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G-000-101.104

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**STATUS UPDATE ON INVESTIGATION OF  
ELEVATED CONCENTRATIONS OF URANIUM  
IN OFFSITE SOILS**

**06-12-1989**

**WMCO/WMCO  
WMCO:R(RIFS):89-117  
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LETTER**

From: C. R. Conner/6017

WMCO:R(RIFS):89-117

Date: June 12, 1989

Subject: STATUS UPDATE ON INVESTIGATION OF ELEVATED CONCENTRATIONS OF URANIUM  
IN OFFSITE SOILS

To : W. A. Weinreich

The enclosure provides an update of actions taken to date regarding the characterization of offsite surface soils which contain elevated concentrations of uranium. Changes to the status are identified with an asterisk.

Should you have any questions on any aspect of characterization or corrective actions, please contact me directly.



C. R. Conner, Manager  
RI/FS

CRC:dal

Enclosure

c: L. C. Bogar  
M. B. Boswell  
S. L. Bradley  
D. J. Brettschneider  
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Central Files



**Elevated Concentrations of Uranium  
in Off-Site Surface Soils  
Status Report  
June 7, 1989**

**1. DOE Notification**

- o DOE (Ray Hansen) was notified verbally by C. R. Conner on 5/2/89.
- o A letter describing the findings and a fact sheet were transmitted to DOE on 5/3/89 (WMC0:R:89-034).

**2. Public Notification**

- o The property owner was notified of findings by M. B. Boswell on 5/3/89. The property owner agreed to allow FMPC access to the property for characterization.
- o A draft news release was prepared on 5/3/89 by Public Affairs. The news release was forwarded to DOE for approval.
- o The draft news release was revised on 5/8/89 to keep it current. The revised news release was forwarded to DOE.
- o The draft news release was revised on 5/12/89 and forwarded to the DOE-Headquarters to obtain approval for release to the media. The news release still has not been issued. This was, however, a topic discussed at the May 16, 1989 Community Meeting. In addition, Channel 9 has performed two interviews on the topic.

**3. EPA Notification**

- o USEPA and OEPA were notified of the findings on May 10, 1989 by correspondence from the DOE-FMPC.
- o USEPA (Catherine McCord) and OEPA (Graham Mitchell) visited the manhole 180 site on 5/24 for a status update. Personnel from DOE, IT, and WMC0 were present.

**4. Characterization around Manholes**

- o ASI/IT were given notice to proceed on 5/3/89 by Jim Reafsnnyder.

- o Confirmation analytical results for the original eight soil samples were obtained from the WMCO laboratories on 5/3/89. The results obtained were in good agreement with the original analytical results.
- o Isotopic analysis on the collected samples was completed by the WMCO Laboratory on 5/8/89. This data indicates that all samples were within the depleted or normal range.
- o ASI/IT mobilized on 5/4/89. Field measurements using SPA-3 and FIDLER probes were completed on 5/7/89.
- o Preliminary survey data and maps showing collected field radiological measurements were transmitted to WMCO on 5/9/89.
- o A 100 foot x 200 foot area around manhole 180 was roped off by ASI/IT on May 14, 1989 at the request of the DOE-FMPC. Erosion control fabric was also placed at the perimeter of this area.
- o Soil sampling was completed at 53 locations with the collection of 159 discrete samples. Samples are being taken at 0-6, 6-12, and 12-18 inch intervals at each location. The samples were transmitted to the WMCO laboratory for analysis. Sampling activities were complete at manhole 180 as of May 17, 1989.
- o Sampling around manholes 180, 181 and 177 is complete. The estimated completion date for sampling at manholes 178 and 179 is 5/19 and manhole 176 is 5/20.
- o Analytical work on the samples is ongoing through WMCO laboratories. Ten percent of the samples will be split with IT Laboratories for quality assurance purposes. WMCO laboratories can process ten to fifteen samples per day with limited overtime. It is therefore estimated that sufficient data will be available to begin engineering of potential cleanup activities on 6/7/89.
- o Analysis of the 159 samples taken at manhole 180 are scheduled to be completed by the WMCO Lab by June 7. These results will be total Uranium and total Thorium only.
- o Sample preparation questions were discussed with WMCO Lab personnel. Contacted J. Harvey at IT, Oak Ridge Lab for clarification. Samples are not to have stone or gravel removed prior to drying or grinding. This is consistent with WMCO Lab and IT Lab practice.
- o Results of 10 samples were issued by the WMCO Lab on 5/19. Three samples showed > 11 ppm total Uranium. Two samples were 28 ppm and one was 54 ppm.

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- o Signs were made by WMCO Maintenance and were posted at manhole 180 on 5/22. Signs read: "Do Not Enter, Environmental Characterization Underway."
  - o All soil sampling around the manholes was completed 5/22. The samples have been delivered to the WMCO Lab for processing. A letter was issued to D. Herman requesting "Top Priority" attention and overtime as required to complete the analysis for total Uranium and total Thorium for a total of 249 samples.
  - o Results of 21 samples were issued by the WMCO Lab on 5/22/89. None of the samples showed greater than 11 ppm total Uranium.
  - o Results of 21 samples were issued by the WMCO lab on 5/23. One showed 12 ppm Uranium, one showed 18 ppm Uranium, and one showed 24 ppm Thorium.
  - o Results of 18 samples were issued by the WMCO lab on 5/24. One showed 16 ppm Uranium, one showed 23 ppm Thorium, and one showed 24 ppm Thorium.
  - o Results of 22 samples were issued by the WMCO Lab on 5/25 (see Attachment 1). Five samples showed slightly elevated readings. The worst case was 17 ppm Uranium and 24 ppm Thorium.
  - o Results of 23 samples were issued by the WMCO Lab on 5/26. (see Attachment 2). Four samples showed slightly elevated readings. The worst case was 19 ppm Uranium and 27 ppm Thorium.
  - \* Results of 92 samples were issued by WMCO Lab from 5/30 through 6/7. 13 showed slightly elevated readings. The highest readings were 25 ppm Uranium and 25 ppm Thorium. To date, results are issued for 207 analysis,, which leave 42 to be completed.
  - \* The analysis for total Uranium and total Thorium are now complete for MH180 and 181.
  - \* Split samples have been sent to IT for analysis. Results are due back on 6/28/89. Isotopic results will be issued by WMCO Lab for four samples by 6/12/89.

## 5. Cleanup Activities

- o An initial meeting to arrange for engineering of potential cleanup activities was conducted on 5/9/89.
- o Procedures for soil characterization, removal, transportation and certification were received from Bechtel National on 5/12/89. Bechtel National is prime contractor on the Formerly Utilized Sites Remedial Action Program. Copies of these procedures have been distributed to involved organizations.

- 0 A meeting was held with Restoration Engineering and RI/FS personnel on 5/26. The purpose of the meeting was to organize planning and scheduling with regard to Lab results, potential excavation, order of magnitude of quantities to be handled, and general information exchange.
- \* Restoration Engineering is creating a drawing that will document the manhole sampling grids, show action levels, and list analysis results. This drawing will be the basis used to determine if remedial actions are required.

6. Determination of Root Cause

- 0 An evaluation of the root cause has been conducted by Environmental Engineering. The results of this evaluation were transmitted to involved organizations on 5/26.

7. Corrective Actions

- 0 Repair of the manhole covers began on 5/15/89. Repairs were completed on 5/16/89.
- 0 Interim corrective actions have been identified to insure that overflow of the manholes will not recur. The actions were identified as part of the Item 6 report.