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02/22/98 07:41 202 586 2323  
96-02-22 18:14 PYONGYANG-KOREA

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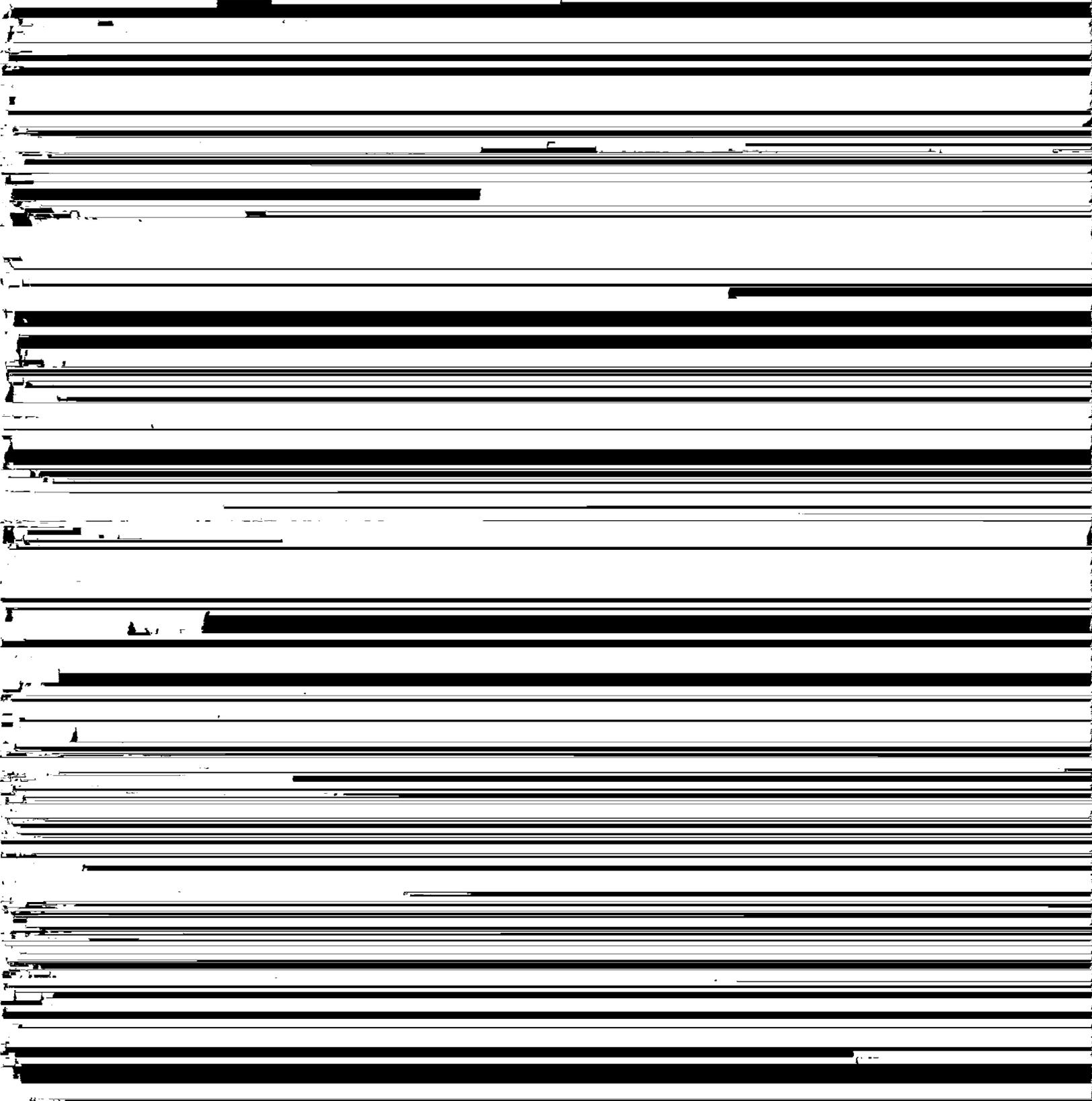
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TRANSFER FOR DIRECT REPLY - DOE

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US SPENT FUEL TEAM  
CHRON

TO: CHERIE FITZGERALD, US DOE NN-42



02/28/96  
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M112

US SPENT FUEL TEAM

CHRON

TO: CHERIE FITZGERALD, US DOE NH-42  
202 506 8525, FAX 202 586 2323  
FROM: WINSTON LITTLER, DOE ONSITE MONITOR  
850 2 381 4423, FAX 850 2 381 2473  
DATE: WEDNESDAY, FEBRUARY 28, 1996

Mike Miles arrived from Pyongyang at noon, and went to the site during the afternoon. Power was off for most of the day, which curtailed our planned activities.

The sludge hoses were connected from Work Station #4 through the Centec pump to the settling tank. Hoses were also connected from the basket cleaning tank through the sandpiper pump to the settling tank. The brush motors were successfully tested on both Work Stations #1 and #4.

We have authorization from Engineer Li to pump more sludge from the settling tank to the disposal drums, but we had no time for this task. We will pump additional sludge tomorrow.

In yesterday's fax, I forgot to include two items from our discussions with Engineer Li on the IAEA gamma counting. First, it was agreed that DPRK would keep the water level in the pool within 30 cm of 5 m (i.e., 4.7 to 5.3 m). Note: in January 1995 it had been agreed to keep the level at 6 m. We see no significant difficulty with the lower level from an operation standpoint. Second, Engineer Li implied that the IAEA will actually make the

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02/29/96 07:58 202 586 2323  
'96-02-29 18:26 PYONGYANG-KOREA

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YU13

# US SPENT FUEL TEAM CHRON

TO: CHERIE FITZGERALD, US DOE NN-42  
202 586 8525, FAX 202 586 2323  
FROM: WINSTON LITTLE, DOE ONSITE MONITOR  
850 2 381 4423, FAX 850 2 381 2473  
DATE: THURSDAY, FEBRUARY 29, 1996

In the morning, we tested the operation of the sandpiper pump with the basket cleaning tank, and everything functioned satisfactorily. In the afternoon, we placed a fuel basket (#105) in the cleaning tank, and began cleaning with the waterjet. At

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08:05

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CHRON

2/29/96  
YUKA

RE: GAMMA DETECTOR DESIGN

**ACTION REQUEST:** Relay the U.S. Team's position to USMISSION VIENNA. Strongly suggest issuing guidance to USMISSION VIENNA to advocate quick, written acceptance of the joint design by the IAEA. USMISSION VIENNA should also advocate that the IAEA allow the U.S. and NK Teams to jointly modify the gamma measuring



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**CHRON** *M14*

**US SPENT FUEL TEAM**

**TO:** CHERIE FITZGERALD, US DOE NN-42  
202 586 8525, FAX 202 586 2323  
**FROM:** WINSTON LITTLE, DOE ONSITE MONITOR  
850 2 381 4423, FAX 850 2 381 2473  
**DATE:** FRIDAY, MARCH 1, 1996

We began the day by modifying several tools, and installing and testing the TV for Work Station #1. Later, we resumed basket cleaning with the waterjet using a nozzle which gave a wider spray.

We also moved rods around within the basket to test whether any of the rods had become bonded together. We moved numerous rods. The rods were not bonded to the sides of the basket, but a few rods were bonded to each other, and could not be readily separated.

In the afternoon, we moved basket #105 from the basket cleaning tank to Work Station #1, and also moved an uncleaned basket (#273) to Work Station #1 (so we could compare the appearance of a cleaned rod with an uncleaned rod). We operated the brush cleaning mechanism on Station #1 several times at increasing pressures and rotation speeds (up to 15% of the maximum of 500 rpm). After each cleaning, we visually inspected the rod with the TV camera. During each cleaning, a moderate plume developed around the brush cleaning mechanism.

After cleaning by just the waterjet, appreciable quantity of corrosion products remained lodged between the spiral fins. The wire brushes did an effective job of removing a large fraction of the corrosion products trapped in the spiral fins. In total, we only cleaned with the brushes for about 10-15 minutes, advancing in a cautious, step-by-step manner. Even so, in this short time we have probably cleaned the rod adequately for canning. Some corrosion products remain, and could be removed if additional cleaning was required. There was no evidence that the brushes damaged the cylindrical section of the rod, although they did significantly batter one of the spacer prongs (the rod should not have been inserted so far into the brushes). The one rod we cleaned was slightly bowed, and had several "pits" in the cladding. We could not immediately evaluate whether these pits went through to the uranium. All-in-all, the brushes appear to be quite effective. The questions remain as to how clean do we wish to get the rods, and at what point might damage to the rods occur.

\*

Earlier in the day, we discussed with Engineer Li what numbers should be written on the outside of the canisters. It was decided, after almost 3 hours, that the 3-digit numerical serial number would be used. For the open baskets, an "O-" would precede the number. It was much ado about nothing.

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DOE OFFICE OF CLASSIFICATION HSB  
T. Sieler PR DATE: 1/30/2009  
*T. Sieler*

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*U.S. spent fuel team (DOE) weekly summaries*

D00013618

04/01/98 08:08 202 586 2323  
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DOE - NN-42  
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V CAROTENUTO  
T-904 P. 01

002/004

03/04/96 07:40  
'96-03-02 15:56

202 586 2323  
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V CAROTENUTO

002/004

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Mille

**US SPENT FUEL TEAM**

**CHRON**

**TO:** CHERIE FITZGERALD, US DOE NN-42  
202 586 8525, FAX 202 586 2323  
**FROM:** WINSTON LITTLE, DOE ONSITE MONITOR  
850 2 381 4423, FAX 850 2 381 2473  
**DATE:** SATURDAY ~~MAY 2~~ <sup>March</sup> 2, 1996

The initial plan for the day was to:

- \* Examine dirty rod with TV (for comparison),
- \* Clean a second rod at Station #4,
- \* Collect sludge from bottom of settling tank, and
- \* Decontaminate spent fuel pool area.

We examined an uncleaned rod chosen at random from the basket sitting in Work Station #1, Basket #173. In comparison, our cleaned rod looks orders of magnitude better. A VCR tape was prepared giving this before-after comparison; the DOS and DOE representatives will carry copies of this tape out on 3/5/96.

Additional sludge was pumped from the settling tank into drain barrels. However, only relatively small quantities of sludge were collected. It appears that we have now pumped essentially all sludge from the west sector (the settling tank is divided into 3 sectors by baffles) of the settling tank. We will make a more detailed assessment of the sludge inventory next week, and begin pumping sludge from another sector.

At 11:00, we began decontamination activities. Some areas were relatively hot. For example, a wall adjacent to the sludge pumping activity gave activity readings of 28,000 dpm/100cm<sup>2</sup>. Decontamination was successful to the satisfaction of NS and NRC health physics experts.

Even with our fuel cleaning operations during the last couple of days, the pool clarity remains good. The water purification line continues to run well; the water temperature has risen slightly to 47 F.

We did not have time to perform additional cleaning operations at Work Station #4.

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*T. Sieler*

*U.S. spent fuel team (DOE) Weekly Summaries*