

James Noggle

From: Sandike, Steven Richard [SSandik@entergy.com]
Sent: Wednesday, September 17, 2008 4:30 PM
To: James Noggle
Subject: Info on U1 pool draining
Attachments: pool-inst.pdf; OIR-2008-004.pdf

Jim....

I have attached a steplist we are using with chemtechs to ensure adequate sampling at the compositors.... And a drawing to give you the big picture. The effluent line taps into the normal Distillate Tank (liquid waste) effluent line for compliance with SPDES. We have a floor supervisor from U1 projects stationed near the skid 24x7. He makes rounds once every 30 minutes. A chemtech collects samples from the second compositor once per 8 hours. We have separate routines for collection of PCB samples. If needed, we have a tap off the line near the final totalizer to divert the entire stream to liquid waste processing.

The large Mixed Bed has 25 cubic feet of media, and the 4 beds that follow (GAC, CAT, MB, and another GAC) are all 12.5 cubic feet.

We are limiting flow to 40 gpm or lower. We have two flowmeters on the stream, and a final calibrated totalizer on the outlet for quantification of total gallons released.

The system has been in recirc for months on the 24x7 mixed bed, and for about 5 days (with a few interruptions) through the other four beds as well. No PCBs were detected on the effluent of the skid while on recirc, and we're seeing about $1E-6$ Cs-137 and some Kr-85. No other gammas. The last Sr-90 and Ni-63 analyses on the pool were about $2E-6$ uCi/ml, but this value is expected to be lower on the new completed skid effluent. I ran some calcs on the total effluent impact of this release and project it to be roughly equivalent to 4 distillate tank releases. (Fewer gamma's but conservatively including higher Sr/Ni). H-3 is consistently around $1E-4$ uCi/ml. This info and standard ODCM release criteria were applied in the attache ODCM Impact Review for the temp mod. (we attached this as part of the 50.59 process).
1000 p/c
100,000 p/c
2000 p/c

We initiated draindown at 13:30 on Tuesday afternoon. We are writing permits in the unit 2 control room, updated every 24 hours from Chemistry data.

We expect the duration to be about 11-12 days, or less, depending on what we see for a d/p on the mixed bed inlet filter. We will stop at 3 feet in the pool.

At some point after that, Don will initiate the sludge cleanup phase, but this will NOT go out through this pathway! I believe Don and Chris are planning special collection processing for the sludge via a vendor and truck....

Don Mayer, Chris English, Mike Donegan, Dara Gray and myself, along with a host of others, are watching this evolution very carefully.

We'll certainly keep you posted if anything changes. One of us should be around if you'd like to call.

<<pool-inst.pdf>> <<OIR-2008-004.pdf>>

Steve Sandike

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CHEMISTRY WORK STEP LIST
Sampling Requirements for Unit 1 Fuel Pool Draining
RP WORK STEP LIST # CH-W.L.-CH-30

TITLES NECESSARY FOR APPROVAL: Chemistry Supervisor

PRECAUTIONS/LIMITATIONS: Standard safety practices SHALL be observed at ALL times.

REFERENCES: GLS Sampler Instruction Manual

EQUIPMENT: GLS Samplers 1 liter PCB Sample bottles 500 cc poly bottles

INSTRUCTIONS:

1. Initial Conditions

- Purification system in service on recirc for 48 hours prior to start of release
- Sample compositors setup at the outlet of each carbon bed
- Composite samples set up to start sample collection with the following frequency:

Compositor 1 (Outlet of first charcoal (GAC) bed)

- Sample size 500 cc
- Sampling frequency is approx every 360 minutes

Compositor 2 (Outlet of 24x7 skid, after second GAC bed)

- Sample size 500 cc
- Sampling frequency is approximately every 30 minutes

2. The system will be operated in recirc for at least 48 hours prior to draining. During that recirc period, obtain a sample from Compositor 1 & 2 by manually activating the sampler until sufficient sample has been obtained.
3. During the recirc, obtain a samples for PCB, and separately, another sample for gamma spec and boron, from both compositors. Then dump any remaining sample in the compositor bottles back into the pool. The release will start after Ops clears the tagout.
4. After the release has started, sample the stream as follows:
 - Compositor 1: Every 3 days for PCB, gamma spec activity, and H-3.
 - Compositor 2: Every 8 hours for gamma spec activity (with ADC at least daily),
Daily for PCB sample (plus a duplicate). Daily for Boron.
Record flow totalizer reading.
 - After collecting a sample from the compositors, dump the remaining water back into pool.
Use the Waste Distillate counting sequence for gamma spectroscopy analysis.
5. After counting, acidify compositor 2 samples with 5 mls of nitric acid, label and save.
6. Weekly a composite will be made from the saved acidified samples for SPDES boron and off-site beta analyses (Sr-90/Ni-63).
7. Enter results of compositor 2 (Activity, ADC, and Boron) in WinCDMS spent fuel pool-west demin out, and also log in CCR. This information will be needed by Operations for the release permit.

APPROVALS:

Chemistry Supervisor: _____
Name / Date

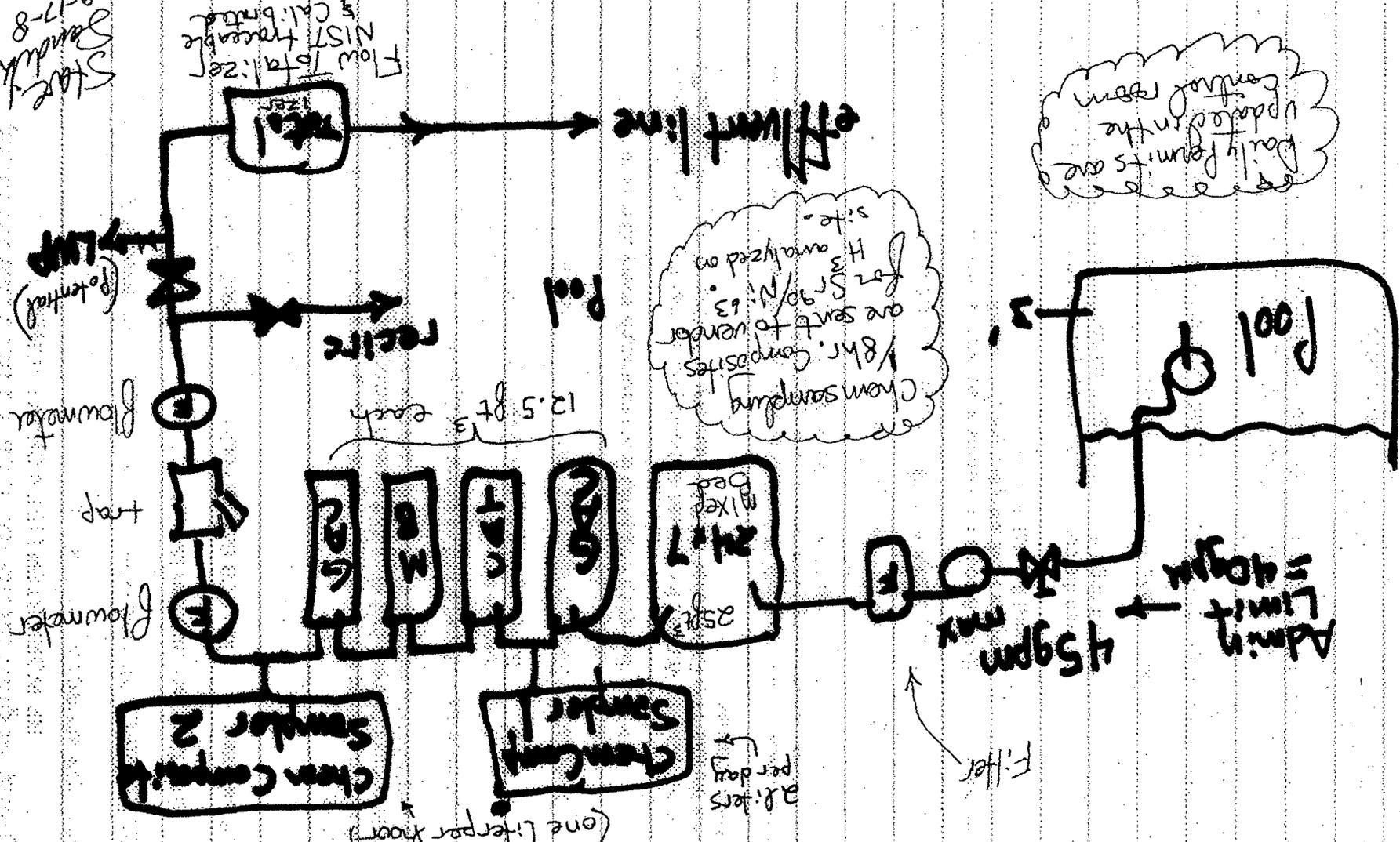
Terminated: _____
Name / Date

UI pool drain @ 1PC

GAC = granular activated charcoal
 CAT = cation resin

(assurance of) charcoal (Pb removed)
 MB = mixed bed resin

Samples are emptied every 8 hrs



daily permits are updated in the control room

Chem sampling 1/8 hr. Composites are sent to vendor for Sr90/Ni63. H3 analyzed on site.

Flow Totalizer NIST traceable & Calibrated 9-17-8

Start Standby 9-17-8