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Production

Routine assaying was performed as required to meet production schedules. This work was somewhat lighter than usual due to readjustments in the April shipping schedule.

Three calorimeters (two recently recalibrated) are now available for production assaying. Some irregularities have been observed in the performance of the Wenner potentiometer. These have been observed by Mr. W. A. Maccan, Field Engineer for Leeds and Northrup Co. J.P. Michelberger has made arrangements for return of the potentiometer to Leeds and Northrup for repair and recalibration as soon as one of the potentiometers ordered for Unit 5 has been received. Until a replacement is available operations will continue with the present potentiometer.

Two neutron counters are now available for production work at Unit 4. The initial difficulties encountered on the new neutron counter have been largely overcome; runs for coincidence correction and preliminary sample runs have been made. Results are comparable to those obtained on the old neutron counter.

Unit 5

Equipment constructed at the Unit 4 Carpenter Shop has been moved to Unit 5. The Calorimetry Research group is planning to investigate the possibility of using a different type of suspension for the high sensitivity galvanometers which will not involve wall or ceiling mounting. Mounting of the type of suspensions now in use is somewhat complicated by the calorimeter room shielding.

Future Plans

Routine assaying and plans for Unit 5 will continue.

M.N. WOLFE

MICRO ASSAY GROUP


Production

Routine determinations paralleled Process's delivery of samples.
A check on the geometry of the Unit 4 Logac-L agreed
with the calibration within 1 per cent.

Development

Time was spent by several members of the group on the
new type balance in C-2. A method has been devised for calibrating
this balance using platinum micro foils. However it has been impossible
to attain any accurate weight for the micro foils to be used.

Research

Studies of time effect on purity continue.

Studies on the effect of the angle of rotation on counts
is being carried on. Several solutions of 1.5 N sodium hydroxide were
received from "Y" group and purity determinations made at various plating
times. All purities were exceedingly low from such solutions.

Units 5 & 6

The balance piers have been poured at 5 and will soon be
set in place. Schematic service diagrams have been turned over to the
Design Group for detailed workup.

Future Plans

Miss Geiger will be asked to make a statistical analysis
of our recent purity determinations (time study determination will be
included in the data submitted).

P. J. Lowry

INVENTORY GROUP

J. Eamons, J. Farley, H. Gillette, S. Ginsburg, L. Hackenberg,
A. Hauenstein, H. Honious, F. Huls, K. McNaughton, P. Morrow, F. Tilbury,
E. Waldfoogle.

Production

The Group continued to make all alpha and DM slides during
the period. Some difficulties were experienced during the period April
8th and 9th in that it was impossible to check solution counts on either
the gamma or Logac counters. Standards in use by these counters did not
show comparable inconsistencies, but discrepancies of 20 per cent to
60 per cent existed between gamma and DM counts. No explanation is
offered for the phenomena, as the trouble was confined to the two days
mentioned.

The Monthly Production Report for the Atomic Energy
Commission was issued April 2nd. The Monthly Inventory Report was
ready for typing on April 2nd and was delivered to the Atomic Energy
Following receipt of a memorandum from E. C. Cunningham, all cold X-Natal, platinum, and gold scrap on hand was shipped to Oak Ridge according to instructions contained in the memorandum.

The suggestion has been made to Los Alamos that tantalum cans be substituted for the platinum cans now in use as shipping containers. This would drastically reduce the consumption of 0.010" platinum foil by the project and likewise reduce the size of the minimum inventory maintained. No decision was reached on this matter by April 25th, and at that time it was necessary to order 0.010" platinum foil to maintain the inventory of this material at the required level.

A memo was written to E. A. Walker on April 26th pointing out discrepancies in the inventory reports on soda pulp issued from Site W.

Development

Final design details have been worked out for all hoods in the elephants at Unit 5. All drawings have been completed and orders have been placed with the various shops for the necessary fittings.

A decision was reached to use a "Popsy" counter for checking the level of contamination on gauges and guns after leaching in the clean-up elephant at Unit 5. J. Bradley will arrange to have such a counter available for installation.

The safe barrier has been installed in the laboratory at Unit 5. This work was completed on April 8th and a negligible amount of work has been done in the area since that date.

Furniture layout, piping and wiring diagrams have been completed for Unit 6.

Discussions were held with various group leaders and section heads relative to a numbering system for active material at Unit 5. A tentative system has been developed and will be offered for approval at a meeting scheduled for early May with the heads of the concerned sections and groups.

On March 29th, a meeting was held in which the decision was reached that the Inventory Group would design and build an active solution carrier to provide positive insurance against spillage. Such a carrier was delivered to G. S. Baker on April 12th and he is to expedite construction of fifty more for use in making transfers between Unit 3 and Unit 4.

Research

An attempt was made to prepare some covered slides for use as standards by the counting room. The covering material used was
a rubber compound obtained from Oak Ridge, and is cemented directly to the slide. The technique employed to effect the covering seems to be satisfactory, but an unfortunate choice was made in selecting the active solution to be used for the mounts. The solution selected contained dissolved platinum and the absorption curve characteristics of the slides were not satisfactory. The work will be retested with minor modifications in technique and using a purer solution for the mounts.

**Future Plans**

Write up transfer procedures for guidance of various groups at Unit 5.

Develop numbering system for samples entering laboratory at Unit 5.

Write transfer procedure for X-Metal at Unit 5.

Write laboratory manual for use of operators in laboratory at Unit 5.

Continue work on covered standards for use of the counting rooms.

E. A. Waldfoogle

**CONTROL SECTION ADMINISTRATION**

**Production**

An additional neutron counter has been installed in the Assay Laboratory and is now ready for production counting.

In a discussion with Mr. Pittenger it was decided to re-transfer the micro foil punching operation to the Machine Shop temporarily, the gauged platinum to be supplied by the Micro Assay Group.

Mary Kaffenberger has been transferred to the Production Counting Group from Unit III.

**Development**

Initial discussions have been held concerning a modified sleeve arrangement for use in the Logan-L chamber to reduce contamination effects, and tentative design plans studied.

Initial experimentation has been undertaken in the development of techniques for preparing covered slides to be used as standards.

Some experiments have been run on the determination of the purity of sodium hydroxide solutions by the Micro Assay method. No definite conclusions can be reached at present. The work will continue.
Research (Two Men)

Work on improvements in the techniques of Micro Assay purity method is continuing. Studies are also being carried out on the effect of time between determinations on the observed Micro Assay purity of several "standard" solutions.

Unit 5

Control Section equipment is being moved into temporary storage rooms in the T-Building.

Room 303, the "cold" stockroom, has been stocked and turned over to L. Byriel.

Some time was spent on further organization, and in expediting the construction of some of the necessary special equipment.

Room layouts, piping and wiring diagrams, etc., for Unit 5 Control Section rooms and hoods have been discussed and submitted to the Design Group.

E. A. Rembold