



## ENVIRONMENTAL EVALUATION GROUP

ENTERED

AN EQUAL OPPORTUNITY / AFFIRMATIVE ACTION EMPLOYER

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July 11, 2001

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



Dear Dr. Triay:

Attached is the EEG observer's report on the surveillance of the CCP-SRS program conducted June 18-22, 2001. The surveillance appeared to be successful in pointing out areas of the program that needed further development. While these were extensive, the observer notes that quality and attitude of the CCP personnel appeared to be very good.

Sincerely,

Matthew Silva  
Director

BAW:ss  
Enclosure

cc: Mike Eagle, EPA  
Steve Zappe, NMED

010735





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ENVIRONMENTAL EVALUATION GROUP

### MEMORANDUM

DATE: June 27, 2001  
TO: Matthew Silva, Director  
FROM: Ben Walker, QA Specialist *Baw*  
SUBJECT: Surveillance of CCP-SRS, June 18-22, 2001

I observed the Carlsbad portion of the CBFO surveillance of the Central Characterization Project's Savannah River Site (CCP-SRS) activity. As you may remember, SRS must ship TRU waste to the WIPP before receiving Pu-238 waste from Mound, as a part of an agreement with the state of South Carolina; Mound clean-up activities are in turn dependent on shipping the Pu-238 waste to SRS. Since SRS has limited characterization capacities the SRS waste was scheduled as the first priority of the CCP (ANL-E and NTS development plans are also expected in the immediate future). The CCP is a division of WTS recently formed specifically for the purpose of characterizing waste for the WIPP.

This surveillance precedes a planned certification audit currently scheduled for July 16-20, 2001. The same assessment team members used in this surveillance will be used for the audit. The same areas will be covered during the audit, using essentially the same checklists. The team consisted of 15 persons, six of which performed technical evaluations of the waste characterization-related activities performed at the SRS. The EPA had three observers at the SRS portion of the audit and two in Carlsbad; one person from the NMED was also an observer at the SRS, and another NMED person participated in the opening and closing meetings, as well as the Carlsbad team caucus meetings held each afternoon.

Attached (Attachment 1) are copies of selected pages from the audit closeout presentation. As was expected most areas audited had not been fully exercised, so that there were major parts of the program which did not undergo assessment (the "Indeterminates" on the Conclusions pages of Attachment 1). There were a number of unsatisfactory areas also, all in the adequacy of the documentation of the program requirements. While it was also not expected that the program would be in perfect shape, the unsatisfactory ratings are for all of the actual waste characterization techniques--acceptable knowledge (AK), radiography, non-destructive assay,

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and headspace gas sampling and analysis--that are the primary functions of the program. Summaries of the 18 draft Corrective Action Reports (CARs) generated during the surveillance are also included in Attachment 1; several of the 16 observations would have been CARs had actual operations been underway. The surveillance was conducted to illuminate the areas of the program that need additional work, and appears to have met that goal.

Despite the relatively poor report from this surveillance, the CCP-SRS did show some bright spots. The AK process earned an exemplary practice for summaries of source documents, noting that the listing of the limitations of these data were well-documented. The AK auditing specialist stated that these were the best summaries he had seen from any of the sites; my experience is more limited, but I can echo that judgment. The CCP also has numerous personnel that have worked on other waste characterization activities and certifications from a variety of viewpoints--three highly-placed individuals have been auditors during certification audits in the past, for example. Finally, the personnel in Carlsbad at least (I have no data from SRS) exhibited a confidence and upbeat attitude that is often an indicator of good things to come.

### **The CCP and the CCF**

The CCP--Central Characterization Program--is differentiated from the CCF--Central Confirmation Facility--so that waste characterization under the CCP that takes place at the generator/storage sites can be proposed for certification prior to modification of the WIPP Hazardous Waste Facility Permit (HWFP). The CCF is used to designate the proposed facility at the WIPP in which non-AK characterization activities are to be performed after necessary approvals are obtained; the CCP is the organizational structure that is initially planned to perform waste characterization activities at generator/storage sites, and then control the CCF once the necessary approvals of the facility are obtained.

### **The CCP and the HWFP**

The NMED's comments at the closeout indicate that there is some concern that the HWFP does not cover use of the CCP for waste characterization purposes. Module II and the WAP portions of the HWFP state specifically that "waste generator/storage sites" will conduct waste characterization activities, with the Permittees (CBFO and WTS) acting more as regulators of the process. Thus the HWFP would appear to require that SRS control the waste characterization process, not WTS. The current interface agreements with SRS (an MOU and a proceduralized "Interface Document"<sup>1</sup>) indicate that the CCP is responsible for providing SRS with assurances

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<sup>1</sup>*Memorandum of Understanding SWD-MOU-00-005 for Certification and Shipment of TRU Waste in Support of Mound Site Closure*, Revision 0, Effective Date 12/08/00; and CCP-PO-004, Revision 2, *CCP/SRS Interface Document*, Effective Date 06/14/2001.

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that the waste characterization was adequate, but does not evidence a SRS control of the waste characterization process. For example, the MOU states (Section 6.2.1, p. 8):

WID [now WTS] will certify to WSRC that payload containers meet the WIPP Waste Acceptance Criteria and the payload containers and payload assemblies meet the criteria for the shipping package. WID's mobile loading vendor will certify to WSRC that the payload assemblies were properly loaded into the shipping package and the shipping package was properly prepared for shipment. Upon receiving these certifications, WSRC will finalize the shipment by preparing the shipping manifest, marking and labeling the shipping package, and placarding the vehicle.

This is not the process that is reflected in the HWFP, where WTS as a Permittee is required to impose the Waste Analysis Plan requirements on the SRS in its capacity as a generator/storage site and then perform checks of the processes used to ensure that the data meets these requirements. The CCP was not a part of the vision when the HWFP was written, and it appears logical to conclude that the HWFP must be adjusted to include the CCP before CCP activities can be certified by the NMED.

The WTS General Manager was at the surveillance closeout meeting, and replied to the NMED comments by stating that an effort was underway to meet the NMED's concern through further negotiations between WTS and SRS. It may be possible to create a legally acceptable way for the NMED to certify the CCP process--RCRA had generated numerous examples of rather tortuous logic--but it seems clear that such a resolution would be based on a legal argument rather than the language in the current HWFP.

#### **The CCP and 40 CFR 194**

The CCP may also stretch the concepts on which the EPA's regulatory function is based. The intent in the CCP is to use the same documented program for all sites, rather than developing site-specific programs. 40 CFR 194.8(a) states:

*Quality Assurance Programs at Waste Generator Sites.* The Agency will determine compliance with requirements for site-specific quality assurance programs as set forth below:

- (1) Upon submission by the Department of a site-specific quality assurance program plan the Agency will evaluate the plan to determine whether it establishes the applicable Nuclear Quality Assurance (NQA) requirements...

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(2) The Agency will conduct a quality assurance audit or an inspection of a Department quality assurance audit at the relevant site for the purpose of verifying proper execution of the site-specific quality assurance program plan.

Thus, the EPA will apparently need to accept the concept of multiple locations (SRS, ANL-E, and NTS to begin with) as a single "site" under the current CCP concept. As with the HWFP, the underlying problem is that the concept of a centralized waste characterization process for multiple sites was neither broached nor considered during the development of WIPP regulatory authority. Thus, the 40 CFR 194 Certification (Appendix A to that CFR) established in Conditions 2 and 3 that the §194.8 processes are requirements to be met for waste characterization programs other than the LANL program in effect at the time of the certification, and the CCP concept would seem to require an elasticity of language beyond that which was originally intended.

#### **Interactions Between the SRS and CCP-SRS Programs**

As noted above, WTS may be considered a regulator of waste characterization, and the CCP will perform the waste characterization regulated by WTS. This might be considered a self-regulation process not envisioned in the HWFP. The SRS waste characterization effort has heretofore been an independent waste generator that has been regulated by the WTS as a Permittee. The interface documents, however, notes many instances where the SRS and CCP processes are intermingled. SRS performs the initial selection of drums that the CCP characterizes (MOU Section 6.1.1); visual examination (VE) will be performed at the SRS VE facility under SRS procedures and the SRS QAPD (MOU, Section 6.1.3); container dose rate/surface contamination information will be performed by SRS personnel using SRS procedures (CCP-PO-004, Sections 3.0 and 4.4.2); TRUPACT-II leak testing will be performed by SRS personnel, apparently under SRS procedures (MOU Section 6.1.4); WWIS data entry will be split between entry of waste characterization data by the CCP, and shipping information by the SRS (CCP-PO-004, Section 3.0); container tracking will be a joint responsibility (MOU, Section 6.1.4); The SRS is responsible for providing the temperature-controlled environment and calibrated instrumentation to measure the temperature used in preparation of containers for headspace gas sampling, but CCP personnel perform the sampling (CPP-PO-004 Section 4.7); AK document storage may be by either program (CCP-PO-004 Section 4.8.1); procedures for NDA, headspace gas, training, and document preparation are all reviewed by the SRS Project Manager, and written comments "are addressed so that CCP operations will continue" (CCP-PO-004 Sections 4.13.1-3; SRS will provide calibration services to the CCP (CPP-PO-004 Section 4.11.2); and perhaps most telling, "CCP will do work either under CCP approved procedures or SRS approved work packages" (CCP-PO-004, Section 4.12.2).

Thus, the "program" established for the CCP-SRS involves accepting much interchangeability of

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SRS quality-affecting activities with those of the CCP. CCP-SRS intermingles two similar and complementary programs, rather than the single program defined in the regulatory oversight documents.

### **CCP-SRS Initial Waste Streams**

SRS is (independent of the CCP) currently certified to ship the approximately 480 job control debris waste drums from the FB-Line generated between January 21, 1990, and March 20, 1997. The CCP-SRS initial waste stream group is an approximately 6,000-drum from the same line generated between March 7, 1986, and January 25, 1990.<sup>2</sup> The difference between the two is that the SRS waste stream is considered unmixed wastes (free from RCRA hazardous constituents), while the earlier waste has been assigned F-listed hazardous waste numbers because of possible hazardous solvent contamination (apparently SRS began to distinguish between mixed and unmixed wastes in early 1990). The proposed CCP-SRS waste has also been divided into five separate waste streams, on the basis of the presence of different hazardous metals (none, lead, cadmium, cadmium and lead, and mercury), designated "A" through "E" respectively.

The CCP-SRS waste streams and processes generates questions that may not have been considered yet, and the answers may have bearing on the acceptability of the process to regulators. For example, the MOU only covers characterizing and shipping the amount of waste necessary to allow the Mound wastes to come to the SRS. Will the remaining drums in the waste streams certified for the CCP-SRS also be considered certified for shipment under the SRS program--that is, could waste characterization data be interchangeable between the two programs? Or would new AK reports and waste stream profile forms need to be produced if SRS took over characterization of these waste streams?

### **CCP-SRS Schedule and Deadline**

The MOU implies (but does not clearly state) that about 3200 drums will need to be shipped before May 31, 2002. This is an important, and fairly solid, deadline--the certification of the ATMX railcars for shipping the Pu-238 wastes from Mound expires on that date, and the certification was a special approval by the DOT which apparently would not be easy to extend. According to the MOU, the state of South Carolina requires that a two-for-one WIPP shipping to Mound waste received ratio be maintained throughout the project. Full shipments of 14 drums

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<sup>2</sup>Note the slight overlap of dates. These dates were taken from the respective AK Summary Documents. For the SRS Waste Stream, the document is WSRC-TR-98-00301, *Savannah River Site Waste Isolation Pilot Plant Disposal Program Acceptable Knowledge Summary Report for Waste Stream: SR-T001-221F-HET*, Revision 3, August 22, 2000 (p. 4); for the CCP, CCP-AK-SRS-1, *Central Characterization Project Acceptable Knowledge Summary Report For Savannah River Site Waste Streams: SR W027-221F-Het-A through Het-E*, Revision 0, February 28, 2001 (p. 1).

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per TRUPACT-II, three TRUPACT-IIs per shipment would just meet the deadline if two shipments per week were made starting October 1, 2001. This could strain TRUPACT-II use if proposed shipping schedules from the major generator/storage sites are also maintained.

These data would appear to be the impetus for achieving certification of the CCP-SRS process as soon as possible, and the initial scheduling of the certification audit in mid-July. The CCP processes are sufficiently unique that both the EPA and the NMED will likely take extra care--and time--in reviewing this initialization before certifying them.

BAW:ss

**CARLSBAD FIELD OFFICE (CBFO)  
SURVEILLANCE S-01-19**

**of the**

**CENTRAL CHARACTERIZATION  
PROJECT (CCP)**

**CHARACTERIZATION AND  
CERTIFICATION ACTIVITIES**

**POST-SURVEILLANCE  
CONFERENCE**

**JUNE 22, 2001**

# SCOPE

## QUALITY ASSURANCE ELEMENTS

- Organization
- QA Program Implementation
- Grading Program
- Personnel Qualification/Training
- Quality Improvement
- Documents and Records
- Work Processes
- Procurement
- Inspection and Testing
- Audits and Assessments
- Sample Control
- Software Quality Assurance

## SURVEILLANCE

# SCOPE

## TECHNICAL ELEMENTS

- Program Level Data V&V
- Generation Level Data V&V
- Acceptable Knowledge
- Nondestructive Assay (NDA)
- Visual Examination (VE)
- Real Time Radiography (RTR)
- Head Space Gas Sampling & Analysis (HSG)
- Sample Control
- Performance Demonstration Program (PDP)
- Waste Certification
- WIPP Waste Information System (WWIS)
- Container Management
- Waste Analysis Plan (WAP) Section B6

# **SURVEILLANCE RESULTS**

- **CONDITIONS ADVERSE TO QUALITY (CARs) Eighteen (A-R)**
- **CONCERNS CORRECTED DURING THE SURVEILLANCE (CDSs) - Eight**
- **OBSERVATIONS – Sixteen**
- **RECOMMENDATIONS – Eight**
- **EXEMPLARY PRACTICES – One**

# CONCLUSIONS

<u>PROCESS</u>	<u>ADEQUACY</u>	<u>IMPLEMENTED</u>	<u>EFFECTIVE</u>
AK Process	UNSAT	I	I
Project Level Data V&V	A	I	I
VE (N/A)	I	I	I
HSG Sampling/Analysis	UNSAT	I	I
RTR	UNSAT	I	I
NDA	UNSAT	I	I
PDP	I	I	I
Organization/QA Program	M	I	I

A= Adequate  
S= Satisfactory  
I= Indeterminate

E= Effective  
M= Marginal

# CONCLUSIONS

<u>PROCESS</u>	<u>ADEQUACY</u>	<u>IMPLEMENTED</u>	<u>EFFECTIVE</u>
SQA	A	S	E
WWIS	I	I	I
Doc. Control	A	S	E
Records	A	M	M
Procurement	A	S	E
NCRs/Corrective Action	A	S	E
Training	A	S	E
Audits/Assessments	A	S	E

A= Adequate  
S= Satisfactory  
I= Indeterminate

E= Effective  
M= Marginal