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PNL-1-92

December 13, 1950

Classification Cancelled (Change to)

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TO: R. C. Grant

FROM: W. N. Mobley

SUBJECT: Processing of Special Low-Level Material—T Plant Only

In order to process 55 MWD per ton metal, process equipment in the Canyon, Concentration and Isolation Buildings should be cleaned to remove all traces of 400 MWD material. Heels from both dissolvers will be removed. This metal solution can be used as normal run make-up material. When all normal size runs possible have been made up from the heel metal solution, the remainder can be stored in the 6-4 tank to be blended when regular material is processed again. Two normal acid washes should be processed just preceding the 55 MWD per ton material. Both acid washes then can be started in the 6-3 tank. The first acid wash is scheduled to start through Section 7 and the second acid wash will start through Section 8. Dissolver 3-5R will be charged first with 55 MWD per ton metal. The coats may be removed on December 21; however the dissolving can not be started until December 23.

The initial charge of 55 MWD per ton metal to each dissolver should be 4.4 tons. Only 3.3 tons will be removed from each dissolver in order to establish the desired one ton metal heel. Successive dissolver operation will be as usual.

Each make-up in the 6-3 tank should contain 1.65 tons of metal. This make-up will be identified as a batch through extraction and will be given a batch number. This batch size should constitute 100 per cent volume runs in extraction and therefore cannot be exceeded. When there is one extraction batch holding in 12-7 or 12-8, one-half an extraction batch in 7-4 or 8-4 should be jetted to 12-7 or 12-8. This will make up 1.5 batches in 12-7 or 12-8. This will be a 100 per cent volume run and will be assigned a run number for further processing.

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SPECIAL RE-REVIEW

FINAL DETERMINATION

DECLASSIFICATION CONFIRMED

BY *JP Barker* DATE *5-7-81*

BY *DE Gidman* DATE *5-7-81*

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The one-half extraction batch remaining in 7-4 or 8-4 will wait for the next extraction batch to enter 7-4 or 8-4. This will result in 1.5 extraction batches in 7-4 or 8-4. This can be transferred to 12-7 or 12-8 and assigned a run number for further processing. The next extraction batch to enter 8-4 or 7-4 can be transferred to 12-7 or 12-8 and the cycle will be repeating itself. It is estimated that runs can be shipped from the Canyon and Concentration Buildings on a schedule of approximately 12 hours.

Batch size will be calculated from the total count of the 6-3 NR sample. A batch size will be assigned to each run after they are made up in the oxidation tank.

It may be possible to dissolve the extraction cake in less than the standard amount of acid. This would allow combining two batches from the extraction to make 1 run. This procedure will be tested on the first batches and run to be processed. The Plant Assistance Group has suggested that the second run should not be made up from combined batches until the First Cycle by-product precipitation loss of the first run is known. This procedure will allow runs to be shipped on a schedule of approximately 16 hours. A chemical saving and waste storage cost saving of approximately one-third in the decontamination cycles and Concentration Building would be realized by using this procedure.

This process procedure has been prepared in concurrence with the Plant Assistance Group.

It is important that process equipment be kept free of any other MWD metal until it has been established that 1.8 kilograms of product can be shipped from the 231 Building. A commitment has been made with the AEC that the required amount of low-level product will leave the 231 Building prior to February 5, 1951.

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END

DATE
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4/10/92