



United States Government

Department of Energy

# memorandum

 Carlsbad Field Office  
 Carlsbad, New Mexico 88501


DATE: JAN 30 2013

REPLY TO  
ATTN OF: CBFO:OQA:CF:CC:13-1318:UFC 2300.00

SUBJECT: CBFO Surveillance Report S-13-17 of the Idaho National Laboratory Central Characterization Project Gas Chromatography Unit 7

TO: Jerry Wells, DOE-ID

The Carlsbad Field Office (CBFO) conducted a surveillance to evaluate the adequacy, implementation, and effectiveness of the Idaho National Laboratory Central Characterization Project Gas Chromatography Unit 7 (GC-7) used for the dual-column gas chromatographic separation and detection of nonhalogenated volatile organic compounds in extracts of solid samples and for the purposes of characterizing and certifying Summary Category Group (SCG) S3000 homogeneous solids and SCG S4000 soil/gravel wastes. The surveillance report is attached.

The surveillance team verified that the procedures adequately address upper-tier requirements, and are satisfactorily implemented, and effective. The team determined that the GC-7 and associated activities evaluated are satisfactorily implemented and effective.

If you have any questions, please contact me at (575) 234-7548.

Courtland G. Fesmire, P.E.  
Quality Assurance Engineer

Attachment



Mr. Jerry Wells

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JAN 30 2013

cc: w/attachment

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P. Y. Martinez, CTAC	ED
R. Castillo, CTAC	ED
WIPP Operating Record	ED
CBFO QA File	
CBFO M&RC	

\*ED denotes electronic distribution

## CBFO SURVEILLANCE REPORT

**Surveillance Number:** S-13-17      **Date of Surveillance:** January 9 – 10, 2013

**Surveillance Title:** Gas Chromatography Unit 7

**Organization:** Nuclear Waste Partnership LLC (NWP), formerly Washington TRU Solutions LLC/Idaho National Laboratory (INL) Central Characterization Program (CCP)

### Surveillance Team:

Courtland G. Fesmire	Carlsbad Field Office (CBFO) Management Representative
Priscilla Y. Martinez	Team Leader, CBFO Technical Assistance Contractor (CTAC)
Paul Gomez	Team Member, CTAC
Roger Vawter	Team Member, CTAC

### Surveillance Scope:

The surveillance team evaluated the operability, implementation, and effectiveness of the Gas Chromatography Unit 7 (GC-7) instrument used for the dual-column gas chromatographic separation and detection of nonhalogenated volatile organic compounds in extracts of solid samples, and examined the associated procedure to confirm the adequacy, implementation, and effectiveness of this process for analysis of Summary Category Groups (SCGs) S3000 solids and S4000 soils/gravel waste relative to the requirements of the Waste Isolation Pilot Plant Hazardous Waste Facility Permit.

The surveillance was based on the following documents:

- *CBFO Quality Assurance Program Document, DOE/CBFO-94-1012*
- *Waste Isolation Pilot Plant Hazardous Waste Facility Permit No. NM4890139088-TSDF*
- *CCP Laboratory Logbooks, CCP-QP-011*
- *CCP Determination of Nonhalogenated Volatile Organics by Gas Chromatography, CCP-TP-186*
- *CCP Training and Qualification Plan, CCP-QP-002*

### Activities Evaluated:

The following CCP activities were evaluated during the surveillance:

- Operability of GC-7
- Minimum detection limit performance
- Initial calibration performance
- Precision and accuracy performance
- Performance Demonstration Program
- Standard certifications

- Instrument installation and operability
- Analysis of samples as documented in a batch data report
- Maintenance and analysis of samples as documented in logbooks
- Operator qualification and training

The surveillance team verified that the Advanced Mixed Waste Treatment Project Analytical Chemistry Laboratory (ACL) uses the GC-7 for analysis of aqueous extractable volatile organic compounds (VOCs) for the CCP, as described in procedure CCP-TP-186, Revision 1, *CCP Determination of Nonhalogenated Volatile Organics by Gas Chromatography*. The GC-7 is a dual-column gas chromatography (GC) instrument with flame ionization detection for the analysis of the nonhalogenated VOCs.

The team verified the use of procedure CCP-TP-188, Revision 2, *CCP Analytical Data Recording, Review, and Reporting*. This procedure, along with CCP-TP-186, was used for analysis, quality assurance/quality control reporting, and the identification of the laboratory personnel utilizing the instrumentation reported by qualified independent technical reviewers (ITRs), operators, and standards chemists.

The surveillance team also verified the ACL completes precision and accuracy reports with the recording of percent relative standard deviations and recoveries for the acceptability limits on seven performance samples. The ACL utilizes National Institute of Standards Traceability materials and reports them in the raw data portion of the batch data reports (BDRs). The standards verified meet the criteria established in the permit, including duplicates, matrix spike duplicates, laboratory control standards, initial calibration and continuing calibration standard results.

The laboratory offered BDR ALD12PDP19BAUDIT for examination during the surveillance. Results were reported in mg/kg accurately and in a pre-approved format. The team verified the reports are stored in fire-rated cabinets and are traceable. The raw data was signed and dated properly and produced clearly, legibly, and accurately with sample identifiers. The ITR reviewed the data using the proper checklist and it was signed and dated. There were no line-outs or obliterations observed in the data package. The report met project level review using proper checklists as established in CCP-TP-001, Revision 20, *CCP Project Level Data Validation and Verification*.

#### Data Storage

The data is stored in files and maintained properly according to an appropriate records inventory and disposition schedule for permanent and non-permanent records.

#### Nonconformance Reports

There was no nonconformance report related to the data package.

WIPP Waste Information System/Waste Data System

The surveillance team verified that the Waste Data System will not receive data regarding the use of GC-7 until the GC is approved through a recertification audit.

Performance Demonstration Program Participation

The ACL participates in the Performance Demonstration Program (PDP) for homogeneous waste analysis in support of SCG S3000 and S4000 wastes. The results for the Resource Conservation and Recovery Act PDP Cycle 19B were reviewed. The ACL results were approved as of September 19, 2012.

The calibration confirmation and verification documents were determined to be technically adequate and the implementing procedures were determined to provide an adequate implementation of upper-tier requirements; specifically, those requirements applicable in DOE/CBFO-94-1012, *CBFO Quality Assurance Program Document*.

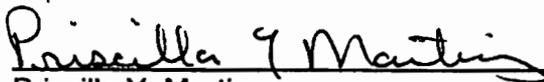
Qualifications and training were verified for personnel performing GC operations activities and all personnel were determined to be appropriately trained and qualified.

The surveillance team evaluated records relevant to the processing activities related to the GC activities. All quality assurance records reviewed were legible, accurate, and maintained compliantly.

**Surveillance Results:**

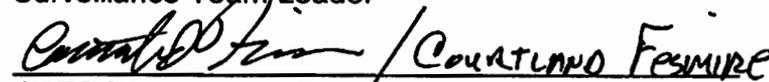
The surveillance team identified no concerns during the surveillance.

The surveillance team verified that the GC-7 procedures adequately address upper-tier requirements, are satisfactorily implemented, and are effective. The team determined that the GC-7 processes and associated activities evaluated are satisfactorily implemented and effective.



Priscilla Y. Martinez  
Surveillance Team Leader

1-24-13  
Date

  
Courtland Fesmire  
CBFO Management Representative

29 JAN 2013  
Date