



ENVIRONMENTAL EVALUATION GROUP

AN EQUAL OPPORTUNITY / AFFIRMATIVE ACTION EMPLOYER

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August 23, 2002

Dr. Inés Triay, Manager
Carlsbad Field Office
U.S. Department of Energy
P.O. Box 3090
Carlsbad, NM 88221-3090

RE: INEEL recertification audit comments

Dear Dr. Triay:

The Environmental Evaluation Group (EEG) was represented by Dr. Scott Webb at the recent recertification audit of Idaho National Engineering and Environmental Laboratory (INEEL) (audit no. A-02-27 conducted August 5-9, 2002). Dr. Webb accompanied and observed the Real Time Radiography/Visual Examination (RTR/VE) audit team. He witnessed the liquid in INEEL drum IDR074704967 during the VE audit and the subsequent inquiry which lead to Corrective Action Report (CAR) no. 02-078*. There appears to be a considerable amount of free liquid possible, at times, in the INEEL sludge waste. As a result of the audit, the EEG has questions about INEEL sludge/liquid waste that has been, or may be, shipped to the Waste Isolation Pilot Plant (WIPP). The fundamental concern is whether transporting drums with intermittently appearing liquids to the WIPP could be viewed as a violation of the TRUPACT-II Authorized Methods for Payload Control manual (TRAMPAC §2.6.1), the New Mexico Environment Department (NMED) Hazardous Waste Facility Permit - Waste Analysis Plan (WAP §B-1c), and the Contact Handled - Waste Acceptance Criteria (CH-WAC §3.4.1).

It is also stated in §3.4.1 of the CH-WAC that, "Liquid waste is prohibited at WIPP. Waste shall contain as little residual liquid as reasonable achievable by pouring, pumping, and/or aspirating." In the same document (Appendix C), residual liquid is defined as, "Liquids in quantities less than 1 volume percent of the waste payload container that results from liquid residues remaining in well-drained internal containers, condensation of moisture, and liquid separation resulting from sludge/resin setting." The liquid observed by VE in drum IDR074704967 was not poured, pumped or aspirated. Rather, absorbent was added to the drum. It was understood that this

* Drum IDR074704967 was rejected by RTR in 12/01 for excessive liquids. It was radiographed again in 6/02 but no liquid was detected, so it was readied for WIPP. It was randomly selected for VE and excessive liquid was observed during the recent audit. The liquid was absorbed and the drum was again prepared for WIPP shipment.



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process to treat sludge drums was allowed by a “non-conforming/corrective action” guidance document negotiated between INEEL and the National TRU Program (NTP). The EEG is requesting a copy of that document and any Department of Energy (DOE) Carlsbad Field Office (CBFO) review and/or approval documents on that guidance. We would also appreciate a summary of all the other drums that have been recovered by absorption and sent to the WIPP as it would be useful for assessing the magnitude of the situation.

The TRAMPAC requires verification of the absence of liquids by various methods including RTR and VE (Section 2.6.2). In the case of drum IDRF074704967, RTR and VE appear to be capable of detecting the free liquid when it was present, so these processes are not currently a concern with the EEG. The EEG believes, however, that the liquid absorption/de-sorption phenomenon observed in drum IDRF074704967 (and alluded to in the May 2001 INEEL investigation referenced in CAR no. 02-078) is an important issue, and we are interested in the resolution of the CAR. Please provide a copy of INEEL and CBFO documents that have been, or will be, generated that relate to the resolution (and acceptance of the resolution) of this CAR. We believe that such information may have implications on the acceptability of waste from subsequent INEEL projects or from other sites. The EEG expects that such information will include the complete Acceptable Knowledge summary as required by the WAP (§B-1d) when the Permittees request detailed information on a waste stream. Also, please provide any additional studies or information CBFO may have on sludge/liquid separation.

The EEG seeks information verifying that nonconforming items, e.g. containers with prohibited excessive liquids, are being adequately managed at the INEEL to prevent them from being transported to the WIPP. Section 1.3.2.3 of the CBFO Quality Assurance Program Document (QAPD) requires that such nonconforming items be clearly identified, segregated, and otherwise controlled to prevent use or conditions adverse to quality. Drum IDRF074704967, however, was apparently placed in the WIPP-ready population prior to completing an approved disposition of the nonconformance. The EEG also seeks an understanding of why these requirements were not considered to apply to the containers with excessive amounts of liquids and why there were no concerns written during the audit on this quality assurance issue.

There is an additional discrepancy concerning drum IDRF074704967. The attached copy of the Container Transportation Report/Drum Waste Profile Sheet for the drum (signed 7/22/02) has radio-assay data indicating that this drum does not contain TRU waste. The assay showed no plutonium, no PE-Ci, and ~ 2 nCi g^{-1} of uranium isotopes. Therefore, either the profile sheet is in error or the CAR was based on a drum that should not have been in the WIPP population. If the drum contained low-level waste, the EEG is interested in why the INEEL was processing it for other aspects of the CH-WAC and why it was offered as an auditable item. Please provide EEG with any other radio-assay data for drum IDRF074704967 if it differs from the attached sheet and explain the differences.

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The EEG considers this audit to have been well conducted by knowledgeable and professional persons. We are especially appreciative of the team's efforts to pursue the truth about the appearance of liquids in the sludge waste and how INEEL has managed that waste stream.

Sincerely,



Matthew K. Silva
Director

MKS:sbw:js

cc: Steve Zappe, NMED
Elizabeth Forinash, US EPA
Tom Matula, US NRC
Nathan Christiansen, Western Governors Association

Enclosure: Container Transportation Report/Drum Waste Profile Sheet for drum
IDRF074704967

CONTAINER TRANSPORTATION REPORT
DRUM WASTE PROFILE SHEET

OLD Container Information

Container Identification: IDRF074704967
 Swepp Barcode: 004236
 Shipping Category: 1001300190
 Test Category: N
 TRUCON Content Code: ID211A
 Package Date: 28-apr-1986
 Gross Weight: 210.5 kg 464.0 lbs
 Gross Weight Error: 0.9 kg 2.0 lbs
 Waste Weight:
 Seal Number: 024848
 Alpha Contam. (dpm): 0.0
 Beta/Gamma Contam. (dpm): 0.0
 Neutron Dose Rate (mrem/hr): 0.0
 Surface Dose Rate (mrem/hr): 0.1

VIEWS THIS DRUM
 DURING VE
 - WATER LIQUID

Unaffected Data Information

Content Code: 007
 Container Type: 001
 Handling Code: CH
 Volume Utilized (percent): 65

Nuclide	Mass (g)	Mass Error (g)
CS137	0.0	0.0
SR90	0.0	0.0
U234	0.00659	0.00279
U235	1.93511	0.89822
U238	1056.32324	490.14615

Total PU (g): 0.0
 Fissile Gram Equivalent (Pu239): 1.93511
 Fissile Gram Equivalent Error (Pu239): 0.89822
 Thermal Power (watts): 0.00001
 Thermal Power Error (watts): 0.0
 Total Alpha Activity (Ci): 0.00038
 Total Alpha Activity Error (Ci): 0.00016
 Plutonium Equivalent (Ci): 0.0

All radio-assay data is the most recent data.

The assay values have been adjusted per EDF
 RWMC-840 (rev. 3) to incorporate the gamma
 spec results. For EPA Hazardous Waste Code,
 Hazardous Constituents, or Hazardous Characteristics,
 please refer to Engineering Design File (EDF) serial
 number: RWMC-803.

 R3 all TL 7/22/02
 RWMC Signature Role Date

ANL-W Signature Role Date