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State of Utah  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

007/035 #2

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July 13, 1994

TO: Daron Haddock, Permit Supervisor

FROM: Henry Sauer, Senior Reclamation Soils Specialist *HS*

RE: DRAFT REVIEW, Refuse and Slurry Acid-and/or-Toxic Forming Potential Sampling Plan, Sunnyside Cogeneration Associates, Refuse and Slurry, ACT/007/035, Working File, Carbon County, Utah

**SYNOPSIS**

The permittee has responded (received May 23, 1994) to the Divisions' initial review (March 7, 1994) of the refuse and slurry sampling plan proposal (Appendix 6-5, received March 1, 1994).

The editorial comments noted in this writers March 7, 1994 review have been adequately addressed. However, analytical procedures and methodologies must be discussed in greater detail (see ANALYSIS) prior to initiation of the refuse and slurry sampling plan.

The permittee's discussions and commitments surrounding monitoring well installation, while not optimal, may be accepted. Regulatory requirements for characterization of the seasonal variations in the quantity and quality of groundwater beneath the refuse and slurry remain. The permittee has the opportunity to collect the necessary information so that these regulatory requirements can be adequately addressed.

**ANALYSIS**

The permittee has responded to the Division's comments regarding instrumentation employed for the determination of metals.

**Response:**

*"Based on a conference call on May 17, 1994 between Henry Sauer of DOGM, Bruce Eloff of EWP Engineering, and Frank Polniak of ACZ Laboratories, Henry Sauer agreed that samples collected from the precipitate layer will be analyzed using ICP analysis*



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*with a saturated paste extraction, and furnace atomic adsorption analysis is not necessary."*

The permittee, account of the conversation is accurate however **portions of the agreements made during the conference call have been omitted.** These agreements included:

1) Prepare standard solutions of known metal concentration and matrix characteristics similar to sample. Determine recovery with and without matrix components. If necessary pretreat sample to decrease interference (i.e. matrix interference by chlorides and sulfates may be inhibited by pretreatment with silver chloride and barium nitrate, respectively).

2) Ensure calibration curve is linear over the concentration range of interest.

3) Correction may be applied for interference if the interfering element and the magnitude of the interferences are determined.

4) Split samples, duplicate analysis.

5) Split samples with DOGM.

The likelihood of encountering analytical difficulties must be anticipated. The permittee's continued insistence on 'taking care of this once and for all' is not reflective of the circumstances. Additional sampling, laboratory analysis and evaluation should be anticipated. Statements which leads one to believe that the biogeochemical processes will be completely appraised without further study within the refuse material, the associated subsurface and surface water and the impacted marsh below the Coarse Refuse Seep are short sighted and must be reassessed.

#### RECOMMENDATION

Analytical procedures and methodologies must be discussed in greater detail prior to initiation of the refuse and slurry sampling plan.

CC:J. Randel Harden  
Ken Wyatt  
Susan White