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United States Government **Department of Energy**

memorandum

Carlsbad Field Office
Carlsbad, New Mexico 88221

DATE: October 17, 2003

REPLY TO ATTN OF: CBFO:QA:MPN:GS:04-2917:UFC 2300.00

SUBJECT: Surveillance Report S-04-02 of Hydrogen/Methane Analysis at the Hanford Site

TO: Mark French, RL

The Carlsbad Field Office (CBFO) conducted a surveillance of the Hydrogen and Methane Analysis of Headspace Gas Samples by gas chromatography using a thermal conductivity detector on October 9, 2003. The surveillance team concluded that this process is adequate, satisfactorily implemented and effective. The CBFO surveillance report is attached. There were no CBFO Corrective Action Reports (CARs) issued as a result of the surveillance.

If you have any questions or comments concerning this report, please contact me at (505) 234-7483.

Martin P. Navarrete
Quality Assurance Specialist

Attachment

cc: w/attachment

A. Holland, CBFO	*ED
D. Miehls, CBFO	*ED
R. Knerr, CBFO	*ED
K. Watson, CBFO	*ED
T. Shrader, DOE-RL	*ED
D. DeRosa, FH	*ED
R. Dunn, FH	*ED
J. Maupin, FH	*ED
M. Eagle, EPA	*ED
S. Zappe, NMED	*ED
B. Walker, EEG	*ED
P. Rodriguez, CTAC	*ED
L. Greene, WRES	*ED
K. Dunbar, WRES	
CBFO QA File	
CBFO M&RC	

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U.S. DEPARTMENT OF ENERGY
CARLSBAD FIELD OFFICE

SURVEILLANCE REPORT

OF THE
HANFORD SITE

RICHLAND, WASHINGTON

SURVEILLANCE NUMBER S-04-02

OCTOBER 9, 2003

HYDROGEN/METHANE ANALYSES AT HANFORD

Prepared by: Pete V. Rodriguez For **Date:** 10-14-03
William (B.J.) Verret, CTAC
Surveillance Team Leader

Approved by: Ava L. Holland **Date:** 10/17/03
Ava L. Holland, CBFO
Quality Assurance Manager

1.0 EXECUTIVE SUMMARY

Carlsbad Field Office (CBFO) Surveillance S-04-02 was conducted to evaluate the adequacy, implementation, and effectiveness of the applicable technical activities related to the Hanford site analysis of headspace gas (HSG) samples for hydrogen and methane, as applied to Summary Category Groups S3000, homogeneous solids, and S5000, debris waste.

The surveillance was conducted at Carlsbad, NM, on October 9, 2003. An examination of the analytical equipment was performed at the Hanford site during September 8 – 11, 2003, in conjunction with Hanford Audit A-03-25. The surveillance team concluded that the Hanford technical procedures are adequate relative to the flow-down of requirements from the CBFO Quality Assurance Program Document (QAPD), the TRUPACT-II Authorized Methods for Payload Control (TRAMPAC). and the Waste Acceptance Criteria (WAC).

The surveillance team concluded that the Hanford quality assurance (QA) program, relative to analysis of HSG samples for hydrogen and methane, satisfactorily met the requirements of the QAPD, TRAMPAC, and WAC. The surveillance team also concluded that the QA program and the aforementioned Hanford technical processes, are satisfactorily implemented and effective.

The surveillance team did not identify any conditions adverse to quality (CAQs) that required the issuance of CBFO corrective action reports (CARs). No issues were identified that were corrected during the surveillance, and the surveillance team issued no Observations as a result of the surveillance.

2.0 SCOPE

The surveillance team evaluated the adequacy, implementation, and effectiveness of technical processes related to the analysis of HSG samples for hydrogen and methane, as applied to Summary Category Groups S3000, homogeneous solids, and S5000, debris waste.

The following CBFO technical characterization element was evaluated in accordance with the WAC and TRAMPAC:

> Hydrogen and Methane Analysis of Headspace Gas Samples by Gas Chromatography using a Thermal Conductivity Detector

Evaluation of Hanford transuranic (TRU) waste characterization program documents was based on current revisions of the following documents:

Hanford Site Quality Assurance Project Plan (QAPjP) for the Transuranic Waste Characterization Program

Hanford Site Transuranic Waste Certification Plan

Related Hanford Waste Receiving and Processing (WRAP) facility technical implementing procedures

3.0 SURVEILLANCE TEAM, INSPECTORS, AND OBSERVERS

SURVEYORS/TECHNICAL SPECIALISTS

William (BJ) Verret, Surveillance Team Leader and Technical Specialist, CTAC

OBSERVERS/INSPECTORS

None were present during the surveillance.

4.0 SURVEILLANCE PARTICIPANTS

Hanford personnel involved in the surveillance process are identified in Attachment 1. The surveillance was performed using a data package provided by Hanford that contained the relevant analytical data. Telephone interviews were performed on October 9, 2003, of the Hanford individuals involved in the process. Contacted were Karola Kover, FH Waste Certification Official Alternate and TRU HSG Lead, and L.A. Pingle, Waste Sampling and Characterization Facility (WSCF) Scientist. Equipment was verified at the Hanford site on September 8 - 11, 2003, during CBFO Audit A-03-25.

5.0 SUMMARY OF SURVEILLANCE RESULTS

5.1 Program Adequacy, Implementation, and Effectiveness

The surveillance team concluded that the Hanford hydrogen and methane analytical technical program satisfactorily met the requirements of the CBFO QAPD, Revision 5, the TRAMPAC, Revision 19c and the WAC, Revision 0.1. The Hanford hydrogen and methane analytical technical processes evaluated by the surveillance team were determined to be satisfactorily implemented and effective.

5.2 Technical Activities

Evaluations of applicable Hanford technical activities are summarized below. Technical procedures evaluated during the surveillance are provided in Attachment 2.

5.2.1 Hydrogen and Methane Analysis

The surveillance team evaluated the hydrogen and methane analytical processes and procedures performed at the WSCF at Hanford. This process and procedure (LA-523-426) is limited to the analysis of HSG samples for hydrogen and methane. The surveillance team evaluated the applicable procedures to ensure they were consistent with the upper-level CBFO requirements. Using the reviewed Hanford procedures, a checklist was prepared and used to evaluate the hydrogen and methane analytical process as follows:

- Operability and condition of equipment (i.e., gas chromatograph with thermal conductivity detector)
- Implementation and effectiveness of instrument/measurement controls (QC samples analyses)
- Verification that Hanford procedures are followed
- Completed data packages for hydrogen and methane analytical processes, to ensure data are reported and reviewed as required
- Data storage and retrievability

The surveillance team interviewed Hanford personnel via telephone, observed equipment and logbooks, and examined records. Examination of the analytical equipment was performed at the Hanford site on September 8 - 11, 2003, in conjunction with CBFO Audit A-03-25. The surveillance team concluded that the written procedures for hydrogen and methane analysis were adequate. The surveillance team also determined that this process has been satisfactorily implemented and is effective.

One batch data report (hydrogen and methane analytical batch number 030923 from the WSCF) was examined and evaluated to verify implementation of procedural requirements. The surveillance team determined that procedures for data generation and project level data verification and validation (V&V) remain adequate. The team also determined that the process for data generation and project level V&V continues to be satisfactorily implemented and effective.

6.0 Corrective Action Reports (CARs), Corrected During the Surveillance (CDS), and Observations

6.1 CARs Initiated as a Result of CBFO Surveillance S-04-02

No conditions adverse to quality were identified during the surveillance and no CARs were initiated.

6.2 Deficiencies Corrected During the Surveillance (CDS)

No deficiencies were identified during the surveillance.

6.1 Observations

No Observations were identified during the surveillance

7.0 LIST OF ATTACHMENTS

Attachment 1: Personnel Contacted During the Surveillance
Attachment 2: Table of Procedures Surveilled

PERSONNEL CONTACTED DURING THE SURVEILLANCE

HANFORD PERSONNEL CONTACTED				
NAME	**ORG/TITLE**	**PRE SURVEILLANCE MEETING**	**CONTACTED DURING SURVEILLANCE**	**POST SURVEILLANCE MEETING**
Kover, Karola	FH Waste Certification Official Alternate, and TRU HSG Lead WCO	**N/A**	**X**	**N/A**
Pingle, L. A.	WSCF, Scientist HSG	**N/A**	**X**	**N/A**

HANFORD PFP PROCEDURES SURVEILLED

NUMBER	PROCEDURE NUMBER	TITLE
1.	LA-523-426	Determination of Permanent Gases in TRU Waste Container Headspace
2.	WMP 400, Section 8.1.8	Data Management for Headspace Gas Sampling and Analytical Results