

United States Government

Department of Energy

memorandum

Carlsbad Field Office
Carlsbad, New Mexico 88221

DATE: September 5, 2001

REPLY TO
ATTN OF: CBFO:QA:MLC:VW:01-1437:UFC:2300

SUBJECT: CBFO Surveillance Report S-01-29, Idaho National Engineering and Environmental Laboratory

TO: Edward Ziemianski, ID

SEP 2001
RECEIVED

The Carlsbad Field Office (CBFO) conducted a surveillance of the Idaho National Engineering and Environmental Laboratory (INEEL) SWEEP Waste Assay Gamma Ray Spectrometer (WAGS) system on July 2 & 3, 2001, and July 25 & 26, 2001. The surveillance team concluded that the INEEL processes relating to the WAGS system were adequate in accordance with the CBFO Waste Acceptance criteria. The surveillance team also concluded that the INEEL procedures evaluated were being satisfactorily implemented and that the evaluated processes were effective. The CBFO Surveillance report is attached.

There were no CBFO Corrective Action Reports or Recommendation issued as a result of the surveillance. Two Observations have been documented in the report relating to replicate assays and data reporting.

If you have any questions or comments concerning this report, please contact me at (505) 234-7311.



Thomas J. Reese
Acting Quality Assurance Manager

Attachment

cc: w/attachment
L. Chism, CBFO
R. Knerr, CBFO
D. Winters, DNFSB
S. Monroe, EPA
M. Eagle, EPA
S. Zappe, NMED
B. Walker, EEG
T. Monk, BBWI
T. Preston, BBWI
M. Gerle, WTS

cc: w/o attachment
I. Triay, CBFO
K. Watson, CBFO
J. Schuetz, CTAC



U.S. DEPARTMENT OF ENERGY
CARLSBAD FIELD OFFICE

SURVEILLANCE REPORT
OF THE
IDAHO NATIONAL ENGINEERING AND
ENVIRONMENTAL LABORATORY
(INEEL)


Idaho Falls, Idaho

SURVEILLANCE NUMBER S-01-29

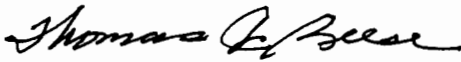
July 2 & 3, 2001
And
July 25 & 26, 2001



SWEPP WASTE ASSAY GAMMA RAY SPECTROMETER

Prepared by: 
Steven D. Calvert
Surveillance Team Leader

Date: 8/23/01

Approved for Issue by: 
Thomas J. Reese
Acting CBFO Quality Assurance Manager

Date: 9/5/01

1.0 EXECUTIVE SUMMARY

CBFO Surveillance S-01-29 was conducted to evaluate the implementation and effectiveness of the Idaho National Engineering and Environmental Laboratory (INEEL) process for use of the Waste Assay Gamma Ray Spectrometer (WAGS). The surveillance was conducted in two phases at the site. The first phase was conducted on July 2 and 3, 2001 and the second phase occurred on July 25 and 26, 2001. The surveillance team determined that the WAGS procedure was adequate. The surveillance team determined that the activities evaluated relating to WAGS process were satisfactorily implemented and effective.

The surveillance team did not identify any conditions adverse to quality that required the issuance of a Corrective Action Report (CAR). Two Observations were identified in the areas of the administrative controls for performing replicate measurements and the identification of the level of measurement uncertainty when reporting assay results. No Recommendations were issued as a result of this surveillance.

2.0 SCOPE

CBFO Surveillance S-01-29 was conducted to evaluate the implementation and effectiveness of the INEEL Transuranic Waste nondestructive assay process relating to the WAGS system. The surveillance team evaluated the operation of the assay equipment and the reporting and documenting of assay results. Attachment 2 lists the procedures evaluated by the surveillance team.

3.0 SURVEILLANCE TEAM, INSPECTOR AND OBSERVER

Steven D. Calvert	Surveillance Team Leader, CTAC
Wayne Ledford	Surveillor, CTAC
Patrick Kelly	Technical Specialist, CTAC
Ed Feltcorn	Inspector, EPA
Dave Stuenkel	Inspector, Trinity Engineering
Ben Walker	Environmental Evaluation Group
George Anastas	Environmental Evaluation Group

4.0 SURVEILLANCE PARTICIPANTS

A list of personnel contacted during the course of the surveillance is provided as Attachment 1 of this report.

5.0 SUMMARY OF SURVEILLANCE RESULTS

5.1 Surveillance Activities

Details of surveillance activities, along with the specific objective evidence reviewed and the results of the review are contained within the surveillance checklist. The checklist is maintained as a QA record. No conditions adverse to quality were identified.

The surveillance team evaluated the implementation and effectiveness of the Idaho National Engineering and Environmental Laboratory (INEEL) process for use of the Waste Assay Gamma Ray Spectrometer (WAGS). The surveillance was conducted in two phases at the site. The first phase was conducted on July 2 and 3, 2001 and the second phase occurred on July 25 and 26, 2001.

5.1.1 Nondestructive Assay Using the SWEPP Waste Assay Gamma Ray Spectrometer (WAGS) System

The surveillance team examined the INEEL WAGS system located in the Stored Waste Examination Pilot Plant (SWEPP) at the INEEL Radioactive Waste Management Complex (RWMC). During the first phase of the surveillance the team observed actual operation of the equipment. A sample of waste containers was selected from INEEL inventory. The containers were assayed on two separate gamma detector systems and the results were compared. The surveillance team determined the assay results were within the established tolerances and concluded that the WAGS system was equivalent to the previously certified SWEPP Gamma Ray Spectrometer (SGRS) assay system. Phase two of the surveillance included interviews with WAGS operations personnel, a review of data generated from the assay results, an evaluation of the training records for personnel operating the WAGS equipment, and an evaluation of the disposition of the containers assayed on the WAGS system.

The WAGS system is used to assay 55 gallon (208 liter) drums of TRU waste to determine the distribution of plutonium isotopes and to quantify non-plutonium gamma emitters, i.e., Am-241, U-233, U-238, U-235 and Cs-137. The data obtained on the WAGS are used in conjunction with quantitative data from the SWEPP Passive Active Neutron (PAN) system to provide mass values for selected plutonium and other radionuclides, and other regulatory required data. The evaluation consisted of reviewing all applicable site procedures to ensure consistency with the upper level requirements. Using the reviewed INEEL procedures, a checklist was prepared and used to evaluate the following aspects:

- Operation and condition of equipment
- Instrument calibration and traceability of calibration sources
- Applicability of calibration to waste type and radionuclide content
- Implementation and effectiveness of instrument/measurement controls
- Verification that INEEL procedures are being properly executed

- Review of completed data packages to ensure data are reported and reviewed as required
- Verification of proper data storage and retrievability

The surveillance team determined that the WAGS procedure was adequate. The surveillance team determined that the activities evaluated relating to WAGS process were satisfactorily implemented and effective.

6.0 CORRECTIVE ACTIONS AND RECOMMENDATIONS

The surveillance team identified no deficiencies during the surveillance that required the issuance of Corrective Action Reports (CARs) or Recommendations.

6.1 OBSERVATIONS

The following two Observations were identified during the surveillance:

1. INEEL should include administrative controls in the NDA operating procedures that ensure that the frequencies of replicate measurements performed on the WAGS and SGRS systems are consistent with the frequencies of analytical samples assayed on each system.
2. The reported level of measurement uncertainty (one or two sigma) should be explicitly identified and recorded someplace in the NDA documentation.

7.0 ATTACHMENTS

Attachment 1: Personnel Contacted During the Surveillance
Attachment 2: Procedures Reviewed During the Surveillance

PERSONNEL CONTACTED DURING THE SURVEILLANCE

PERSONNEL CONTACTED				
NAME	TITLE/ORG	PRE SURVEILLANCE MEETING	CONTACTED DURING SURVEILLANCE	POST SURVEILLANCE MEETING
Arbon, Rod	SPO, BBWI	X	X	X
Ashley, Holly	Special Projects, BBWI	X		
Bass, Karen	GTI			X
Bright, David	Site Area Director, BBWI	X	X	X
Brooks, Chris	Technical Radioassay Lead, BBWI	X	X	X
Brygelson, D	ANL-W Project Engineer	X		
Carlson, Tim	ESH&QA Manager, BBWI	X		X
Clark, Art	General Manager, BBWI	X		X
Crisp, Dan	Project Manager, BBWI	X		X
Davis, Bob	DOE-ID, QA	X		
Einerson, Jeff	Statistician, BBWI	X	X	
Fife, Cindy	Facility QA, BBWI		X	
Ford, Bryant	3100 Project Engineer	X		
Fritz, Lori	Program Director, DOE-ID	X	X	X
Gordon, Joe	GTI			X
Harker, Yale	NDA Specialist		X	X

PERSONNEL CONTACTED				
NAME	TITLE/ORG	PRE SURVEILLANCE MEETING	CONTACTED DURING SURVEILLANCE	POST SURVEILLANCE MEETING
Johnsen, Tom	Document Control, BBWI	X	X	X
Knox, Greg	QA Manager, BBWI	X	X	X
Krivanek, Ken	Contractor, GTI	X	X	X
Lent, Dave	Training Supervisor, BBWI	X	X	
Miklos, Robert	Production Manager, BBWI	X		X
Monk, Thomas	Site Project Manager, BBWI	X	X	X
Preston, Tim	SQAO, BBWI	X	X	X
Roesener, W	Radioassay Engineer, BBWI		X	X
Rogers, Kim	Engineering Dept Manager, BBWI	X		
Sygitowicz, Lee	Waste Management Director, BBWI	X	X	X
Taft, Rod	DOE-ID	X		X
Twedell, Gary	NDA Specialist, BBWI		X	X
Wells, Jerry	Program Manager, DOE-ID	X	X	X
Wolford, Lisa	Production, BBWI			X
Yew, Paul	DAD, BBWI	X		

INEEL PROCEDURES SURVEILLED IN S-01-29		
NUMBER	PROCEDURE NUMBER	TITLE
1.	TPR-1588	SWEPP Gamma Ray Spectrometer System
2.	TPR-1654	SWEPP Waste Assay Gamma Spectrometer (WAGS) System
3.	TPR-1719	Calibration of SWEPP Radioassay Systems
4.	QTP-011	SWEPP Gamma Ray Spectrometer System