

2 pgs

August 27, 1964

Comments on the Letter from J. A. Lindberg to Harold L. Price -
August 18, 1964

Uranium Accountability

1. I agree that a complete physical inventory of the uranium in the plant should precede any start-up of the plant. The inference is that process equipment must be inventoried, but I also believe that every container in the plant should be resampled and reanalyzed for uranium content. Before start-up, I would also suggest that new labels, containing the new analysis be affixed to the containers. The fact that Peabody believed that there was some mislabeling, should be thoroughly checked before the plant starts to operate.

An inventory of the plant was taken the last week of June 1964, and the new inventory should not show a greater difference from receipts, than the 800 to 1000 g discrepancy noted on that inventory. If a greater loss is found, special flushes of equipment such as the 1-D-5 organic tank should be considered. Some losses to the tile removed, can be estimated but it is hard to imagine that any really large losses should have occurred.

2. "All uranium bearing materials" should refer to all of the building storage, other than stored, and not processed pickle liquor drums, that are stored on the asphalt pavement directly north of the plant.
3.
 - a. Shouldn't this also include dry UO_2 ?
 - c. At some place in the inventory, the waste tanks, the slop tanks and the filtrate and condensate tanks should be included. Is the assay tank a part of this system?
 - d. The 1-D-5 tank (organic from the 1-C-9 tank) should also be included.
 - e. The material in the hoods, the stainless steel dissolver, the incinerator, the reactor, and any drums of waste to be incinerated, should also be considered.
4. The title should say "Dry ADU or UO_2 ".
 - a. It should be stated "Remove one 4 liter bottle" etc.
 - b. A new tag should be prepared at this time.
 - c. Same as (a.) use, "one" 4 liter etc.
 - d. Same as (a.) use, "one" 4 liter etc.

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5. a.1. The area should be specifically designated, such as the area on the south side of the stainless steel dissolvers, and near the "safe way corridor".
4. "Obtain" is a better word than "select".
6. A new tag should be prepared at this time.
- b.3. A new tag should be prepared at this time.
6. a.3. The 4 liter bottle should be maintained in a plane above the 11 liter bottle when the bottle is within two feet of the 11 liter bottle, to avoid interaction problems with concentrated uranium solutions.
6. A new tag should be prepared at this time.
8. An acid flush should be used to wash uranium out of the precipitator.
11. The acid flush of the precipitator should be returned to the storage tank as the last operation. This should leave a relatively clean (uranium free) precipitator tank.
13. Each precipitator should also receive an acid wash prior to the last transfer back to the storage tank.
7. Same comments as those for item 6.
8. a.1 If the tank is not full, acid, and probably $\text{Al}(\text{NO}_3)_3$, should be agitated in the tank for several hours prior to the sampling.
- b.1. A recirculation period should precede the sampling.

W. G. Browne, Inspection Specialist (Criticality)
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