filed immediately.

**Question:**

Is there a list of the toxic chemicals under Subtitle E?

***Jack Fix:***

Subtitle E is administered by the DOL. The Resource Center can give you any information you need on Subtitle E. You can use the same telephone number. If you have any doubt, you should go ahead and make the claim. Make the process start working for you...

***Response:***

Even if I haven't been diagnosed yet, but suspect exposure?



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### **Grady Calhoun:**

Initially, the claim may be denied. I usually address this after the presentation is done, but I will go ahead. NIOSH does not handle any part of Subtitle E claims, but I can give you some general information. Subtitle E covers cancer and other illnesses that may be caused by chemical exposure or agents other than radiation. If you file a Subtitle B claim for cancer, you should go ahead and file a claim for Subtitle E. If you have something other than cancer, let the DOL determine your eligibility. There were a lot of toxic chemicals at the Kansas City Plant.

### **Question:**

I am involved with both the Insulators and the Laborers groups. We have people working in the DOE beryllium program charged with the clean-up of areas to be released to someone else. Would they fall under Subtitle E or another program?

### **Grady Calhoun:**

Beryllium exposure is under Subtitle B, under the same part of the program as the cancer, but you can still file a Subtitle E claim. Always file under both Subtitles if you have any doubt.

### **Buck Cameron:**

Any claim that is filed can be either accepted or rejected. But if you don't file a claim, it cannot be considered at all. When in doubt, fill it out.

### **Jack Fix:**

NIOSH only does radiation dose reconstructions on Subtitle B cancer claims. My part of the presentation today is regarding these claims. Not all claimants who file will receive an award, but it is very important to understand the steps in the process. The Worker Outreach Team is here today to give you the opportunity not only to learn about the steps in the process, but to give us your input, too. Certainly, the subcontractor issue is a very important one, and we would hope that the Kansas City Plant has the appropriate records for anyone who would enter their facility to work. If they don't, the issue must be addressed. The claimant interview process is important because this provides the claimants with the opportunity to say why they think that the exposure they received contributed in some way to their cancers. The claims process is structured so that a dose estimate can be made that will not underestimate the actual exposure. The Site Profile is developed by looking at the monitoring records that are available for the site and calculating a dose for the workers who were not monitored.

The primary source of internal radiation exposure at the Kansas City Plant is from the depleted uranium used at the site from 1959 to 1971, and in a separate program after 1997. Intake is assigned based on three categories of workers: monitored radiological workers, non-monitored radiological workers, and non-monitored non-radiological workers. Radiation intakes for the latter two categories are calculated from distributions based on data from thousands of urinalyses for the monitored workers in a regular bioassay program.

The primary sources of external radiation exposure are the sealed sources in the diagnostic equipment used to check integrity of the non-nuclear components. The dosimetry used at KCP was state-of-the-art, comparable to any other system. Dosimetry records are available for the monitored workers, and doses for non-monitored radiological workers and non-monitored non-radiological workers are assigned based on distributions of the measured dose. We looked at the

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exchange frequency of the dosimeters and estimated a “missed” dose for monitored workers where “zero” dose was recorded, or where the dose fell below minimum detectable levels. It is not apparent if subcontractors were included in the dosimetry programs, but NIOSH makes assumptions to include a radiation dose where there are no records available in an effort to keep the dose reconstruction process “claimant favorable.”

Mr. Fix concluded that the Site Profile Team used all records that were available to them to write the document and attempted to make it comprehensive to the best of their abilities. The workers at the plant have valuable knowledge that may not have been included in the Site Profile, and NIOSH and ORAU want the workers from the site to come forward with any information that they think could be helpful. Information and suggestions for revisions to the document can be sent directly to NIOSH using the contact information included in the presentation. Other information on the EEOICPA program can be found on the NIOSH web site at this address: <http://www.cdc.gov/niosh/ocas>.

**Question:**

We have done a lot of underground work at the site. As I recall, there were citations by the Environmental Protection Agency (EPA) regarding the groundwater and the Little Blue River. Is that included in the Site Profile?

**Jack Fix:**

No, the evidence is that those citations were all non-radiological issues. There has been a lot of environmental surveillance for chemicals at the plant – the State of Missouri conducts a yearly surveillance.

**Question:**

Would the EPA issues fall under Subtitle E?

**Jack Fix:**

Any chemical surveillance findings could possibly affect a Subtitle E claim.

**Question:**

There have been instances where PCBs (polychlorinated biphenyls) were found. Would that come under Subtitle E?

**Jack Fix:**

Yes.

**Response:**

They were not found exactly where we were working, but downstream from there. This was documented in the *Kansas City Star*.

**Grady Calhoun:**

DOL would take that into consideration for a Subtitle E claim. Since that is not a radiological issue, it does not come under consideration in Subtitle B.

**Mark Lewis:**

There will eventually be Site Profiles for Subtitle E. They have not been developed yet, but the legislation has provided for that to happen.



***Buck Cameron:***

Jack, I have a couple more questions regarding depleted uranium. It was used onsite from 1959 to 1971, and there is environmental exposure, so I assume that since it was in a dust form that it has spread in the environment. I don't see anything indicating that it was removed from the environment, but bioassay stopped in 1971. Is there an assumption of exposure from 1972 to the present?

***Jack Fix:***

Yes. Even though they completed the urinalysis program, we assumed that the uranium was present in the environment until 1989. We chose 1989 because there was a major incident that year involving promethium-147. The incident received a lot of press coverage, and a lot of visibility. The investigation involved responses by multiple agencies – the Missouri Department of Health, the Environmental Protection Agency, and the DOE offices in Kansas City and Albuquerque – that conducted a very thorough investigation which included analyses from extensive environmental sampling. These agencies wrote a 385-page report that found that there was no significant environmental exposure. Based on that report, the site profile team concluded with relative certainty that as of 1989 there was no longer a potential for exposure to depleted uranium.

***Buck Cameron:***

Yesterday someone asked whether it was possible to measure at the very low levels that were reported in the urinalyses results from the plant. I assume that it was, but I noted in your profile that you questioned the detection limit that was used at this site.

***Jack Fix:***

Yes, we did question it. We used a minimum detectable level of 10 micrograms per liter ( $\mu\text{g/L}$ ), which we thought was a more realistic limit.

***Buck Cameron:***

Then you actually used a limit that was ten times higher than the limit the plant used?

***Jack Fix:***

I would have to look to see the specifics, but we assumed a level that we felt confident would be realistic. The reason those minimum detectable levels (MDLs) are important is that we use those to assign dose to workers.

***Buck Cameron:***

Thank you.

***Jack Fix:***

One goal of this legislation is to give the claimant as much radiation dose as is scientifically possible so the potential dose to the worker is not underestimated. Under the leadership of NIOSH, the Site Profiles are developed with this in mind. Many people are involved in the Site Profile development and review processes to ensure that the finished product will best serve the claimant. Representatives from the Kansas City Plant have been very cordial in this process and seem to have taken the process very seriously. Their comments have been incorporated into the document. NIOSH and ORAU want the workers to have the opportunity to voice their comments as well. Our goal is to work with workers from the plant to make sure the Site Profile is an accurate representation of what should be considered in the dose reconstruction process.

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***Buck Cameron (to the Council Members):***

This is not your last chance to comment on the Site Profile. Today's meeting is to familiarize you with the document. It is a very complex document, so as you go through it, as questions come up, or if you want to provide input, there will be a route for that. Jack, what route can they follow to make comments?

***Jack Fix:***

My job is to make sure that technical details are included in the Site Profile. I'm going to turn this over to Grady.

***Grady Calhoun:***

If you look on the last page of the presentation, you can see the mailing and e-mail addresses that you can use to send your comments or questions to NIOSH.

***Buck Cameron (to the Council Members):***

Probably the most effective way to channel your information is through the Business Manager of the KCBCTC. If there is something in the Profile that you don't understand, let him know and we will get you connected with someone who can answer your questions.

**Question:**

The only thing I can think of in my twenty-five years of dealing with the plant is that I cannot recall one instance of an outside contractor having to submit to a urinalysis. Does anyone else remember any?

***Jack Fix:***

That could very well be. From what we could see, the urinalysis program at the plant stopped in 1971 (after they stopped handling depleted uranium). There may have been some urinalysis during the promethium-147 incident, but no routine program.

**Question:**

Are they not doing them now?

***Jack Fix:***

They may be doing them now because this plant has recently assumed some new functions from at least three other DOE sites. I can't say that with any certainty, though.

**Comment:**

One of the reasons why it is so hard to know what is going on in this plant is that its main function is research and development (R & D). There is a minimal amount of production. Once you put the R & D stamp on something, it becomes hush-hush. Often times, the workers don't even know.

**Question (to Commenter):**

Has that always been the case?

***Response from Commenter:***

They have always done research and development in the plant, and the manufacturing is part of that. There used to be seven major plants involved in the manufacturing. Each one did a certain part of the weapon for security reasons. As the Cold War thawed and the Defense budget was



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cut, operations were condensed and KCP took on work from other plants. But the major part of the funding for KCP is still for the R & D function here.

**Jack Fix:**

The operations at the plant are highly secretive – for example, why was there depleted uranium at the plant? To the best of my knowledge, that information is classified.

**Mark Lewis:**

As you go through this document, don't be intimidated by it. It is a very technical document that is written for health physicists to use in reconstructing claimants' radiation doses. There is a lot of information in it that we don't need to understand, but there is information in the Site Description section that we can understand – historical events like incidents and accidents. This is what we are asking you to think about – is there anything that could be included there that is not?

**Comment:**

On Page 20, are the occupational descriptions in Table 13 for the in-plant employees?

**Jack Fix:**

Yes, I believe you are right.

**Comment:**

I just have one point of clarification. Under the pipefitter classification, there are three crafts here from the United Association – the pipe fitters, the sprinkler fitters, and the plumbers. We all three have members out there under this pipe fitters classification. We have members working out there as full-time employees, too.

**Jack Fix:**

I understand that it gets very complicated when you have subcontractors.

**Comment:**

We have members who are in-plant workers, too.

**Jack Fix:**

You have both? I understand, and the evidence that we have is that the Kansas City Plant Health and Safety people were responsible for securing the facility for whoever was working there, whether they were a permanently assigned employee or a subcontractor. That is what the claims process is intended to evaluate.

**Question:**

What is the average time it takes to go through the claims process – five, six, seven years? They might be dead by the time they get the money. Is there an average time?

**Jack Fix:**

That is a good question, and, unfortunately, that is always a possibility.

**Grady Calhoun:**

I can field this one if you like. The basic answer is that I wish it was going faster. NIOSH began getting claims before there was actually even a process in place. We were thousands of claims behind before we were even okay to go. In the beginning, our goal was just to get the claims moving, and the meant doing the easiest ones first. Some of the more difficult claims have taken



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four years, and some of the easy ones can move through the process in as little as two weeks. At this point, we are trying to complete the earlier cases first. Some of the later cases that we have are now in the 20,000 range, and we have completed more than half of those. I can't see the process taking as long for any of the new claims coming in, but the required time to complete a dose reconstruction is very case specific. Having complete Site Profiles in place expedites claims, too. We didn't have the Site Profile documents ready for the early claims. I would not be comfortable even trying to give you an "average" time for a claim.

***Buck Cameron:***

A building trades worker's claim will probably take longer than that of an on-site worker, say a machinist, because your work and exposures would be less defined. I would imagine it would take longer.

***Response (laughing):***

My union business manager assigned this to me, and I plan to retire in three years, so I hope the issues will be resolved by then.

***Buck Cameron (laughing):***

You'll still be working on it. Make sure you train someone to take over for you. I was at Savannah River when a group met with the Building Trades there, and the delays had been so long that it very nearly came to blows. People were upset. That message has gotten back, and there has been a lot of pressure – especially from Congress – to get this process moving. I don't think it is going to be as bad as it has been, but it is a very complicated process. People should not expect that they will file their claim on Tuesday and get a check on Friday.

The meeting adjourned at approximately 11:45 a.m.

**Attachments:**

Attachment A: Worker Outreach/TopHat Concern-Response Review for the Kansas City Plant  
September 15, 2004 Kansas City Plant Site Profile Meeting

Attachment A: Worker Outreach/TopHat Concern-Response Review for the Kansas City Plant  
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Concern No.	Concern	Response Resolution	Result in Change to Site Profile?	Reference to Site Profile Change
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1.	<p>The medical department at the Kansas City Plant changed over the years. At one time, chest x rays were standard procedure at the plant, but later the medical department at the Kansas City Plant suggested that workers get x rays from their own personal doctors.</p>	<p>The KCP Site Profile assumes that the precise history of chest x-rays to KCP workers is not known. It is understood from KCP medical staff that KCP has never asked workers to obtain occupational x-rays from their personal physician. Workers were however referred to an offsite imaging clinic for work-related x-rays beginning in the fall of 1997. However, in the Site Profile in section 3.1, "Dose Reconstruction," it is recommended that "If there is no reasonable information in the claim documentation, dose reconstructors should assume an annual posterior-anterior (PA) radiographic chest X-ray for each claimant's employment period from 1949 to 1990." Further, it is recommended that the estimated dose from medical X-rays before 1964 use higher dose default values as stated "dose reconstructors should use the default values in Tables 3.3-1 and 4.0-1 of ORAU (2003b) for chest X-rays." The approach to assume that chest x-rays were taken each year, if there is no information to the contrary, and to assign a conservative estimate of the dose per examination will result in an over-estimate of the actual worker medical x-ray dose.</p>	<p>Yes, Based on a July 2, 1993 audit finding, the change from annual x-rays was made during mid-year 1993.</p>	<p>Propose changing section 3.1 "Dose Reconstruction" recommendations as follows:          1) item c, change wording from "to 1990" to "through June 1993"          2) add new item d stating that chest x-rays, unless there is other information, assume that x-rays were received for each 5-year period beginning July 1993.</p>
2.	<p>X rays for beryllium monitoring were performed outside of the Kansas City Plant facility.</p>	<p>Please see the response for item #1. KCP practices to examine workers potentially exposed to beryllium are not considered in the KCP Site Profile with the exception that it is intended to include the dose received from KCP occupational health organization directed chest x-rays, as well as any other occupational related chest-x-rays since 1990 in addition to the recommendations to estimate occupational dose from x-rays from 1949 to 1990.</p>	<p>Yes</p>	<p>See item #1</p>
3.	<p>Guards employed at the Kansas City Plant went everywhere at the site but were not told the amount of danger involved in their work or what types of chemical and radiation sources they could be</p>	<p>For radiation exposures addressed in the KCP Site Profile, it is understood that KCP has followed policies to monitor all workers with a potential for significant radiation exposure relative to established radiation protection guidelines. For the early years, Atomic Energy</p>	<p><b>No</b></p>	



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	exposed to.	Commission guidelines were to monitor workers who could exceed 10% of the respective skin, organ and whole body dose guidelines. Similar policies have apparently been followed in later years.		
4.	After an incident at the Kansas City Plant when promethium was released and maintenance workers tracked the promethium home, the plant wanted the exposed workers to bring their cars inside of the plant so that they could be checked for radiation. For security reasons, the guards had to search the cars that were brought in. The guards were never told about the possibility of radiation being inside the cars.	A relatively large report (384 pages) of an extensive investigation of the Pm-147 contamination on February 10, 1989 was prepared and published September 1989. According to this report, the Department of Energy, Environmental Protection Agency and the Missouri Department of Health, Radiological Health Division were notified of this incident, and the efforts to assess the extent of exposure and contamination of facilities and personnel. A DOE team of investigators arrived at KCP on February 14 to assume technical management of the situation. Based on what eventually were determined to be false-positive bioassay results, the homes of 4 KCP workers were inspected and some contamination was found. There were undoubtedly many activities to identify the cause and extent of this contamination. Pm-147 is a relatively low-energy 100% beta emitting nuclide (e.g., maximum energy of 224.7 keV, average energy of 62 keV) with a half-life of 2.6 years. The primary concern with this type of nuclide would be direct skin contamination and intake. The report addresses the chronology of steps, and the results, to examine potential exposure and contamination.	<b>No</b>	
5.	Kansas City Plant guards were not a part of the monitoring program.	Please see response to item #3.	<b>No</b>	
6.	The few workers that were aware that the cars that were possibly contaminated with promethium argued with management at the Kansas City Plant regarding the decision of having guards search the cars and possibly being exposed themselves. But	Based on the presence of AEC technical inspectors for this incident, and the apparent involvement of Missouri radiological health professionals, it is assumed that all significant potential worker exposure was considered. Considering the number of persons involved in the investigation and the diverse employment of these persons, it is	<b>No</b>	



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	the decision was made to bring the cars in and have the guards search the cars.	difficult to imagine that a significant exposure potential was over-looked.		
7.	Kansas City Plant workers need to know about the sources of exposure that were at the Kansas City Plant.	This is indeed important. Preparation of the KCP Site Profile focused on an examination of the types of radiation that could result in KCP worker exposures. The TBD includes a summary of inventories of radiation sources and potential environmental releases. It was concluded that the primary sources of potential exposures involved the numerous industrial radiation generating devices used for examination and process control, and the work with depleted uranium.	<b>No</b>	