

Summary Notes of Technical Issues Raised at the Bethlehem Steel Meeting  
Held in Hamburg, NY, 21 June 2006  
Final Notes, 23 July 2006

Representing NIOSH: Sam Glover, Dave Allen, and Amanda Harney

Representing SC&A: Arjun Makhijani

Representing Bethlehem Steel Action Group (BSAG): Ed Walker.

Also representing BSAG: Three Bethlehem Steel site experts who had worked on some aspect of uranium rolling operations: Tom Donovan, Don Lotocki, and Frank Morinello. All three of them have given permission in writing for their names to be used.

Notes are not verbatim. Issues relating to compensation matters and other program details that individuals brought up are not covered in these notes, which are restricted to the technical matters relating to the Site Profile for Bethlehem Steel. Draft notes were written by Arjun Makhijani and circulated for comments and corrections to NIOSH and Ed Walker, who provided them to the three BSAG site experts for review. All three site expert reviewed the draft and had no comments. These final notes, prepared by Arjun Makhijani, incorporate comments that were received from NIOSH.

Meeting organized by NIOSH to address remaining issue of how cobbles were cut. This is an outstanding issue that the Advisory Board on Radiation and Worker Health has asked NIOSH to address. Other general issues were also raised. NIOSH informed the audience that its representatives could also answer questions about the general claims process and could get back to individuals about their own claims the next day.

## **1. Cobbles**

Sam Glover made an introductory presentation. He said the purpose of the meeting to address a certain issue – cobbles and how they were handled. NIOSH would accept public comment on other issues. He asked one of the BSAG site experts to address issue of cobbles. If you had knowledge of cutting uranium cobbles – tools used and how long it took to cut them. We have knowledge about time to extract the cobbles from the rollers but not about the cutting process.

The discussion of cobbles was conducted in a Q&A format, by Ed Walker to start with and then by NIOSH and, to a limited extent, by SC&A as well.

Tom Donovan was there during the 1949 to 1951 period as a cobble cutter. He worked in the 10-inch bar mill where uranium was rolled. He remembers participating in operations involving the rolling of uranium. Ed Walker asked him if he cut uranium with cobbles.

He said he did. He remembers cutting the uranium with a torch. He did not remember the length of the material.

NIOSH asked him how long it took typically to cut cobbles. But he did not remember and could not estimate the time except to say that it depended on how messed up it was. When asked to make a ball park estimate, whether it could be five minutes to an hour, he said it could take longer than that.

Ed Walker: Did they have to cut it up into small pieces? Did you cut it up into small eight-inch or six-inch pieces?

Tom Donovan: Yes, that's what I was doing.

Mr. Walker pointed out that remembering details clearly more than fifty years later was very difficult and pointed out that one of the people involved in the air sampling, Mr. Breslin, had refused to be interviewed for the record.

Mr. Donovan noted that he found the lunch room "real dirty, black." There was no shower. He took a shower when I got home. He said that a person in a cage who pulled the cobble out of the rolling line and put it down for it to be cut up. He said that, so far as he remembered, when he was cutting a cobble he was the only doing it other than the person in the cage [the crane operator] who pulled the cobbles out of the rolling line.

SC&A: Was that the only job you did or did you get pulled off some other job when there was a cobble?

Tom Donovan: It was the only job I did.

NIOSH asked whether he also cut steel cobbles.

Tom Donovan said that he also cut steel cobbles when steel was being rolled. It was dusty where he worked cutting the cobbles. There was dust anyway, but there was also dust from the cutting. He did not remember the difference in cutting or dust between the steel bars and uranium bars.

Don Lotocki (who worked at the bar mill for 43 years and retired as a foreman): There are different types of cobbles. There were cobbles on the cooling bed. Someone had to go there and cut it up. The cooling bed cobbles occurred when the bars would hit a bad spot on a cooling bed and get twisted up. Another type of cobble was when the bar could not get into the rolls and it would buckle up. He had seen cobbles go 90 feet up in the air. If it was stuck, someone would cut it out of there. Some cobbles damaged the rolls. Then the rolls had to be taken out. If it was bad, it could take 45 minutes or more. Sometimes it was the mill hands who cut the cobble out of the rollers where it might be stuck. There was no way it was cut with anything but an acetylene torch. There were no shears. He pulled cobbles using the crane, which were used to move the cobbles off the roller line or cooling bed to the floor, where it would be cut up.

NIOSH: Do you recall them rolling uranium?

Don Lotocki: Yes, my mind is sharp. I used to record every bar of uranium and every bar had to have numbers. I used to record all of that. The time per cobble could be five minutes or an hour. It can't be compared to steel. The uranium cutting was different. The cutting threw off a light that was brighter light than steel. Different metals give off different color sparks when they are cut. Actually, in steel you can tell the carbon content from the color of the sparks. I put a grinder on a piece of uranium it was three or four times the brightness of a regular steel spark. I was told by a physicist that there was enough energy in an inch [of uranium bar] to run a car for a year. They never told workers as to the dangers of uranium. I am surprised they did not keep track of it. All that material that went to Oak Ridge – did they not keep records of it? Each bar had a number. They should have a record of every cobble that happened.

NIOSH: We do have that [production] data. We don't have comprehensive records or individual records of monitoring. We also have a list of cobbles but we don't know how long it took to cut it offline. Do you recall how many people were involved?

Don Lotocki: They used to roll in one or two shifts – one shift and some overtime. They cleaned up the dust after they did the rolling. They had big vacuum cleaners.

Frank Morinello worked from 1950 in the labor pool. He did not remember when the uranium was rolled. He worked nights and did not know there was uranium at the plant. His job was to do clean up. He remembered cobbles. He said that they would cut them up into pieces and there would be a pile in a scrap bin. The pieces were put into containers.

## **2. Subbasement under the 10-inch bar mill**

Ed Walker: Did you ever see any one go into the subbasement?

Don Lotocki: It was open under the cooling bed and the dust trickled down into the basement from there into the subbasement.

Ed Walker: Uranium would fall into the basement area.

NIOSH: Would anyone be in the subbasement?

Don Lotocki: It is possible that some clean up men or electricians could be down there. I know people who worked down there.

Frank Morinello: I worked in the subbasement when it needed to be cleaned up. We cleaned up scale down there. We would be shoveling it. We did not use air hoses to my knowledge.

NIOSH: Was there normally someone in there in the subbasement?

Frank Morinello: When they rolled the regular steel they had clean up. They worked off to the side. There were no people working regularly under there.

NIOSH: Did you go down there?

Don Lotocki: Yes. There is dust falling down on you, when there was dust. The uranium wasn't as bad as the leaded steel.

Ed Walker: A lot of uranium went into the subbasement – more than steel because uranium is twice as heavy as steel. Uranium dust landing down there on the motors would land and start a fire. I frankly think it might be worse than cutting up cobbles. Because there could have been fires all over. I understand from Don Lotocki that there were occasional fires. But we don't know what happened during the week. I don't understand why we are so concerned just with cutting up one rod. There were no air samples in the subbasement.

### **3. Ventilation**

Don Lotocki: Friction gives off heat. There was friction in the straightener and a lot of scale coming off in the straighteners. It was dusty over there. No exhaust fans or anything. They kept the roof vents closed so OSHA would not see the dust coming out. The straightener was in a different bay, after the finishing end.

### **4. Other issues**

Mr. Walker also raised a number of other technical issues. He gave a list to NIOSH. The NIOSH response given at the meeting, if one was given, is indicated in italics:

1. Documents, including the Range letter say that there was a blooming mill and rough rolling at Bethlehem Steel. So more buildings may have been involved. There must have been experimental work prior to the start of regular rolling. *NIOSH response: We have documentary evidence that rough rolling was done elsewhere and not actually done at Bethlehem Steel. The Range letter is twenty year retrospective memory of one person. NIOSH took it into account by assuming rolling started in 1949 even though other documentation says that the rolling started in 1951.*
2. Documents indicate that rolling may have gone on after 1952 because Fernald was delayed.
3. Simonds Saw was a small, primitive facility. It was very different from the large state-of-the art Bethlehem Steel 10-inch rolling mill. Simonds had ventilation and Bethlehem Steel did not. They had only two rollers, while Bethlehem Steel had

- six. *NIOSH response: No ventilation or protective clothing was assumed for Bethlehem Steel workers. NIOSH used Simonds data from the time before they had ventilation.*
4. First I was told that the rollers were the most dusty; then it was the shears. *NIOSH response: The rollers were the most dusty in the early period. When the rolling was spilt up into two periods, based on SC&A's analysis, the roller area was not the most dusty during the salt bath period, the later period. The salt bath process proved so successful in reducing dust at the rollers that Fernald did not use ventilation there.*
  5. People were denied before there was a site profile. NIOSH only met with workers 16 months after the site profile was completed. How could things like that happen? *NIOSH response: We try to complete cases that can be done as rapidly as possible with a model that is close. There is pressure to compensate as rapidly as possible and also to do detailed science. So it is a balancing act. Site profiles are living documents. When there is a change in estimation procedure we review previously denied cases, but only inform the claimants if it appear that there is going to be a change from denial to compensation.*

Mr. Walker also stated SC&A had a wrong diagram in their slide show presented during the December 2004 meeting in Livermore, California. [Note: The error has since been corrected. A diagram showing a schematic of the process and floor plan, provided by Mr. Walker, was published in SC&A's letter report on Bethlehem Steel, dated October 14, 2005.]

Two other technical issues were brought up by others during the discussion:

1. There would still be some uranium dust there and people have been exposed for sixty years because of residual contamination. *NIOSH response: The uranium dust gets diluted over the years with steel dust so that after some time primarily steel dust is inhaled. The new NIOSH model takes resuspension of uranium as well as dilution by steel dust into account.*
2. One person said her father, who worked at Bethlehem Steel during World War II and also after the war, had told her that uranium was rolled at Bethlehem Steel during World War II, in addition to the rolling after the war. Don Lotocki stated that he was sure that no uranium rolling occurred during World War II. The person making the point said she was convinced her father was right. *NIOSH response: NIOSH has researched the period and the plant's work was related to the creation of the Fernald plant. The determination and addition of periods of work at facilities was done by the Department of Energy. [Arjun Makhijani said that the histories he was familiar with in his study of the Manhattan Project before becoming involved with the present work of supporting the Advisory Board did not indicate any work at Bethlehem Steel during the war, though, of course, his own review was not comprehensive and he did not intend to make any definitive statement on the matter, just a personal statement to be helpful. He*

*provided her with a reference to the official history of the Manhattan Project as a possible starting point for her own research if she wanted to pursue it.<sup>1]</sup>*

There were questions about SEC petitions and the process of granting them and the cancers that were compensated. NIOSH explained that the SEC cancer list was shorter than the full list of cancers that could be compensated with dose reconstruction under 42 CFR 82 and that people with non-listed cancers would not be eligible for automatic compensation under an addition to the SEC class. Since NIOSH did not have anyone involved with the details of the petition review process present at the meeting, Arjun Makhijani, who is SC&A's Task Manager for SEC petition reviews and SEC Evaluation Report reviews, provided an overview of the process by which petitions filed by a claimant or claimant representative are considered and evaluated. He also pointed out that NIOSH had initiated additions to SEC class when it concluded that it did not have enough information to do dose reconstruction with sufficient accuracy for that class. He provided the example of Nevada Test Site atmospheric testing workers for whom NIOSH had initiated such a process. He also pointed out that NIOSH did partial dose reconstructions for non-listed cancers and that the Board had recently decided to be specific about what parts of dose reconstruction could be done when an SEC was granted, so as to facilitate NIOSH's partial dose reconstruction process for non-listed cancers.

Don Lotocki mentioned that Roger Custer, superintendent of the mill, passed away a few weeks ago. He was a brilliant man who may have had records that would be useful. The obituary in the Buffalo News provides information that would enable NIOSH to contact the family.

Ed Walker gave a list of issues he had written up to NIOSH.

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<sup>1</sup> The reference provided was Richard G. Hewlett and Oscar E. Anderson, Jr., *The New World: A History of the United States Atomic Energy Commission*. Berkeley, California: University of California Press, 1990 paperback edition.