

October 5, 1992



Mr. Edward M. Lee, Jr.  
Technical Representative  
EG&G Rocky Flats, Inc.  
P. O. Box 464  
Building 080  
Golden, Colorado 80402-0464

Subject: Rocky Flats Plant Solar Evaporation Ponds Stabilization Project  
[WBS 431 PONDSLUDGE PROCESS TRAIN - DESIGN CRITERIA - HNUS ROCKY  
FLATS] ADDITIONAL INFORMATION ON WASH UP STATION  
RF-HED-92-0648

Dear Mr. Lee:

During the week of October 2, 1992 additional technical questions have been raised on the proposed wash up station. The attached memo summarizes conversations held between Messrs L. Collins and R. Rodrigue on the subject.

I need approval to start the installation of the containment of the wash station early this week. We have looked at a significant number of methodologies for washing the system and conclude that this method will minimize the number of halfcrates of non-spec material produced. This method could produce up to 400 less crates than earlier methods under consideration.

In the event that further questions arise, please advise.

Sincerely,

HALLIBURTON NUS ENVIRONMENTAL  
CORPORATION



Ted A. Bittner  
Project Manager

TAB/jg

Enclosures

cc: J. DePriest  
R. Rodrigue  
J. Zak

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RF-HED-92-0648

A-OU04-000416

ADMIN RECORD

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DOCUMENT CLASSIFICATION  
REVIEW WAIVER PER  
CLASSIFICATION OFFICE

To: Ted Bittner  
Ricky Rodrigue

From: Shannon Phelps

Date: October 5, 1992

Subj: RCM/GROUT LOOP CLEANUP

### DATA

|  |       |
|--|-------|
| Volume of RCM tub:                     | 40 cf |
| Volume of Grout Loop (3½ I.D. x 200'): | 13 cf |
| Usable volume of half crate:           | 38 cf |

### BACKGROUND

Wash-up will be typically required at the end of processing a batch of materials. A batch is the contents of either Batch Tanks 4/5 or 6/7. A normal batch is equivalent to approximately 32 half crates. Times between the processing of batches is planned to be approximately 3 hours. The wash-up material will be pumped into half crates at the wash-up station for removing the cemented solids from the system. During the planned maintenance/downtime period, the wash-up slurry will be allowed to gravity settle separating the water phase from the solids. The liquid phase will be decanted and pumped back to the holding batch tanks located adjacent to the wash station and processed in the subsequent batch.

### NORMAL WASH-UP

During normal wash-up, the RCM tub level will be almost empty (say 10 cf of product). The volume of solids would be 10 cf (tub) + 13 cf (grout loop), or 23 cf.

Approximately two RCM tub volumes, or 80 cf, of brine/process water will be required to clean up the RCM and grout loop. Thus the total volume needed for a normal wash-up is 23 cf (solids) plus 80 cf (liquid) or 2½ half crates. A large majority of the flushing water will come from the two batch holding tanks. The frequency of normal wash-up will be dependant on cement build-up in the RCM and the grout loop. This will be monitored by visual inspection of RCM and monitoring pressure in the grout loop. Process water will be used at the end of the cleanup cycle for final rinsate. Process water will be stored in the process water tank. Any waters used will be pumped to the wash station and returned to the batch tanks.

We will determine the correct time interval and intensity for wash-up during testing with the actual waste material.

It is anticipated that the initial material coming to the wash station will be spec material (high solids) which is a residue in the grout loop. It will be placed in half crates containing cemented solids from previous wash up cycles. Little water separation/decanting is expected for the first 1-2 half crates of wash-up material and thus we would expect to produce two half crates per wash-up that are available for transporting to a segregated area on the 750 Pad area within two hours of completing the wash cycle. Upon filling the half crate, the bladder will be secured and the outer body bag will be taped prior to transporting. Lids will be secured and banded after transporting the half crate unless EG&G desired to modify the lid closure operation.

### EMERGENCY WASH-UP

Emergency wash-ups may be required from time to time to address the following conditions:

- 1) Cemented slurry is deemed to be out of spec
- 2) Weather conditions/wind facilitating a planned shutdown
- 3) Security condition necessitating a shutdown
- 4) Mechanical failures/delays at the casting and conveying system of RCM mixer.

An emergency wash-up could require disposal of a full RCM tub volume (40 cf) and a full grout loop volume (13 cf) of product as a worst case, or 2 additional half crates of solids. The wash-up process water (2 RCM volumes, or 80 cf), plus a grout loop volume, plus any additional volume, would go directly to a batch tank if all half crates were full.

A normal wash-up (2½ half crates), if followed immediately by an emergency wash-up (2 half crates), would require that 4½ empty half crates be available before transferring materials directly back to the batch tanks. The current wash station contains an area for six half crates.

September 16, 1992

TO: Ted Bittner  
FROM: Brian Sheets  
SUBJ: Option 2 RCM Wash System

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The purpose of this system is to facilitate a simpler operation for RCM wash-up. See attached sketch.

Proposed System

1. Build a 8' x 44' secondary containment with 6" high side walls just north of batch tank containment.
2. Place 6 half crates in line on west side of secondary containment.
3. Build 2" discharge manifold to fill each bladder in half crates individually.
4. Build 2" vent manifold to vent each bladder in half crates to passive HEPA filter individually.
5. Pump RCM wash water to half crates until clean, then divert final rinse to batch tank system.
6. As half crates become full, allow solids to settle and decant free liquid to batch tanks system as needed.
7. Remove full half crates with fork lift as needed.

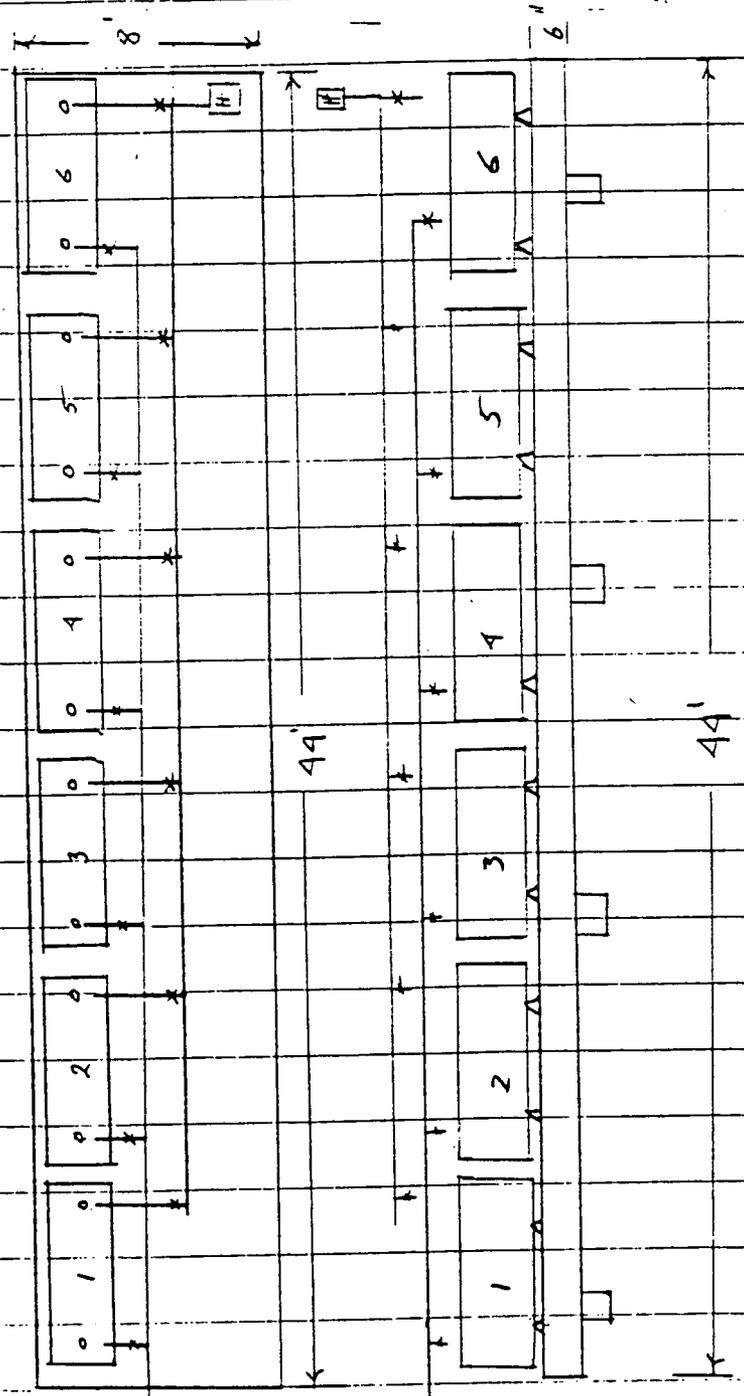


Brian Sheets

cc: Ricky Rodrigue

waste crate containment 750 AAD N<sup>th</sup> of Butch tanks 4, 5, 6, 7

From wash  
8F-340



2' x 4' x 7' = half crate

9/15/92

Bin H. [Signature]