HW-11112

Cover Sheet for a Hanford Historical Document Released for Public Availability

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Pacific Northwest Laboratory
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HW 11112

RED LABEL

#1, 2 & 3 DD [illegible]
4 CL [illegible]
5 JB [illegible] - [illegible]
6 700 File
7 300 File
8 Pink
9 Yellow

7 [illegible]

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MAY 22 1956
300 AREA
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September [illegible], 1948

COPY 1 OF 1, SERIES MA

THIS DOCUMENT CONSISTS OF 3 PAGES NO. [illegible] OF [illegible]

D. D. [illegible]
Design Engineering Division

ADDITIONAL DESIGN WORK FOR 234-5 PROJECT

After completion of the initial specification of process and equipment requirements for the 234-5 Project by the Technical Division, it was necessary from time to time to ask for additional or substitute facilities and equipment. In most of these cases it was found that completion of the newly specified item could not be expected in time for plant start-up so that installation could be finished as soon after start-up as possible.

During the past two weeks you have collected these items into a group for the purpose of determining the magnitude of the design job and the probable cost, with the expectation of writing a project proposal (or Part IV of Project C-190) requesting funds if the cost could not be included in Part III of C-190 or if the scope of the work was otherwise altered. Several meetings have been attended by yourself, J. B. [illegible], R. E. [illegible], C. L. [illegible], E. A. [illegible] and the writer in an attempt to plan this work.

At the last of these meetings, September 23, 1948, an agreement was reached that three of the nine previously requested items should be completed as soon as possible, three should be deferred indefinitely, and three should be cancelled in entirety. The table below lists these items, the date and document in which the item was requested, and the decision which was made in the September 23 meeting. The table also lists an additional item which was requested at the meeting.

Classification Cancelled And Changed To
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By Authority of CH Henagir,
CG-PR-2 1-8-92
By DK Hanson 2-12-92
Verified By DA Buck 2-21-92

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ITEM	[illegible]	[illegible]	[illegible]
1. Transfer container (for AT solution)	7/25/48	HW-10681	Cancelled
2. Loading system in 231 Bldg.	"	"	"
3. Evaporator in 234 Bldg. (for AT solution)	"	"	"
4. Pu-lined recovery evaporators	5/12/48	HW-9176	Postponed
5. Crucible Slag development equipment	6/14/48 7/16/48	HW-9704 HW-10254	"
6. Decontamination Fluid Storage Tanks	5/12/48	HW-9579	"
7. Gas manifold for purification hood	7/15/48	HW-10681	Required
8. Maintenance hoods	7/1/48	E.A. [illegible] to F.E. Collins Verbal	"
9. Gloveboxes for dry chemistry hood	9/1/48		"
10. Sample can bagging facilities	9/15/48	"	"

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In support of the disposition of the first three items in the list are the following:

(1) The proposed change, elimination of the sample-can and substitution of the two present 231 Building evaporations (in still and in sample can) into one evaporation in the 234 Building, is an improvement but not a required change. Had it been proposed prior to January of 1944, the incorporation into the rubber glove and remote lines would have been logical and desirable. To make this change at the present time, however, would waste the time and effort already expended in design of sample can handling facilities in these two lines. The estimated expenditure ($100,000) is not deemed justifiable at the present time.

(2) Great advantages of process simplification and improvement and (possibly) savings have been frequently mentioned as possible if the evaporation is eliminated completely. This requires process changes for which information is not now available. Studies at Los Alamos and at Hanford may later show that sample can evaporation may be eliminated in favor of (a) dilution or partial neutralization before oxalate precipitation or (b) destruction of nitric acid by such materials as formic acid. These studies may even show that both the still and sample can evaporations may be eliminated by dissolving the second peroxide cake in P-6 tank of the 231 Building in (c) low concentrations of nitric acid (possibly with platinum catalysts of peroxide decomposition) or (d) ammonium oxalate solution. There is also the possibility that (e) the second peroxide cake can be transferred directly to the 234 Building for hydrofluorination. Thus, if the equipment change were made today, it might be necessary some months later to design and install a third set of equipment for a major process change.

The basis for the postponement of items 4, 5 and 6 in the above list is primarily one of economy. It is felt reasonable to wait until operations have proceeded long enough to establish the needs for these replacements or additions more definitely. Requests for the necessary funds can then be made if required.

The remaining four items of the list have been considered of merit and have been indicated as necessary at plant start-up or soon thereafter. It is requested that these tasks be completed as soon as possible, even if they are considered outside the scope of project C-198 and it is necessary to write a Part II of this project to obtain further funds.

JBWork

J. B. Work
Contract Engineer

BW/mg