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HW 17971-Del

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1 - H. A. Winne
2 - C. G. Suits, Schenectady
3 - G. R. Prout
4 - C. N. Gross
5 - A. B. Greninger
6 - W. E. Johnson
7 - Hanford Operations Office
Attention: D. F. Shaw
8 - Hanford Operations Office
Attention: D. F. Shaw
9 - Hanford Operations Office
Attention: D. F. Shaw
#10 - Hanford Operations Office
Attention: D. F. Shaw
#11 - Hanford Operations Office
Attention: D. F. Shaw
#12 - Hanford Operations Office
Attention: R. W. Richardson, Historian
#13 - 700 File
#14 - 700 File
#15 - 700 File

REPOSITORY PNL
COLLECTION Atmospheric Releases
BOX No. N/A
FOLDER N/A

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CLASSIFICATION REVIEW FOR DECLASSIFICATION BUT LEFT UNCHANGED
By [redacted]
Date [redacted]
U. S. AEC Division of Classification

June 20, 1950

HANFORD WORKS

MONTHLY REPORT

MAY 1950

Classification Cancelled (Change to
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By Authority of RLO-C-4
W H Hyder 2/21/92
By D J Krushas 2/21/92
PM Eck 2-21-92

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HW 17971-Del
June 20, 1950

TABLE OF CONTENTS

General Summary 3

Staff 14

Force Report 15

Personnel Distribution 16

Manufacturing Divisions 24
Plant Statistics 26
Production Divisions
P Division 30
S Division 41
Power Division 58

Mechanical Divisions
Instrument Division 64
Maintenance Division 68
Electrical Division 71
Transportation Division 76

Project Engineering Divisions 81

Technical Divisions 95
Pile Technology Division 98
Separations Technology Division 110
Technical Services Division 127

Medical Division 142

Health Instrument Division 153

General Accounting Division 178

Plant Security and Services Divisions 204

Purchasing and Stores Divisions 231

Employee and Community Relations Division 248

Community Divisions 278
Public Works 279
Commercial Facilities 295
Community Housing 293
Community Safety 303
Community Fire 304
Community Patrol 307
Community Activities 320
Community Accounting 327

Design and Construction Divisions 331

Project and Related Personnel 366

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GENERAL SUMMARY

MAY, 1950

MANUFACTURING DIVISIONS

Production Division:

A total of 56 tons of metal was discharged at the goal concentration. The pile operating efficiency was 93.2 percent. The operating levels at month end were 290 MW at B Pile, 305 MW at D and F Piles, and 400 MW at H Pile. The nominal CO_2 concentration in the pile circulating gas at month end was 97 percent, 96 percent, 80 percent, and 91 percent at B, D, F, and H Piles, respectively.

A total of 72 tons of acceptable slugs was canned at a yield of 94.9 percent.

The machining yield again attained a new high at 79.2 percent. The Melt Plant produced 18 tons of billets at a new record yield of 80.2 percent.

A total of 75 batches was started in the Canyon Buildings, 72 were processed through the Concentration Buildings and 68 were completed through the Isolation Building. The average purity of completed batches was 98.4 percent.

Mechanical Divisions

Precautionary flood control work of the following nature has been performed: Installed emergency pumps, checked and are holding 42 vehicles in standby, provided emergency power supply at 1906-H lift station, removed or protected line crew effects from Richland Labor Yard.

The first locomotive operated over the new Northern Pacific-Union Pacific connection on May 23, carrying an inspection party of General Electric officials.

The electrical peak load of 74,200 KW, compared to April's figure of 75,850, is substantially higher than anticipated because of lower than normal temperatures.

The testing of operating equipment at Grand Coulee without necessitating interruption of Hanford Works production was completed, saving expense and loss of production by the elimination of six shutdowns.

TECHNICAL DIVISIONS

Pile Technology Division

Initial results from the experimental program at the DR Pile indicated that P-10 feed slugs should be about 4¼ inches long, and manufacture of feed slugs to this specification was resumed. Meanwhile the first four tubes of the H-10 program were loaded experimentally, using 4-inch feed

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slugs which were on hand. Forty solution-heat-treated feed slugs have been prepared for testing in the pile.

The quality of P-10 fuel slugs received during May from Y-12 was markedly improved. Reactivity loss during canning was minimized by reduction in temperature of the canning bath. Fuel slugs irradiated for two months increased in length by 0.3% and increased in diameter by 0.1 - 0.4%, but were unchanged in warp.

Three critical mass determinations were made in a ten-inch diameter cylinder, using varying concentrations of plutonium. The results suggest that a substantial upward revision of batch size in chemical separations and thus a sizeable reduction in operating costs may be possible.

The P-10-B "Cold" Laboratory in Building 108-B is ready for partial use for making gas analyses on unirradiated slugs.

Vertical bowing measurements of the top central tubes at the B and D Piles indicate that graphite expansion near the front face of the piles has been reduced significantly by the use of 100 percent carbon dioxide in the pile atmosphere.

Off-site rolling of uranium from three inch diameter rod to standard size rod was successfully accomplished at 400°C.

Separations Technology Division

The product contained in two plutonium "cows", returned to the Hanford Works by the Argonne National Laboratory, has been recovered by blending into Isolation Building production, but a companion shipment of neptunium raffinates is being held back from Canyon Building blending because of the presence of excessive amounts of hexone. Production testing of increased final product solution volume transfer to Building 234 from Building 231 is still in progress. A new Model 090 die for plutonium fabrication has been made and calibrated but the male punch broke during its first "cold" testing. Plutonium metal coating procedure changes during the month have succeeded in essentially eliminating previous recent difficulties with so-called "hot spots" of contamination at tripod rest points on the pieces.

In Redox and Metal Waste Recovery development, 69 additional solvent extraction runs were made during the month, all on TBP process studies. These runs have extended previous column data up to 16-in. packed columns and 8-in. pulse columns. The 16-in. packed column is being readied for conversion to a pulse column during the month of June. Five different Redox "hot" pump assemblies are continuing satisfactorily in test under closely simulated plant conditions. Flow measurement and control studies have been initiated on the final prototype models of Fischer & Porter and Schutte & Koerting rotameters. Continued chloride corrosion studies with TBP process RAW wastes and RAF feed have shown that the former may be extremely difficult to handle in the production plant.

General Summary

In the research laboratory, experiments with dissolver solution have proved that ruthenium decontamination in the acid-deficient Redox flow sheet is increased 200-fold by ozonization and 125-fold in the acid flow sheet. Additional data have been obtained on evaporation of and nitric acid recovery from TBP process wastes. New data have also been obtained on the mechanism and operation of the pulse column. Laboratory studies with Bismuth Phosphate plant 5-6W and second cycle wastes have shown no harmful effects to be obtained on blending these wastes as planned for scavenger co-precipitation waste treatment. Redox-234 coupling studies and plutonium coating by the "Electroless" plating method have been continued. The "25" Midget process step of uranium-aluminum separation by selective dissolution of aluminum has been completed in laboratory study.

In the 234-5 process development laboratory, satisfactory precipitation of low-sulfate plutonium peroxide, as a substitute for oxalate purification, has been obtained, together with subsequent hydrofluorination and reduction. Principal remaining problems constitute development of mechanisms for plutonium peroxide transfer to hydrofluorination and the desirable increase of bulk density of the fluoride.

Additional experimental studies of the possible reasons for the apparent drop in sand filter particle removal efficiency at T Plant during the past winter have confirmed the belief that the true efficiency had not decreased but was indicated to be lower because of the unusually high moisture content of the exhaust air saturating the monitoring filters and causing high pick-up of iodine. Life-tests of Fiberglas filter assemblies have indicated that a Fiberglas filter, which will be considerably smaller and longer-lived than the present sand filters, can probably be designed without sacrifice of efficiency or increase in pressure drop.

Technical Services Division

All but one of the Analytical Section personnel assigned to the Rala laboratory design program were reassigned following the formal termination of Rala work on May 2. Plans were made for the preparation of complete terminal reports covering methods research and development and laboratory design phases.

Installation of the machine tools, transferred from Building 3706 to Building 101, was completed, effecting the consolidation of these shops in the 101 Building. A small one-man machine shop was retained in Building 3706.

Continued progress was made on designs for the Hanford Works Laboratory Area. Design project proposals for the Radiochemistry Building and the Radiometallurgy Building have been approved by the A. E. C. A rough draft of the related design project proposal covering the Plot Plan and Utilities for the new area was reviewed with D & C. The inclusion of the Mechanical Development laboratory as a part of this design project proposal was not considered advisable and a separate proposal is in preparation.

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General Summary

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HEALTH INSTRUMENT DIVISIONS

The force increased by seven. Two informal Special Hazards Incidents were investigated.

With minor exceptions, surveys by the Operational Division showed no deviation from acceptable hazard control standards. Efforts to reduce significant personnel exposures arising from the P-10 process continued.

Control phases of the Biology and Development Divisions showed the normal pattern of activity.

Preliminary arrangements were made by Development Division members to provide assistance in background measurements at Arco, Idaho.

Active particles in lungs of experimental animals were observed to persist in situ for at least eight days, indicating the hazard is not lessened by rapid physiological removal.

PLANT SECURITY AND SERVICES DIVISIONS

There were no major injuries during May leaving the number for the year to date at two. The Major Injury Frequency Rate for the year to date is 0.32.

There was one minor fire caused by a spark from a welder's torch resulting in a $20 loss.

Pickup and delivery schedules were revised this month for the 200-West Laundry which reduced delivery service to the Process Buildings from a two-shift schedule to a one-shift schedule. Accordingly, the number of personnel was reduced by two employees.

Office furniture stocks have now been moved from the Pasco warehouse to Warehouse No. 63 in North Richland.

The formation of the Office Methods Division as a separate division of Office Services was accomplished this month. All previous work of this nature had been carried out under the Records Control Division up to the establishment of the new group. One Methods Engineer and one forms designer were added to the staff of the new division.

A new identification numbering system for forms has been put into effect. This revised system is designed to indicate the function of the form, method of reproduction and location of supply. The system being replaced was established in accordance with the divisions that existed in 1946. Organization changes that have since occurred have caused the old system to become obsolete.

Beginning May 10, a new Security Patrol manual was issued to each member of the Security Patrol Division covering regulations and general instructions for the use and guidance of each member of the Division.

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Procedure Memorandum No. 26, Revision No. 3, was issued on May 17 to govern lost or forgotten photo identification passes. All future replacement passes will contain a large red letter "R" on the face of the pass, and all area badges will be marked in the same manner. Comparison will be made between the badge and pass to remove the possibility of unauthorized personnel utilizing the original pass.

Effective May 31, the 108-B Area was designated as a separate exclusion area from the 105-B Area. Approval to enter this area must be obtained from the Pile Technology Division.

EMPLOYEE AND COMMUNITY RELATIONS DIVISIONS

The number of applicants interviewed decreased from 1,888 during April to 1,643 during May. Four hundred twenty-nine of these applicants were individuals who applied for employment with the General Electric Company for the first time. In addition, 124 new applications were received through the mail. Open non-exempt, non-technical requisitions increased from 241 at the beginning of the month to 248 at the end of May. Total plant personnel increased from 7,646 to 7,679. Turnover rate increased during May from 0.89% to 1.25%. The majority of this increase is attributed directly to the removal of 10 dentists and 16 doctors to go into private practice, plus voluntary terminations of some supporting personnel to continue their employment with the doctors. At the end of May there were 93 nonbargaining unit employees in lack of work status and 160 bargaining unit employees. Forty-three new requests for transfers to other types of work were received from employees during the month. As a result of these requests, 31 transfers were effected. The Olympic Junior College, Bremerton, Washington, was visited by a representative of the Employment Group and the Technical Personnel Office for the purpose of recruiting two-year college level people for the Technical and Instrument Divisions. The Instrument Division advised that 60 instrument mechanic trainees will be required during the next 12 months. Due to the nationwide shortage of such personnel, an extensive advertising campaign is being conducted.

Final results of the Employee Services Fund indicated that 56% of all employees desired to participate, with 70% required in order to place the Fund in operation. A letter signed by the General Manager was mailed to all employees on May 17 advising them of the results. Visits were made by the Employee Services Group to three retired employees, 215 employees who were ill in the hospital, and one employee who was ill at home. In addition, 67 salary checks were delivered to employees confined to the hospital or to their homes due to illness. Plans are about completed for establishing a procedure at this Works for recognizing perfect attendance. Tentatively it is agreed that the program will be placed into effect September 1, 1950. Fifty-seven suggestion awards, totaling $1,250, were made during May. These suggestions resulted in an estimated savings of $16,343.16. Suggestion publicity was carried in each issue of the Works News during the month. A poster was designed for the suggestion boxes which reflects the presentation of the $1,000 suggestion award made during April. Copies of this poster were also forwarded to all Employee Relations Divisions of other Departments.

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Thirty-eight supervisors participated in the Supervisor's 40-Hour Training Program during May. This program will be omitted during the summer months of June, July, and August but will again be made available to supervisors beginning in September. During the weeks of May 15 and May 22, 27 meetings were held throughout the Works for supervisors to discuss uniform administration and application of the disciplinary action procedure outlined in H. W. Instructions Letter No. 140. A total of 558 supervisors participated. As assistance to the S Division, a special program was presented to their new supervisors in training by the Training and Program Development Group. Further specialized training is to be given to these supervisors at a later date.

A story was prepared during May concerning General Electric's opinion about the question of whether or not the Washington Public Service Commission has jurisdiction over the long distance toll rates charged for calls placed from Richland residence, business, and other non-plant phones. Although this story was not published, the discussions of it with Hanford Works officials of G. E. and A. E. C., and with officials of the Washington Public Service Commission resulted in a public announcement by the Washington Public Service Commission that an investigation and public hearings would be held in connection with the question of jurisdiction over Richland toll rates.

The Nucleonics Department News Bureau had a record production of 123 information releases during the month.

The one-arm robot, designed by G. E. for use at atomic energy projects it operates for the Atomic Energy Commission was originally announced by the Company's News Bureau in Schenectady. A series of six pictures was cleared for publication by the Atomic Energy Commission and released on May 25 from the News Bureau in Richland, the News Bureau in Schenectady, and the Advertising and Publicity Department offices in San Francisco.

Through the Community Divisions Public Information Supervisor, assistance was rendered during the month to Richland Community Council. A member of the council approached him and received help in publicizing a Humane Society Chapter in Richland.

The Public Functions and Services Supervisor, together with the group whom he supervises, received and cleared during the month of May for delivery before the American Chemical Society Northwest Regional Meeting in Richland a total of 31 manuscripts prepared by Hanford Works employees.

Two radio programs were produced through the Public Functions and Services Group and recorded on tape for rebroadcast by radio station KALE during the month.

Hanford Works Photo House experienced an increase in the number of 8" x 10" prints produced during the month of May, and at the same time effected a reduction in the number of negatives exposed which resulted in a considerable saving in material and labor.

General Summary

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Special Programs activities during the month of May included the publicity, a souvenir booklet, and follow-up stories and news pictures for local papers concerning the Third Annual Kadlec Hospital Open House, as well as after-the-fact news photos of the Telephone Building Open House.

Special Programs also publicized the Hanford Works Suggestion System through the creation of a special suggestion box poster which focused attention upon the recent $1,000 award made at this plant.

Hanford Works News started publication during the month of May of the Neil Carothers economics articles, and was the prime media for publicity for the Kadlec Hospital Open House, significant organization announcements, and the new plan for purchase of safety shoes through payroll deduction.

A Decision and Direction of Election was received from the NLRB in connection with the Building Service Employees Union, setting up a bargaining unit including nurses aides and orderlies-ambulance drivers. The election was scheduled for June 9. The first negotiation meeting between the Company and the HAMTC for the purpose of discussing wage adjustments was held on May 23. The union demands were for a $10 a week raise, to be retroactive to April 11, 1950. The Council was asked to consider the fringe benefits which accrue to operations personnel. It was mutually agreed to adjourn and reconvene the following week; however, the reopening date was later postponed to June 12. One meeting was held with the Council Grievance Committee. The issue of DST versus PST within the Project Construction Program was not resolved during the month. A series of meetings and counterproposals resulted in a decision to select a fifth man for the Arbitration Committee and proceed according to the original May 4, 1950 arbitration agreement. Preparations for this procedure were in progress at month end. Negotiations between Atkinson-Jones and the Office Workers Local #100, Teamsters Local #556 and Ironworkers Local #14 were attended by a member of this Division. A meeting of the Joint Board of the United Association of Plumbers and Steamfitters in Seattle was attended by a member of this division. The discussion involved travel time to Plumbers outside the barricaded area. A threatened work stoppage was successfully averted. During the month, a series of conferences were held with division representatives regarding the classification of employees under the application of the Fair Labor Standards Act and the Walsh-Healey Act. As a result of the Division Managers' review, a total of 61 individuals out of a total of approximately 1,600 now classified as exempt was said to come under the provisions of the Federal regulations.

PURCHASING AND STORES DIVISIONS

Personnel of the Purchasing and Stores Divisions showed a net increase of 19 people as indicated by the tabulation below:

	Total Personnel as of 4-30-50	Total Personnel as of 5-31-50	Net Change
Exempt	57	55 *	minus 2
Non-Exempt	272	293 **	plus 21
TOTALS	329	348	plus 19

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* Includes two Administrative personnel not shown on divisional reports.
** Includes one Administrative personnel not shown on divisional reports.

Although the over-all work load in the Purchasing Division decreased somewhat during the month, there was a marked increase in the number of requisitions received for construction material and equipment.

As a result of cancellation of MJ-3, it was necessary to cancel a total of 53 orders. At month end 45 of these orders had been closed out and negotiations were underway on the other 8 with respect to cancellation charges.

Two new sources of supply for high purity aluminum required for P-10 operations were developed.

It was found necessary to change the design of aluminum nozzles on order for B, D, and F Areas to overcome casting difficulties. New prices and delivery schedules were established and approved by representatives of the Manufacturing Divisions.

Negotiations continued with the General Chemical Division, Allied Chemical and Dye Corporation, on the ANN contract. It appeared at month end that this contract would be concluded and executed during the ensuing month.

The Commission elected to supply our requirements of argon gas for the 12-month period beginning June 1, 1950.

Bids on our annual requirements of steam coal were being received and evaluated at month end.

Materials valued at $22,621.29 were declared excess from current Stores inventories.

There were 1,303 purchase requisitions screened against project inventories and 1,313 items were supplied as a result of screening, thus obviating the necessity for outside purchase.

The sale of safety shoes increased sharply due to the payroll deduction plan inaugurated on the first of the month.

Activity in the Receiving Section continued at a high level, there being a total of 5,001 receiving reports written during the month.

Due to threat of flood, it was deemed advisable to move automotive parts and supplies in Warehouse 1133 at the old Labor Yard up to a level of approximately 24 inches above the floor.

A project proposal based on Recommendation Report No. 134 was submitted for a central warehouse facility and an appropriation request for funds for engineering costs was submitted at the same time.

General Summary

Shipment of surplus materials from the Pasco Base continued at an accelerated pace, most of this material being consigned to schools or other governmental agencies.

The Traffic Section at the request of the Commission assumed responsibility for issuing government bills of lading on outbound shipments of surplus materials.

As a result of rate reductions obtained from the carriers, total savings in freight charges for the month amounted to $6,461.03.

COMMUNITY DIVISIONS

Richland was awarded first place among the three cities (Los Alamos, Oak Ridge, and Richland) in the National Traffic Safety Contect, by the National Safety Council. Richland also received the highest score of any city in any population class in the same contest.

Housing applications increased from 290 on April 30, 1950 to 297 on May 31, 1950.

The following new businesses began operation during May: Stanley Randolph Insurance Agency, Milhaven Kennels, Amusement Enterprises, Inc., and Kennell-Ellis Photographic Studios.

In anticipation of a high Columbia River water run-off level, several precautionary measures have been taken to protect Community property and equipment. At the Richland drainage ditch two portable pumping units have been installed and put in service pumping ditch flow over the dike. Pumping was commenced on May 21, 1950.

MEDICAL DIVISIONS

The Medical Divisions' roll decreased by 78 from 357 to 289, due to the out-patient clinic being changed from G. E. operation to operation by private physicians and dentists.

Seventy-five clinic employees were involved in the change. Forty-nine continued with the private practice clinic, eleven were transferred to other medical divisions, six were transferred to other G. E. Divisions, three were temporarily retained to collect accounts, and six were given no work layoffs.

The N. L. R. B. has ordered an election on the part of 68 medical division employees, including nurse aides, practical nurses, kitchen workers, janitors, orderlies, etc., to determine if they wish to be represented in collective bargaining by Building Service Employees Int. Union, Local No. 201, A. F. of L.

One month of operation of the out-patient clinic on a private practice basis has apparently been entirely satisfactory.

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Staff appointments to Kadlec Hospital will be made upon recommendation of the present staff and subject to final approval by G. E. and A. E. C. management.

Weekly employee sickness absenteeism dropped from 1.94% to 1.58%, while absenteeism for all causes declined from 2.48% to 2.12%.

Hospital activities increased slightly with a considerable increase in elective surgery due to change to private practice.

Ratio of hospital employees to patients for April was 1.98, which corresponds exactly to the 12-months figure for the Pacific States.

The net cost of operating the Medical Divisions for April (before assessments to the other divisions and workmen's compensation costs) was $91,856, an increase of $12,263. While total expense dropped by $5,760, this was offset by a decrease of $18,023 in net revenue. The community medical division loss was $18,172.

GENERAL ACCOUNTING DIVISION

In view of increased cash disbursements and to provide more adequate balances in contract bank accounts, an additional million dollars was requested from AEC which increased total advances to $4 500 000. Net cash disbursements in May chargeable to AEC totaled $5 985 914.

Considerable thought and work was devoted to the establishment of additional standard costs which at a later date may be used as bases for liquidating actual costs incurred. Work was begun on a proposed procedure to cover assessments to other divisions based on the use of standardized unit "selling price". Two new unit cost reports were prepared this month and arrangements were completed for the issuance of additional reports in June.

Fiscal Year to date IME percentage rates of all general divisions, where assessments are based on applied labor, were analyzed in an effort to establish revised standard rates for fiscal year 1951. After costs for the months of May and June have been considered, standard rates for FY 1951 are to be established.

Internal Auditors continued work in connection with the accounting for excess materials and the audit of records of the Surplus, Salvage and Scrap Section. In addition, audits were completed and reports submitted covering official toll and leased line charges and transactions relating to sale of medical equipment to physicians and dentists.

Budget estimates covering Operating and Research and Development Costs for Fiscal Year 1950, 1951, and 1952 were revised during the month and narrative justifications of Operating Equipment budget estimates for FY-1951 and 1952 were reviewed and consolidated and forwarded to AEC.

Uncollectible Medical accounts are continuing to be forwarded to Yakima Adjustment Service for collection. To date, accounts totaling $20 754

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have been forwarded but no collections have been remitted from the collection agency.

At the request of AEC, all schools with the exception of John Ball School at North Richland were transferred from plant accounts to AEC this month. Amount of this transfer was $9 155 108.

During the month considerable time was spent in connection with payroll matters; such as arranging mechanics for classification of monthly paid employees as to exempt and non-exempt and reporting results; participation in conferences and studies in connection with rotating overlapping shift schedules, notifying employees holding annuity certificates covering du Pont service of the provisions for naming contingent annuitants and the provisions for annuity payments beginning at optional retirement age; preparing employee and payroll statistical information to be published annually.

Work continued on preparation of a draft of an Appendix C to the Prime Contract covering employee relations policies, other payroll policies, and policies in connection with employees' travel and transfers, etc.

Hanford Works cash disbursements and cash receipts, excluding advances from Atomic Energy Commission, may be summarized as follows:

	April	May
Disbursements		
Material and Freight - GE	$1 403 334	$1 389 241
Payrolls - GE (Net)	1 768 244	1 758 755
Payments to Subcontractors	1 670 276	2 029 419
Other	1 081 304	1 014 641
Total	$5 923 158	$6 192 056
Receipts		
House Rents	107 005	103 583
Hospital and Clinic	79 415	52 457
Telephone	11 405	12 307
Bus Fares	9 743	11 523
Other	27 196	26 272
Total	234 764	206 142
Net Disbursements	$5 688 394	$5 985 914

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STAFF

General Manager	G. R. Prout
Assistant General Manager	R. S. Neblett
Assistant General Manager	F. K. McCune
Assistant to the General Manager (Technical and Education Matters)	W. I. Patnode
Assistant to the General Manager	J. R. Rue
Assistant to the General Manager and Manager of the Plant Security and Services Divisions	G. G. Lail
Department Comptroller	F. E. Baker
Counsel	G. C. Butler
Community Manager	L. F. Huck
Manager, Design and Construction Divisions	W. E. Johnson
Manager, Manufacturing Divisions	C. N. Gross
Manager, Technical Divisions	A. B. Greninger
Manager, Health Instrument Division	H. M. Parker
Manager, Medical Division	W. D. Norwood, M.D.
Manager, Employee and Community Relations Division	H. E. Callahan
Manager, Purchasing and Stores Divisions	W. A. Jeffrey

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FORCE REPORT
MAY - 1950

	EXEMPT		NON-EXEMPT		TOTAL	
	4-28-50	5-31-50	4-28-50	5-31-50	4-28-50	5-31-50
GENERAL	17	17	29	32	46	49
LAW	3	3	3	3	6	6
DESIGN & CONST. DIV'S.						
CONSTRUCTION	7	7	36	36	43	43
CONSTRUCTION ACCTG.	11	9	58	57	69	66
DESIGN	194	196	205	209	399	405
NO. RICHLAND REALTY	18	19	80	86	98	105
MANUFACTURING DIV'S.						
GENERAL	12	12	4	4	16	16
PROJ. ENG'R. CONTROL	23	23	20	20	43	43
PROJ. ENG'R. DESIGN	46	45	68	70	114	115
PROJ. ENG'R. MINOR CONST.	30	30	170	168	200	198
MFG. ACCTG.	8	8	51	50	59	58
OPERATING DIV'S.						
"P"	70	69	271	270	341	339
"S"	97	100	310	314	407	414
POWER	82	82	456	462	538	544
MECHANICAL DIV'S.						
MAINTENANCE	51	51	304	310	355	361
ELECTRICAL	50	50	246	247	296	297
INSTRUMENT	50	49	190	193	240	242
TRANSPORTATION	58	58	559	570	617	628
TECHNICAL DIV'S.						
GENERAL	3	3	2	2	5	5
PILE TECHNOLOGY	88	89	52	62	140	151
SEPARATIONS TECHNOLOGY	98	100	59	57	157	157
TECHNICAL SERVICES	113	115	348	349	461	464
MEDICAL	77	49	280	240	357	289
H. I. DIV'S.						
GENERAL	5	5	4	4	9	9
OPERATIONAL	59	61	164	164	223	225
DEVELOPMENT	21	21	70	71	91	92
BIOLOGY	22	24	32	33	54	57
ACCTG. DIVISIONS						
GEN. ACCTG. PAYROLL	9	9	72	72	81	81
GEN. ACCTG. ACCTG.	15	16	76	77	91	93
EMPLOYEE & COMMUNITY RELATIONS DIV.	30	30	57	56	87	86
PLANT SECURITY & SERVICE DIV'S.						
PATROL & SECURITY	56	55	523	527	579	582
SAFETY & FIRE	37	37	108	107	145	144
GEN. & OFF. SERV.	21	23	200	206	221	229
PURCHASING & STORES DIV'S.						
PURCHASING	41	41	44	49	85	90
STORES	22	22	229	246	251	268
COMMUNITY DIVISIONS	215	217	507	511	722	728
GRAND TOTAL	1759	1745	5887	5934	7646	7679

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PERSONNEL DISTRIBUTION — MAY 1950

	100-B Area	100-D Area	100-F Area	100-H Area	101 Area	200-E Area	200-W Area	300 Area	Plant General	3000 Area	700-1100 Area	Total
GENERAL												
Clerical	-	-	-	-	-	-	-	-	-	-	17	17
Total	-	-	-	-	-	-	-	-	-	-	32	32
	-	-	-	-	-	-	-	-	-	-	49	49
LAW												
Clerical	-	-	-	-	-	-	-	-	-	-	3	3
Total	-	-	-	-	-	-	-	-	-	-	3	3
	-	-	-	-	-	-	-	-	-	-	6	6
DESIGN & CONST. DIV'S.												
CONSTRUCTION												
Supervisors	-	-	-	-	-	-	-	-	-	6	-	6
Inspectors	-	-	-	-	-	-	-	-	-	1	-	1
Clerical	-	-	-	-	-	-	-	-	-	36	-	36
Total	-	-	-	-	-	-	-	-	-	43	-	43
CONST. ACCT'G.												
Supervisors	-	-	-	-	-	-	-	-	-	9	-	9
Clerical	-	-	-	-	-	-	-	-	-	57	-	57
Total	-	-	-	-	-	-	-	-	-	66	-	66
DESIGN												
Supervisors	-	2	-	-	-	-	-	-	-	11	37	50
Engineers & Estimators	-	6	-	-	-	-	7	-	-	14	110	137
Other Exempt	-	-	-	-	-	-	-	-	-	5	4	9
Draftsmen	-	-	-	-	-	-	-	-	-	-	67	67
Clerical	-	1	-	-	-	-	1	-	-	25	115	142
Total	-	9	-	-	-	-	8	-	-	55	333	405
NO. RICHLAND REALTY												
Supervisors	-	-	-	-	-	-	-	-	-	19	-	19
Clerical	-	-	-	-	-	-	-	-	-	15	-	15
Janitors	-	-	-	-	-	-	-	-	-	39	-	39
Others	-	-	-	-	-	-	-	-	-	32	-	32
Total	-	-	-	-	-	-	-	-	-	105	-	105

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HW 17677-Rev

1217448

	100-B Area	100-D Area	100-F Area	100-H Area	101 Area	200-E Area	200-W Area	300 Area	Plant General	3000 Area	700-1100 Area	Total
MANUFACTURING DIV'S.												
GENERAL												
Supervisors	-	-	-	-	-	-	-	-	-	-	8	8
Engineers	-	-	-	-	-	-	-	-	-	-	4	4
Clerical	-	-	-	-	-	-	-	-	-	-	4	4
Total	-	-	-	-	-	-	-	-	-	-	16	16
PROJ. ENG'R. CONTROL												
Supervisors	-	-	-	-	-	-	-	1	-	-	7	8
Engineers	-	-	1	-	-	-	-	1	-	-	13	15
Clerical	-	-	-	-	-	-	-	-	-	-	15	15
Craftsmen	-	-	-	-	-	-	-	-	1	-	4	5
Total	-	-	1	-	-	-	-	2	1	-	39	43
PROJ. ENG'R. DESIGN												
Supervisors	-	-	-	-	-	-	5	1	-	1	30	37
Engineers	-	-	-	-	-	-	-	-	-	-	8	8
Clerical	-	-	1	-	-	-	-	-	-	-	8	9
Others	-	-	1	-	-	-	8	3	5	-	44	61
Total	-	-	2	-	-	-	13	4	5	1	90	115
PROJ. ENG'R. MINOR CONST.												
Supervisors	-	-	1	-	-	-	1	-	24	-	1	27
Engineers	-	-	1	-	-	-	-	1	1	-	-	3
Craftsmen	-	-	-	-	-	-	-	-	156	-	-	156
Clerical	-	-	-	-	-	-	1	1	9	-	1	12
Total	-	-	2	-	-	-	2	2	190	-	2	198
MFG. ACCTG.												
Supervisors	-	-	-	-	-	-	-	-	-	-	8	3
Clerical	-	-	-	-	-	-	-	-	-	-	50	50
Total	-	-	-	-	-	-	-	-	-	-	58	58

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HW 17971-Rev

1217449

	100-B Area	100-D Area	100-F Area	100-H Area	101 Area	200-E Area	200-W Area	300 Area	Plant General	3000 Area	700-1100 Area	Total
OPERATING DIV'S.												
"P"												
Supervisors	9	12	9	10	-	-	-	13	-	-	2	55
Supv. in Training	1	2	1	-	-	-	-	1	-	-	-	5
Engineers	2	-	-	-	-	-	-	-	-	-	7	9
Operators	39	53	38	39	-	-	-	82	-	-	-	251
Clerical	3	3	3	2	-	-	-	4	-	-	4	19
Total	54	70	51	51	-	-	-	100	-	-	13	339
"S"												
Supervisors	-	-	-	-	-	15	30	-	-	-	4	49
Supv. in Training	-	-	-	-	-	6	14	-	-	-	7	27
Engineers	-	-	-	-	-	-	9	-	-	-	15	24
Operators	-	-	-	-	-	107	174	-	-	-	-	281
Clerical	-	-	-	-	-	8	19	-	-	-	6	33
Total	-	-	-	-	-	136	246	-	-	-	32	414
POWER												
Supervisors	12	12	12	12	-	5	9	5	1	-	2	70
Engineers	-	4	-	-	-	-	-	-	8	-	-	12
Craftsmen	80	82	78	79	-	28	49	10	18	-	-	424
Clerical	1	1	1	1	-	-	1	-	4	-	2	11
Others	5	5	4	6	-	-	6	1	-	-	-	27
Total	98	104	95	98	-	33	65	16	31	-	4	544
MECHANICAL DIV'S.												
MAINTENANCE												
Supervisors	1	6	8	4	-	4	14	6	-	-	2	45
Engineers	-	-	-	-	-	-	-	-	-	-	6	6
Craftsmen	18	38	47	25	-	34	75	51	-	-	-	288
Clerical	-	1	3	1	-	2	3	2	-	-	1	13
Others	-	-	2	1	-	1	2	3	-	-	-	9
Total	19	45	60	31	-	41	94	62	-	-	9	361

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1217450

HW 17971

	100-B Area	100-D Area	100-F Area	100-H Area	101 Area	200-E Area	200-W Area	300 Area	Plant General	3000 Area	700-1100 Area	Total
MECHANICAL DIV'S. CONT.												
ELECTRICAL												
Supervisors	2	1	1	3	-	1	5	2	17	-	11	43
Engineers	-	-	-	1	-	-	1	1	1	-	3	7
Craftsmen	11	13	14	14	-	10	13	11	70	-	27	183
Clerical	1	-	1	1	-	-	1	1	5	-	25	35
Operation	4	4	4	4	-	-	-	-	10	-	-	26
Others	-	-	-	-	-	-	1	-	1	-	1	3
Total	18	18	20	23	-	11	21	15	104	-	67	297
INSTRUMENT												
Supervisors	1	5	1	3	-	2	6	8	-	-	4	30
Engineers	-	-	-	-	-	-	3	10	1	-	5	19
Craftsmen	12	16	15	14	-	13	33	54	-	-	12	169
Clerical	-	1	1	1	-	1	2	6	2	-	3	17
Others	-	-	-	-	-	-	-	7	-	-	-	7
Total	13	22	17	18	-	16	44	85	3	-	24	242
TRANSPORTATION												
Supervisors	2	3	1	1	-	2	1	1	8	-	35	54
Engineers	-	-	-	-	-	-	-	-	-	-	4	4
Bus Drivers	-	-	-	-	-	-	-	-	-	-	164	164
Journeymen	2	3	3	5	-	4	5	-	13	-	80	115
Trainmen	-	-	-	-	-	-	-	-	25	-	-	25
Servicemen	1	10	2	2	-	3	5	4	12	-	27	66
Clerical	1	1	1	1	-	1	1	1	-	-	20	27
Equipment Operation	4	6	3	4	-	3	8	5	15	-	32	80
Others	10	14	2	2	-	10	4	2	11	-	38	93
Total	20	37	12	15	-	23	24	13	84	-	400	628
TECHNICAL DIV'S.												
GENERAL												
Supervisors	-	-	-	-	-	-	-	-	-	-	3	3
Clerical	-	-	-	-	-	-	-	-	-	-	2	2
Total	-	-	-	-	-	-	-	-	-	-	5	5

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HW 17971

1217451

	100-B Area	100-D Area	100-F Area	100-H Area	101 Area	200-E Area	200-W Area	300 Area	Plant General	3000 Area	700-1100 Area	Total
TECHNICAL DIV'S. CONT.												
PILE TECHNOLOGY												
Supervisors	2	1	1	1	-	-	-	12	-	-	-	17
Metallurgists & Eng'r.	12	5	-	5	-	-	-	29	-	-	-	51
Physicists	1	14	2	2	-	-	-	2	-	-	-	21
Tech. Grads.	10	1	1	-	-	-	-	2	-	-	-	14
Laboratory Asst.	16	9	1	6	-	-	-	8	-	-	-	40
Clerical	-	-	-	1	-	-	-	6	-	-	-	7
Others	1	-	-	-	-	-	-	-	-	-	-	1
Total	42	30	5	15	-	-	-	59	-	-	-	151
SEPARATIONS TECHNOLGY												
Supervisors	-	-	-	-	-	1	4	14	-	-	1	20
Chemists & Chem. Eng'r.	-	-	-	-	-	5	12	62	-	-	1	80
Tech. Grads.	-	-	-	-	-	1	-	1	-	-	-	2
Clerical	-	-	-	-	-	-	3	6	-	-	1	10
Chem. Operators	-	-	-	-	-	-	1	32	-	-	-	33
Others	-	-	-	-	-	-	-	12	-	-	-	12
Total	-	-	-	-	-	7	20	127	-	-	3	157
TECHNICAL SERVICES												
Supervisors	-	-	-	2	2	5	13	28	-	-	3	53
Chemists & Eng'r.	1	1	1	-	9	1	6	40	-	-	3	62
Technologists & Tech. Grads.	-	-	-	3	-	7	22	26	-	-	-	58
Lab. Asst.	-	-	-	8	-	32	58	62	-	-	-	160
Clerical	-	-	-	1	1	3	3	42	-	-	36	86
Others	-	-	-	-	32	-	-	11	-	-	2	45
Total	1	1	1	14	44	48	102	209	-	-	44	464

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1217452

	100-B Area	100-D Area	100-F Area	100-H Area	101 Area	200-E Area	200-W Area	300 Area	Plant General	3000 Area	700-1100 Area	Total
MEDICAL												
Supervisors	-	-	-	-	-	-	-	-	-	1	29	30
Physicians	-	-	-	-	-	-	-	-	1	3	8	12
Other Exempt	-	-	-	-	-	-	-	-	-	-	7	7
Technicians	-	-	-	-	-	-	-	-	4	4	11	19
Nurses	2	4	4	1	-	4	6	2	-	1	59	83
Clerical	-	-	-	-	-	-	-	1	3	11	51	66
Others	-	-	-	-	-	-	-	-	-	1	71	72
Total	2	4	4	1	-	4	6	3	8	21	236	289
H. I. DIVISIONS												
GENERAL												
Supervisors	-	-	-	-	-	-	-	-	-	-	4	4
Engineers	-	-	-	-	-	-	-	-	-	-	1	1
Clerical	-	-	-	-	-	-	-	-	-	-	4	4
Total	-	-	-	-	-	-	-	-	-	-	9	9
OPERATIONAL												
Supervisors	1	1	1	2	-	1	5	8	-	-	1	20
Engineers	6	5	5	6	-	5	10	3	-	-	1	41
Clerical	11	13	14	16	-	21	37	42	10	-	-	164
Total	18	19	20	24	-	27	52	53	10	-	2	225
DEVELOPMENT												
Supervisors	-	-	-	-	-	1	4	4	-	-	-	9
Engineers	-	-	-	-	-	4	3	4	-	-	1	12
Clerical	-	-	-	-	-	1	1	1	-	-	1	4
Others	-	-	-	-	-	14	25	17	-	-	11	67
Total	-	-	-	-	-	20	33	26	-	-	13	92
BIOLOGY												
Supervisors	-	-	4	-	-	-	2	1	-	-	-	7
Engineers	-	-	12	-	-	-	3	1	-	-	1	17
Clerical	-	-	1	-	-	-	-	1	-	-	-	2
Others	-	-	29	-	-	-	2	-	-	-	-	31
Total	-	-	46	-	-	-	7	3	-	-	1	57

1217453 UNCLASSIFIED

HW 17971

	100-B Area	100-D Area	100-F Area	100-H Area	101 Area	200-E Area	200-W Area	300 Area	Plant General	3000 Area	700-1100 Area	Total
ACCOUNTING DIV'S.												
GEN. ACCT'G. PAYROLL												
Supervisors	-	-	-	-	-	-	-	-	-	-	9	9
Clerical	-	-	-	-	-	-	-	-	-	-	72	72
Total	-	-	-	-	-	-	-	-	-	-	81	81
GEN. ACCT'G. ACCT'G.												
Supervisors	-	-	-	-	-	-	-	-	-	1	8	9
Other Exempt	-	-	-	-	-	-	-	-	-	2	5	7
Clerical	-	-	-	-	-	-	-	-	-	29	48	77
Total	-	-	-	-	-	-	-	-	-	32	61	93
EMPLOYEE & COMM. RELATIONS												
Supervisors	-	-	-	-	-	-	-	-	-	-	22	22
Employee Rel. Counselor	-	-	-	-	-	-	-	-	-	-	1	1
Other Exempt	-	-	-	-	-	-	-	-	-	-	7	7
Clerical	-	-	-	-	-	-	-	-	-	-	45	45
Others	-	-	-	-	-	-	-	-	-	-	11	11
Total	-	-	-	-	-	-	-	-	-	-	86	86
PLANT SECURITY & SERVICE DIV'S.												
PATROL & SECURITY												
Supervisors	5	6	6	5	-	5	9	7	7	-	4	54
Other Exempt	-	-	-	-	-	-	-	-	1	-	-	1
Patrolman	51	66	66	49	-	56	109	70	3	-	37	507
Clerical	-	-	-	-	-	-	-	-	16	-	2	18
Seamstress	-	-	-	-	-	-	-	-	2	-	-	2
Total	56	72	72	54	-	61	118	77	29	-	43	582
SAFETY & FIRE												
Supervisors	8	-	-	-	-	-	4	4	9	-	4	29
Safety Engineers	-	2	-	1	-	2	-	2	-	-	1	8
Firemen	44	-	-	-	8	-	13	14	3	-	18	100
Clerical	-	1	-	1	-	1	-	1	-	-	3	7
Total	52	3	-	2	8	3	17	21	12	-	26	144

DECLASSIFIED 1217454

HW 17977

	100-B Area	100-D Area	100-F Area	100-H Area	101 Area	200-E Area	200-W Area	300 Area	Plant General	3000 Area	700-1100 Area	Total
PLANT SECURITY & SERVICE DIV'S. CONT.												
GEN. & OFF. SERVICES												
Supervisors	-	-	1	1	-	1	2	-	-	-	18	23
Engineers	-	-	-	-	-	-	-	-	-	-	-	-
Laundry Operators	-	-	-	-	-	-	2	-	-	-	1	3
Janitors & Servicemen	5	5	5	4	2	4	16	13	4	-	38	96
Clerical	-	-	-	-	-	-	-	-	-	-	26	26
Others	-	-	-	-	-	-	34	-	-	-	47	81
Total	5	5	6	5	2	5	54	13	4	-	130	229
PURCHASING & STORES DIVISIONS												
PURCHASING												
Supervisors	-	-	-	-	-	-	-	-	-	-	13	13
Other Exempt	-	-	-	-	-	-	-	-	13	-	15	28
Clerical	-	-	-	-	-	-	-	-	-	-	49	49
Total	-	-	-	-	-	-	-	-	13	-	77	90
STORES												
Supervisors	4	-	-	-	-	-	-	-	-	5	13	22
Clerical	18	-	-	-	-	-	-	-	-	30	41	89
Others	33	-	-	-	1	-	1	-	-	9	113	157
Total	55	-	-	-	1	-	1	-	-	44	167	268
COMMUNITY DIVISIONS												
Supervisors	-	-	-	-	-	-	-	-	-	21	111	132
Other Exempt	-	-	-	-	-	-	-	-	-	-	15	15
Firemen	-	-	-	-	-	-	-	-	-	25	45	70
Patrolmen	-	-	-	-	-	-	-	-	-	26	29	55
Journeymen	-	-	-	-	-	-	-	-	-	-	173	173
Servicemen	-	-	-	-	-	-	-	-	-	-	65	65
Truckdrivers	-	-	-	-	-	-	-	-	-	-	43	43
Power Operators	-	-	-	-	-	-	-	-	-	-	42	42
Clerical	-	-	-	-	-	-	-	-	-	-	89	89
Others	-	-	-	-	-	-	-	-	-	-	44	44
Total	-	-	-	-	-	-	-	-	-	72	656	728
GRAND TOTAL	453	439	414	351	55	435	927	890	494	439	2782	7679

1217455

HW 17971

23

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MANUFACTURING DIVISIONS

MAY 1950

SUMMARY

Production Divisions

A total of 56 tons of metal was discharged at the goal concentration. The pile operating efficiency was 93.2 percent. The operating levels at month end were 290 MW at B pile, 305 MW at D and F piles, and 400 MW at H pile. The nominal CO_2 concentration in the pile circulating gas at month end was 97 percent, 96 percent, 80 percent, and 91 percent at B, D, F, and H piles, respectively.

A total of 72 tons of acceptable slugs was canned at a yield of 94.9 percent.

The machining yield again attained a new high at 79.2 percent. The Melt Plant produced 18 tons of billets at a new record yield of 80.2 percent.

A total of 75 batches was started in the Canyon Buildings, 72 were processed through the Concentration Buildings and 68 were completed through the Isolation Building. The average purity of completed batches was 98.4 percent.

Mechanical Divisions

Precautionary flood control work of the following nature has been performed: Installed emergency pumps, checked and are holding forty-two vehicles in standby, provided emergency power supply at 1906-H lift station, removed or protected line crew effects from Richland Labor Yard.

The first locomotive operated over the new Northern Pacific-Union Pacific Connection on May 23, carrying an inspection party of General Electric officials.

The electrical peak load of 74,200 KW, compared to April's figure of 75,850, is substantially higher than anticipated because of lower than normal temperatures.

The testing of operating equipment at Grand Coulee without necessitating interruption of Hanford Works production was completed, saving expense and loss of production by the elimination of six shutdowns.

C. N. GROSS, MANAGER
MANUFACTURING DIVISIONS

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MANUFACTURING DIVISIONS

PATENT REPORT SUMMARY
FOR
MONTH OF MAY, 1950

Richland, Washington
June 9, 1950

All persons engaged in work that might reasonably be expected to result in inventions or discoveries advise that, to the best of their knowledge and belief, no inventions or discoveries were made in the course of their work during the period covered by this report except as listed below. Such persons further advise that, for the period therein covered by this report, notebook records, if any, kept in the course of their work have been examined for possible inventions or discoveries.

INVENTOR	TITLE
Rodney G. Hoff (Instrument Division)	Process Tube Slope Indicator
E. M. Johnston (Project Engineering Division)	Rear Face Charging Device (Revolving cylinder type)
H. J. Bellarts L. C. Koke (Project Engineering Division)	Hose Clamps or Coupling
H. J. Bellarts (Project Engineering Division)	Non-rotating Piston

C. N. GROSS

MANAGER, MANUFACTURING DIVISIONS

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HW-17971 Rev

DECLASSIFIED
WITH DELETIONS

DECLASSIFIED
WITH DELETIONS

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[redacted]

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RELEASED
WITH DELETIONS

RELEASED
WITH DELETIONS

1217459

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RECLASSIFIED
WITH DELETIONS

RECLASSIFIED
WITH DELETIONS

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DECLASSIFIED
WITH DELETIONS

Section 10 Approved By: W. D. Davidson for
W. K. Woods, Division Head
Pile Technology Division
Technical Divisions

DECLASSIFIED
WITH DELETIONS

1217461

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June 6, 1950

P DIVISION

MAY, 1950

I. GENERAL

The B, D, F, and H Piles operated throughout the month except for outages listed under Area Activities. Power levels were as follows: B Pile - 275 MW until May 4 when the level was increased to 290 MW, D and F Piles - 305 MW, H Pile - 370 MW until May 24 when a stepwise increase in level to 400 MW was begun. A level of 385 was reached on May 24 and maintained until May 31 at which time the level of 400 was attained. The piles operated with a "time operated" efficiency of 94.4%.

The P-10 fuel slug test program continued in the DR pile throughout the month. One experimental loading was completed and a second loading was in progress at month end.

Two record yields were attained in the 300 Area during the month of May. A yield of 79.2% was established for machining of 4" pieces from alpha rolled rods and a melt plant yield of 80.2% for billets.

II. ORGANIZATION AND PERSONNEL

Number of employees on payroll - May	
Beginning of month -	341
End of month	339
Net decrease	2

J. W. Baker, T. M. Hall, G. B. Jex, M. T. Lewis, H. A. Zweifel were promoted to Area Supervisor effective May 1.

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P Division

J. A. Cowan was transferred from the 300 Area to the Engineering Control Section in the 700 Area effective May 8.

D. C. Montgomery, Area Supervisor, was transferred to KAPL, Schenectady, New York, effective May 1.

Two rotational pool trainees were assigned to the P Division for a three month period; one on May 2 and one on May 15.

One Pile Operator was transferred to the S Division on May 29.

Two operators terminated voluntarily from the 300 Area.

III. AREA ACTIVITIES

Pile Summary	Pile B	Pile D	Pile F	Pile H
Time Operated (%)	94.1	92.7	93.3	97.3
Operating Efficiency (%)	93.3	90.3	91.6	96.9
*Power Level (MW)	290	305	305	400
*Inlet Water Temperature (°C)	13.2	13.2	12.9	13.2
*Outlet Water Temperature (Maximum °C., 10 tubes, 0.240" Zone)	56.1	54.9	56.9	67.3
Number of Scrams	2	1	4	6
Number of Purges	2	1	2	1
Helium Consumption (cu. ft.)	0	26,417**	10,962	0
CO_2 Consumption (cu. ft.)	43,248	69,768	42,840	9,067
Metal Discharged (tons)	17.20	20.07	16.42	1.88
Inhours Gained (this month)	-18	-0.8	25	70
*Inhours Poisoned	592	619	471	431
*Inhours in Rods	70	86	92	190
CO_2 concentration	97	96	80	91

* Month end figures.
** Includes 20,000 cu. ft. for DR Pile.

PILE BUILDING

Outage Breakdown

Date of Outage	Scheduled Metal Discharged	Scheduled Maintenance	Unscheduled	Length of Outage (Hours)
(1) 5-1-50		H		0.9
5-2-50	B			22.3
(2) 5-2-50			F	0.2
5-3-50	F			23.9
(2) 5-7-50			H	0.2
(3) 5-8-50			B	0.3
(4) 5-8-50	D		D	23.9
(3) 5-8-50			F	0.3
(3) 5-8-50			H	0.2
(5) 5-9-50			H	0.1

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P Division

Outage Breakdown (Continued)

Date of Outage	Scheduled Metal Discharged	Scheduled Maintenance	Unscheduled	Length of Outage (Hours)
5-10-50	H			17.4
(2) 5-16-50			H	0.7
(2) 5-16-50			H	0.2
5-17-50	B			21.7
(2) 5-22-50			F	0.1
5-23-50	F			24.6
(6) 5-23-50			F	0.9
5-24-50	D			30.2
(2) 5-24-50			H	0.5
(5) 5-25-50			B	0.1

(1) Unit shut down for purge because of excessive pressure drop in process tubes.
(2) Unit scrammed due to surge of control room Beckman power supply.
(3) Unit scrams due to power interruption on BPA system.
(4) Unable to reactivate pile after scram due to power interruption on BPA system. Work originally scheduled for May 10 was completed during this outage.
(5) Unit scrammed when panellit alarm could not be reset.
(6) Voluntary scram to permit turnaround after start-up.

Operating Experience

Production tests having operational significance are reported below:

105-81-P (Probe Test of Top Central Tubes)
On May 23, a 1.475" probe was inserted 8 feet 3½ inches into tube 4674-F. This marks the first time this probe could not be inserted at least 10 feet.

105-103-P (Corrosion Rates at Elevated Temperatures)
Thirty-one tubes in F Pile operated throughout the month with reduced water flow in accordance with the provisions of this test. No unusual conditions were noted.

105-168-P (Replacement of Pile Atmosphere with CO_2)
The B Pile atmosphere was maintained at approximately 97% CO_2 and 1% CO throughout the month without incident.

Beginning May, the CO_2 concentration in the D Pile was increased from 80% to a nominal 100%. The concentration at month end was 96% CO_2 and 0.4% CO. Temperature limitations due to this increase in CO_2 resulted in power level re-

1217464

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ductions on several occasions. No unexpected operating conditions have been observed.

The increase in CO_2 concentration in the F Pile from 60% to 80%, started in April (HW-17660), was completed on May 11. No unexpected operating conditions have been observed.

105-278-P (Effect of Increased Enrichment Level)
Examination of metal from two tubes discharged at 157% of the current goal value showed no significant change in the extent of blistering or warping.

105-291-P (Examination of Inlet Ends of Process Tubes)
Tubes 4379-B and 3186-B were replaced as part of the program to evaluate the effects of corrosion products on tube life. Complete front dummy charges were installed in the front of six process tubes as part of a study of the effect of water velocity on process tube corrosion.

105-302-P (Power Level Increase, H Pile)
Increases in the H Pile operating level were made as listed below in accordance with this test:

370 MW to 385 MW on May 24
385 MW to 400 MW on May 31.

105-316-P (Test Exposure of P-10 Test Loadings)
Four tubes of H Pile were charged with the proposed H-10 loading pattern on May 10. Outlet temperatures of these tubes are approximately 85% of the temperatures of the surrounding regular metal tubes. No significant operational effects have been observed.

105-337-P (Power Level Increase, B Pile)
The B Pile power level was increased from 275 MW to 290 MW on May 5 as the first step of a planned increase to 305 MW. Because of the high graphite and exit water temperatures experienced at the 290 MW level, the increase in level to 305 MW will depend upon the possibility of some relaxation of the present temperature limits.

A total of 55.57 tons of uranium slugs was discharged during the month at an average concentration of current goal value.

On the startup of the F Pile after the May 23 outage, the pile was scrammed when it became apparent that there was insufficient horizontal rod capacity to permit effective operational control during the peak reactivity turnaround. This condition resulted from under estimating the reactivity after the poisoning rearrangement made on May 23.

P Division

At H Pile difficulties due to unexplained surges on the control Beckmans continued during the month despite intensive efforts to locate and correct the trouble. On two occasions, surges resulted in scrams and on numerous other occasions, annunciator alarms were received although no scram occurred. On May 10, the power supply leads to the Beckmans were replaced with shielded cables and on May 24 a rectifier tube of higher voltage and current rating was installed in each Beckman. Although no unexplained surges have occurred since May 24, further action is planned to stabilize the Beckman circuits and eliminate the surges.

Mechanical Experience

All horizontal and vertical rods are in satisfactory operating condition at month end except the following:

a. Vertical Rod #14-D stuck several times during tests and is tied out pending repair.
b. Vertical Rod #27-F is scrammable but binds at each joint when operated under power. Corrections are planned in the immediate future.
c. Horizontal Rod #2-F cannot be withdrawn beyond approximately 300 inches. This condition will be corrected during the extended outage in July.
d. Vertical Rod #31-H failed to operate under power during the May 10 outage. The rod is tied out of service pending repairs planned for the next scheduled outage.

Following the scram due to a power failure in the BPA system on May 8, the #1 safety circuit of the D Pile could not be reset. After the cause of the difficulty had been located, a mechanical binding of the PF relay in the circuit, the available scram recovery time had been exceeded and the pile could not be restarted. The outage time was utilized in completing work scheduled for May 10.

A five foot section of the neoprene seal on the top far front corner of the F Pile was replaced on May 3.

Gas Processing Building

Following a purge of the gas system of H Pile on April 24 (HW-17660), the CO in the system increased from 3.5% to 8% at month end. It is expected that at the 400 MW operating level the CO percentage will reach an equilibrium value somewhat greater than 8%.

Special Hazards

The activity of the effluent water from the 107 retention basins of all piles continued unusually high throughout the month. The addition of dilution water at the 1904 buildings has been effective in maintaining the activity of the water entering the river below the desired level of 4.17 mrep/hr.

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P Division

Project Status

Below is summarized the status of P Division projects which are currently active.

C-306 (Front Face Shielding Caps)
Eight hundred forty one additional plugs were received during the month. Procurement is proceeding satisfactorily.

C-330 (Improved Ventilation, Building 313-314)
The installation has been completed except for the outside duct work.

C-339 (Rolling Mill)
Preparation of the project proposal continues.

C-347 (Nozzle Replacement)
A design change on the nozzle lug ring was effected to minimize fabrication difficulties. Deliveries of 1200 nozzles of each type are expected by June 19 and to continue at the rate of 400 each per week until the order has been completed.

C-355 (Pile Clearance, Near Side)
B Pile work is scheduled for September. No plans have been made for D and F Piles.

M-711 (Algae Filter)
Sampling apparatus was installed and preliminary test runs were started during the month.

M-713 (Flexible Vertical Rod)
A review of the future needs for flexible rods indicated that this project should be continued as proposed.

M-715 (IBM Individual Tube Accounting)
A study completed during the month does not indicate any current operational justification for further installation.

M-721 (Pile Shield Restraining Clamps)
Installation on B Pile has been deferred until the need becomes more apparent.

M-723 (Repairs to 107-B Basin)
Deferred until the B pile extended shutdown in September.

B-803 (High Tank Control Valves)
A project proposal is being prepared.

B-814 (CO_2 Bulk Handling Facilities)
Preparation of the Project Proposal continues.

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P Division

300 AREA METAL FABRICATION

Production Statistics

Production for the month of May was as follows:

Billets Produced	18 Tons
Rods Machined	58 Tons
Bare Pieces Machined	46 Tons
Acceptable Pieces Canned	72 Tons

Melt Plant

The casting yields were as follows:

	April	May	To Date 1950
Billet (Ave. per furnace run)	72.6	80.2	70.5
Billet (Yield from total scrap processed)	86.1	82.4	81.8
Solid Yield	87.6	92.1	88.2

The improvement in the average billet yield was made possible by improved capping techniques and a decrease in the number of bad heats resulting from broken stopper rods.

An improvement in the solid yield resulted from the higher quality of material charged. In addition, some gains were made through a recent evaluation of optimum melting time.

Machining

The machining yields were as follows:

April	May	To Date 1950
77.7	79.2	77.2

The yield of 79.2 for May is the highest yield ever obtained on 4 inch slugs machined from alpha rolled rods. The close observance of minimum slug cut-off tolerances and the continued good quality of the rods machined were contributing factors in obtaining this yield.

Two lots of rods received during May were machined with yields of 80.6% and 80.0%, respectively. These rods were rolled from lead preheated billets and coated with a 5:1 solution of water and calol. The rod lengths varied from 12 feet to approximately 17 feet. Rods exceeding a maximum length of fourteen feet were too long for existing feed racks on the lathes.

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P Division

Chip Recovery

The chip recovery yield was as follows:

Per Cent Yield		
April	May	To Date 1950
89.8	89.3	88.5

The entire chip recovery process was operated three shifts and the press was operated an additional five shifts. A total of 14,125 pounds of TXB was produced from pickled chips.

Work on Production Test 313-111-M, "Substitution of Calcium Nitrate for Calcium Chloride in the Chip Recovery Process", was continued during the month. It is expected that this test will be completed early in June.

Oxide Burning

The material burned was as follows:

Weight Out - Pounds		
April	May	To Date 1950
23,235	18,669	102,774

Oxide on Hand at Month End (Metal Content)

To be burned	8,810
To be analyzed	5,816
To be shipped	12,813
Total	24,430

Canning Operation

The canning yield was as follows:

April	May	To Date 1950
95.0	94.9	93.9

Canning rejects, by cause, were:

	Per Cent		
	April	May	To Date 1950
Non seating	1.7	1.2	1.1
Marred surface	0.8	1.1	1.9
Al-Si on outside of can	0.8	0.4	0.8
Frost test	0.5	0.7	0.8
Bad welds	0.7	0.9	0.7
Miscellaneous	0.5	0.8	0.8
	5.0	5.1	6.1

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P Division

The canning yield is comparable to the record yield for April. Emphasis and follow-up on close adherence to process requirements has been continued.

The following special request pieces were canned:

Request No.	Content	No. of Pieces
P-10-A	Lithium Aluminum Alloy	1,852
"J"	Aluminum U-235 Alloy	2,582

The P-10-A program was resumed on May 15, 1950, with the slug length set at 4-1/4 inches. The cans now being supplied for this operation are of 4-7/8 inches with a bottom thickness of 0.045 inches. They are cut to size from present stock of 8 inch thin bottom cans.

A total of 2,582 "J" slugs were inspected during the month. The "J" slug canning yield was as follows:

Per Cent Yield		
April	May	To Date 1950
91.3	93.3	93.0

The "J" slug canning rejects, by cause, were:

	Per Cent		
	April	May	To Date 1950
Frost test	1.3	4.4	3.4
Air pockets	1.0	0.5	0.6
Marred surface	2.9	0.6	1.2
Non seating	2.9	0.7	1.2
Al-Si on outside of can	0.3	0.2	0.3
Not canned	0.0	0.1	0.1
Bad welds	0.3	0.2	0.2
Totals	8.7	6.7	7.0

"J" slug canning tests were run during the month in an effort to minimize dih loss during canning, frost test and non seat rejects. Lowering the canning bath temperature reduced the dih loss during canning but increased frost test and non seat rejects. Balancing the economic and operational factors involved, it was found that the optimum canning bath temperature was

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P Division

Slug Recovery

	Per Cent Recovered		Ave. Wt. - Lbs.	
	May	To Date 1950	May	To Date 1950
"Z" Slugs	79.9	86.2	3.897	3.903
"X" Slugs	17.6	11.9	3.856	3.861
Rejects	2.5	1.9	---	---
	100.0	100.0		

Inspection and Testing

Autoclave results were as follows:

April	May	To Date 1950
.20/M	.23/M	.15/M

Eight autoclave failures occurred during the month. Six were complete fialures and two were partial failures.

No slugs were found to be penetrated at .010 inches during the month.

Tho "as received" quality of cans, caps and sleeves inspected was as follows:

	Per Cent Usable		
	April	May	To Date 1950
Aluminum Caps	99.0	99.6	97.1
Aluminum Cans	97.2	93.7	93.9
Steel Sleeves	94.9	*	88.9

*No new sleeves were inspected during May.

A total of 3,120 aluminum cans received in a recent shipment from the Victor Company was inspected. It was necessary to reject 4.6% for wall thickness exceeding and falling below specifications. Other types of rejects compared with those for Scovill cans.

Material Handling

A total of 133 tons of alpha rolled rods was received from Simonds Saw and Steel Company. Thirty-six tons of uranium oxide (MD-2, MD-6, CRD-2, CRD-6, and C-6) were shipped to Mallinckrodt Chemical Works and five tons of solid uranium scrap were shipped to Los Alamos.

During the month, 2,900 U-235 alloy slugs were received, making a total of 5,424 received to date. A total of 2,203 pieces has

P Division

been processed and transferred to 105-DR and 100-H for experimental tests. In addition, 346 reject pieces were returned to ORNL during the month, making 357 pieces returned to date.

305 Test Pile

The test pile was operated on a two-shift, five day week schedule for the first week of May, and during the remainder of the month operated on a one-shift, six day week schedule. The additional shift and the sixth day were necessary to expedite testing of material for the H-10 program.

A total of 1,874 tests was made on "J" material including 16 tests on Al-Si samples from "J" canning baths. In addition, the following special work requests were run:

Request No.		No. of Tests
143	To determine the reactivity of a mixture of "J" pieces and 4" P-10-A pieces.	10
144	To determine the danger coefficients of two silicon greases to be used in 105 buildings.	2

Special Hazards

No unusual conditions developed during the month.

Development

Tests were run to determine the feasibility of eliminating degreasing from the chip pickle operation. The oil content on the pickled chips showed no significant increase and the objectionable scum accumulation on the surface of the pickle acid and rinse water was reduced appreciably. A savings of approximately $450.00 per year will be realized in labor and material costs by discontinuance of this solvent degreasing operation.

During the month DB furnace in the canning area was revised to accommodate a larger crucible. This will permit the use of three rather than two heating elements, thereby reducing the temperature of the individual elements. As a result of this work, it is estimated that furnace maintenance costs will be reduced $3,000 per year.

June 5, 1950

S DIVISION

MAY, 1950

OPERATING SECTION

I. GENERAL

Seventy-five charges were started in the Canyon Buildings, seventy-two charges were processed through the Concentration Buildings and sixty-eight charges were completed through the Isolation Building. The average purity for completed charges was 98.4 percent.

	B Plant	T Plant	Combined
Number of charges started in Canyon	39	36	75
Number of charges completed thru 224	36	36	72
Number of charges completed thru 231	35	33	68

Canyon and Concentration Building Production Performance Data - (5-1-50 thru 5-31-50, inclusive)

For Completed Charges:	B Plant	T Plant	Combined
Percentage of starting product in waste:			
This month	3.2(a)	3.1(a)	3.2
Last month	3.4(b)	3.2(b)	3.3
Cumulative to date	4.2(c)	3.9(c)	4.0
Percentage of starting product recovered:			
This month	95.3	97.2	96.2
Last month	97.1	95.8	96.4
Cumulative to date	96.9	95.6	96.3
Percentage of starting product account for:			
This month	98.5	100.3	99.4
Last month	100.5	99.0	99.7
Cumulative to date	101.1	99.5	100.3

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	B Plant	T Plant	Combined
Gamma decontamination factor (Log.)			
This month	7.41	7.42	7.41
Last month	7.37	7.44	7.41
Cumulative to date	7.36	7.35	7.36

(a), (b), (c): Includes waste from processing recycle. The recycle wastes are estimated as: (a) 0.013%-T Plant; 0.008%-B Plant. (b) 0.020%-T Plant; 0.001%-B Plant. (c) 0.085%-T Plant; 0.009%-B Plant.

Isolation Building Performance Data (5-1-50 to 5-31-50, inclusive)

	Prepared for Shipment	Recycle	Waste	Retained Samples	Material Balance
Average for this month	95.8	4.85	0.13	0.010	100.8
Average for last month	95.4	4.72	-0.16	0.024	100.0
Average to date	95.9	4.62	0.07	0.022	100.6

II. ORGANIZATION AND PERSONNEL

Number of employees on payroll:

Beginning of month	408
End of month	416
Net increase	8

Remarks: The changes which occurred in the S Division are listed below:

2 new hires (monthly roll)
2 new hires (weekly roll)
8 transfers from other divisions
1 transfer out of S Division
2 resignations
1 retired
1 transfer from weekly roll to monthly roll.

Changes in the supervisory organization:

N. E. Craft was promoted from weekly salary roll to supervisor-in-training on May 1, 1950.

A. J. Low was employed as a supervisor-in-training May 3, 1950.

C. P. Coryell was employed as a supervisor-in-training May 12, 1950.

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W. Watson, Jr., acting Senior Supervisor in the 231 Building, was made Senior Supervisor during the month.

III. AREA ACTIVITIES

PRODUCTION PERFORMANCE

B and T Plants and 231 Building

Extraction Waste Losses - B and T Plants

Significant data on extraction waste losses are tabulated below:

	B Plant		T Plant	
	May	April	May	April
Analyses before rework	1.62	1.82	1.72	1.70
Analyses after rework (throw-away)	1.11	1.28	1.16	1.15
Average MWD/Ton	378	363	374	354

No 600 Test Program material was processed during the month. Processing of 600 Test Program material, followed by Class C material is scheduled for T Plant late in June.

Acid Wash Run - B Plant

An acid wash run was completed through one of the parallel lines of the Canyon Building and through the Concentration Building of B Plant during the month. The data below details the product pick-up data of this run.

	Product Pick-up (Percent)					
	Extraction	12-7 and 1st cycle	2nd Cycle	221 Bldg. Total	224 Bldg.	Total thru Process
B-10-05-AW-1	6.6	13.1	14.5	34.1	9.9	44.1

Higher than normal pick-up of product in second cycle led to the finding of a defective spray in the second cycle product precipitator. The spray was replaced.

Acid Wash Run - T Plant

An acid wash run was completed through one of the parallel lines of the Canyon Building and through the Concentration Building of T Plant during the month. Product pick-up data is listed below:

	Product Pick-up (Percent)					
	Extraction	12-8 and 1st cycle	2nd Cycle	221 Bldg. Total	224 Bldg.	Total thru Process
T-10-05-AW-1	7.6	25.2	12.9	45.9	7.4	53.3

S Division

Higher than normal pick-up of product was experienced in the 12-8 tank and in the first cycle product precipitator. Batch size limitations on the preceding run had necessitated leaving a fraction of the run in 12-8 tank, accounting for the extra pick-up at this point. The spray in the first cycle product precipitator was found defective, and was replaced.

WASTE DISPOSAL

Second Decontamination Cycle Waste Supernatant Cribbing - B and T Plant

Approximately 328,000 gallons of supernatant from second cycle waste storage tanks X-106-B and X-110-B were cribbed during the month in the 200 East Area. In 200 West Area, the cribbing of supernatant from the X-112-T second cycle waste storage tank, started late in April, has totaled 462,000 gallons to date.

Waste Status

The status of the Waste Storage Areas as of May 31, 1950 is shown in the following table.

B Plant

Bldg. 241 Tanks	Waste	Percentage Full				Reserve Capacity in Batches to Process				
		B	C	BX	BY	B	C	BX	BY	Total
x101,2,3	Metal	100	100	100	24.1	0	0	0	491	491
x104,5,6	Metal	-	100	100	0.5	-	0	0	644	644
x201,2,3,4	Metal	-	100	-	-	-	0	-	-	-
x111,12	Metal	-	-	-	0	-	-	-	432	432
x104,5,6	1st Cycle	55.0	-	-	-	202	-	-	-	202
x107,8,9	1st Cycle	100	100	66.7	0	0	0	150	642	792
x109,10,11, 12	1st Cycle	-	-	-	-	-	-	-	-	-
x110,11,12	1st Cycle	-	100	66.7	0	-	0	150	-	150
x110	1st Cycle	-	-	-	0	-	-	-	214	214
x115,118	1st Cycle	-	-	-	-	-	-	-	-	-
x104,5,6	2nd Cycle	-	-	-	-	-	-	-	-	-
x110,11,12	2nd Cycle	58.0	-	-	-	341	-	-	-	341
x113,14,16, 17	2nd Cycle	-	-	-	-	-	-	-	-	-

T Plant

Bldg. 241 Tanks	Waste	Percentage Full			Reserve Capacity in Batches to Process			
		T	U	TX	T	U	TX	Total
x101,2,3	Metal	100	100	-	0	0	-	0
x101,2,3,4	Metal	-	-	46.6	-	-	430	430

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T Plant

Bldg. 241 Tanks	Waste	Percentage Full T	U	TX	Reserve Capacity in Batches to Process T	U	TX	Total
x104,5,6	Metal	-	100	-	-	0	-	0
x105,6,7,8	Metal	-	-	0	-	-	588	588
x107,8,9	Metal	-	100	-	-	0	-	0
x104,5,6	1st Cycle	100	0	-	0	-	-	0
x107,8,9	1st Cycle	100	-	-	0	-	-	0
x109,10,11, 12	1st Cycle	-	-	60.4	-	-	359	359
x110,11,12	1st Cycle	-	100	-	-	0	-	0
x110	1st Cycle	-	-	-	-	-	-	-
x115,18	1st Cycle	-	-	0	-	-	449	449
x104,5,6	2nd Cycle	-	-	-	-	-	-	-
x110,11,12	2nd Cycle	71.9	-	-	160	-	-	160
x113,14,16, 17	2nd Cycle	-	-	0	-	-	1092	1092

MECHANICAL PERFORMANCE

Canyon Equipment Failures - B and T Plants

A description of equipment failures in B and T Plant Canyons, for which replacements were necessary since excessive radiation levels made repairs impossible, is given below.

a) In T plant the failure of the batch size make-up tank sampler made necessary the discard of the sampler cell connector, and the installation of a new replacement.

Following are descriptions of equipment failures in the B and T plant canyons and associated buildings where repairs were successfully effected, or where radiation levels should permit repair of the failed equipment.

a) In B plant, the Section 18 centrifuge became inoperable when the dip tubes were bent by the centrifuge bowl. A spare centrifuge was installed in this position, and the damaged centrifuge is now undergoing repairs, after which it will be held as a spare.

b) In B plant, the second cycle product precipitator spray failed when the suction lift pipe failed at the threads and separated from the rest of the spray assembly. A new spray was installed, with the threads back-welded at this point.

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c) In T plant, a similar failure occurred in the spray of the first cycle product precipitator. A new spray was installed, and the old spray is now undergoing repairs according to the revised design described in item b) above.

Concentration Building Equipment Repairs - B and T Plants

a) A program has been started for the inspection and overhauling of all Concentration Building centrifuges during the next few months. Increasing maintenance of these machines, and higher production schedules in the near future, have made this program advisable.

In order to minimize the amount of lost operating time during this program most of the overhauling is being done on a spare motor and drive head assembly, on a scheduled basis, and the centrifuges are out of service only for the time required to move in the overhauled motor and drive head assembly and make the required adjustments to the centrifuge. The removed motor and drive head assembly is then overhauled, under improved working conditions, for installation in the next centrifuge.

At month-end, the B-2 and D-2 centrifuges have been overhauled in this manner in B plant, and the F-2 centrifuge is being overhauled in T plant.

b) Prior to the start of the overhauling program mentioned above, it was necessary to repair the E-2 centrifuge in T plant due to a loosened motor drive fork and a bent dip tube. On completion of these repairs the centrifuge motor failed, the result of a metal part breaking loose from the rotor, and damaging the stator windings. A replacement motor was installed and the centrifuge returned to service. The damaged motor is being repaired.

Isolation Building Equipment Repairs

a) Cell 3 was put into service during the month, following completion of the program for substituting air jets for water jets on the head tanks in this cell as described in last month's report. A new still and spider were also installed in this cell prior to start-up. Cell 4 was shut down for a similar program.

b) Corrosion failure of the Cell 2 still column, necessitated its replacement. This equipment had given one year of service, and had been frequently repaired by welding. Pyrex glass is under consideration as a more durable material of construction in this service.

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IV. SPECIAL HAZARDS

Sand Filter Operation - B and T Plants

The T Plant sand filter efficiencies discussed in previous monthly reports returned to normal with the drying of the filter. It was estimated that 20,000 to 30,000 pounds of water were removed. Recent tests have indicated that the actual efficiency of the filter did not decrease, but was indicated to be less because of monitoring difficulties experienced as the result of the moisture in the air streams.

An investigation was started in May to determine the dust and particle loading of ventilation air, as well as the efficiency with which atmospheric dust is removed in the ventilation air intake air conditioners. It is hoped that this investigation will permit closer prediction of sand filter-life, and possibly enable refinements to be made in operation leading to longer sand filter life.

G.E. Cocoon Installation on Concentration Bldg. Process Tanks

Equipment for placing G.E. Cocoon on Concentration Building process tanks has been received, and is now being used for this purpose. This plastic strippable film will be used principally to seal off the open clearances around center-mounted agitators on process tanks, and will reduce the escape of contamination from the roof ventilators of the Concentration Buildings.

V. PROCESS CONTROL SECTION

Dissolver Off-Gas Filters (Project C-337) and Silver Reactor (C-378)

The fabrication of the dissolver off-gas filter box has been delayed by the lack of filter media and screens. Delivery of these items has been promised for June. The project proposal for the silver reactor for iodine removal has been approved by the AEC, and a work release was issued on 5-22-50 authorizing procurement of materials and designating specific work assignments.

Increased Capacity for Canyon and Concentration Buildings

The Project Proposal for increased capacity in F cell, Concentration Buildings has been approved by the A & B Committee and has been submitted to the AEC for approval. Project Engineering is currently working on the plan for increasing the capacity of the second cycle operation in each Canyon Building through utilization of a Section 20 precipitator vessel in combination with the Section 19 centrifuge. This project proposal will be submitted in June for the necessary approvals.

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Settling of Canyon Cell Drainage Wastes

Diversion box piping changes have been made in B plant to permit the diversion of first cycle wastes in 241-B Waste Storage Area to the X-104-B series, thereby releasing the X-112-B series for use in settling the 5-6 W cell drainage wastes.

Cell Drainage Conductivity Meters

The experimental conductivity electrodes installed in the Section 17 sewer line of B plant Canyon Building have worked satisfactorily, and a work order has been issued to Project Engineering for the preparation of drawings and a project proposal for the installation of electrodes in Sections 7R, 9R, 13R, and 17R of both Canyon Buildings.

Special Sampling

The following special samples were obtained and delivered during the month:

a) 2,000 ml of un-neutralized cell drainage waste from T plant Canyon Building.

b) 200 ml of second cycle waste sludge from tank X-110-T.

c) 500 ml of un-neutralized second cycle waste from T plant Canyon Building.

d) 100 ml of dissolver solution from T Plant Canyon Building.

The above samples were all delivered to the Separations Technology Division for its use.

VI. EXPANSION SECTION

1. Rala

General

On May 2, 1950, the Atomic Energy Commission notified the General Electric Company that the Radio Lanthanum project was cancelled, and that orderly termination and close-out of the project was to be effected as soon as possible.

Status at End of Month

The Separations Design Division issued a Completion Report for Project C-343 (HDC-1770) which describes the progress of work till cancellation date and provides a bibliography of documents, prints etc. A report by the Technical Divisions describing technical design progress is expected to be issued before June 15, 1950.

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S Division

The Separations Design Division is presently working on a cost estimate which will reflect the total expenditures and commitments till May 2, 1950, cancellation charges and value of materials which can be used on other projects. This cost estimate is scheduled for transmittal to the AEC by June 15, 1950.

The physical work involved in restoring the Rala project construction areas to a proper status and the handling of equipment involved are essentially completed.

2. Metal Waste Recovery Plant

General

Effective May 8, 1950, F. A. Hollenbach was appointed Contact Engineer for the TBP and UO_3 Facilities, vice R. C. Grant transferred to other duties.

A letter proposal requesting funds for:

a) Preparation of U Canyon
b) Construction of first recovery system
c) Construction of mock up building

was issued and approval received from the A & B Committee on 5-9-50. It is anticipated that a directive will be forthcoming from AEC during the first week of June authorizing this work to proceed.

Essential Materials

a) Nitric Acid

The Design and Construction Divisions are currently studying the nitric acid supply situation. They have requested the Purchasing and Stores Division to investigate the availability and price of excess Ammonia Oxidation Pressure units, the availability of stainless steel tank cars, and the availability of the required quantities of acid and ammonia. It is anticipated that this nitric supply problem and economic study will be resolved in the near future.

b) Diluent

Four companies have submitted their specifications for the petroleum diluent in the TBP Process. The Chemical Development Section of the Separations Technology Division is currently reviewing the specifications submitted since they are not entirely consistent with the original criteria established.

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c) TBP

Four firms have shown a definite interest in supplying the TBP, two of which have stated their ability to meet specifications and supply the quantities required.

d) The remaining essential material procurement poses no problems.

Design

A. Phase I - Metal Removal - One Cascade 241-U

1. A conference was held with the Kellex Corporation in New York relative to the Engineer's Flow Sketch of this phase. Major points of agreement were the removal of the heat exchanger and Dorr Thickener from the process since current data indicate that these undesirable major pieces of equipment are not required for the operation.

2. Kellex is proceeding with the scope design of this phase which is to be completed for transmittal to G.E. about June 5, 1950. Detailed design work is being completed in conjunction with the scope work in compliance with work authority No. C-362 (2) Release No. 4 dated 5-11-50 which authorizes Kellex to proceed with preparation of detailed design of the first waste removal system prior to receipt of formal G.E. approval of the scope material.

B. Phase II - Metal Removal - Remaining Cascades

1. Since the basic design of this phase parallels that of Phase I, no specific work has been authorized for Phase II up to the present time.

C. Phase III - Design of Underground Pipe Lines

1. The scope of this work is approximately 95% completed by the Power & Mechanical Division of the Design and Construction Divisions. Design bases for this scope working describing pipe lines, diversion boxes, and encasements were presented for signature during the month. The major alteration to the original scope was the elimination of the East Area storage and booster pump station, since flow data for the intra-area solution transfer reveal that a nominal initial pressure will be sufficient for the transfer.

D. Phase IV - Reactivation and Conversion of 200-U Area for the TBP Project

1. Scope work for this phase is approximately 91% complete.

2. The following tracings were presented for signature during the month:

   a) 43 Engineering Flow Diagrams which included Buildings 221 and 224 process requirements.

   b) Schematic layouts of the operating gallery cold tankage, organic handling system located south of the canyon, 271 Building chemical make-up and the canyon arrangement.

3. The following outlines the status of the Design Instruction Letters scheduled for the TBP Project:

Number	Title	Status
G-1	Architectural and Structural	Approved
G-2	Electrical	In Process
G-3	Heating and Ventilation	Approved
G-4	Dismantling & Renovation of U Area	In Process
G-5	Outside Facilities	Not Started
G-6	291 Ventilation	Approved
G-7	Railroads, Walks, and Roads	In Process
G-8	Communications	In Process
G-9	Mock-Up Facilities	Approved
M-1	Materials of Construction	In Process
M-2	Process Equipment	Being Revised
M-3	Rotating Equipment	Approved
M-4	Demineralized Water	Approved
M-5	Protective Coatings	Not Started
M-6	Canyon Crane	Approved

4. The Instrument Engineering Flow Diagrams have been reviewed and commented on prior to issuance for approval. The major controversial point centers on the use of orifice meters vs. rotometers as flow control mechanisms in the TBP Process. The Separations Design Division will issue a report on the overall rangeability of the plant and will make a rough economic study on orifice meter vs. rotometer installations.

   The graphic panel board layout which includes the instrumentation of all major process equipment has just been received for comment at month end.

5. Preliminary corrosion studies of the RAF and RAW solutions were completed by the Chemical Development Section of the Separations Technology Division and indicated that stainless steels were not serviceable in the RAW concentration and nitric acid recovery step with the possible exception of

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Carpenter Type 20. Tantalum showed good corrosion resistance on all tests. A meeting of the Separations Committee and the TBP Working Committee was held on 5-25-50 to discuss this corrosion problem. Considering the present corrosion data, design timing, and project costs, it was decided to eliminate the nitric recovery step and rescope the RAW system in order to provide for the neutralization of the RAW solution and the concentration of this neutralized solution to a saturation point at an operable temperature.

It is probable that a lower acid flow sheet will be issued in order to aid in reducing the waste volume. Assuming a lower acid flow sheet than HW-3 and the handling of concentrated neutralized waste at 30° C from 221-U to waste storage, an estimated 130% volume will be sent to storage, compared to 100% volume taken out. If the temperature of the waste solution can be maintained at 40° C during the disposal transfer and the solution concentrated to the saturation point at this temperature no added waste storage will be required for the process.

As a separate phase to this re-scope, it was decided that the present corrosion tests program would be continued in anticipation that the results would show some means of nitric recovery without abnormal fabrication problems. In conjunction with this study the above re-scoping is to be completed with as few changes of piping and layout as possible so that the acid recovery process can be incorporated at a later date with minimum changes. It is anticipated that forty new drawings and an additional month period will be required for this re-scope period.

E. Phase V - Stripping of 221 and 224-U Buildings

1. This item is pending the authorization of funds by the AEC. In anticipation of this authorization, the Manufacturing Divisions are preparing a complete and revised listing of U Area Equipment and its allocation prior to turning over the responsilibities of the U Area Plant to the Design and Construction Divisions.

Development

1. The Chemical Development Section issued the pulse column specifications on 5-17-50 (Doc. HW-17773). The Separations Design Division has made a study on the effects of the pulse column installation in the present cell layout. The Chemical Development Section is fabricating a simulated column and pulsing mechanism and a testing program is to be initiated by 6-6-50. It is expected that sufficient information will be available for a comparative evaluation of the packed and pulse column sometime in July.

2. A request was made by the Manufacturing Divisions to the Separations Design Division to conduct a pump life test on the most promising type of pump for the TBP process prior to plant operation. The Design Division is at present working out a testing program for approval.

3. The Chemical Development Section has recommended the use of sulfamic acid and ferrous ammonium sulphate crystals dissolved in nitric acid as a method for preparation of a ferrous sulfamate. This procedure is simpler, operationalwise and equipmentwise, than the initially proposed method of the use of iron powder, sulfamic acid, and nitric acid and has been accepted for the ferrous sulfamate make-up.

3. UNH Conversion to UO_3

1. At month end the Design and Construction Divisions have submitted to the Manufacturing Divisions a proposal to locate the UO_3 facilities in the 224-U Building, and at present the scope work is progressing on this basis.

2. The scope of this work is approximately 24% completed.

3. The Engineer's Flow Sketches have been reviewed and commented on. In general the process is identical to the Mallinckrodt process with a few refinements which include electrical decomposition furnaces, and a more efficient dust control system.

4. Redox

General

Mr. R. W. Waldsmith, shift supervisor, joined the group on 5-22-50 on a temporary basis. His former assignment had been as field representative for the MJ-3 project.

Design

a) Drawing Review

In order to expedite the flow of approved-for-construction drawings to the General Contractor and to the General Electric Stores and Purchasing Division, it was found expedient to revise the established method of print review. In an agreement reached between G.F. and the Kellex Corp. it was resolved that the Separations Design Division (and consequently the Redox Contact Engineers Group) would review for comment, in the manner heretofore established, only a small and predetermined number of "key" or representative drawings in each major category of design. It was further agreed that the Separations Design Division would select at random, and unknown to Kellex, an

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equal number of prints. The remaining drawings will be approved for construction without detailed checking or comments. However, it is understood that Kellex will review and modify, if necessary, all drawings represented by the "key" drawings in conformance with comments made on specific prints.

The following table will illustrate what the agreement involves in terms of the number of drawings scheduled by Kellex:

	Total To Be Made	Total Received	To Be Sampled
Engineering Flow Diag.	33	31	2
Architectural	109	106	0
Structural	117	109	0
Heating & Ventilating	92	47	5
Mechanical	312	182	46
Piping	907	115	16
Electrical	116	62	6
Instrument	176	33	15
Mock-up	48	48	0
Stack, Filter & Fan	49	0	[illegible]
Total	1,959	733	96*

*The Manufacturing Divisions have not been notified as yet of the drawings to be selected for random sampling.

b) Engineering Flow Diagrams

File prints of revision 1 of the Engineering Flow Diagrams were received following approval of the revisions.

c) Drawings for Approval

A number of tracings were presented for approval signature during the past month covering the following subjects:

a) Class I vessel assemblies
b) Revision I of architectural and structural drawings
c) Lighting plans in the pipe galleries and service portions of the building
d) Silo viewing window construction.

d) Power and Mechanical Division Design

The P & M Division submitted plot plans of the exclusion area showing roads, walkways and facilities in the vicinity of the 202-S Bldg. A major comment on these drawings resulted in the reduction in size of the exclusion area, made possible by the elimination of the 203-S Bldg. which is now intended for

installation in 224-U Plant. Requests were also made for evacuation bus parking in the exclusion area.

e) Decontaminated UNH Transfer

At a meeting attended by members of the Design and Manufacturing Divisions a decision was reached as to the method of transferring decontaminated UNH material from 202-S operations to the UO3 plant site. It was agreed to propose transfer via a 1 1/2" pipe line. The line will be run above ground and will be supported from the west branch of the main steam line between the Redox and TBP areas. Two tanks, 307 A & B (reserved from excessed U Plant vessels) serving as hold-up tanks will be tied together by connecting lines to make essentially one tank. A submerged transfer pump installed in one of the tanks and rated at 20 gpm will pump the metal solution an estimated distance of 4,000 feet. Members of H.I., Accountability and Security sections have been consulted and all approve this method of transfer without reservation.

f) Remote Connector Tests

Model tests of remote connectors designed by the Crane Co. and Pyle National Co. have been completed. Except for minor modifications to the electrical connector and the sampler connector, all units have been approved for production as supported by model test.

g) Vessel Vent Filters

Because the Manufacturing Divisions felt that information presented to the vendor by Kellex on subject drawings was far too sketchy to assure proper operation of the vessel vent filters, it was requested that detailed instructions be issued for packing Fiberglas filters.

h) 241-S Tank Farm

The contract for construction of the 241-S tank farm and associated equipment has been awarded to the Early Co. of San Francisco.

i) Hot Process Pumps

Design of hot process pumps has progressed to the point where two sizes of pump heads will meet all process needs. The seventeen pumps required will be mounted on seven different shaft lengths, the greatest number of any shaft length being three. To fulfill spare equipment requirements one spare pump assembly for each shaft length will be ordered.

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j) Metering Pumps

Bids have been submitted by four vendors interested in supplying the nine metering pumps required for the Redox process. Because of the fact that coordinated work, which resulted in the development of a successful pump, was necessarily carried on with only one of the four vendors (Proportioneer's Inc.), the Separations Design Division has recommended that bids be waived and the vendor specified.

k) Process Sampler

While the Kellex version of the remote sampler gave evidence that considerable time and effort were expended in its design, the Manufacturing Divisions expressed disappointment in the fact that it failed to meet our basic requirements of operational simplicity and ease of future maintenance. The design proposed is expensive and mechanically complex.

Construction

a) 202-S Building

1. To date, 2,000 yards of concrete have been poured in the 202-S Bldg. lower levels, although some delay in the schedule was occasioned during the latter part of the month awaiting delivery of Y-frame anchor bolt assemblies. The building footings are approximately 50% complete.

2. Bending and testing of piping in concrete was started at month end upon receipt of kick plates and cell wall male ends.

3. Bending of the stainless steel process sewer pipe has been started, and the pipe will shortly be cast into the floor of the Remote Shop, Decontamination Room and Regulated Shop.

4. During the latter part of May work was begun on outside facilities. Steam header support piers installation is 30% complete and excavation for water mains is in progress.

5. Minor Construction forces engaged in clearing the slab yard for the railroad right-of-way have completed 80% of this work.

b) 277-S Building

Installation of building piers is estimated at 75% of completion. Excavation for the silo pit is 90% completed.

c) 241-S Building

Tank farms and construction buildings to be used in constructing the 241-S waste storage tanks have been transferred from the 200 East Area and are now on the 200 West Area site. The contractor started the excavation on 5-29-50.

5. First Cycle Waste Evaporation

1. Due to the urgency of the need for the first cycle waste evaporation facilities, the Project Engineering Divisions are proceeding with design on a six day basis. On this basis, it is anticipated that design of the first evaporator will be advanced far enough to permit construction work to be initiated not later than September 1, 1950 providing that the contract can be let on a CPFF basis.

2. The design work is approximately 35% complete.

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POWER DIVISION
MAY 1950

GENERAL

A survey of Power areas of low relative elevation was made, and plans developed for flood protection as a result of predicted flood conditions in the Columbia River.

A severe disturbance on the electrical power system from 12:26 p.m. to 12:34 p.m. on May 8, caused process water pressure variation of 50 psi to 65 psi at the 190 Process Pump Houses. Several non-critical ventilating and pumping units relayed out in the 100 Areas. Operating electrical equipment at practically all Power Division locations in the 200 Areas relayed out as a result of this disturbance. The equipment affected was restarted without difficulty.

Installation of plastic shields around hazardous gauge glasses at all locations was completed during the month as a safety measure.

PERSONNEL AND ORGANIZATION

No. of employees on payroll - May	
Beginning of month	539
End of month	546
Net Increase	7

The indicated net increase was the result of the transfer of eight people into the Division, and the removal from payroll of one employee on account of illness.

100 AREAS

In the 100-B Area, the 184 Building incoming electric line, emergency feeder, and station auxilliary circuit breakers were relayed out of service at 1:13 p.m. on May 26, as a result of construction activity. Normal conditions were restored at 1:27 p.m.

In the 100-D Area, 182 Reservoir Pump House, the condenser water system was out of service from 4:00 p.m. on May 8 until 12:30 p.m. on May 9, while a 24-inch connection was made for new facilities.

On May 11, process water to the 105-DR was started and supplied from the D Area Process Pump House.

Work was started on the removal of the Nos. 5 and 6 compressor foundations in the 189 Refrigeration Building in the 100-D Area on May 8, to make space available for the installation of a heat transfer unit for the Design and Construction Division. A 2-inch steam connection for this unit was made in the 190 Process Pump House on May 24.

Power Division

In the 100-D Area Power House, Building 184, on May 24, the 4-inch water supply line to the deaerator was replaced with a 6-inch line, and a 10-inch valve was installed on the No. 2 steam manifold header in connection with the expansion of boiler house facilities.

In the 100-F Area, recaulking of the filter backwash line in the 183 Filter Plant was completed on May 19.

In the 100-H Area, the No. 2 chlorinator at the 183 Filter Plant was removed on May 2, and three silicate injection pumps in the 190 Process Pump house were removed on May 1. These units will be used in the 100-DR expansion program.

200 AREAS

The No. EM-2 exhaust fan at the 234-5 Facility has been out of service since April 19. In the meantime, exploratory work has been carried on to determine the most practical method of repairing, or replacing the fan shaft.

The re-tubing of the deaerator vent condenser in the 200 East Area 284 Boiler House was completed on May 10.

In the 200 West Area 284 Boiler House, a test was made on May 25 to determine the draft capacity of the No. 2 stack. Stack draft conditions were determined to be satisfactory at a peak steam load of 80,000 lbs./hr. per boiler.

300 AREA

A Johnson air compressor was installed in the 384 Boiler House on May 5 to supply air for the No. 3 boiler controls in the event of a power failure.

The installation of explosion proof switches on the coal handling equipment was completed on May 25.

A new 6-inch line was installed from the Nos. 3 and 4 well header to the 321-S process on May 26. This installation permits the use of inferior quality well water for process cooling purposes and will relieve the overloaded condition of the sanitary water system.

101 TECHNICAL SHOPS

Work is in progress to overhaul the air conditioning units on the building roof and to raise the circulating water pumps which are attached to the roof.

WHITE BLUFFS ICE PLANT

The elevated water storage tank was out of service on May 16 and 17, while repairs were made to stop leaks. There were 1,649,700 pounds of ice in storage on May 31.

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Power Division

POWER ENGINEERING SECTION

A test is in progress in the 100-H Area to evaluate the relationship of water quality to 107 basin activity.

The 183 Filter Plant process pump head reduction study was completed and final recommendations submitted.

The continued study of filter plant operation, analysis of steam distribution systems, 300 Area water system, and power house tests were additional items handled during the month.

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POWER DIVISION STATISTICS

From May 1, 1950

Through May 31, 1950

			AREAS 100-B	100-D	100-F	100-H
RIVER PUMP HOUSE (Bldg. 181)						
River state Feet above sea level		(max)	402.6	391.8	378.5	383.8
		(min)	392.0	383.3	369.7	375.6
		(avg)	396.8	387.3	374.0	379.4
River temperature	avg. °F.		48.9	48.0	48.4	48.4
Water to Reservoir	gpm avg.rate		40,517	43,928	39,230	55,963
RESERVOIR (Bldg. 182)						
Water to Filter Plant	gpm avg. rate		33,979	36,703	33,602	43,290
Water to Condenser System	gpm avg. rate		* 5,132	* 5,692	* 5,170	*12,228
Water to Export System	gpm avg. rate		1,406	1,533	458	445
	gpm nor. rate		3,842	3,842	3,842	3,842
Chlorine added #1 inlet	pounds		19,900	24,760	23,200	33,500
FILTER PLANT (Bldg. 183)						
Filter water Power House	gpm avg. rate		230	259	233	220
Filtered water to Process	gpm avg. rate		31,732	31,637	30,205	37,896
Filtered water to construction	gpm avg. rate		0	0	0	0
Filtered water to DR Process	gpm avg. rate		0	190	0	0
Filtered water Fire & San.	gpm avg. rate		208	211	200	124
Chlorine for Water Treatment	pounds		6,200	3,172	5,800	4,500
	ppm avg.		1.81	1.74	2.05	1.89
Lime for Water Treatment	pounds		75,000	92,000	80,400	197,000
	ppm avg.		5.9	6.7	6.4	13.2
Coagulant Water Treatment	pounds		159,800	211,840	183,000	346,320
	ppm avg.		12.6	15.5	14.6	21.5
Raw Water pH	pH avg.		7.82	7.78	7.8	7.8
Finished Water pH	pH avg.		7.68	7.69	7.67	7.76
Alkalinity, M.O. - Raw	ppm avg.		56	55	59	58
Finished	ppm avg.		57	53	60	56
Residual Chl. - Settled	ppm avg.		.23	.16	.17	.22
Finished	ppm avg.		.13	.09	.12	.14
Iron - Raw	ppm avg.		.44	.60	.53	.67
North Clearwell	ppm avg.		.01	.01	.01	.01
South Clearwell	ppm avg.		.01	.02	.01	.01
Hardness - Finished	ppm avg.		79	72	70	68
Turbidity - Raw	ppm avg.		18.3	21.0	21.0	22.0
Filtered	ppm avg.		0	0	0	0
*Process Waste Dilution Incl'd	gpm avg. rate		1,546	2,677	2,000	6,187

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Power Division

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From May 1, 1950

Through May 31, 1950

		100-B	100-D	100-F	100-H
POWER HOUSE (Bldg. 184)					
Maximum Steam Generated	lbs./hr.	128,000	140,000	132,000	145,000
Steam generated - Total	M pounds	87,945	94,251	88,340	78,299
Avg. rate	lbs./hr.	118,205	126,681	118,737	105,240
225 psi Steam Plant (est)	M pounds	74,207	79,555	74,542	66,028
15 psi Steam Plant (est)	M pounds	370	370	370	370
Coal Consumed	Tons	6,624	6,608	6,427	5,933
Coal in storage (est)	Tons	37,624	36,870	37,209	34,970
DEAERATOR PLANT (Bldg. 185) AND 190-H TANK ROOM					
Water flow	gpm avg.rate	31,482	31,577	29,955	37,646
Chemicals consumed:					
Dichromate	pounds	22,300	22,900	19,800	30,000
Sodium Silicate	pounds	0	0	0	0
Chemical Analysis:					
pH	pH avg.	7.64	7.65	7.66	7.65
Dichromate	ppm avg.	1.8	1.9	1.8	1.8
Dissolved Iron	ppm avg.	.01	.02	.01	No Anal.
Free Chlorine	ppm avg.	.07	.12	.12	No Anal.
PROCESS PUMP ROOM (Bldg. 190)					
Process Water to 105-DR	gpm avg.rate	-	190	-	-
Total water pumped	gpm avg.rate	31,307	31,212	29,780	37,471
	gpm nor.rate	32,336	32,555	31,230	40,200
Water temperature	avg. °F.	51.1	51.4	51.1	51.1
VALVE PIT (Bldg. 105)					
Chemicals consumed:					
Solids	pounds	1,300	2,000	2,800	1,550
Chemical analysis:					
A, B, C, & D Headers					
Standard limits					
pH 7.5 - 7.8	pH (max)	7.65	7.70	7.65	7.70
	(min)	7.60	7.60	7.60	7.60
	(avg)	7.60	7.65	7.64	7.65
$Na_2Cr_2O_7$ 1.8 - 2.2	ppm (max)	2.0	2.0	2.0	2.1
	(min)	1.8	1.8	1.8	1.7
	(avg)	1.9	1.9	1.9	1.9
Iron	ppm (max)	.03	.02	.03	.028
	(min)	.01	.01	.01	.001
	(avg)	.01	.01	.02	.009
Chlorides	ppm avg.	1.7	1.8	1.6	1.9

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Power Division

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From May 1, 1950

Through May 31, 1950

200 AREAS

		200-East	200-West
Reservoir (Building 282)			
Raw water pumped	gpm avg. rate	1,790	2,052
Filter Plant (Building 283)			
Filtered water pumped	gpm avg. rate	294	728
Chlorine consumed	lb.	256	280
Alum consumed	lb.	2,674	5,874
Chlorine Residual - Sanitary Water	ppm	.8	.3
Power House (Building 284)			
Maximum Steam Generated	lbs./hr.	33,000	70,000
Steam Generated - Total	M lb.	16,115	33,066
Steam Generated - Ave. Rate	lb./hr.	21,659	44,443
Coal Consumed (est.)	Tons	1,299	2,411
Coal in storage (est.)	Tons	7,555	20,040

300 Area

Power House (Building 384)		
Maximum Steam Generated	lbs./hr.	16,700
Steam Generated - Total	M lb.	10,152
Steam Generated - Avg. Rate	lb./hr.	13,640
Coal Consumed - Total (est.)	Tons	772
Coal in Storage (est.)	Tons	2,418
Sanitary and Fire System		
Sanitary Water from 3000 Area	gal.	34,901,100
Well Water Pumped - Total	gal.	3,693,150
Total water per day	gal/day	1,244,900
Total Water	gpm avg. rate	865
Chlorine Residual	ppm	.35

MISCELLANEOUS AREAS

White Bluffs		
Ice Manufactured	lbs.	659,400
101 Technical Shops		
Coal Consumed	Tons	216

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HW-17971 -Def

INSTRUMENT DIVISION

MONTHLY REPORT FOR MAY, 1950

GENERAL

The instrument maintenance work load is increasing throughout the plant. This is attributed mainly to experimental test work notably in the 100 Areas, Building 222-U, and Building 305.

In contrast the machine shop work load is down and some lay-offs are anticipated in early June.

The Development Section has an unusually large backlog of work. Emergency field engineering studies are utilizing much of the available time of this group.

100 AREAS

All but 240 gauges of the process tube water pressure monitor in 105-H have been replaced with factory reconditioned units.

The balancing motors in the Power Calculator in 105-H have been a continuing source of trouble due to binding. To date 10 of the 26 have been replaced with a preferred type motor.

Shutdown Experience

At 100-B Area: Controlled shutdown at 9:12 p.m. on May 25, 1950 due to poor jumper connection between pressure monitor gauges 1166 and 1167.

At 100-F Area: Scram at 10:22 a.m. May 2, 1950 when two Beckman annunciator tabs dropped. Units checked normal, but at time of incident they were being supplied by unregulated voltage. (Sola transformer to replace one that failed April 19, 1950 was not installed until shutdown of May 3, 1950).

Scram at 3:25 p.m. May 22, 1950 when annunciator tab to No. 4 Beckman dropped. No cause for trouble was isolated.

At 100-H Area: (See first entry under Reports & Studies, below). Six scrams and several near scrams occurred during the month. After careful studies and numerous attempts to isolate the trouble, two changes were made.a)On May 23rd a Sola constant voltage transformer was installed in the power supply to the recorders for the Beckmans to prevent possible voltage surges from the recorders entering the Beckman power supply. b) On May 24th, 5R4GY Rectifier tubes were substituted in the Beckman RXG-2 micromicroammeters for the80 Rectifier tubes which were apparently shorting between electrodes.

Further studies are being made although no troubles attributed to instrument failure have been experienced.

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Reports and Studies

Report, "Shutdown Experience, 105-H - May, 1950" submitted by J. D. McCullough.

Report, "Water Supply Failure to 'B' Hole, 105-D" submitted by E. S. Day, Jr.

200 AREAS

T & B Plants - Production Instruments

Development work on a conductivity meter designed for remote operation and ease of maintenance for use in drains of individual process cells in canyon buildings has been completed. The prototype cell was installed in Section 17-R, 221-B Building. Response and general performance satisfactory.

Z Plant - Production Instruments Bldg. 234-5

Possibility of measuring core surface temperature by radiation rather than contact methods is being considered. Temperatures are difficult to reproduce. Contact thermocouples do not yield reproducible results owing to variable contact pressure, tip construction, etc.

Ventilation System

The new atmospheric reference tip has proved satisfactory under gusty and high wind conditions. Minor changes have been made in the zone pressure controllers to improve performance. Control in general has been satisfactory.

300 AREA

MANUFACTURING SECTION

P-3330-58- - H.I. Operational Division Survey Instruments

Work has been cancelled on the conversion of 26 Zeuto Survey Meters. The instruments and related components have been forwarded to the Calibrations Section, Health Instrument Divisions. The only remaining work on this project is the inspection and testing of 75 instruments being supplied by outside vendors.

P-1920-58891 - Operational Instruments for Biology Laboratory - 108-F Bldg.

4 Mica Window Sets completed and delivered.

1 Pulse Generator completed and delivered.

2 HM Chambers completed and delivered.

Parts for Vibrating Reed Electrode Assemblies - awaiting delivery of special tapered glass connections.

2 L. B. A. Sets Complete - Drawings have been completed and are now in the field for approval.

1 Chicago-type Fluorophotometer - Awaiting field approval of drawings revised to incorporate modifications recently requested.

OPTICAL SECTION

Modification of Crane Periscope for 202-S Building - Drawings have been completed and approved. The remaining work is scheduled for resumption early next month.

Non-routine work of interest included: the installation of the Underwater Viewer in the 100-F Area; the completion of a special Lead Glass Viewer containing 54 sheets of 1/4 inch Pittsburgh lead plate glass; some time was spent in studying the failure problem associated with the change-of-power mechanism for crane periscope (several mock-ups made to test the operation and a method has been devised to reduce the probability of solenoid overloads.

MAINTENANCE SECTION

305 Building

Operation was continued on a 2-shift basis throughout the month. Saturday coverage has been supplied on an overtime basis.

DESIGN & CONSTRUCTION GROUP - 760 BLDG.

Project C-300 (100-G Area)

Plans are being made to field check the demonstration unit for rapid scanning of process tube exit temperatures recommended in HW 16092.

Project C-187-D (Redox S)

The ventilation specifications prepared by Kellex were reviewed with the Kellex engineers. On the basis of HW experience the specifications were rewritten to more exacting requirements.

Considerable reworking of instrument requisition data sheets has been required. The mechanics of this has now been transferred to Kellex field group to be done with our guidance. The backlog should be eliminated within the next week.

The small meter pump purchased from Proportioneers, Inc. for test on the low flow rates (.006 gallons per minute) has been modified by the manufacturer to meet the accuracy requirements under varying suction and discharge pressures which may be required.

Project C-343 (Radio-Lanthanum)

This project was cancelled on May 2. A report concerning the progress on instrumentation to this date was submitted. A special report HDC 1764 is being written to summarize the work done on ionization chambers.

Project C-362 (Tri-Butyl Phosphate Process)

Proposed 241 Tank Farm periscope design has been resolved as to dimensional, lighting, and decontamination requirements and submitted for approval.

Graphic panel layouts (Boards A, B and C) have been completed for the 221-U Building and are being issued for comment. Instrument flow diagrams for 224-U Building Cells A, B, C and D have been completed. Cell E will be completed by June 1 and all prints will be issued for comment. The graphic panel layout for the above is complete and will be issued for comment on the same date.

Plans have been started for rescoping a part of the Tri-Butyl Phosphate Process. This will probably involve changes in nine of the instrument flow diagrams and the three of the graphic panels.

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MAINTENANCE DIVISION

MAY, 1950

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GENERAL

The Maintenance Division had a work backlog of 7969 mandays at the close of the month. This represents a 28.5 day backlog for the present force.

100 AREAS

General

The installation of plastic safety guards, over all sight glasses under pressure, has been completed throughout the 100 Areas. This program was initiated when a sight glass under steam pressure, failed and injured an employee.

Special metal shoring to hold shipping casks in place when enroute on rail cars was designed and fabricated in the area shops. This will eliminate the cost of installing wooden shoring for each shipment.

100-B

An under ground crib was installed near the 111-B Laboratory to permit disposal of the contaminated waste water from the storage basin in the laboratory.

A new type of bullet nose guide was developed for leading replacement process tubes through the pile graphite. The new guide is fastened to the replacement tube by rubber retention rings which permits the tube to be cut to proper length and the ends annealed before installation.

100-H

To control rusting on the "H" pile vertical safety rods, a solution "Ospho" has been applied to rods 16 through 35. This solution was found to be acceptable for this use after field tests and technical checks had shown it was not detrimental to pile operation. Coating was necessary only where the chrome plating had been removed by construction forces in field grinding a chamfer to overcome misalignment at the joints.

The vent stack on the effluent line just outside of the 105-H Building was removed and the opening in the junction box was covered with a steel plate. This vent was removed to eliminate the spread of contaminated gases in this vicinity.

200 AREAS

General

The sand blasting and repainting of twenty transport car casks was completed. Due to contamination of the old paint and rust removed by sand blasting, it was necessary for personnel doing the work to be completely protected by rubber clothing and fresh air masks were used.

Maintenance Division (continued)

200 WEST

In maintenance of the 234-5 process hood line, it was necessary:

1. To install an 8" rubber glove port in Hood #6 top panel in order to service the upper assembly in the hood.

2. Replace four monel jets in Hood #8. Failure was due to erosion and corrosion in the throat. Replacements were made with three new monel jets and one Karbate jet. The Karbate jet was fabricated in our shop. Previous tests have indicated the possibilities of overcoming failures of this kind by changing to this material.

3. Replace the Cenco vacuum pump to Hood #19 with a new spare. Removed pump will be reconditioned and held for future use.

4. Install a cleaned diffusion pump on Hood #25 vacuum system and make minor repairs and replacements on the Hood #26 vacuum system.

200 EAST

A change in the method of overhauling centrifuge drive heads resulted in a savings of 138 hours in production downtime and $2,000 in maintenance labor costs while overhauling centrifuges "B" and "D" in the concentration Building. These savings were accomplished by removing the drive heads from the cells to a temporary building located outside of the concentration building. A spare drive head was installed on the first centrifuge and the drive head removed was overhauled in the temporary structure, preparing it for the next centrifuge. This method precluded the necessity for mechanics to work under short time limit SWP conditions.

During a schedules electrical power outage in 200 Area, it was discovered that the emergency steam driven canyon exhaust fan could not maintain the desired pressure differential between the building and outside atmosphere. To prevent the possibility of complete loss of ventilation the electrical service was restored at an early hour. Test conducted subsequent to this event have established the cause of the low pressure as being due to belt slippage between the drive and the fan. Since the type of "V" belt in use cannot be held tight enough to transmit this power over long periods of time a change to a better belt with an idler to maintain tension will be made in both East and West Areas.

All tubes in the deaerating condenser in the power house were replaced when inspection revealed advanced corrosion had destroyed sections of the existing tubes.

300 AREA

A new "V" belt drive was designed for use on the 313 Building exhaust fans which will increase the efficiency of the fan and belt life. Investigation had

Maintenance Division (continued)

shown the sheaves diameters to be under recommended size and this caused excessive belt slippage. The new sheaves and belts are being purchased and will be installed.

A special all metallic gland seal was purchased and installed in the chip washer recirculating pump in 313 Building for test purposes, to eliminate periodic repacking.

To prevent possible back up of process water, from the 314 Building autoclaves into the sanitary water supply system, a head tank and float valve have been installed. This replaces a direct connection through a check valve which could have failed.

In order to provide adequate cooling water supply to the 321 Tank Farm during the expected summer shortage in the sanitary system, a direct 6" connection was made to numbers 3 and 4 wells in the area. This well water is not of the quality for sanitary use but is satisfactory for use as cooling water.

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ELECTRICAL DIVISION

MAY, 1950

GENERAL

The backlog of scheduled work for the Division at month end was 10,248 mandays, an increase of 432 mandays during the month. In this backlog is included 440 mandays for the North Electric training course for the Telephone Section.

The attached load chart for the peak day of the month, May 5, shows a 7:00 a.m. (8:00 a.m. DST) peak of 74,220 KW with a coincidental demand of 24,220 KW for the 115 KV system plus the remaining part of the 66 KV system. The decrease from the April demand (75,850 KW) is substantially less than seasonal expectation because of continued lower than normal temperatures.

A number of projects were reviewed with the Design Divisions:

(a) Further review of Project C-341 (Additions to Richland Distribution System) were made with Project Engineering in order to enable final preparation of the revised Project Proposal.

(b) A final agreement was reached as to financial responsibility for normal and emergency power requirements of the Hanford Laboratory and the Rolling Mill in the 300 Area.

(c) The bids for Redox (Project C-187) emergency generator in the 200 West Area were reviewed with Design and Construction and an agreement reached to purchase the Terry turbine with General Electric generator (lowest bid).

(d) Project C-380 (Electric Metering - Village of Richland) has been re-studied with Project Engineering for determination of requirements and achievement of lowest unit cost through off-site sub-assembly manufacture.

(e) An agreement was reached with Design and Construction Divisions and the interested Manufacturing Divisions relative to the power facilities to the 282-W Building (water treatment) and to install additional feeder and provide for switching all pumps to either feeder.

The activities of the Electrical Standards Subcommittee have been directed toward review of final "outside lines and substation" scope and specifications, and development of lighting intensity standards.

Electrical cost codes for all areas have been developed for the proposed Manufacturing Divisions Control Section.

Survey of possible Columbia River flood damage to electrical installations resulted in the following decisions:

(a) An emergency back-up power service to the 1906-H Drainage Lift Station was installed utilizing a 300 KVA, 2300/440 volt transformer connected to the 1700 H Area feeder.

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(b) Removed or protected Richland Line Crew material and effects at Richland Labor Yard with minimum expenditure.

(c) No action will be taken at Hanford Substation Yard unless water rises appreciably higher.

After complete study and investigation, special operating arrangements were devised to permit Manufacturer's tests of newly designed high interrupting capacity oil circuit breakers at Grand Coulee under actual 220 KV fault conditions without necessity of interrupting production at Hanford. Allis Chalmers tests were completed on May 6 and 7, and Westinghouse and General Electric tests are scheduled for August and September. A substantial savings of out-of-pocket expenses and prevention of corresponding important loss of plutonium production was realized.

AREA ACTIVITIES

A large number of unexplained "scrams" of the 105-H Pile due to operation of the control Beckmans led to a complete investigation which is still in progress:

(a) The 110 volt supply circuit from the stabilizing transformer was rewired with shielded wire to minimize the possibility of induced currents.

(b) A 500 VA regulated voltage transformer was mounted at the Control Desk in the Beckman recorder supply circuit to lessen the possibility of transients to the control Beckmans.

(c) A tape recorder and oscillograph has been installed to record transient data for further study.

Several area operating improvements were made:

(a) In 105-D (Pile), a double throw switch was installed in the equipment room to enable operation of the Transfer Area Compressor from "process" power in case of failure of "non-process" supply.

(b) In the same area another double pole switch was installed on the regulated voltage instrument supply to make possible connecting all regulated voltage load on either of the 3000 VA Sola transformers permitting operation at lower transformer temperature.

(c) In 384 Power House, a pressure actuated alarm system was installed in output water lines No. 3 and No. 4 to indicate existence of low process water supply to the 321 Building.

(d) In the 300 Area, general purpose safety switches on the new coal handling equipment were replaced with explosion proof switches.

TRANSMISSION AND DISTRIBUTION

The overhead 2300 volt service from 186-D Substation to 189-D, power source for heat transfer tests in 189-D, was completed.

The series of eight scheduled outages (overtime work) for tie-in of switchgear and new lines to 200-W Area at 251 Substation have been completed. This work (Project)

C-295) is now 90 percent complete on line work, and 70 percent complete on substation work.

There were two unscheduled power operations during the month affecting process work:

(a) On May 2 at 10:20 a.m., severe voltage disturbances on the 220 KV system resulting from a line to ground fault on the Midway-Bonneville line No. 1 caused a scram of 105-F Pile, which is believed to have been due to the regulated voltage transformer in the Beckman supply having been out of service. It had failed several days before and had not been replaced, awaiting scheduled shutdowns.

(b) On May 8 at 12:25 p.m., all 100 Areas scrammed, resulting from an arc-over at Grand Coulee, disconnect to ground, during switching operations. All areas were restarted at 12:34 a.m. except 100-D where a faulty relay in the "Power Failure" circuit was not corrected in sufficient time. The disturbance also resulted in short interruption of production in the 200 Areas.

TELEPHONE SECTION

Telephone service to the Medical Dental Building and Public Health Building were removed from the Kadlec Hospital board, and a cordless PBX with individual lines was installed at the Medical Center for Doctors and Dentists now in private practice.

A Western Union duplex teletype circuit was established in the 703 Building, and Western Union simplex teletype circuits were established to the Meteorology Station at 200-W, and to Building R-1557 in White Bluffs.

New telephone directories were distributed during the month.

The following is a summary of current telephone service rendered by the Richland Telephone Exchange:

	April 30	May 31
Lines in service	3314	3471
Stations in service	5045	5400
Vacant lines	686	529

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POWER STATISTICS - ELECTRICAL DIVISION
FOR MONTH ENDING MAY 31, 1950

ITEM	ENERGY - MW HRS. April	ENERGY - MW HRS. May	MAX DEMAND - KW April	MAX DEMAND - KW May	LOAD FACTOR - % April	LOAD FACTOR - % May
230 KV SYSTEM						
A-2 Out (100-B)	7,220	7,530	11,800	12,200	85.0	83.0
A-4 Out (100-D)	7,560	8,040	12,700	13,200	83.8	81.9
A-5 Out (100-H)	9,000	9,324	13,950	13,800	89.6	90.8
A-6 Out (100-F)	6,970	7,020	11,000	11,200	88.0	84.2
A-8 Out (200 Areas)	3,142	3,096	5,300	5,040	82.3	82.6
TOTAL OUT	33,992	35,010	54,750**	55,440**	86.2	84.9
MIDWAY IN	34,598	35,607	51,600*	51,200*	93.1	93.5
Transm. Loss	606	597				
Percent Loss	1.7	1.7				
115 KV SYSTEM						
B1-S4 Out (N. Rich.)	1,613	1,594	3,053	2,880	73.4	74.4
B3-S4 Out (300 Area)	349	346	756	708	64.2	65.7
B3-S5 Out "	400	388	1,220	1,120	45.6	46.5
BB1-S1 Out (Richland)	5,372	4,262	12,600**	12,060**	59.2	47.5
BB1-S2 Out "	5,396	3,992	12,960**	12,420**	57.8	43.2
TOTAL OUT	13,130	10,582	30,589**	29,188**	59.6	48.7
Benton In	180	360	13,200*	26,400*	1.9	1.8
S. Richland In	12,168	9,624	24,840*	24,120*	68.0	53.6
TOTAL IN	12,348	9,984	38,040**	50,520**	45.1	26.6
Transm. Loss	-782	-598				
Percent Loss	-6.4	-6.0				
66 KV SYSTEM						
B7-S10 Out (W. Bluffs)	279	288	923	1,035	42.0	37.4
Hanford Out	284	356	600	600	65.7	79.7
TOTAL OUT	563	644	1,523**	1,635**	51.3	53.0
HANFORD IN	567	665	1,400*	#5,300*	56.3	16.9
Transm. Loss	4	21				
Percent Loss	.7	3.2				
PROJECT TOTAL						
230 KV Out	33,992	35,010	54,750**	55,440**	86.2	84.9
115 KV Out	13,130	10,582	30,589**	29,188**	59.6	48.7
66 KV Out	563	644	1,523**	1,635**	51.3	53.0
TOTAL OUT	47,685	46,236	86,862**	86,263**	76.2	72.0
230 KV In	34,598	35,607	51,600*	51,200*	93.1	93.5
115 KV In	12,348	9,984	38,040**	50,520**	45.1	26.6
66 KV In	567	665	1,400**	5,300**	56.3	16.9
TOTAL IN	47,513	46,256	75,850*	74,220*	87.0	83.8
Transm. Loss	-172	20				
Percent Loss	-0.4					

* Denotes Coincidental Demand
* Denotes Non-Coincidental Demand

Average Power Factor - 230 KV System--95.7
Average Power Factor - 115 KV System--93.8
Average Power Factor - 66 KV System-+99.6

66 KV System carried 300 Area and North Richland for six hours while 115 KV System was down.

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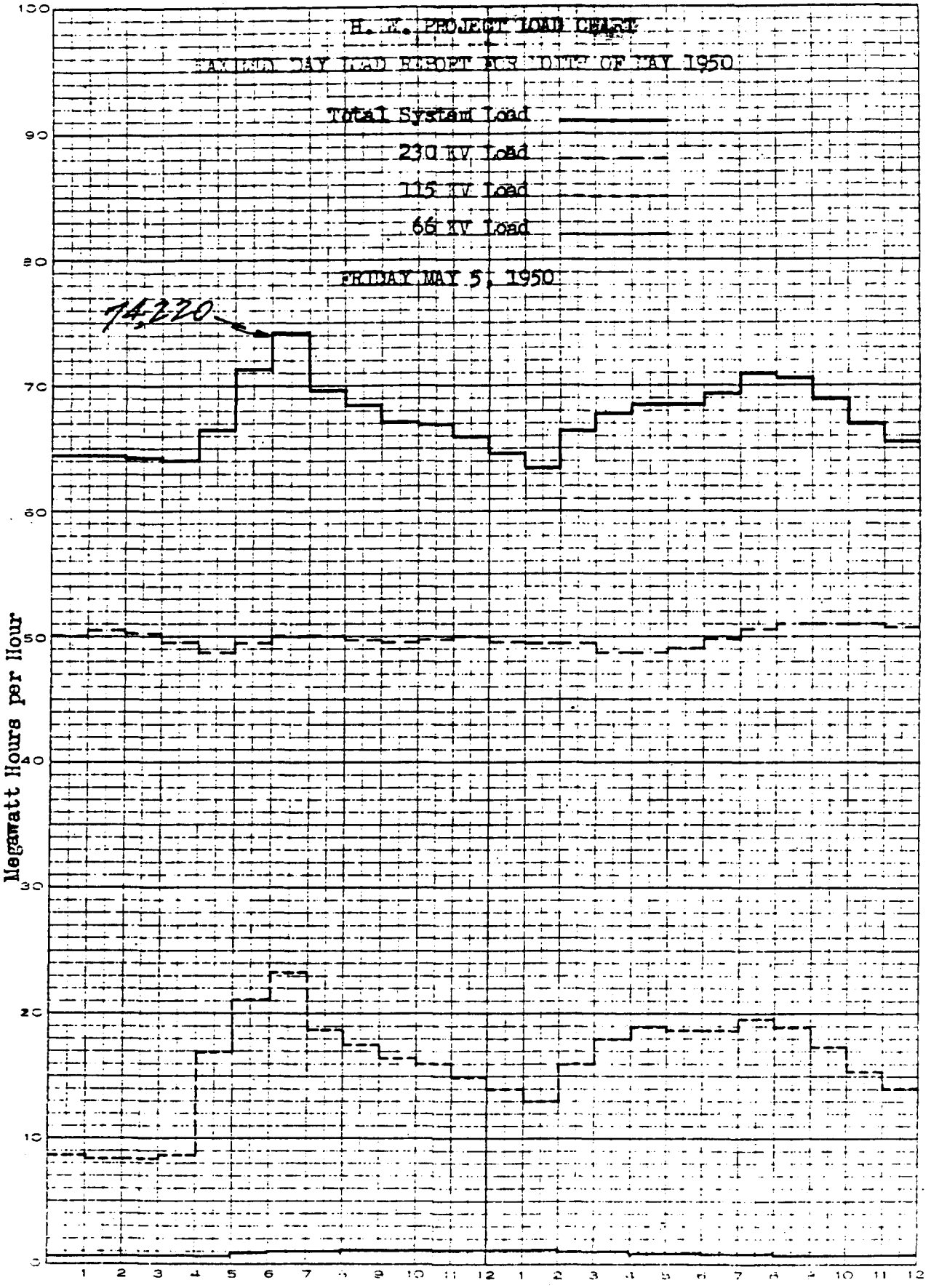

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TRANSPORTATION DIVISION
MONTHLY REPORT
MAY 1950

[redacted]

GENERAL

Transportation Division personnel forces were increased by 12 non-exempt employees during the month from 616 to 628 by 5 transfers in, 16 new hires, 1 re-activation-personal illness, 3 transfers out, 6 terminations, and 1 de-activation-personal illness.

RAILROAD ACTIVITIES

Commercial cars handled during May remained at a high level with the continuation of large volume coal receipts. Process service continued at a normal level with all movements being completed as scheduled. Cars handled during May including process movements totaled 3,164 compared with 3,132 in April, 2,978 in March, 1,433 in February and 1,223 in January.

The following recapitulation indicates the number of commercial cars handled:

Carload Movements - General Electric Company

Loads In	Empties In	Loads Out	Empties Out
1342	61	56	1274

Carload Movements - Subcontractors and Others

	Loads In	Empties In	Loads Out	Empties Out
Atkinson-Jones Company	30	0	0	30
Acme Fast Freight	1	0	0	1
Rust Engineers	1	0	0	0
J. A. Terteling & Sons, Inc.	2	0	0	0

The first locomotive operated over the newly constructed Northern Pacific-Union Pacific Connection on May 23 at 7:00 P.M. with an inspection party of Hanford Works officials aboard. The initial Northern Pacific and Union Pacific trains arrived on May 29 at 8:00 A.M.

Completed major repairs to flat car 10-A-3622. Frame and trucks have been painted and are ready for new decking.

Installed new time-amperage charts on all 120-ton Diesel electric locomotives which were supplied by Alco's Field Service Engineer.

Railroad track maintenance and rehabilitation work continued on a normal basis throughout the five sections. Weed spraying operations were completed over the entire railroad system including the temporary construction trackage. Replaced defective switch and cross ties in the 200-West, 100-B, 100-D, and 700 Areas. Received and stockpiled six carloads of switch ties at Wilda Junction. Completed distribution of 4,590 cross ties obtained from Design and Construction Divisions' stocks. Surfacing was in progress on the "A" line in the vicinity of Bettie and between the Salvage Yard and Edna, "B" line from Van Giesen to the 1100 Area, and the main lead into 100-D Area.

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By Authority [redacted]
OFFICE, NON-TECHNICAL DOCUMENT REVIEW BOARD. H. J. Newton, Chairman
Date: 12-10-51

Transportation Division

AUTOMOTIVE ACTIVITIES

The Area Bus System transported approximately 5% more passengers in May than in April. The following tabulation indicates the passenger volume by shifts and the total revenue received during the month:

No. 1	No. 2	No. 3	Total	Revenue
23,896	51,669	54,760	130,325	$6,516.25

The following is a comparative breakdown of average daily bus trips to the Plant Areas:

Passenger buses - 100-B Area	10
Passenger buses - 100-D Area	10
Passenger buses - 100-F Area	10
Passenger buses - 100-H Area	11
Passenger buses - Hanford	5
Passenger buses - 200-East	12
Passenger buses - 200-West	17
Passenger buses - 300 Area	8
Passenger buses - Riverland	3
Passenger buses - Pistol Range	1
Passenger buses - White Bluffs	2
Passenger buses - North Richland	3
Passenger buses - Pasco	3
700-300 Area Shuttle	17
Inter-Area Passenger service	3
Inter-Area Express service	1
Inter-Area Mail service	1

The Village Bus System transported approximately 5% fewer passengers in May than in April. The service rendered is indicated in the following statistics:

Total passengers, including transfers	46,363
Total bus trips	5,402
Total bus miles	29,711
Total revenue	$ 4,022.05

Special shuttle bus service within the Pasco Warehousing Area was rendered to prospective buyers at a public sale on May 8, 9 and 10. This service was requested by the Atomic Energy Commission.

Effective May 3, shuttle service to and from North Richland was established for Design and Construction personnel on the 8:00 A.M. to 4:45 P.M. shift (Standard Time) who reside in Richland.

Off-Plant automobile trips (Company business and official visitors) totaled 166.

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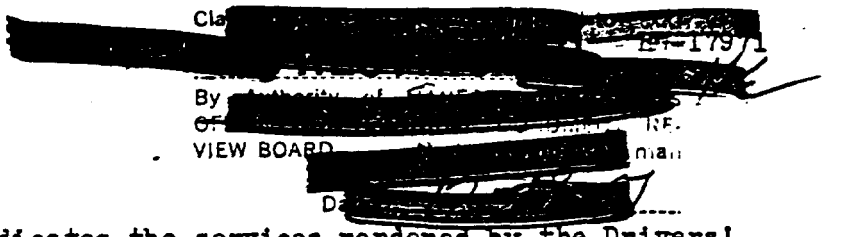

The following tabulation indicates the services rendered by the Drivers' Test Unit:

Applicants:	Male	58	Number retested	0
	Female	9	Number rejected	0
	Total	67	Number tests given	67
Permits Issued:	Limited to driving with glasses			15
	Unlimited			52
Permits Reissued:				48

The following tabulation indicates the volume of fuel distribution by the Equipment Maintenance Section:

	Gasoline	Diesel Fuel	50 Cetane	Kerosene
Stock at start of month	22,155	9,231	6,436	2,359
Received during month	134,388	69,456	41,086	2,507
Total	156,543	78,687	47,522	4,866
Delivered to Area stations	113,667	57,785	26,673	2,519
Stock at end of month	42,876	20,902	20,849	2,347

The following tabulation indicates the Plantwide usage of automotive equipment:

Code	Type	No. of Units	Total Mileage
1A	Sedans	328	513,239
1B	Buses	155	200,281
1C	Pickups	454	257,210
1D	Station Wagons	81	57,377
1E	Armored Cars	12	433
1G	Weapon Carriers	55	11,807
68 Series	Trucks	328	103,976
		1,413	1,154,323

Completed removal and storage of antifreeze from the cooling systems of automotive and similar equipment where the quantity of solution and location of equipment made it possible to effect a savings over handling charges.

Installed one new spray compressor on a Dodge power wagon to be used for mosquito control.

Installed a new pump and 500 gallon tank on an Army GMC 6x6 truck for the Richland Fire Department. Fabricated and installed a 1,000 gallon tank on an Army GMC 6x6 truck for the White Bluffs Fire Department.

Installed five water pumps at three locations in Richland to be used in connection with flood control.

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[redacted] to HW-17971 DECLASSIFIED ... VIEW BOARD. ... H. J. Newton, Chairman
Date: 12-18-57

Removed forty-two units consisting of jeeps, weapon carriers, 6x6 flatbed trucks, and Diamond T dump trucks from the White Bluffs and 3000 Area equipment yards and delivered to the 1131 Area. At the request of the Atomic Energy Commission these units were inspected, serviced and necessary repairs made to put them in safe operating condition for possible emergency flood control work in Pasco and Kennewick.

The Planning and Methods Section submitted A&B Requests for 36 4-wheel drive trucks, 12 moto-mowers, 1 hay baler, 1 side delivery rake, and 2 special truck bodies.

LABOR ACTIVITIES

Expended 828 manhours in crushing and stockpiling 1,752 cubic yards of aggregate; 448 manhours in maintaining outside Area roads and 198 manhours for Patrol roads; 286 manhours for weed spraying operations on Area roads; and 142 manhours for stabilizing sand blow at the 3000 Area.

The following tabulation indicates in gallons the volume of road asphalt material handled by the Service Section:

	MC 1	MC 3	MC 4	MC 5
Stock at start of month	4,625	5,243	0	0
Received during month	0	0	0	0
Dispensed during month	375	5,243	0	0
Stock at end of month	4,250	0	0	0

The following tabulation indicates the volume of materials handled by the Service Section and a breakdown by Plant Areas:

	100 B	100 D	100 F	100 H	200 W	200 E	300	Total
Cars coal unloaded	228	262	249	184	167	34		1124
Cars other material	3	4	2	9	9	4	6	37
Cars loaded out	1	2	0	0	0	4	1	8

Expended 3,861 manhours in loading 4 carloads of lumber, 28 carloads of ballast, 8 carloads of equipment, 3 carloads of scrap, 18 carloads of pipe, 1 carload of steel, 209 truck loads of lumber, 47 truck loads of equipment, 18 truck loads of pipe, and 146 truck loads of steel and miscellaneous material.

Expended 2,229 manhours in handling salvage materials for the Stores Division at the Pasco Warehousing Area which included the sorting and loading of 195 truck loads and general clean-up. Expended 759 manhours in handling excess materials for the Stores Division at White Bluffs. Expended 793 manhours in unloading and warehousing 175 truck loads of incoming material at Warehouse #6 Richland for the Stores Division. Expended 152 manhours and 5,500 gallons of weed killer in spraying operations at the 1100 and 3000 Areas.

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[redacted]

Transportation Division

[redacted]

Expended 1,158 manhours in handling Area deliveries, 295 manhours for Stores deliveries, and 994 manhours for moving furniture.

Expended 1,442 manhours in weed spraying operations throughout the Operating Areas.

Routine Area maintenance was performed in all Operating Areas with labor and transportation equipment being furnished for Projects M-754, M-758, C-343, P-287, and P-326.

Classification Cancelled and Changed to
RESTRICTED
By Authority of ~~HANFORD OPERATIONS OFFICE~~, NON-TECHNICAL DOCUMENT REVIEW BOARD. ~~H. J. Newton~~, Chairman
Date: 12-18-57

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1217512

[redacted]

($000 HIGH SPOT ESTIMATE ONLY
WORK PROGRESS DURING PERIOD
WORK PREVIOUSLY DONE

MID-MONTH STATUS REPORT

100 AREA PROJECTS

DATE MAY 15, 19 50

ENG. REQ. NO.	DATE RECEIVED	BLDG. OR AREA	DESCRIPTION OF WORK	DIVISION RESPONSIBLE	PROJECT NO.	ESTIMATED COST	ENGINEERING STATUS PER CENT COMPLETE	PROJECT DATE	APPROPRIATION REQUEST DATE	APPROVED A & B COMMITTEE	ROUTED TO GOVERNMENT	DIRECTIVE DATE	AUTHORIZATION RECEIVED	WORK RELEASE	FIELD WORK PER CENT COMPLETE	REMARKS
A1034	5-29	185BDF	DISMANTLING OF EQUIPMENT IN THE DEMINERALIZING AND DEAERATING PLANTS	POWER	C-172	360,200		7-11-47		7-11	3-31	4-4	4-7			CERTAIN WORK TO BE SUBCONTRACTED
A532	1-7	108F	BIOLOGICAL LABORATORY, PARTS I AND II	H.I.	C-192	1,121,000		3-31-49	4-1	4-1	4-1	3-29	4-3	4-6		WORK PROGRESSING
A1046	6-14	105D	NEUTRON SPECTROMETER	TECH.	C-290	17,400		9-5-48	9-9	9-14	9-14	10-4	10-11	10-11		EXTENSION OF TIME MAY BE REQUIRE
A1060	7-29	100BDF	INCREASED SHIELDING - FRONT NOZZLE CAPS	P	C-306	88,000		10-6-48	10-11	11-10	11-10	11-30	12-2	6-17		MATERIAL NOW BEING RECEIVED
A1057	4-20	105BF	EFFLUENT DIVERSIONARY OUTLET (105-107 B & F)	P	C-321	153,000		1-12-49	1-14	1-26	1-26					RE-SUBMITTAL OF PROJECT POSTPONE UNTIL FISCAL YEAR 1951
A1093	3-17	TRACT HOUSE	P-11 PROJECT	TECH.	C-340	328,000		5-23-49	5-20	6-1	6-1	6-28	7-1	7-12		NO. 1 CONVERSION DESIGN PROGRESSING
A1097	4-27	101	P-12 PROJECT	TECH.	C-346	391,000		8-1-49	8-16	8-17	8-17	10-31	11-3	11-11		FIELD WORK SUSPENDED
A1100	5-27	105BDF	NOZZLE GALVANIZING AND REPLACEMENT	P	C-347	775,000		8-15-49	8-15	10-12	10-12	12-28	1-4	1-13		LAST NOZZLE PROCUREMENT HAS ENCOUNTERED CERTAIN TECHNICAL DIFFICULTIES
A1110	7-21	105BDF	PILE CLEARANCE - INNER ROD ROOM WALLS 105BDF	P	C-355	40,600		9-26-49	9-26	12-13	12-14	1-18	1-19	2-8		WORK BEING SCHEDULED IN ONE AREA
A1129	2-2	108B	P-10-B (COLD FACILITIES)	TECH.	C-368	95,000		3-1-50	3-21	3-21	3-22	4-24	5-1			FIELD WORK IN PROGRESS
A1068	10-29	105	DEVELOPMENT OF FLEXIBLE VERTICAL SAFETY RODS	P	M-713	18,500		5-18-49	5-18	5-27	5-27	7-19	7-22	9-26		TO BE REVIEWED IN CONNECTION WITH THIMBLE REMOVAL
A1101	6-1	105BDF	IBM INSTALLATION FOR INDIVIDUAL PILE TUBE ACCOUNTING	P	M-715	13,400		8-15-49	8-15	9-6	8-7	9-15	9-15	9-22		WORK TO BE RESCOPED
A1106	7-21	105BDF	RESTRAINING CLAMPS - PILE SHIELDING	P	M-721	15,000		8-25-49	8-25	9-8	9-8	10-7	10-14	10-17		TWO AREAS COMPLETED - THIRD DEFERRED
A1104	6-7	107B	REPAIRS TO 107 BASIN (IMMEDIATE PROGRAM ONLY)	P	M-723	18,100		9-15-49	9-15	10-12	10-12	10-25	10-27	12-2		WORK POSTPONED BY P-DIVISION
A1125	11-23	105H	FIRST HANFORD PILOT CHANNEL TEST RIG (ANL #140) P-13 — AUTH. ON SUSP. CODE	TECH.	M-754	20,000		3-31-50	3-31	4-11	4-12		S.C.	1-31		PROJECT AWAITING APPROVALS
			ESTIM. ENTIRE COST		C-379	85,000										WORK PROGRESSING ON SUSP. CODE
A1130	2-3	108B	P-10-A EXPANSION — AUTH. ON SUSP. CODE	TECH.	M-758	100,000		4-12-50	4-13	4-20	4-20		S.C.	2-24		WORK PROGRESSING ON SUSP. CODE
			ESTIM. ENTIRE COST		C-383	300,000										SUSP. CODE FOR DESIGN ONLY
A1135	3-13	108B	P-10-D HOT DEVELOPMENT FACILITIES	TECH.	M-761	50,000 (350,000)							S.C.	5-10		DESIGN IN PROGRESS
A555	11-6	100F	AQUATIC BIOLOGY LABORATORY	H.I.		(350,000)										SCOPING COMPLETED 5-10-50 DATA ROUTED TO D & C
A575	5-1	105DR	PILE TECHNOLOGY LABORATORY	TECH.		(95,000)										DESIGN IN PROGRESS
A1059	6-29	100B	INSTALL STEEL PROCESS SEWER 105B - 107B	P		(550,000)										PRESENT LINE BEING CHECKED FOR LEAKS
A1086	2-4	100BDF	HIGH TANK CONTROL VALVES	POWER		40,000										HELD UP BY HIGHER PRIORITY WORK
A1116	9-30	111B	HEALTH MONITORING AND STORAGE FACILITIES	TECH.		16,100		3-20-50	3-20	4-28	4-28					AWAITING APPROVAL
A1116	10-14	105F	DOWNCOMER REPLACEMENT	P		(100,000)										HELD UP FOR HIGHER PRIORITY WORK
A1119	10-17	100 200 300	COAL METERING FACILITIES	POWER		31,400										TEMPORARILY HELD IN ABEYANCE
A1122	11-9	100	DEVELOPMENT OF FLEXIBLE HORIZONTAL CONTROL RODS	P		(50,000)										HELD UP FOR HIGHER PRIORITY WORK

COMBINED TOTAL OF AUTHORIZED AND PENDING 100 AREA WORK $5,051,700

1217513

PROJECT ENGINEERING DIVISIONS
MID-MONTH[illegible] STATUS REPORT
200 AREA PROJECTS

DATE MAY 15, 19 50

($000,000) HIGH SPOT ESTIMATE ONLY
WORK PROGRESS DURING PERIOD
WORK PREVIOUSLY DONE

ENG. REQ. NO	DATE RECEIVED	BLDG. OR AREA	DESCRIPTION OF WORK	DIVISION RESPONSIBLE	PROJECT NO.	ESTIMATED COST	ENGINEERING STATUS PER CENT COMPLETE	PROJECT DATE	APPROPRIATION REQUEST DATE	APPROVED A & B COMMITTEE	ROUTED TO GOVERNMENT	DIRECTIVE DATE	AUTHORIZATION RECEIVED	WORK RELEASE	FIELD WORK PER CENT COMPLETE	REMARKS
46	2-14	251 & 200EW	ENLARGING 251 SUBSTATION AND ADDITIONAL 13.8 KV FEEDERS 200EW	ELECT.	C-295	1,500,000		8-25-48	10-5	10-12	10-6	10-15	10-13	11-19		DESIGNS AND ESTIMATE PROGRESSING
59	12-30	200	UNDERGROUND GEOLOGICAL & HYDROLOGICAL INVESTIGATION PROGRAM INCLUDING TEST WELLS & OTHER FACILITIES	H.I.	C-326 REV.	95,000		1-20-50	1-20	2-1	2-1	2-16	2-21	3-1		SAMPLER FABRICATION IN PROGRESS
60	12-23	221TB	EQUIPMENT FOR DISSOLVER OFF GAS FILTRATION ($337,000 ORIGINALLY AUTHORIZED)	S	C-337	158,000		4-13-49	4-13	5-6	5-6	4-30-50	2-2	2-16		REVISED PROJECT APPROVED FOR CONSTRUCTION
46	7-19	200E	HOT SEMIWORKS COMPLETE PLANS & SPECS, PARTS I & II	TECH.	C-349	150,000		2-1-50	2-8	2-8	2-15	3-9	3-16	3-24		DESIGNS PROGRESSING
			HOT SEMIWORKS (ACTUAL CONSTRUCTION) PART III	TECH.	C-349	(3,000,000)										PROJECT IN PREPARATION
13	8-30	234-5	AUXILIARY HOOD ENCLOSURE FOR PART I, BLDG. 234	S	C-366	49,000		2-20-50	3-6	3-21	3-22	4-11	4-14	4-26		FABRICATION OF ENCLOSER BEING SUBCONTRACTED
91	5-13	200EW	EVAPORATION FACILITIES FOR WASTE SOLUTIONS (200EW)	S	C-369	25,000 / 841,000		2-28-50	2-28	4-11	4-12	4-25	5-1			DESIGN ONLY AUTHORIZED
90	5-13	221TB	IODINE REMOVAL FACILITIES FOR DISSOLVER OFF-GAS (200EW)	S	C-378	149,000		3-9-50	3-9	3-31	4-12	5-9	5-12			AWAITING AUTHORIZATION
01	9-2	224TB	REARRANGEMENT OF F CELL EQPT. BLDGS. 224 T & B	S	C-384	30,000		4-12-50	4-12	4-25	5-10					PROJECT AWAITING APPROVALS
01	9-2	221TB	PARALLEL OPERATIONS - 221TB - SECT. 19 & 20 AUTH. ON SUSP. CODE ESTIM. ENTIRE COST	S	M-742	4,800 / (100,000)		4-20-50	4-25	4-25				5-11		INFORMAL REQUEST FOR DESIGN & PROJ. PROPOSAL ONLY
98	8-18	222T	DESIGN AND INSTALL FISSION COUNTER	TECH.	M-753	14,750		9-1-49	9-1	9-8	9-8	10-7	10-7	1-18		FIELD WORK PROGRESSING
54	12-23	222U	OFFICE AND STORAGE ANNEX TO BLDG. 222U	H.I.	M-755	9,700		10-26-49	10-26	11-22	11-25	12-7	12-7	2-21		TO BE SUBCONTRACTED
570	3-15	200W	CONSOLIDATED MAINT. SHOPS	MAINT.		310,000										PROJECT IN PREPARATION
571	4-7	200W	ANIMAL EXPOSURE CHAMBER	H.I.		(45,000)										DESIGNS STARTED
501	9-2	221TB	REMAINING WORK FOR COMPLETE PARALLEL OPERATION OF 221 BLDGS.	S		(140,000)										DESIGN WORK IN PROGRESS
503	7-22	234-5	DUCT LEVEL FLOOR COVERING AND SAFETY SHOWERS	S		(150,000)										DESIGNS POSTPONED BY S-DIVISION
504	7-22	271TB	INSTALLATION OF LABORATORY EQPT. IN BLDGS. 271TB	TECH.		13,600					5-10					INFORMAL REQUEST ROUTED FOR APPROVAL
520	1-16	234-5	LOADING FACILITIES FOR RECYCLED MATERIAL BLDG. 234	S		19,000		4-24-50	4-24	4-25	5-10					INFORMAL REQUEST ROUTED FOR APPROVAL
533	4-11	234-5	PROCESS WASTE DISPOSAL SYSTEM	S		(50,000)										DESIGN IN PROGRESS
540	5-11	234-5	PREPARE PROJ. FOR COATING UNIT IN HOOD #25	S		(30,000)										PROJECT IN PREPARATION

COMBINED TOTAL OF AUTHORIZED AND

1217514

PROJECT ENGINEERING DIVISIONS
MID-MONTH STATUS REPORT

($000,000) HIGH SPOT ESTIMATE ONLY
WORK PROGRESS DURING PERIOD
WORK PREVIOUSLY DONE

DATE MAY 15, 19 50

300 AREA PROJECTS

ENG. REQ. NO.	DATE RECEIVED	BLDG. OR AREA	DESCRIPTION OF WORK	DIVISION RESPONSIBLE	PROJECT NO.	ESTIMATED COST	ENGINEERING STATUS PER CENT COMPLETE	PROJECT DATE	APPROPRIATION REQUEST DATE	APPROVED A & B COMMITTEE	ROUTED TO GOVERNMENT	DIRECTIVE DATE	AUTHORIZATION RECEIVED	WORK RELEASE	FIELD WORK PER CENT COMPLETE	REMARKS
960	8-12	300	EXPERIMENTAL METALLURGY LABORATORY - BUILDING 3730	TECH.	C-287	140,000		11-5-48	11-5	11-7	11-9	12-2	12-6	3-7		INSPECTION COMPLETED WORK PROGRESSING ON EXCEPTIONS
961	8-14	313-314	IMPROVED VENTILATION - BLDGS. 313-314	P	C-330	200,000		12-8-49	12-8	12-28	12-18	2-1	2-3	2-10		SCOPE OF PROJ. COVERS ONLY ENGRG. & DEVELOPMENT WORK AT PRESENT
962	2-9	314	ROLLING MILL ($60,000 AUTHORIZED 12-13 FOR ENGINEERING) AUTHORIZED EST. TOTAL COST	P	C-339	60,000 (2,800,000)		5-23-49	5-23	5-27	6-1	12-13	12-23	12-23		PROJECT PROPOSAL BEING REVISED TO INCLUDE COMPLETE 300° C. PROCESS
50	9-15	300	ADDITION TO BLDG. 3745	M.I.	C-354	20,300		11-8-49	11-8	12-1	12-1	12-19	12-23	3-2		READY FOR SUBCONTRACT
8	11-14	300	NEW INSTRUMENT MAINTENANCE AND DEVELOPMENT BLDG., 300 AREA	INST.	C-377-P	111,000		4-26-50	3-25	4-28	5-10					AWAITING APPROVAL DESIGN IN PREPARATION
OR	10-10	3701	300 AREA BADGE HOUSE ADDITION PREVIOUSLY AUTH. INF. REQ. PRESENT EST. TOTAL COST	SERV.	AEC #1	14,500 34,000		3-29-50	3-29							PROJECT AWAITING APPROVALS
4	4-28	300	ADDITION TO BLDG. 3702	TECH.		(58,000)										DESIGNS STARTED
8	8-29	300	SOLVENT STORAGE FACILITIES - BLDG. 3706	TECH.		(60,000)										PROJECT IN PREPARATION
32	1-11	300	ELECT. POWER SERVICE TO MANF. LAB. & ROLLING MILL	ELECT.		(113,500)										DESIGNS STARTED
33	1-17	300	TELEPHONE SERVICE TO TECH CENTER	ELECT.		(5,000)										DESIGNS STARTED
34	1-13	300	EXPERIMENTAL INDUCTION HEATING FACILITIES BLDG. 3732	TECH.		(35,000)										DESIGNS STARTED
083	7-21	313	SEGREGATION OF FLUORIDE SLUDGE	P		(40,000)										DESIGNS HELD PENDING FURTHER DECISIONS ON WORK TO BE DONE

COMBINED OF AUTHORIZED AND

1217515

PROJECT ENGINEERING DIVISIONS

MID-MONTH STATUS REPORT

($000,( ) HIGH SPOT ESTIMATE ONLY

WORK PROGRESS DURING PERIOD

WORK PREVIOUSLY DONE

DATE MAY 15, 19 50

GENERAL PLANT PROJECTS

ENG. REQ. NO.	DATE RECEIVED	BLDG. OR AREA	DESCRIPTION OF WORK	DIVISION RESPONSIBLE	PROJECT NO.	ESTIMATED COST	ENGINEERING STATUS PER CENT COMPLETE	PROJECT DATE	APPROPRIATION REQUEST DATE	APPROVED A & B COMMITTEE	ROUTED TO GOVERNMENT	DIRECTIVE DATE	AUTHORIZATION RECEIVED	WORK RELEASE	FIELD WORK PER CENT COMPLETE	REMARKS
28	11-22	702	ADDITION TO BLDG. 702 - AUTOMATIC DIAL TELEPHONE EXCHANGE	ELECT.	C-138	470,500		3-7-47		3-10	5-12	5-21	5-13			WORK PROGRESSING
00	8-21	506	ADDITIONAL TELEPHONE CABLES - RICHLAND	ELECT.	C-144	71,000		3-28-47		4-1	5-5	5-21	5-13			WORK PROGRESSING
62	7-10	ALL	115 KV POWER LINE TO RICHLAND PLUS SUBSTATION FACILITIES — AUTHORIZED 1,364,000 / EST. TOTAL COST 1,500,000	ELECT.	C-177	1,364,000 / 1,500,000		7-17-47		7-21	8-14	8-26	8-29			PART II-R (136,000) TO AEC 12-14-49. AWAITING AUTHORIZATION WORK HELD UP
52	2-17	ALL	PLANT TELEPHONE PROJECT	ELECT.	C-276	1,548,600		9-8-48	7-13	9-8	9-9	10-3	10-6	10-6		SUBCONTRACT NEGOTIATIONS PROCESSING FOR REMAINING WORK AS AUTHORIZED
90	6-28	ALL	INSTALLATION OF NEW SECURITY FENCES - ALL AREAS	SERV.	C-291	424,000		8-31-48	9-9	9-9	9-15	10-13	11-8	11-8		WORK PROGRESSING
180	3-15	ALL	H.I. OPERATIONAL DIVISION SURVEY INSTRUMENTS	H.I.	C-333	85,000		3-30-49	4-1	4-1	4-1	4-20	4-26	4-29		WORK STARTED
106	5-16	1100	ADDITIONS TO RICHLAND ELECTRICAL DISTRIBUTION SYSTEM	ELECT.	C-341	173,600		5-29-49	5-29	6-6	6-16	9-2	9-13	9-2		LUMP SUM SUBCONTRACT BEING PROCESSED
136	3-17	1100	ADDITIONAL CAPACITY RICHLAND SEWAGE LIFT STATION	VILL.	C-357	47,500		11-22-49	11-22	12-28	12-28	2-16	2-23			WORK BEING SCHEDULED
143	7-14	HANFORD	ARSENAL BLDG., FIRE PROTECTION & SANITARY FACILITIES - PATROL PISTOL RANGE	SERV.	C-360	54,000		12-19-49	12-23	2-14	2-15					ACTION TEMP. DEFERRED AEC LETTER 3-31-50
142	7-8	200	ADDITION TO METEOROLOGY BLDG. 622	H.I.	C-365	23,100		3-2-50	2-25	3-9	3-10	4-3	4-5	4-12		READY FOR SUBCONTRACT
163	12-22	ALL	METEOROLOGICAL FIELD STATIONS	H.I.	C-371	30,800		3-25-50	3-25	4-11	4-12	5-9	5-11			WORK BEING SCHEDULED
135	2-10	1100	ELECTRICITY METERING - COMMUNITY OF RICHLAND — INFORMAL REQUEST / ESTIM. TOTAL COST	ELECT.	M-733 / C-380	12,400 / (362,000)		3-9-50	3-9							DESIGNS PROGRESSING
134	2-25	1100	SURGICAL WING AIR CONDITIONING - KADLEC HOSPITAL (INFORMAL REQUEST)	MED.	MED. #1	16,100		5-2-49	5-2	5-5	5-5	5-18	5-23	5-27		WORK PROGRESSING
152	10-7	1100	SOFT WATER PIPE LINE 784-B TO KADLEC HOSPITAL (INFORMAL REQUEST)	MED.	MED. #14	9,800		5-18-49	5-18	5-20	5-27	8-4	8-18			READY FOR SUBCONTRACT
157	11-11	ALL	PERMANENT FENCING 230 KV AND DISTRIBUTION SUBSTATIONS	ELECT.		(170,000)										PROJECT IN PREPARATION
158	11-11	500	TRANSFORMER OIL STORAGE FACILITIES	ELECT.		(10,800)										INFORMAL REQUEST IN PREPARATION
160	11-11	1100	RELOCATION OF RICHLAND LINE CREW HEADQUARTERS	ELECT.		(30,000)										HELD UP FOR HIGHER PRIORITY WORK
162	11-1	3000	CENTRAL STORES WAREHOUSE IN 3000 AREA	STORES		(1,800,000)										DESIGNS IN PREPARATION
165	1-16	706	ADDITIONS AND ALTERATIONS - 706 LABORATORY	H.I.		(100,000)										DESIGN WORK PROGRESSING
167	1-23	1100	DORM H-1 CONVERSION TO OFFICE BLDG.	PURCH. STORES		38,600		3-16-50	3-16							DISAPPROVED BY A & B COMMITTEE
168	2-27	ALL	1950 AREA ROAD MAINTENANCE PROGRAM	TRAN.		94,000		5-6-50	5-6	5-9						AWAITING APPROVALS
126	11-11	ALL	SALVAGE AND RECOVERY OF TELEPHONE CABLE AND EXCHANGE EQUIPMENT	ELECT.		(32,600)										DESIGNS STARTED

121516

COMBINED TOTAL OF AUTHORIZED AND PENDING PLANT AREA WORK

PROJECT ENGINEERING DIVISIONS
ENGINEERING DESIGN
100 AREA

---- WORK PROGRESS DURING PERIOD
——— WORK PREVIOUSLY DONE

DATE MAY 15, 1950

E.R. NO.	DATE RECD.	BLDG. OR AREA	DESCRIPTION	PERCENT ENGINEERING COMPLETE 0 10 20 30 40 50 60 70 80 90 100	DRWGS. OR REPORT ISSUED DATE	REMARKS	DIV. RESPON.	ESTIM. COMPL. DATE
A-1001	9-1-49	100	"AS-BUILT" DWGS. SINCE 9-1-46			WORK PROGRESSING		
A-1002	2-1-50	105	G.E.C. STUDY			EXTENDED STUDY BY STANDING COMMITTEE	TECH. & P	
A-1074	11-2-49	115BDF	DESIGN MOISTURE EXTRACTION EQUIPMENT FOR GAS SYSTEM			NOT STARTED	P	
A-1085	2-4-50	100F	STUDY PILE OPERATION WITH 100% CO_2 ATMOSPHERE		5-10-50	SUBSEQUENT ORDER ISSUED FOR PROJECT	P	
A-1127	1-20-50	108B	P-10 SHIPPING TUBE NUMBERING		4-30-50	REPORT ISSUED	TECH.	
A-1128	2-1-50	100H	DESIGN GRAPHITE MONITORING PUSH RODS			PRELIMINARY STUDY MADE	P	7-30-50
A-1132	2-8-50	105	ROTARY TUBE CUTTER			FIELD STUDY STARTED	P	7-30-50
A-1136	5-11-50	108B	P-10-D STACK DESIGN			IN PROGRESS	TECH.	6-30-50
A-1137	5-11-50	108B	P-10 FURNACE EXHAUST FACILITY			NOT STARTED	TECH.	7-30-50

1217517

PROJECT ENGINEERING DIVISIONS
ENGINEERING DESIGN
200 AREA

---- WORK PROGRESS DURING PERIOD
——— WORK PREVIOUSLY DONE

DATE MAY 15, 1950

E.R. NO.	DATE RECD.	BLDG. OR AREA	DESCRIPTION	PERCENT ENGINEERING COMPLETE 0 10 20 30 40 50 60 70 80 90 100	DRWGS. OR REPORT ISSUED DATE	REMARKS	DIV. RESPON.	ESTIM. COMPL. DATE
2266	10-28-49	200EW	"AS-BUILT" DWGS. SINCE SEPT. 1, 1946			ONLY URGENT CORRECTIONS BEING MADE TO DWGS. AT PRESENT	--	12-31-50
2279	12-1-49	221TB	STUDY AND MAKE RECOMMENDATIONS FOR REMOTE CONTROL REGASKETING FACILITIES			POSTPONED BY S-DIV. 2-7-50	S	
2517	1-16-50	234	REV. PRINTS FOR RECOVERY HOOD EVAPORATORS		4-21-50	DRAWINGS COMPLETE	S	
2519R	1-16-50	234-5	PREPARE DWGS. FOR LATHE INSTALLATION			FINAL DWGS. BEING MADE	S	5-26-50
2524	2-17-50	234-5	PREPARE PIPING DESIGNS FOR HOODS 5,6,7			DESIGN IN PREPARATION	S	6-9-50
2526	2-24-50	234-5	MODIFY EQUIPMENT ROOM #230		5-5-50	DESIGN COMPLETE	S	
2529	3-15-50	235	GLASS PIPE FOR HOODS 29 & 30		4-15-50	DESIGN COMPLETE	S	
2530	4-3-50	234-5	FILTERS FOR 26" VACUUM LINE		5-12-50	DESIGN COMPLETE	S	
2531	4-6-50	221-T	SPECIAL JUMPER FOR DIVERSION BOX #153		4-17-50	DESIGN COMPLETE	S	
2532	4-6-50	221-T	CHANGE DWGS. FOR CONNECTORS IN SECTION 6-R			DESIGN PENDING FURTHER STUDY BY S-DIV.	S	
2534	4-17-50	234-5	DESIGN NEW SHAFT FOR WASTE SUMP TANK AGITATORS			LETTERS TO VENDORS IN PROCESS	S	6-16-50
2535	4-17-50	222TB	DESIGN HOOD FOR LIQUID HOOD ASPIRATOR			DESIGN IN PROGRESS	S	6-19-50
2536	4-26-50	234-5	DESIGN THREE-POSITION TRIPOD FOR HOODS 25 & 26			DESIGN BEING REVIEWED BY S-DIV.	S	5-19-50
2537	5-5-50	200E	DESIGN JUMPER FOR 153-B DIVERSION BOX		5-11-50	DESIGN COMPLETE	S	
2538	5-5-50	234-5	PREPARE SKETCHES FOR AREA VACUUM COMMITTEE			LAYOUT IN PROGRESS	S	6-30-50

1217518

38

PROJECT ENGINEERING DIVISIONS
ENGINEERING DESIGN
300 AREA

---- WORK PROGRESS DURING PERIOD
——— WORK PREVIOUSLY DONE

DATE MAY 1, 1950

E.R. NO.	DATE RECD.	BLDG. OR AREA	DESCRIPTION	PERCENT ENGINEERING COMPLETE (0 20 30 40 50 60 70 80 90)	DRWGS. OR REPORT ISSUED DATE	REMARKS	DIV. RESPON.	ESTIM. COMPL. DATE
A-3002	9-1-49	300	"AS-BUILT" DRAWINGS SINCE 9-1-46			ONLY URGENT CORRECTIONS BEING MADE AT PRESENT		
A-3070	10-28-49	3706	STUDY VENTIL. REQUIREMENTS TO PROVIDE 40% HUMIDITY AND 2 MINUTE AIR CHANGE			WORK POSTPONED UNTIL ALL HOODS HAVE BEEN INSTALLED	TECH.	7-1-50
A-3082	7-8-49	3706	DESIGN AND PREPARE COST EST. FOR EXHAUST SYSTEM FOR GRAPH. MACHINING IN ROOM 41A			DESIGNS PROGRESSING	TECH.	7-1-50
A-3085	9-27-49	RIVER.	STUDY HIGH WATER TANK - RIVERLAND			RECOMMENDATIONS BEING PREPARED	POWER	6-1-50
A-3088	2-13-50	314	STUDY GATE TYPE CRUCIBLE, MELT PLANT			WORK PROGRESSING	P	7-1-50
A-3090	3-7-50	314	HOOD FOR OUTGASSING FURNACE			STUDY PROGRESSING	P	7-1-50
A-3092	4-28-50	314	STOKES PUMP EXHAUST GAS TEST			WORK BEING SCHEDULED	P	7-1-50

1217519

PROJECT ENGINEERING DIVISIONS
ENGINEERING DESIGN
PLANT GENERAL

---- WORK PROGRESS DURING PERIOD
——— WORK PREVIOUSLY DONE

DATE MAY 15, 1950

E.R. NO.	DATE RECD.	BLDG. OR AREA	DESCRIPTION	PERCENT ENGINEERING COMPLETE	DRWGS. OR REPORT ISSUED DATE	REMARKS	DIV. RESPON.	ESTIM. COMPL. DATE
A-537	4-8-49	ALL	SURVEY FOR MAINTENANCE OF ALL RAILROADS INSIDE RESTRICTED AREAS			WORK PROGRESSING AS REQD.	TRAN.	9-1-50
A-553	9-7-49	ALL	ARCHITECTURAL STANDARDS			WORK PROGRESSING AS REQD.	-	
A-569	3-2-50	300	ENGRG. REPORT ON 300 AREA DEVELOP.STUDY			WORK PROGRESSING AS REQD.	TECH. & MFG.	6-1-50
E-405L	1-12-50	ALL	ELECTRICAL AS-BUILTS (LAYOUT WORK ONLY)			AS REQUIRED	-	
E-406L	8-1-49	1100	ADDITIONS TO VILLAGE DIST. - LAYOUT ONLY FOR PROJECT C-341			WORK PROGRESSING AS REQD.	ELECT.	
A-1001L	5-26-49	100	AS-BUILTS - 100 AREAS - LAYOUT ONLY			WORK PROGRESSING AS REQD.	-	
A-1034S	6-29-49	100BDF	DISMANTLING OF DEAERATING PLANTS ARCH. & MECH. DESIGNS & SPECS. ONLY		5-2-50	DESIGNS COMPLETED	POWER	
2266L	1-13-50	200EW	AS-BUILTS (LAYOUT WORK ONLY)			WORK PROGRESSING	-	6-1-50
A-3002L	12-7-49	300	AS-BUILTS - 300 AREA - LAYOUT ONLY			WORK PROGRESSING AS REQD.	-	
A-3062A	5-17-50	314	ROLLING MILL - ARCH. DESIGN ONLY- C-339			NOT STARTED	P	
4365D	12-2-49	-	PROCESS CHARTS - 300 AREA (FOR IND. ENGINEERING GROUP)			WORK PROGRESSING AS REQD.	P	
4375D	1-20-50	1100	DRAFTING FOR TRANS. CONSOLID. STUDY		5-2-50	COMPLETED	TRAN.	
4377	3-3-50	100	PREPARE CHARTS FOR P-10-A STUDY			WORK PROGRESSING	P	6-1-50

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PROJECT ENGINEERING DIVISIONS
ELECTRICAL DESIGN
PLANT GENERAL

---- WORK PROGRESS DURING PERIOD
——— WORK PREVIOUSLY DONE

DATE MAY 15, 1950

E.R. NO.	DATE RECD.	BLDG. OR AREA	DESCRIPTION	PERCENT ENGINEERING COMPLETE (0 20 30 40 50 60 70 80 90)	DRWGS. OR REPORT ISSUED DATE	REMARKS	DIV. RESPON.	ESTIM. COMPL. DATE
A-505E	8-19-49	ALL	ELECTRICAL STANDARDS			WORK PROGRESSING	-	
A-528E	1-16-50	300	300 AREA INSTRUMENT SHOP			WORK PROGRESSING	INST.	7-1-50
A-532E	3-4-50	108F	BIOLOGICAL BLDG.			WORK PROGRESSING	H.I.	6-1-50
A-546E	8-19-49	200E	HOT SEMIWORKS			WORK PROGRESSING	TECH.	8-1-50
A-562SE	2-27-50	ALL	WAREHOUSE MODIFICATIONS			WORK PROGRESSING	STORES	6-1-50
A-565E	3-23-50	700	BIO ASSAY LABORATORY			WORK PROGRESSING	H.I.	7-15-50
A-567E	2-10-50	1100	DORM M-1 CONVERSION (HOLD)			HELD UP	STORES	
E-427	11-11-49	ALL	ADD'N. ELECTRICAL POLE REPLACEMENT - FISCAL YEAR 1950			PRELIMINARY WORK STARTED	ELECT.	6-1-50
E-428	11-1-49	HANF.	DISMANTLE DISTRIBUTION LINES AND TELEPHONE CABLE - HANFORD			PRELIMINARY WORK STARTED	ELECT.	6-1-50
E-431	11-11-49	1100	EMERGENCY POWER PLANT - RICHLAND EXCHANGE (PRELIMINARY ENGINEERING)			PRELIMINARY WORK STARTED	ELECT.	6-1-50
E-436	2-20-50	251	ENLARGING 251 SUB.			WORK PROGRESSING	ELECT.	6-15-50
E-438	3-30-50	66KV	DISMANTLE 66KV LINE			WORK PROGRESSING	ELECT.	
E-439	4-1-50	ALL	AS-BUILTS ALL AREAS					
A-1129E	2-6-50	100B	P-10-B COLD LAB.			WORK PROGRESSING	TECH.	5-21-50
A-1130E	2-16-50	100B	P-10-A EXPANSION			WORK PROGRESSING	TECH.	5-21-50
A-1135E	4-2-50	108B	P-10-D			WORK PROGRESSING	TECH.	7-1-50
A-1135E	4-2-50	100B	P-10-D ADDITIONAL HOT FACILITIES			WORK PROGRESSING	TECH.	7-1-50
2490E	2-15-50	200EW	IODINE REMOVAL FACILITIES			WORK PROGRESSING	P	6-1-50
2491E	9-14-49	200EW	FIRST CYCLE EVAP. FAC. - 241 T-X, ELECTRICAL DESIGNS			HELD UP FOR ADDITIONAL INFORMATION	S	
A-3061E	12-10-49	314	INCREASED VENTIL. - ELECT. DESIGNS ONLY			WORK PROGRESSING	TECH.	8-1-50
A-3062E	8-1-49	314	ROLLING MIL			WORK PROGRESSING	P	8-1-50

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PROJECT ENGII ERING DIVISIONS
INDUSTRIAL ENGINEERING
ALL AREAS

---- WORK PROGRESS DURING PERIOD
——— WORK PREVIOUSLY DONE

DATE MAY 15, 1950

E.R. NO.	DATE RECD.	BLDG. OR AREA	DESCRIPTION	PERCENT ENGINEERING COMPLETE (0 20 30 40 50 60 70 80 90)	DRWGS. OR REPORT ISSUED DATE	REMARKS	DIV. RESPON.	ESTIM. COMPL. DATE
M-714	5-4-49	ALL	ELECTRICAL POWER CONSERVATION			REPORT APPROVED	ELECT.	5-19-50
A-562S	12-8-49	700	STORES DIVISION CONSOLIDATION		5-1-50	WORK COMPLETED	STORES	
4363	3-21-50	ALL	PROJECT ENGRG. DIV. PERSONNEL ANALYSIS			WORK PROGRESSING	P.E.D.	5-19-50
4365	4-15-49	300	METHODS STUDIES - P-DIVISION					
			MELT PLANT OPERATION ANALYSIS			WORK COMPLETED 5-5-50	P	
			OPTIMUM BILLET DIMENSION DETERMINATION			WORK PROGRESSING	P	
			REDUCED CUT-OFF TOOL WIDTH			WORK PROGRESSING	P	
			PICKLED CHIP ECONOMICS			WORK COMPLETED 5-1-50	P	
			CANNING LINE MECHANIZATION			WORK DEFERRED	P	
	11-1-49	300	MODIFIED MACHINING METHODS			WORK DEFERRED	P	
			CHIP PICKLING METHODS			WORK COMPLETED 5-1-50	P	
			PERSONNEL EXPOSURE - CHIP RECOVERY			WORK DEFERRED	P	
			MELT PLANT MATERIAL HANDLING			WORK DEFERRED	P	
	3-7-50	300	AMORTIZATION PERIODS			WORK PROGRESSING	P	
4370	11-1-49	100	INDUSTRIAL ENGINEERING - P-DIVISION					
			CHARGE-DISCHARGE METHODS			WORK PROGRESSING	P	
			105 BLDG. MECHANIZATION			WORK DEFERRED	P	12-1-50
			SUGGESTION EVALUATION FOR P.C. GROUP			WORK PROGRESSING	P	6-1-50
			NOZZLE REPLACEMENT STUDY			WORK DEFERRED	P	10-1-50
			SHUTDOWN ECONOMICS			WORK COMPLETED 5-5-50	P	
4374	12-20-49	200	INDUSTRIAL ENGINEERING - S-DIVISION CREW REQUIREMENTS 221 & 224 BLDGS.			AWTG. PERSONNEL ASSIGNMENT	S	12-20-50
4375	12-22-49	1100	TRANSPORTATION DIVISION CONSOLIDATION		5-2-50	WORK COMPLETE	TRANS.	
4378	2-5-50	202S	LUBRICATION SPECIFICATIONS MJ-1			AWAITING EQUIPMENT DATA	S	8-1-50
4379	2-3-50	234-5	" " MJ-2			" " "	S	8-1-50
4380	2-3-50	221T	" " MJ-3		5-10-50	WORK CANCELLED	S	
4381	2-3-50	221U	" " MJ-4			AWAITING EQUIPMENT DATA	S	8-1-50
4382	3-2-50	200	" " MJ-5			" " "	S	8-1-50
4383	3-6-50	ALL	FUEL OIL STUDY			WORK PROGRESSING	POWER	6-16-50
4385	3-6-50	703	OFFICE PARTITION STUDY			WORK PROGRESSING	O.S.D.	5-19-50
4386	3-13-50	ALL	STUDY DEVELOPMENT AND ROUTINE			SERVICE AND DEVELOPMENT	MFG.	3-13-51
4387	4-14-50	300	LUBRICATION SPECIFICATIONS - BLDG. 3730			WORK PROGRESSING	TECH.	6-1-50

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PROJECT ENGINEERING DIVISIONS
INDUSTRIAL ENGINEERING
ALL AREAS

---- WORK PROGRESS DURING PERIOD
——— WORK PREVIOUSLY DONE

DATE MAY 15, 1950

E.R. NO.	DATE RECD.	BLDG. OR AREA	DESCRIPTION	PERCENT ENGINEERING COMPLETE	DRWGS. OR REPORT ISSUED DATE	REMARKS	DIV. RESPON.	ESTIM. COMPL. DATE
4388	11-15-49	ALL	ANALYSIS OF HEAVY DUTY LACQUERS			WORK PROGRESSING	CONTROL	6-30-50
4389	5-5-50	700	CONTROL - P. & S. DIVISIONS PROCEDURE			WORK PROGRESSING	CONTROL	5-19-50
4390	5-9-50	100	LUBRICATION SPECIFICATIONS 105H			WORK PROGRESSING	CONTROL	7-1-50
4391	5-12-50	ALL	INDUSTRIAL LUBRICATION PROGRAM			WORK INITIATED	CONTROL	11-10-50

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PROJECT ENGIN ERING DIVISIONS
COST ESTIMATING WORK SCHEDULE
WORK RECEIVED AND COMPLETED
ALL AREAS

—·—·— WORK PROGRESS DURING PERIOD
——— WORK PREVIOUSLY DONE

DATE MAY 15, 1950

E.R. NO.	DATE RECD.	BLDG. OR AREA	DESCRIPTION	PERCENT ESTIMATING COMPLETE 10 20 30 40 50 60 70 80 90	SCHED. COMPL. DATE	REMARKS	DIV. RESPON.	ESTIM. COMPL. DATE
C-172	5-8-50	100'S	DEAERATOR REMOVAL - FAIR COST EST.		5-16-50			
C-192	4-14-50	108F	BIOLOGY LAB. - EST. TO COMPLETE		4-20-50	$1,012,000 EST. TO HYLBAK		4-20-50
C-279	5-5-50	100-200	IMPR. TO AREA ADM. BLDGS. - FINAL EST.		--	$167,800 EST. TO E.S. BELL		5-11-50
C-331	5-5-50	321	REHAB., VENT., & BLDG. IMPR.-FINAL EST.		--	$227,000 EST. TO E.S. BELL		5-11-50
C-339	4-14-50	300	ROLLING MILL		4-27-50	$2,795,000 EST. TO H. SHAW		4-27-50
C-349	5-1-50	200	SEMI-WORKS		6-1-50			
C-354	4-13-50	300	ADDITION TO 3745 BLDG.		5-4-50	$22,000		5-9-50
C-357	5-8-50	1100	SEWAGE LIFT STATION - FAIR COST EST.		5-26-50			
M-715	2-10-50	105	I.B.M. INSTALLATION - EST. TO COMPLETE		HOLD			
M-751	5-5-50	222	HOODS & NITROGEN LINES - FINAL EST.		--	$4,750 EST. TO E.S. BELL		5-11-50
M-755	4-13-50	200	ADDITION TO 222-U BLDG.		5-4-50	$11,000		5-9-50
M-755	4-26-50	--	TEMP. CONSTRUCTION FENCE		4-29-50	$630 EST. TO H.E. HYLBAK		4-29-50
A-548	5-8-50	300	SOLVENT STORAGE		5-15-50			
A-557	4-6-50	--	FENCES - 230 KV & DISTR. SUBSTATIONS		HOLD			
A-565	4-6-50	700	BIO-ASSAY LABORATORY		5-2-50	$244,500 INST. SHOP $281,500 NEW BLDG. $273,000 CARP. SHOP		5-4-50
A-568	3-28-50	--	SEAL COATING PLANT HIGHWAYS 1950 - REV.		5-5-50	$93,600 EST. TO H.E.HYLBAK	MFG.	5-5-50
E-434	5-5-50	3732	EXPERIMENTAL INDUCTION HEATING		--	$53,000 REVISED		5-5-50
A-1093	4-28-50	120	P-11 - S & H PHASE		5-4-50	$35,000 EST. TO F.A.BOWMAN		5-4-50
A-1135	4-10-50	108B	COMPARISON - AIR CONDITIONING		4-11-50			
2520	4-6-50	234-5	R.C. WASTE CONTAINER FACILITY		4-15-50	$19,000 EST. TO JOHNSTON		4-18-50
A-3090	3-30-50	300	ROTARY ROASTING FURNACE - ALT. #3		4-20-50	HOLD - H. SHAW		
4365	4-5-50	--	METHYL ALCOHOL RECOVERY STILLS		4-21-50	$3,800 EST. TO C.P. CABELL		4-26-50

PROJECT ENGINEERING DIVISIONS
COST ESTIMATING WORK SCHEDULE
WORK RECEIVED AND COMPLETED
ALL AREAS

----WORK PROGRESS DURING PERIOD
——WORK PREVIOUSLY DONE

DATE MAY 15, 1950

E.R. NO.	DATE RECD.	BLDG. OR AREA	DESCRIPTION	PERCENT ESTIMATING COMPLETE 10 20 30 40 50 60 70 80 90	SCHED. COMPL. DATE	REMARKS	DIV. RESPON.	ESTIM. COMPL. DATE
4385	4-25-50	700	MOVABLE OFFICE PARTITIONS		5-12-50			
W.O. #H43223	4-27-50	141F	TOPSOIL & BLACKTOP - ANIMAL FARM		5-4-50	$7,300 EST. TO H.E. HYLBAK		5-4-50
--	3-30-50	200	RELATIVE COST - STEAM LINE SUPPORTS		4-12-50	$75 EST. TO H.E. HYLBAK		4-29-50

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MAY 15, 1950

RECAP - ALL AREAS

PROJECT COSTS

	100	200	300	GENERAL	TOTAL
AUTHORIZED	$3,451,200	$2,006,250	$ 434,800	$4,276,400	$10,168,650
AWAITING APPROVAL	281,100	192,600	130,500	284,000	888,200
WORK IN PREPARATION	1,319,400	4,531,200	3,111,500	2,505,400	11,467,500
TOTALS	$5,051,700	$6,730,050	$3,676,800	$7,065,800	$22,524,350
LAST MONTH'S TOTALS	$5,302,700	$6,372,050	$3,576,300	$7,122,900	$22,373,950

PROJECTS COMPLETED DURING MONTH: NONE

SUBCONTRACTS IN FORCE: $200,966

SUBCONTRACTS PREPARING: $369,741

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TECHNICAL DIVISIONS

May, 1950

6/9/50

SUMMARY

Pile Technology Division

Initial results from the experimental program at the DR Pile indicated that P-10 feed slugs should be about 4-1/4 inches long, and manufacture of feed slugs to this specification was resumed. Meanwhile the first four tubes of the H-10 program were loaded experimentally, using 4-inch feed slugs which were on hand. Forty solution-heat-treated feed slugs have been prepared for testing in the pile.

The quality of P-10 fuel slugs received during May from Y-12 was markedly improved. Reactivity loss during canning was minimized by reduction in temperature of the canning bath. Fuel slugs irradiated for two months increased in length by 0.3% and increased in diameter by 0.1 - 0.4%, but were unchanged in warp.

Three critical mass determinations were made in a ten-inch diameter cylinder, using varying concentrations of plutonium. The results suggest that a substantial upward revision of batch size in chemical separations and thus a sizeable reduction in operating costs may be possible.

The P-10-B "Cold" Laboratory in Bldg. 108-B is ready for partial use for making gas analyses on unirradiated slugs.

Vertical bowing measurements of the top central tubes at the B and D Piles indicate that graphite expansion near the front face of the piles has been reduced

[redacted]

In Redox and Metal Waste Recovery development, sixty-nine additional solvent extraction runs were made during the month, all on TBP process studies. These runs have extended previous column data up to 16-in. packed columns and 8-in. pulse columns. The 16-in. packed column is being readied for conversion to a pulse column during the month of June. Five different Redox "hot" pump assemblies are continuing satisfactorily in test under closely simulated plant conditions. Flow measurement and control studies have been initiated on the final prototype models of Fischer & Porter and Schutte & Koerting rotameters. Continued chloride corrosion studies with TBP process RAW wastes and RAF feed have shown that the former may be extremely difficult to handle in the production plant.

In the research laboratory, experiments with dissolver solution have proved that ruthenium decontamination in the acid-deficient Redox flow sheet is increased 200-fold by ozonization and 125-fold in the acid flow sheet. Additional data have been obtained on evaporation of and nitric acid recovery from TBP process wastes. New data have also been obtained on the mechanism and operation of the pulse column. Laboratory studies with Bismuth Phosphate plant 5-6W and second cycle wastes have shown no harmful effects to be obtained on blending these wastes as planned for scavenger co-precipitation waste treatment. Redox-234 coupling studies and plutonium coating by the "Electroless" plating method have been continued. The "25" Midget process step of uranium-aluminum separation by selective dissolution of aluminum has been completed in laboratory study.

In the 234-5 process development laboratory, satisfactory precipitation of low-sulfate plutonium peroxide, as a substitute for oxalate purification, has been obtained, together with subsequent hydrofluorination and reduction. Principal remaining problems constitute development of mechanisms for plutonium peroxide transfer to hydrofluorination and the desirable increase of bulk density of the fluoride.

Additional experimental studies of the possible reasons for the apparent drop in sand filter particle removal efficiency at T Plant during the past winter have confirmed the belief that the true efficiency had not decreased but was indicated to be lower because of the unusually high moisture content of the exhaust air saturating the monitoring filters and causing high pick-up of iodine. Life-tests of Fiberglas filter assemblies have indicated that a Fiberglas filter, which will be considerably smaller and longer-lived than the present sand filters, can probably be designed without sacrifice of efficiency or increase in pressure drop.

Technical Services Division

All but one of the Analytical Section personnel assigned to the Rala laboratory design program were reassigned following the formal termination of Rala work on May 2. Plans were made for the preparation of complete terminal reports covering methods research and development and laboratory design phases.

Installation of the machine tools, transferred from Bldg. 3706 to Bldg. 101, was completed, effecting the consolidation of these shops in the 101 Bldg. A small one-man machine shop was retained in Bldg. 3706.

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Continued progress was made on designs for the Hanford Works Laboratory Area. Design project proposals for the Radiochemistry Bldg. and the Radiometallurgy Bldg. have been approved by the A.E.C. A rough draft of the related design project proposal covering the Plot Plan and Utilities for the new area was reviewed with D & C. The inclusion of the Mechanical Development laboratory as a part of this design project proposal was not considered advisable and a separate proposal is in preparation.

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June 9, 1950

PILE TECHNOLOGY DIVISION

MAY, 1950

VISITORS AND BUSINESS TRIPS

D. M. Marquis, R. A. Koehler, and H. W. Bousman, General Engineering and Consulting Laboratory, Schenectady, N.Y., were here May 1 - 5 for P-10 Consultation.

J. R. Humphreys and P. E. Brown, Argonne National Laboratory, were here May 1 - 6 for consultation on ANL-141.

A. H. Seybolt, D. W. White, and A. C. Cooley, Knolls Atomic Power Laboratory, were here May 3, 4, 5 to discuss the KAPL program on metallurgy.

T. B. Drew, Columbia University, was here May 3 - 6 to discuss heat transfer problems.

A. D. Callihan, Oak Ridge National Laboratory was here May 8 - 13 for P-11 consultation.

G. Dessauer, General Electric Co., Schenectady, N. Y., was here May 8 - 26 for consultation on the experimental program in the DR Pile.

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Pile Technology Division

W. D. Davis, General Electric Co., Schenectady, N. Y., was here May 22 - 26 for P-10 consultation.

Business trips of the Pile Technology Division personnel during May were as follows:

P. H. Reinker and L. A. McClaine visited North American Aviation, Inc. Downey, California, May 1 and 2 for technical consultation on graphite.

A. A. Johnson visited Knolls Atomic Power Laboratory May 8 - 12 for P-10 consultation.

C. W. Botsford visited Brookhaven National Laboratory on May 15 for consultation on boron-bearing steel.

E. A. Eschbach visited Argonne National Laboratory May 15 - 19 for P-10 consultation.

E. A. Smith visited Y-12 and X-10 at Oak Ridge on May 22 and 23 to obtain information relative to the fabrication of "J" slugs.

C. E. Lacy visited Simonds Saw and Steel Co., Lockport, N. Y. May 22 - 26 to observe a special rolling of uranium.

W. R. Felts visited the General Engineering & Consulting Laboratory, Schenectady, N. Y., May 24 - 26 for P-10 consultation.

J. C. Chatten visited Bohn Aluminum & Brass Co., Detroit, Michigan, May 24 - 26 to witness extrusion of P-10-A billets.

ORGANIZATION AND PERSONNEL

	April	May
Physics Section	40	40
Engineering Section	45	44
Metallurgy Section	31	31
P-10 Project	22	35
Administration	3	3
	141	153

A group head, a technical graduate, and four laboratory assistants transferred from other divisions to the P-10 Project. Three technical graduates and a glassblower-mechanic were hired for the P-10 Project and two chemical engineers and a technical graduate transferred to P-10 from the Engineering Section.

A chemical engineer was hired and a steno-typist transferred into the Engineering Section.

One physicist was hired and one physicist terminated during the month.

A laboratory assistant transferred into the Metallurgy Section and a steno-typist transferred out of the Section.

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Pile Technology Division

PILE PHYSICS

Increased P-10 Production

It became necessary during the month to specify the length of P-10-A slug to be used in the H-10 loading so that manufacture of these pieces could begin. The first experimental load at DR was used as a test pile to obtain the necessary data. In this way the behavior of various combinations of P-10 feed and fuel slugs was observed in a lattice free from the resonance absorption encountered in natural uranium. The length chosen was 4.25 inches.

Following the measurement of the water effect the first loading was dismantled. A small block of the pile consisting of 81 tubes each loaded with 19 natural uranium slugs was then made critical by surrounding it with a blanket of enriched uranium slightly poisoned with P-10 feed slugs. At month end experiments were in progress to determine the neutron flux distribution in a loading of P-10 feed and fuel slugs replacing the center of the natural uranium block and thereby simulating the situation to be encountered in the H-10 load.

Four experimental tubes were loaded in H Pile during May; these tubes contained the proposed H-10 type loading with the exceptions that the feed slugs were 4 inches in length instead of 4.25 inches and that two natural uranium slugs were inadvertently omitted from each tube. The reactivity change produced by loading these tubes was not detectable within the precision of such measurements since other changes effecting the reactivity were also made.

The power output of these tubes under normal operating conditions was 87% of that of the surrounding tubes with conventional loading. This information indicates that present production goals will be met by use of 4.25 inch feed slugs in 600 tubes of H-10 type loading. However it may be preferable, when all the information to be obtained at DR is available, to make a small decrease in the slug length.

The quality of P-10 fuel slugs received during the month was markedly improved over that for previous shipments and it was possible to institute a sampling procedure for Test Pile work eliminating the complete testing of all slugs. At the end of the month 5424 slugs had been received of which 2121 had been accepted, 209 had been rejected for reactivity reasons, 182 were canning rejects, 12 slugs had been alloted to experimental work, and 2900 were still to be tested. The test pile results were calibrated in terms of uranium concentration by use of a series of special slugs prepared with various concentrations.

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Pile Technology Division

Plutonium Critical Mass Experiments

The critical mass in a ten inch diameter cylinder with full water reflector was measured for three concentrations of plutonium in solution. At concentrations of 77.4, 62.4, and 49.3 grams Pu/liter the critical masses were 943, 834, and 787 grams respectively. These results indicate definitely that the single result of a rough experiment performed at another site several years ago was too low. The present values appear to be in good agreement with calculations based on currently accepted values of the plutonium cross section for thermal neutrons and the number of neutrons produced per capture. Results are not yet sufficiently complete to warrant a change in batch size at the separations plant but a substantial upward revision may soon be possible.

A remotely controlled motor drive has been installed on the top reflector which determines the cylinder volume and the control strength has been increased by changing from a round rod to a cadmium plate. A fast response scintillation type instrument has been added to the automatic safety circuits.

Design of apparatus for measuring critical masses in a spherical geometry has been completed.

Pile Physics Work

At the startup of F Pile on May 24 on the 12 to 8 shift the capacity of the horizontal rod system was exceeded before the xenon poison was stopped and regrowth begun. It was necessary to shut the pile down for a short time and subsequent operation was guided by information supplied by the area physicists on an emergency basis until sufficient xenon had built up to permit return to normal operating procedures.

The flashing test of the H Pile during startup showed that a small dry loading decreases in reactivity as the temperature increases, whereas the conventional large wet loading is known to increase in reactivity as the temperature increases This difference has been attributed to the presence or absence of water, though the mechanism has not been explained. It has now been noted that the difference may be related logically to the size of the pile, so that a fully loaded pile may still gain reactivity as the temperature rises following loss of water. Plans are being formulated to permit tests of this possibility during startup of the DR Pile.

Seventy slugs with an average exposure of 711 MWD/T have been prepared for shipment to Oak Ridge for plutonium and uranium isotopic determinations. This is part of an extensive program throughout the A.E.C. to develop information on high exposure plutonium.

Reactivity changes were normal during power level increases at B and H Piles and during increases in carbon dioxide concentration at D and F Piles.

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Special Request Program

232 P-10-A slugs and nine other special requests were disc during the month, while 381 P-10-A slugs and eight other s being charged. There are 22 additional special requests c charging.

Reactivity

At month end the reactivity status of the four operating p

	B Pile	D Pile
In rods	70 ih	86 ih
In xenon poison	466	469
In Special Requests		
In lead-cadmium columns	0	0
In bismuth	103	104
In plant assistance	0	47
In dummy columns	0	23
In overall coefficient	-251	-300
Total cold, clean reactivity	877	374

as compared to the higher temperatures even in the phite in the central zone of the pile. These data, energy data on previously mined samples, show the

The B Pile lost 21 ih, while D Pile gained 2 ih, the F Pile 70 ih during the month. The changes at all of the piles a the changes in the exposure history of the uranium metal.

PILE ENGINEERING

Graphite Expansion

Vertical bowing measurements of the top central tubes at indicate that the recent increases of carbon dioxide to l phere significantly reduce the rates of expansion of the gr faces of the piles. Previously 40 to 60% carbon dioxide st the center of the pile but there was continued expansion of near the edges. Recent data while not conclusive are of gr immediate production is being sacrificed to obtain increase point about 3 1/2 feet from the front edge of the graphite a recovery of previous expansion at the B Pile of 0.03 "± . D Pile 0.05 "± .02" during the past two months as compared of 0.02 to 0.04 inches expansion per month.

Additional measurements of graphite tube block bore diamete endwise expansion were made on P.T.-105-292-P and P.T.-105-

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Pile Technol

The nine tub central tube the hydrauli of the block stack has no

Graphite Mon

Two core sam blocks 2279- X-ray measur were approxi For example, core shows m 40% higher. outside the tube block b along with X trend of dam the bore of annealed, wh flattened zc this period, percent.

Forty-eight rate of 0.78 about 2/3 of of orientati

Additional d samples havi data are in annealing wi first one mc

Exposures of dioxide and be in about

Power Level

The H Pile p P.T.-105-302 the B Pile w A further ir be feasible which have t Two special fabrication. Ins during June be defined.

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PAGE 103
OF DOCUMENT 727797
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Pile Technology Division

Measurements of the graphite temperatures at the H Pile, which has been operated with a 100% carbon dioxide atmosphere since startup, show that the decrease in apparent graphite thermal conductivity has been much less than was experienced at the B, D, and F Piles which were operated with a Helium atmosphere.

Thimble Removal Program

A fluted vertical rod stepped plug was designed for use with a ball third safety system. A production test has been approved for pile tests of the shielding effectiveness of this stepped plug and the feasibility of the associated gas seal.

Boiling Tests

The method of calculation which is currently used to determine header pressure requirements for the pile process tubes was found to predict accurately the flow rates and pressure drops accompanying boiling in a small heated mock-up of a process tube. It was also found when the flow of cooling water to the mock-up was reduced by the presence of steam in the tube that water flow without vaporization would not be resumed unless the water supply pressure exceeded the maximum pressure drop which could occur with boiling in the tube at low flow rates. This mock-up consisted of a tube, 0.152 inches i.d. by 23.3 feet long, heated by direct passage of electric current through the walls of the tube.

Increased Exposure of Group V Metal

Production Test P.T.-105-278-P, "Increase in Enrichment Level", in which the exposure level of group V metal was raised by increments to 625 MD/T, has been completed. The increased exposure had no pronounced effect on the length, diameter, or warp of this metal. Slight increases in blistering tendencies were noted; however, the blistering is of no engineering significance and special techniques are required to observe it. It is believed that considerably higher exposures would be possible.

Process Tube Corrosion

A metallographic examination of two tubes removed from the B Pile showed that corrosion pits have occurred only in the 72S layer in the tubes, and only in the regions where there are no dummies or slugs in the tube. Tubes from all orifice zones are being examined to complete the study.

Exposure of P-10 Fuel Slugs

Two P-10 fuel slugs were discharged after 64 days exposure. The slugs each increased 0.023 inches in length, and 0.001 inches and 0.005 inches in diameter but were unchanged in warp or bowing.

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Pile Technology Division

METALLURGY

Uranium Billet Casting

In an effort to find a deoxidizing agent that will completely remove oxide from uranium chips in a minimum time with minimum attack on the base metal and with minimum evolution of noxious fumes, several pickle solutions have been tried experimentally as alternatives for the 50% nitric acid in present use. The most promising of these appears to be 5% H_2SO_4 + 1% H_2O_2 with a small amount of $(NH_4)_2 SO_4$ (added to inhibit precipitation of uranium peroxide), used at 85°-95°C.

Uranium Rolling

Rolling of uranium at 400°C was successfully accomplished during the May run at Lockport. Two-inch and three-inch diameter uranium rods fabricated from billets by various methods at higher temperatures were easily rolled to standard size rod. The rods finished with a fair surface but there was appreciably more oxidation than occurred at 300°C. This was accentuated by the fact that the temperature increased during rolling to about 500°C even though in one case an additional cooling period was used. In rolling the 3 inch diameter gamma extruded rods, surface checking occurred in the first passes.

A dimensional spot-check on 65 random rolled uranium rods from the May shipment gave results as follows:

Average diameter	1.418"
Diameter range	+0.019", -0.023"
Ellipticity	0.005" Avg., 0.020" Max.

Uranium Slug Canning

The results of three trial attempts to substitute a molten lead quench bath for the tin bath in the slug canning process indicate that with present facilities such substitution is not feasible. No simple changes in equipment can be expected to improve the feasibility of the substitution.

The design of the time and temperature control devices, developed for attachment to all bronze-dip furnaces, has been completed. Work orders covering their installation have been issued.

Dilatometry

Work was continued on the development of a dilatometric method of inspecting slugs for the degree of transformation. While untransformed and completely transformed slugs can be easily separated, the difference in expansion between 80 per cent (and greater) transformed to completely transformed slugs is sufficiently small that statistical methods will be required to set up the expansion limits for acceptable slugs. Data for statistical analysis are currently being obtained. In the meantime, a dilatometer is being constructed for trial use as a production inspection unit.

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Pile Technology Division

Radio Metallurgy

Samples of irradiated vertical safety rod guide were mechanically polished. Although the surfaces are somewhat imperfect, photographs show the grains to be discernible and the pearlite in these samples to be resolved. This method will be improved considerably when the Elgin Polisher unit arrives on or about July 1, 1950.

The initial design for an electrolytic polishing and etching container was completed for detailing and the design of a clamp to hold the specimen to the container was begun.

The tensile and hardness specimen cutter has been modified to accommodate an on-center type of guide post arrangement. The new die set, with this on-center guide post, has been received.

A lead glass viewer plug has been installed in the mock-up cell. Most of the interior of the cell can be seen through this 6-1/2" diameter, 10-1/2" long leaded glass (density 6.4) which is relatively free of bubbles and striae.

Plans for handling the rotobin between buildings and within the 111-B Building have been completed and a report is in progress.

A newly designed molding jacket was received and has proven very satisfactory. Various molding techniques using Denticol and plaster of paris have been tried to obtain an optimum replica for observing the general appearance of irradiated slugs, but perfect duplication has not yet been obtained.

Shielding and decay studies of the K.A.P.L. Irradiation Request 101 test components has been completed and a report is in progress.

The project proposal to provide 111-B with storage facilities and health monitoring equipment was approved on May 23, 1950. Project Engineering estimates that the completed design may be available by June 30, 1950. A crib for the disposal of basin water and other innocuous wastes has been installed outside the 111-B Building.

P-10 Alloys

An experimental gas analysis line was completed during the month and placed in operation. Two pairs of heat treated and non-heat treated slugs exposed to 20 and 80 per cent humidity for 37 days gave analyses that were the reverse of previous analyses made at 100-B on short exposure pairs, in that the heat treated slugs contained more hydrogen than did non-heat treated slugs. Additional tests on pairs exposed 3 days confirmed the earlier data favoring heat treated slugs. This reversal behavior on long time exposures is being checked.

In preparation for a pile test of heat treated slugs, forty pieces of rod were given a solution heat treatment. These will be processed into slugs by the standard procedure.

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Pile Technology Division

Examination of a billet received from P-10-A operations showed that the unsoundness was caused by solidification shrinkage. Examination also disclosed that inverse segregation had also occurred in this billet, that is, the outer skin contained 0.5% more of the added element than the average of the cross section.

Metallographic examination of a 4 foot long extruded bar of aluminum -7.5% natural uranium alloy indicated that the uranium rich phase was broken up and distributed uniformly in the outer portion of the rod but that in the center the cast structure was elongated but not broken up sufficiently to distribute the uranium phase. The uranium content was relatively uniform along the length of the rod but varied from the surface to the center, the center being about 0.5% richer in uranium.

Small scale experimental work directed toward the reduction of some of the difficulties associated with the fabrication of "J" slugs has shown some promise for a process involving the casting of an Al-Mg-U alloy directly into the final aluminum can. Further experiments along these lines are being pursued. Twenty-five mockup slugs of Aluminum -7.5% natural uranium alloy were canned by the "J" process for use in experimental separation work.

To minimize the loss of "J" alloy metal to the Al-Si bath during canning, with attendant loss in canned reactivity, the nominal temperature of the canning bath was This expedient has greatly improved the reactivity of canned "J" slugs in comparison with their bare reactivity, but some increase in frost test and non-seat rejects has resulted. The canning yield for "J" slugs during May was 92%.

Corrosion

Corrosion tests on austenitic stainless steels Carpenter 20, T-309SCb, T-347, and T-304 ELC and tantalum exposed to boiling solutions of MJ-4 streams, RAF (conc.) and RAW (conc.) were begun. Data previously obtained for these materials but using CP grade chemicals for the make-up of these corrosive solutions, are reported in Doc. HW-17626.

Work on the applied potential corrosion tests on aluminum has been discontinued at the direction of Mr. P. E. Lowe. A final report is being prepared.

A test program for the evaluation of the dimensional stability and corrosion resistance of Saran in nitric acid-hydrogen peroxide solutions was completed. The results of this study were reported by letter.

The preliminary results of corrosion studies for Project MJ-4 were reported in Doc. HW-17819.

Austenitic stainless steels T-309SCb, T-347, T-304 ELC, and Carpenter 20 were exposed to a mixture of HF, HNO_3 and H_2SO_4 (similated 202-S waste storage) at room temperatures under static conditions. The data indicate that both Carpenter 20 and T-309SCb are satisfactorily resistant to both concentrations of these mixed acids used in this study.

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The P-10-B "Cold" : 11
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A decision has bee
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The design of the
scheduled for ship
December 1, 1950.

Slug machining ope
P-10-A slugs 4.25
are continuing fiv

INVENTIONS

All Pile Technolog
be expected to rea
of their knowledge
course of their wo
listed below. Suc
by this report, no
have been examined

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Special Requests

The following special request pieces were tested as indicated:

Request No.	Work Done
ORNL 111	Spun closure, dimensional check, bu test
ORNL 129	Inspect
ORNL 130	Inspect
UCRL 117	Can with welded closure, bubble tes
ANL 140	Special examination and checking
WAPD 100	Doc. HW-17720 Bubble test Can with welded closure; determine temp.
ANL 162	Doc. HW-17791 Assemble in special containers

Miscellaneous

A uranium sample prepared by the powder method by S grain structure and orientation. Although the spec it did not have a completely random orientation. T less than that present in alpha rolled uranium but in rolled uranium which has been given a beta pha

All but two of the exceptions noted in the first have been corrected. It is planned to have the f before completing the last two exceptions.

P-10 PROJECT

The contaminated can opening room mentioned in the Analytical investigations indicate that the contami was spread from a few slugs, was formed from chlori chlorine in the slugs was introduced as an impurity

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PAGE 109
OF DOCUMENT 727797
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EW-17971 Dec

June 12, 1950

SEPARATIONS TECHNOLOGY DIVISION

MONTHLY REPORT
MAY, 1950

VISITORS AND BUSINESS TRIPS

L. Burris, M. Levinson, and R. Vogel of the Argonne National Laboratory visited this site on May 15 and 16 for consultations on P-10, TBP, and "25" Processes.

W. D. Davis of the Knolls Atomic Power Laboratory inspected the 200-W Area on May 24 during his visit here with the Pile Technology Division personnel.

R. E. Smith visited the Kellex Corp. in New York City from May 3 to 5 for engineering consultations on MJ-4.

W. H. McVey visited the Radiation Laboratory at the University of California on May 10 for a consultation on heavy elements separation.

V. R. Cooper, M. K. Harmon, and C. M. Slansky attended a TBP conference at the Oak Ridge National Laboratory - V. R. Cooper on May 22, 23, 24 and M. K. Harmon and C. M. Slansky on May 23 and 24.

M. K. Harmon and C. M. Slansky visited the Argonne National Laboratory on May 25 for a "25" Process consultation.

V. R. Cooper visited the General Engineering & Consulting Laboratory at Schenectady on May 25 and 26 to discuss the Long-Range Bearing Program.

ORGANIZATION AND PERSONNEL

Personnel totals in the Separations Technology Division are as follows:

	April	May
Administration	2	2
Special Assignment	2	1
Process Section	26	27
Development Section	94	92
Research Section	33	34
[redacted]	157	156

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1217540

110

Separations Technology Division

Process Section: One Chemist was added to the Section as a new hire.

Development Section: One Draftsman and one Chemical Operator Trainee were terminated.

Research Section: One Chemical Engineer was added to the Section as a new hire.

Special Assignment: An Asst. Group Head was transferred to the Pile Technology Division.

200 AREAS PLANT ASSISTANCE

Canyon Buildings

It had been planned to recover the product in the neptunium recovery raffinates, received from the Argonne National Laboratories, under Production Test 200-1 by adding these solutions to regular production runs at the second cycle product precipitation step. Samples taken from the shipping containers, however, revealed the presence of significant amounts of solvent. Recovery of this product is being postponed, pending removal of the solvent.

The second cycle product precipitator tank spray at B Plant was examined and found to be defective after an Acid Wash Run indicated a product hold-up of approximately 11% at this point.

Failure of the 6-3 Tank sampler at T Plant necessitated the use of extraction precipitator tank assays as bases for two runs.

Concentration Buildings.

The Isolation Building recycle material storage tank (E-4) at B Plant was recalibrated to initiate the use of a manometer for weight determination. Excellent agreement was found between rod readings, the manometer, and the original calibration. The ring balance indicated 1.38% less pounds per inch of tank than was found by rod and manometer measurements.

The E-4 Tank at B Plant was cleaned with a flush of nitric acid and hydrogen peroxide prior to recalibration. A product loss of 0.07% of an average run occurred in the flush.

Isolation Building

The product contained in two plutonium "cows", returned to this plant by the Argonne National Laboratories, was recovered without difficulty under Production Test 200-1 by handling as an F-10P solution.

234-5 Building

Twenty-one of the twenty-four batches to be processed in the first part of Production Test 231-10 have been processed in the 234 Building. Eleven of these batches have been diluted in the 234 Building while using the large flat paddle in Hood 4. In all of these cases, within the accuracy of the analytical methods, homogeneity has been reached after one hour of agitation. Some crystalline solids were found in one of the three sample cans which contained 70 cc more liquid than the sample cans processed in the standard procedures for the 231 Building.

When buttons were assembled for charges there was an inadvertent mix-up of the buttons to be used, which resulted in incorrect additions of 40-8 to each charge. After this error was discovered, it was calculated that should have approximately 1.1% 40-8 and should have 0.91% 40-8. Since these values lie within specifications, processing was continued to the point of machining at which point the charges were held pending laboratory analyses. The laboratory reported 1.05 and 1.16%, respectively, for the MC-1 and the MC-2 samples of This charge was sent on to Hood 19 for normal processing. The laboratory reported a low MC-2 of 0.78% and high MC-1 of 1.21% for charge and this charge will be recycled through Hood 14 since the analytical results indicate a lack of adequate homogeneity.

A newly fabricated 090 die has been calibrated in the 272-Z Shop using the RM Line press. The male punch broke the first time it was used and a new punch is being made. The heat-treating history of the punch that broke was questionable due to the failure of some furnace control and recording equipment during its fabrication. The usual practice of using lead as a stand-in material at room temperature was followed during this calibration work. The diameter of the new die is 3 mils less than the die currently being used and the pieces produced during the calibration work indicate that charges requiring considerably less hand cleaning can be produced in this die.

REDOX AND METAL WASTE RECOVERY DEVELOPMENT

Solvent Extraction Studies: General

A total of 69 solvent extraction studies was completed during May, extending previous studies of packed columns up to 16-in. diameter and pulse columns up to 8-in. diameter for the TBP Metal Waste Recovery Process. Highlights of new information from these studies are summarized below:

Packed Column Studies

1. Continued studies using a 16-in. diameter column packed with 19 ft. of 1-1/2-in. by 1-1/2-in. stainless-steel Raschig rings as both an RA extraction section and an RC Column confirmed the preliminary conclusions stated last month that there is no scale-up factor for 1-1/2-in. rings on going from an 8-in. to a 16-in. diameter column.

2. Use of 0.01 M HNO_3 in the RCX appears definitely beneficial in plant-size RC Columns using 1-1/2-in. Raschig rings. When this nitric acid was not used during one 16-in. column run, the uranium loss in the RCW increased from 1.3% to 7% and the H.T.U. increased from 4.1 ft. to 6.9 ft.

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3. Contrary to previous experience with 3-in. and 8-in. packed RA Columns, making the RAFS 0.2 M in ferrous sulfamate during one 16-in. column run (using 1-1/2-in. rings) was apparently detrimental rather than beneficial to uranium transfer (uranium loss in the RAW increased from a previously reported value of 3% to 6%; H.T.U. increased from 5.7 to 6.3 ft.). This ferrous sulfamate was added continuously to the RAFS feed pump rather than to the entire feed batch just prior to starting the run as had been done previously. It is not definitely established whether the poorer extraction observed during the above run is due only to the ferrous sulfamate.

4. RO Column studies have been initiated using a 3-in. glass column packed with 12 ft. of 1-in. by 1-in. stainless steel Raschig rings. Although alternative ROX compositions (water, 10% Na_2CO_3, 10% NaOH, 10% H_3PO_4) have been employed, the relative performance of these agents has been obscured by off-standard solvent containing varying concentrations of what appears to be an organic-favoring form of uranium. Subject to the above reservation regarding "inextractable" uranium, the best removal of uranium from the organic stream was obtained using H_3PO_4, with water apparently being at least as good as Na_2CO_3 or NaOH. None of the agents displayed any significant advantage over the others in improving the uranium distribution ratio of the solvent, as measured by a standardized test at dilute RC Column conditions (equilibrating at approximately 1 g.UNE/l. in the aqueous phase).

Pulse Column Studies

While awaiting plates pierced with 1/8-in. holes for both 8-in. and 16-in. pulse columns, further RA and RC studies were carried out in an 8-in. pulse column using 50 plates pierced with 0.079-in holes (2-in. plate spacing, 8.4 ft. effective "packed" height, 23% free area). The column was operated at pulse amplitudes in the range 0.5 in. to 1 in., and pulse frequencies in the range 38 to 75 cycles/min. at volume velocities (sum of both phases) up to 1900 gal./(hr.)(sq.ft.) in the RA extraction section and up to 840 gal./(hr.)(sq.ft.) in the RC Column. New information is summarized below:

1. In general, both the RA and RC Column extraction performance was slightly poorer than the best results reported last month for this column. Uranium waste losses as low as 0.9% for the RA extraction section (1.7 ft. H.T.U.) and as low as 0.3% for the RC Column (1.4 ft. H.T.U.) were realized at respective volume velocities of 1440 and 500 gal./(hr.)(sq.ft.), sum of both phases.

2. No significant effect on uranium extraction was noted during one run when the RAFS was made 0.02 M in ferrous sulfamate by adding ferrous sulfamate solution continuously at the RAFS feed pump. This confirms no effect of ferrous sulfamate on the performance of pulse columns with 0.079-in. perforations as noted in previous 3-in. pulse column studies.

Carrying on with the previously reported program of using a 3-in. diameter glass pulse column to scout the effects of the many pulse-column variables on flooding capacity and extraction performance for RA extraction section and RC Column operation, the 3-in. column was rebuilt during May with 54 stainless-steel plates spaced 2-in. apart (9.1-ft. effective "packed" height) and perforated with 0.125-in. holes (approximately 23% perforated area). Since similar column heights with 0.125-in. perforations are to be tested in 8-in. and 16-in. diameter pulse columns, studies with this cartridge in the 3-in. column are

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expected to scout optimum operating conditions for the larger columns and to supply basic information for evaluating the scale-up factor for pulse column on going from 3-in. to 16-in. column diameter. New information from these 3-in. pulse column studies is summarized below:

1. Although preliminary information reported last month indicated that the complete flooding capacity decreased (for 0.079-in. plate perforations) as the number of plates was increased from 28 to 50, this decrease was not found for 0.125-in. plate perforations as the number of plates was increased from 32 to 54. Using the 54-plate cartridge in the 3-in. diameter column, (2-in. plate spacing; 0.125-in. holes) complete flooding capacities were determined as high as 3700 gal./(hr.)(sq.ft.), sum of both phases, for the RA extraction section, and as high as 2000 gal./(hr.)(sq.ft.) for the RC Column. However, in the RC Column operation cyclic local flooding with attendant unstable operating conditions generally existed above approximately 60% of the complete flooding capacity, and attempts to operate in this unstable region often resulted in complete flooding if operating changes were not made slowly and smoothly.

2. Good performance of the RA extraction section was realized at 1500 gal./(hr.)(sq.ft.) sum of both phases, using a pulse amplitude of 1-in. and a frequency of 55 cycles per minute, or a pulse amplitude of 1.5 in. and a frequency of 39 cycles per minute (uranium losses of 0.1% or less; H.T.U.'s of 1.0 to 1.1 ft.).

3. Good RC Column performance was realized at (a) 1000 gal./(hr.)(sq.ft.) an amplitude of 0.5 in. and a frequency of 70 cycles per minute, and also at (b) 800 gal./(hr.)(sq.ft.), an amplitude of 1-in. and a frequency of 40 to 50 cycles per minute (less than 0.1% uranium loss; 1.1- to 1.2-ft. H.T.U. values).

4. There is preliminary evidence from both 3-in. and 8-in. pulse-column studies made to date that for any particular feed rate and pulse amplitude there is a pulse frequency above which the H.T.U. increases with frequency rather than decreases. Tentatively, this effect does not occur until the product of amplitude and frequency is somewhat in excess of 50 in./min.

Bldg. 321 Construction and Maintenance

All exceptions to the final acceptance of Project C-331, 321 Bldg. Rehabilitation and Ventilation Revisions, are completed except for improved ventilation in the maintenance shop and installation of the louvres on the roof vent fans. All materials for these two jobs are on hand, but they are being held up by Maintenance and Minor Construction as low priority jobs. The Power Division project to meet Scale-Up tank farm raw water demands by supplying the tank farm directly from No. 3 and No. 4 - 300 Area wells, is completed.

Work orders for installation and fabrication of a plant prototype pulse generator were initiated during the month. At this time, work is about 50% complete with final completion and testing scheduled for June 6.

Difficulties previously experienced with the Demonstration Unit pulse generating mechanism have been corrected by enlarging the line from the pulse generator to the RA Column from 3/4-in. to 1-1/2-in. The former difficulty was apparently caused by cavitation in the line at very high frequencies, causing an overload on the bellows return springs. The unit now operates satisfactorily over a range of 75 to 170 cycles per minute and at amplitudes (in column) of 0.5 to 1.5 in. Equipment for incubated metal waste dissolution studies in "A" and "B" Cells was set up, used, and dismantled during the month.

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The disengagement section on the 8-in. diameter pulse column was enlarged from 10-in. to 16-in. during the month to minimize entrainment during high flow rate runs. It was necessary to dismantle the pulse generator for the 8-in. column to replace a broken shaft during the month. The drive mechanism forced the shaft and piston down on top of a shear pin which had dropped into the piston cylinder during maintenance, resulting in the piston rod shearing between the piston and the cross head. The 16-in. diameter stripper was equipped with differential pressure manometers and seal pots for use in de-entrainment studies. A new head tank and piping was installed to permit continuous addition of ferrous sulfamate solution at the suction of the aqueous feed pump, thus preventing long residence time of the ferrous sulfamate in contact with feed solutions. Installation of spray condensers on AQ-5, 6 and 7 tanks was completed during the month. Several leaks developed in the condenser tail-water piping due to presence of higher than anticipated concentrations of HNO_3 in the boiled-off vapors.

Bldgs. 321 Operations - Demonstration Unit

A dissolution test on incubated metal waste was made in "A" Cell dissolver during the month. The sludge plus supernate was added to HNO_3 in the dissolver. The short test was interrupted by a power failure, but otherwise was satisfactory. Solution was complete without excessive foaming or gas evolution. Further studies were discontinued because of the need for extensive equipment revisions. The major source of difficulty in operation of both Demonstration and Scale-Up units during the month has been caused by the presence of "Red Oil" (TBP decomposition products) which affected uranium distribution ratios. Major efforts have been made to rid the systems of this contaminant and to prevent its reappearance. It should be noted that these difficulties have been caused by the necessity for recycling materials in the operation of the 321 Bldg. and are not anticipated when following a normal production flow sheet.

Pulse column operation was carried on successfully during the month under a wide range of conditions of flow, frequency and amplitude. The RO Column was operated in cascade with the RC pulse column with varying degrees of success depending on the chemical composition of the ROX.

Bldg. 321 Operations - Scale-Up

Scale-Up operations during the month included H.E.T.S. and flooding studies in the 8-in. pulse column and the 16-in. column packed with 1-1/2-in. Raschig rings and with 1/2-in. Raschig rings. A few service runs were made for uranium recovery, and a series of de-entrainment studies were conducted in the 16-in. stripping column. A major portion of Scale-Up operating time is still devoted to feed make-up and solution concentration, even though use of AQ-6 and 7 as semi-concentrators has helped in this respect. Some time has been spent in decanting and barreling out "Red Oil", a somewhat more difficult operation in Scale-Up than in the Demonstration Unit. Several revisions to the solvent washing procedure have been tried during the month, mainly in chemical constituents in the wash solutions. Current studies indicate sodium sulfate is very satisfactory for returning the Spray Base-TBP mixture to feed specifications after an RA-RC run series.

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Equipment Development

Submerged Pump No. 2 (G.E & C.L. turbine driven through a two-foot vertical shaft supported on two carbon-filled fluorothene bearings) has completed 5.3 months of essentially continuous operation in 1.8 M $Al(NO_3)_3$ solution at 3450 rev./min., discharge pressure 40 lbs./sq.in.ga., and flow rate of 1.35 gal./min. The shutoff pressure has remained steady at 56 lbs./sq.in.ga.

Submerged Pump No. 3 (Roth 147 turbine pump suspended from a 10-foot torque tube containing two process fluid-lubricated graphitar bearings supporting Stellite No. 6 journals, revised to correspond to final Redox plant mechanical specifications) has operated intermittently for 10 days in water. This unit is operating in conjunction with prototype rotameter evaluation program.

Submerged Pump No. 4 (Roth 147 turbine pump suspended from a 10-foot torque tube containing two water-lubricated graphitar bearings. An upper and lower seal isolate the water-lubricated bearings). Shake-down testing in 2.0 M NaCl plus 0.02 M NaOH has been uneventful and indicated good mechanical performance with seal leakage rate nominal.

Roth D-93, prototype turbine pump (10-ft. vertical drive shaft supported on two process-lubricated graphite-filled fluorothene (40% graphite) bearings and with a water-flooded Duraseal) has been reassembled for operation in hexone. Modifications to the test stand to insure safe operation include protection from dry operation, loss of inert gas blanket, overheating of bearing, and potentiometer and air failure. Initial test operation on water is expected during the week of 5-29-50.

Peerless Double Volute, prototype turbine pump (10-ft.. vertical drive shaft supported on process-lubricated graphitar bearings with a water-flooded Peerless vapor seal) has been reassembled and start-stop operation resumed in 1.8 M $Al(NO_3)_3$. Initial operation indicated excessive seal leakage (over 1-1/2 gal./hour) across the refaced boron carbide seal. The difficulty has been traced to a loose fit between the boron carbide seal element and the retaining fluorothene mounting cup.

G.E. & C.L. Motor Pump Unit, (1/3 HP submerged electric motor and G.E. & C.L. turbine pump) has been in operation for 58 days in RAF (TBP #3) at 1750 rev./min, discharge pressure of 10 lb./sq.in.ga., flow rate of 0.5 gal./min. Shut-off pressure has remained essentially constant at 13 - 14 lb./sq.in.ga.

Flow Measurement and control studies have been initiated on the prototype rotameters received from Fischer & Porter and Schutte & Koerting. The F.& P. instrument has been calibrated from 10 to 96% of full chart using water. The corresponding flows were 0.6 gal./min. and 3.4 gal./min. Mixmum pen oscillation at any point was 1/2 of one division (0.5%). Total operating time on water was 157 hours. The S.& K. instrument was operated from 3 to 80% of full chart. From 3 to 27% (0.16 - 1.13 gal./min.), operation was stable. At approximately 40% of chart, pen oscillation was ± 1% while at 80% of chart (3.2 gal./min.), pen oscillation was ± 6% indicating float instability. Total operating time on water was 10 days

A low flow rate (0 - 20 ml./min.) Fischer & Porter rotameter has been tested as an automatic flow-controlling device using water as a test fluid. The instrument has operated 409 hours. Flow deviations within ± 1% can be expected if the zero of the instrument is checked before each calibration. Automatic control has been erratic. Further investigation is underway.

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A 1-1/2 gal. RAW concentrator fabricated from Type 347 stainless steel and with 304 s.s. 3/8" steam coils has been put in operation to investigate the extent of scale formation which may be expected to occur in the TBP plant concentrator. Previous operation indicated excessive condenser coil corrosion due to the presence of Cl^- in the RAW. Present condenser coils are of glass. The concentrator operated by incremental addition of RAW with subsequent withdrawal of overhead to produce a liquid boiling at 120° C. The RAW and simulated conc. RAW contain 1.0 and 2.5 g./l. Cl^-, respectively, for initial operation. Over the first 44 hours of operation (no incremental addition) heat transfer coefficients (U) of 517 to 525 BTU/(hr.)(sq.ft.)(°F.) were obtained. Regular samples of feed, bottoms, and overhead will be taken for complete chemical analysis.

Corrosion studies designed to investigate the effect of chloride ion in the RAF and RAW on stainless steel have indicated that all stainless steels studied (304, 347, 309Scb, & Carpenter 20) undergo corrosion in boiling conc. RAW solutions containing 2.5 g./l. Cl^-. Least corrosion occurs in the boiling liquid and varies from 15 - 55 mils/year. Greatest corrosion occurs at surfaces exposed to condensing vapors. Less severe corrosion occurred in boiling RAF solutions containing 1 g./l. Cl^-. It is possible that stainless steel may be used as a construction material for the RAF concentrator (see HW-17819).

Coating materials for the TBP plant have been tested. The following conclusions can be drawn:

1. Amercoat #23 is feasible for non-solvent areas and can be applied over old Amercoat #23.

2. Best materials to date for solvent areas are Ucilon, Amercoat #55, and Tygon paint. Methods of applying these materials over old Amercoat #23 are being investigated.

The development of a non-perforate homogeneous flame sprayed polyethylene coating for concrete is in process, but as yet pinholes continue to appear.

Process Chemistry

Concentration of RCU stream per TBP Flow Sheet HW No. 3 has been carried to 70, 80, 88.5 per cent uranyl nitrate (U.N.) in the concentrated RCU material. At 70 per cent U.N., the HNO_3 concentration in the still was 5 per cent, at 80 per cent it was 2.0 per cent, and at 88.5 per cent free HNO_3 was not present. Decomposition was noted in the 88.5 per cent material which has a boiling point and freezing point of 160°C.

Removal of chlorine from the RAF stream of TBP-HW No. 3 Flow Sheet (exists as chloride ion in the RAF) has been demonstrated by two procedures. Continuous concentration of the 2.5 M HNO_3 RAF material at a reflux ratio of 1:10 to a final concentrate liquid phase volume of 30 per cent of the original RAF volume appears to give 95 per cent removal. Analytical difficulties did not permit material balance of chloride. The RAF may also be increased to 4.5 M HNO_3 and continuously concentrated without reflux to 30 per cent of its original volume with 98.5 per cent chloride removal.

The distribution coefficients of chloride ion in the RA Column have been roughly determined to be: E_a° (Cl^-) range .04 to 1.0 for bottom, mid-point of the extraction section and feed plate when Cl^- in aqueous phase was originally 1.0 g. Cl/l. Reducing chloride concentration in the original aqueous phase to 0.1 g. Cl/l. resulted in E_a° (Cl^-) values of 0.2. The material balance data were low (90%) for the high chloride concentration (1.0 g./l.) and high (160%) for the low chloride (0.1 g./l.) regions.

The equilibrium chloride concentration in an aqueous nitric acid system is of importance in HNO_3 recovery system design and has been studied by adding 8.85 g. Cl^-/l. (as HCl) to 10, 20, 30, 40, 50, 60 per cent HNO_3 systems and refluxing with total aqueous condensation for 24 hours. The final chloride ion concentrations versus HNO_3 concentration are: 10.2 g. Cl/l - 10%, 7.74 g. Cl/l. - 20%, 7.74 g. Cl^-/l. - 30%, 4.40 g. Cl^-/l. - 40%, 0.41 g. Cl^-/l. - 50%, 0.1 g. Cl^-/l. - 60%.

SEPARATIONS PROCESS RESEARCH

Ruthenium Tetroxide Distillations

When the ozonization of dissolver solution was carried out in the presence of 2 g/l of Filtrol which had been pretreated with dichromate, no adverse effects were noted on the ruthenium removal or subsequent solvent behavior. On the other hand, if the Filtrol were not pretreated, the over-all decontamination through an extraction and two scrub steps was reduced by a factor of ten. This decrease was about equally divided between the ozonization step and the solvent extraction steps. These latter data are not regarded as disturbing since any Filtrol heel left in the oxidizer will effectively have been pretreated with dichromate through contact with the previous run.

In an experiment to test the solvent behavior of ruthenium in still residues under ANL acid flow sheet conditions, decontamination factors were 3650 and 29 for ozonized (D.F. on ozonization = 21) and unozonized dissolver solution, respectively. Under comparable conditions with the ORNL acid-deficient flow sheet, the decontamination factors were 1.6×10^5 and 850. If it is assumed that a decontamination factor of 5×10^4 is necessary for the ruthenium, it is apparent that it is not possible to eliminate the second uranium cycle when employing the acid flow sheet. On the other hand, elimination of the third uranium cycle should still be feasible.

Whereas small scale experiments have indicated that the addition of 0.03 M $Co(NO_3)_2$ catalyzes the ruthenium removal to increase the decontamination by a factor of about two, the cobalt decreases the decontamination when the ozone-containing gas stream is passed through a 4-1/2-foot column of diluted dissolver solution. This is explained by the fact that under these latter conditions the cobalt catalyzes the decomposition of 80% of the ozone as it passes through the column. Thus, it is to be anticipated that under plant conditions ruthenium decontamination will be more complete if no cobalt catalyst is added during the ozonization step.

Using plant dissolver solution (3-5-R) diluted 1:200 with cold 321 Building dissolver solution, it has been shown that the induction period is related to impurities in the solution. The nature of these impurities has not yet been determined.

Distribution of Pu(IV) in Redox

The distribution (E_a°) of Pu(IV) from 1.2 M $Al(NO_3)_3$ and 0.3 M HNO_3 has been found to be 5.0 for organic plutonium concentrations of 0.15 to 70 mg. Pu/l. but drops off at higher plutonium concentrations. The distributions are being obtained at other acidities, particularly at high Pu(IV) concentrations.

Reactions of Hexone

Preliminary results on the effect of uranyl nitrate and light upon the hexone-nitrous reaction have shown that $UO_2(NO_3)_2$ has little effect upon the reaction in the absence of light. In the presence of light and $UO_2(NO_3)_2$, nitrous acid was found to decompose at an increased rate dependent upon the light intensity. The destruction of HNO_2 occurs also in the absence of hexone and may involve photochemical reduction of U(VI).

Nitric Acid Recovery in the TBP Process

Continuous evaporation and rectification of column waste (RAW) containing one g/l chloride ion and saturated with extractant produced a 14 M recycle nitric acid with 0.02 g/l Cl^- and <0.01 g/l PO_4. Sixty-nine per cent of the chloride was found in the aqueous overhead, 3.3% in the vent trap, 0.3% in the concentrated nitric acid, 4.6% in the evaporator residue, and 25% unaccounted for. The recovered nitric acid was used in uranium extraction and strip studies with results identical to those obtained with pure nitric acid.

The corrosion of 316 stainless steel was measured at seven locations in the evaporator and still. Over 46 hours the maximum rate of penetration was 0.017 inches/yr. and located in the concentrated nitric acid pot. Evidence of a protective coating was noted. Extended operation of the test was not made to determine the possible existence of a long induction period.

During the concentration and distillation of RAW in the presence of a second phase of RAX, the path of TBP was found to be 19% in the overhead, 48% in the evaporator as TBP, 7.5% in the evaporator as PO_4, 0.07% in the concentrated nitric acid, and 25% unaccounted for. Ninety-four per cent of the diluent was recovered in the overhead.

Freezing Point of Neutralized TBP RAW

In the event that chloride corrosion proves excessive in the RAW concentration step and if it is desired to return the waste to the original tank volume, it will be necessary to neutralize all the nitric acid with caustic and concentrate the resulting neutral solution to a freezing point of 97° C. Upon cooling this solution to 25° C., the settled crystals occupy 47% of the slurry volume. Evaporation of neutral RAW to a freezing point of 63° C. gave a final volume of 116% of the original tank volume, and a crystal volume after cooling to 25° C. of 21%.

Single Drop Extraction Studies

The mechanism and operation of the pulse column is being studied by measuring the diffusion and transfer across the liquid interface of single drops in the TBP-diluent extraction of uranium. Extraction has been found to take place largely during drop formation. Stripping also takes place largely during drop

formation but is somewhat slower than for extraction. Drops of 15% TBP in Deo Base rising through aqueous UNH reached 70% of equilibrium in 1 to 8 inches of distance. Drops of RAFS rising through 15% TBP in CCl_4 attained 45% of uranium equilibrium. These two experiments illustrate passage of uranium both out of and into the continuous phase. On stripping a UNH solution in 15% TBP-CCl_4 drops of pure water extracted 3 and 7% of its equilibrium value in 1 and 8 inches, respectively.

Pulse Column Studies

Comparative studies on the TBP extraction of uranium were made with CCl_4 and Shell Spray Base as diluents and for single and double-faced plates. For 0.046" diameter holes, double-faced plates, the flooding velocity in the RC Column was 1160 and 2100 gal/sq.ft./hr. for Shell Base and CCl_4, respectively, but with no significant differences in extraction. Stripping losses with 0.076" diameter holes, double-faced plates were about the same as for 0.046" holes at the same frequency, displacement and throughput.

RA Column experiments with double-faced plates using CCl_4 as diluent at 650 gal./sq.ft./hr. showed uranium waste losses of 1.0 and 0.02% for organic and aqueous phases continuous, respectively. For Shell Spray Base a higher flooding capacity was noted for aqueous continuous but very little difference in waste loss between aqueous and organic as continuous phases.

Slow motion moving pictures of the pulse column operation have yielded the following observations: (1) at 100 cycles, half-inch displacement, 600 gal./sq.ft./hr. and RC operation, drop diameter varies from 0.5 to 2.5 times the hole diameter for aqueous phase dispersed in CCl_4-TBP. The range in drop size is due in part to the difference in liquid velocity through the holes over a sinusoidal type of pulse; (2) the velocity of rise of the drops at the center is greater then near the wall; (3) for mixer-settler type operation, the distance of passage of the dispersed phase during a pulse cycle is dependent not only on the pulse displacement but also on the Stokes settling velocity of the system and on the pulse frequency; and (4) with simple stainless steel plates under conditions approaching Elgin flooding large masses of extractant appeared to pass through the plates without noticeable dispersion.

Disposal of 221 Bldg. 5-6 W Crib Waste and Second Cycle Waste

Since carrier precipitation with 10^{-3} M ferric hydroxide has been shown to give substantial plutonium decontamination of 221 5-6 W wastes and since it is desirable to allow settling of the scavenger precipitate to take place in a tank cascade already in operation, it has been suggested that neutralized 5-6 wastes and second cycle decontamination wastes be pooled for settling in the 110-111-112 cascade. Preliminary experiments have indicated that when these wastes are separately neutralized to pH 7 and then mixed in the expected volume ratio, plutonium decontamination of the second cycle wastes and the beta-gamma decontamination of the 5-6 waste are improved. The concentration of the mixed supernate was 3×10^{-5} μg Pu/cc and 3×10^{-2} μc gross beta/cc. This corresponds to a discharge to crib per run (41,500 liter 5-6 and 9,050 liter second cycle) of 1.3 mg Pu and 1.7 curies of beta. This compares to 17 mg Pu and 6 curies beta for separate settling and 160 mg Pu and 40 curies beta cribbed under current practices.

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The volumes of centrifuged precipitate obtained on neutralization of 2nd cycle and 5-6 waste are 9.3% and 0.9% of the liquid waste volumes, respectively. Thus, assuming the value of 5 for the volume ratio of the 5-6/2nd cycle wastes, the rate of sludge accumulation for the combined wastes would be but ca. 1.5 times that for 2nd cycle waste alone; equivalent to requiring over 5 years to fill completely a 530,000 gallon tank.

234-5 Plutonium Reduction Studies

Spectrochemical analysis of the plutonium button prepared from fluoride obtained by fluorination of plutonium(IV) arsenate has shown that, with the possible exception of magnesium and calcium, elimination of impurities is equal to that obtained by the main-line oxalate method. The high results observed for magnesium and calcium are not considered to be discouraging since improper sampling techniques resulted in contamination with slag and crucible material.

Electroless Nickel Plating of Plutonium

Good, smooth-appearing plates have been obtained on uranium wafers when the surface of the metal has been properly cleaned and when the plating bath is free of lint or dust. However, even in those cases, treatment with 1 N HCl or hot water has revealed the presence of pinholes, and abrasion tests have disclosed that the nickel is deposited in layers. Efforts to produce an impervious coating are continuing.

Uranium-Alluminum Dissolution and Separation in Alkaline Medium ("25" Process)

The time required for total dissolution of U-Al alloy slugs in $NaOH-NaNO_3$ solutions at 100° C. appears to be relatively independent of variations in the $NaNO_3/Al$ mole ratio (0.5 - 1.5) and the final Al concentration in the slurry (2 - 4 M). For a NaOH/Al mole ratio of 1.25 this dissolution time is ca. 6 hours. The minimum dissolving time observed was 4 hours using a higher NaOH/Al ratio with a low $NaNO_3/Al$, viz., a $NaOH/NaNO_3/Al$ ratio of 1.75/0.5/1. Higher temperatures to ca. 150° C. achieved by evaporative concentration of the caustic nitrate solution actually reduce the dissolution rate apparently due to the formation of an oxide coating on the slug.

On separation of the uranium oxide precipitate from the caustic-dissolution slurry, the lowest uranium losses to aluminate supernate were obtained using a $NaOH/NaNO_3/Al$ mole ratio of 1/1.5/1. These losses of 5 - 10 X 10^{-2}% were reduced to 2 - 5 x 10^{-2}% by the addition of 0.02 M $Ba(NO_3)_2$ to the slurry before separation. Addition of carrier precipitants; e.g., $Fe(NO_3)_3$ or $Cu(NO_3)_2$, to the slurry produced no consistent effect on uranium losses. The surfactant, Igepon AP, causes some flocculation of the uranium oxide which facilitates separation but does not decrease the uranium loss. Separation methods which gave < 0.05% loss included batch centrifugation (700 G), solid bowl centrifugation (5" d, 1/2 hr. hold-up), and filtration (paper or Super-filtrol pre-coated micro-metallic plate). Washing the separated uranium oxide with Ba-saturated 1 M NaOH produced uranium losses proportional to the wash volume, being ca. 0.02% with a wash volume as large as the original slurry volume.

The uranium oxide can be readily dissolved with 5 M HNO_3 to give a 0.2 M UNH, 3.0 M HNO_3 solution as a feed for solvent extraction. Dissolution at 100° C. or room temperature yields a readily centrifugable residue which retains less than 0.01% of the uranium.

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Nitric Acid Dissolution of Caustic Slurry ("25" Process)

An appreciable reduction in time cycle required to prepare an acid feed without U-Al separation could be accomplished by acidifying the alkaline slurry obtained by caustic dissolving of the slugs. An investigation of this system has shown that aluminum nitrate-sodium nitrate solutions containing 0.01 M UNH are stable at acidities 0 to 3.0 M HNO_3 for 1.5 M $Al(NO_3)_3$ solutions and $NaNO_3/Al(NO_3)_3$ mole ratios ≤ 1. At greater ratios of $NaNO_3/Al(NO_3)_3$ precipitation occurred. At ~0.2 M HNO_3 precipitation was observed for solutions 1.0 - 1.5 M $Al(NO_3)_3$ and with $NaNO_3/Al(NO_3)_3$ mole ratios of 1 - 3.

Although the minimum Na/Al ratio for dissolution of aluminum is one, favorable conditions require this ratio to be 1.5 to 2. Therefore, the preparation of feed by acidification of the alkaline slurry has restricted application.

234-5 PROCESS DEVELOPMENT

After it was found at Los Alamos that plutonium fluoride suitable for reduction could be prepared from plutonium peroxide-containing sulfate, the work of the 234-5 Process Development Group was directed to determining the modifications of the process that would be required to adopt the process in the 234-5 Building without making radical changes in equipment. The process at Los Alamos is predicated on the use of a sintered platinum filter boat for filtration of the plutonium peroxide precipitate, and subsequent washing of the precipitate while it is in the filter boat. After the filter boat containing the washed precipitate is transferred to the hydrofluorination line, the peroxide is converted to fluoride. To use this process with existing equipment in the 234-5 Building would require modifications in the process to permit the use of the platinum boats now used in the hydrofluorination of plutonium oxalate (via the oxide) to the fluoride instead of a sintered platinum filter boat.

The principal differences in the precipitation of plutonium peroxide in the proposed process from the present second cycle precipitation of plutonium peroxide in the 231 Building are in the use of a lower concentration of sulphuric acid--0.15 M instead of 0.4 M--and the use of 5% hydrogen peroxide for a wash solution instead of 6% nitric acid. The replacement of nitric acid by hydrogen peroxide for the washing of the plutonium peroxide precipitate is said by Los Alamos to have eliminated the formation of hard, lumpy plutonium tetrafluoride when the peroxide is converted to fluoride. Previous work by the 234-5 Process Development Group also showed that considerable spattering occurred when plutonium peroxide-containing sulfate is hydrofluorinated in regular platinum boats. As a result of work during this month, it now appears that a satisfactory furnacing cycle has been developed for the conversion in conventional platinum boats of plutonium peroxide to fluoride without spattering.

The reduction of the sulphuric acid concentration from 0.4 M to 0.15 M, and in several trials to 0.1M, did not appear to give a plutonium peroxide precipitate (ten-gram scale) whose settling characteristics were different from those obtained when the higher concentration of sulphuric acid was used. In one run sufficient of the precipitate slurry was transferred to fill a platinum boat. The slurry in the boat was then dried with infra red heating, so that the rest of the slurry in the reaction vessel could be transferred to the same boat. Drying by infra red heating was quite slow; some spattering also occurred when gas bubbles burst through the outer portions of the cake, which dried much more rapidly than the interior of the cake.

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In all, eight runs were made in which plutonium peroxide.containing sulfate was prepared. Seven of the runs were made with a stock solution of plutonium nitrate obtained by dissolving plutonium peroxide precipitated from the solution obtained by the dissolution of laboratory prepared metal in hydrochloric acid. In one of these seven runs the starting solution was spiked with ferric nitrate to give an iron concentration of 0.004 grams Fe per gram Pu to simulate the iron to Pu ratio of the P-4 solution in the 234 Building. Cut Sample Can material was used for the eighth run; there was only enough of this material on hand for the single trial. The bulk density of plutonium peroxide apparently is considerably less than that of plutonium oxalate. It would probably require about three times the present capacity of a furnace charge (two boats) to handle the same amount of plutonium as peroxide, as is now handled as oxalate. An attempt was made to increase the bulk density of the peroxide by making a final wash with methanol and then air drying the precipitate at room temperature. For this trial, a precipitate of plutonium peroxide was handled in a fashion similar to the new Los Alamos Wet Chemistry procedure, except that a sintered glass filter was used instead of the sintered platinum filter boat. The bulk density of the dry plutonium peroxide obtained in this manner was not very different from that of the peroxide slurries obtained previously. The dry peroxide was, however, readily transferred to the hydrofluorination boat by pouring and brushing the precipitate from the filter.

The combined supernatants and washes from the runs in which dissolved metal was the starting material could be boiled for two hours with only partial decomposition of the hydrogen peroxide. The addition of iron to the extent of 0.2 gram per liter catalyzed the decomposition of the hydrogen peroxide, so that at 70° C. practically all of the hydrogen peroxide had decomposed after an hour.

It was found necessary to modify the new Los Alamos hydrofluorination cycle to obtain a dry cake without spattering. Although a precipitate of plutonium peroxide can be dried in one hour at 80° C. if air is drawn through the cake, it was found necessary to dry for three hours at 110° C., or for two hours at 130°, when air is drawn over the precipitate in a conventional platinum boat. Furthermore, it was not found possible to introduce the hydrofluorination mixture of HF and O_2 at low temperatures and heat rapidly to 500° C. without getting some spattering when a conventional filter boat is used. Apparently, the hydrofluorination gas mixture can diffuse into the peroxide cake, and effect the rapid conversion of the peroxide to fluoride with the formation of water at relatively low temperatures. The rapid heating to 500° C. then produced spattering, since the cake was still wet. This difficulty can be avoided by hydrofluorinating the dried peroxide at 130° C. for one hour before raising the temperature rapidly to 500° C. If the hypothesis that it is more difficult to hydrofluorinate the decomposition product of the sulfate-containing peroxide than the peroxide is true, it is not likely that the hydrofluorination for three hours at 500° C. can be decreased appreciably. The initial hydrofluorination at 130° C. probably results in some decomposition of the peroxide; to the extent this occurs, the period of hydrofluorination at 500° C. will be affected.

The difference in density of the fluoride was very marked between the runs in which the starting solution was iron-free and those in which iron was present in appreciable quantity--0.0035 gram iron per gram of plutonium. The density

of fluoride in the former case was approximately 2.1, whereas when the starting solution contained iron the density of the fluoride was about 1.35. Even more striking is the very low density of the fluoride, 0.60, obtained in the run in which the peroxide was dried with methanol.

The reduction yields obtained in converting the fluoride to metal appear to be comparable to the yields obtained when fluorides prepared from the oxalate process in the laboratory were reduced to metal.

Because ammonium bifluoride appeared to convert plutonium peroxide readily to the fluoride, a crystal of ammonium fluoride was added to a small portion of a plutonium solution, which contained 70 grams Pu per liter and 1.9 M nitric acid. A pink precipitate, which may be plutonium fluoride, formed quickly and left a colorless supernatant. Further work will be done to determine whether the precipitate is a fluoride suitable for reduction.

STACK GAS DISPOSAL

Operation of the T and B Plant sand filters has been normal during this period. The study of the low efficiencies of the T Plant sand filter reported earlier in the year was completed by demonstrating at the B Plant that a moistened CWS filter monitor retains more non-particulate iodine or its volatile compounds than a dry CWS filter monitor. This was done by having a pair of monitors in parallel downstream from the sand filter. One monitor was kept dry during the sampling interval and the other was kept moist. When the activity found on these filters was used as a basis for obtaining sand filter efficiency, one obtained indicated efficiencies from 97.1 to 99.8% if the moist paper activity was used. When the dry paper activity was used as the basis, efficiencies from 99.6 to 99.9% were obtained. The decay curves for the moist and dry filters indicated that a greater fraction of the activity on the moist filter consisted of a short half life material, presumably I^{131}, than on the dry paper. The low efficiencies reported at the T Plant during the winter were, therefore, probably a result of the moistening of the filter paper monitors by the high humidity of the ventilation air discussed in earlier reports.

A study of the dust loading in the ventilation system in the Canyon Building has been started. The purpose of this study is to determine the origin of the particulate matter in the air stream going to the sand filter. The method being used is to draw air continuously through CWS filter paper until the pressure drop across the filter paper is twice the initial pressure drop. The actual amount of solids deposited on the paper is known for this pressure drop increase from a study, previously made, of the relation between pressure drop and amount of solids retained by CWS filters. In this study, an aerosol of methylene blue was collected on the CWS paper until the pressure drop had increased to a specific value. The filter paper was then removed, and the amount of methylene blue retained by the paper determined by spectrophotometric methods. The dust loading is being determined at the following points in the Canyon Building: outside air inlet, air conditioning unit outlet, the canyon deck, and ductwork ahead of the sand filter. The first tests indicated that practically the entire load of particulate matter going to the sand filter originated in the process cells, or in the ventilation system beyond them. Very little of the load, which may be considered to be very small even for filtered air, was present in the conditioned air, supplied to the deck.

The first life-test with a methylene blue aerosol of filters composed of various grades of Fiberglas, various densities of the same grade of Fiberglas, and a model of the present sand filter has been complete. The data obtained indicate that a fixed bed filter of Fiberglas, which will be considerably smaller and will have a longer life than the present sand filter, can probably be designed without sacrifice of filter efficiency and without increase in the pressure drop across the filter.

The location of the pressure taps in the model of the sand filter made it very difficult to determine whether the observed increase of pressure drop occurred in the layer of "E" sand (4 to 8-mesh) or at the boundary between the "E" and "F" sand. It appears possible at the boundary to have the two grades of sand mix appreciably and give a region whose pressure drop is considerably greater than the same depth of either of the two grades alone. This region in which there is a mixture of the two grades of sand probably also has a much higher filtration efficiency than either of the adjacent layers of the individual components. This point will be determined in the next life-test by locating the pressure taps below and above the boundary between the layers of different grades of sand.

The data in the first life-test indicated that the deposition of 100 grams of methylene blue per square foot in the model of the sand filter caused an increase of 5.6 inches in the pressure drop across the filter. The velocity through the sand filter was maintained at 10 feet per minute during the entire test. A bed consisting of No. 55 Fiberglas packed at 6 pounds per cubic foot preceded by a layer of No. 55 Fiberglas packed at 3 pounds per cubic foot developed an over-all pressure drop increase of 2.9 inches of water after 550 grams of methylene blue had deposited per square foot. A large fraction of the increase in pressure drop occurred across the fore filter of Fiberglas packed to 3 pounds per cubic foot. A velocity of 50 feet per minute was maintained through this unit during the test. It is planned to obtain check values for the rate of increase in pressure drop as a function of deposition of solids for these filters.

The second life-test was directed to finding a packing that would extend the life of a bed of Fiberglas packed to 3 pounds per cubic foot. Very coarse Fiberglas, grades No. 600 and 800, do not appear to be promising, since their filtration efficiency is so low that very little of the particulate load is removed from the air stream. Although complete analytical data are not yet available, No. 55 Fiberglas packed to a density of 1.5 pounds per cubic foot and No. 450 Fiberglas packed to a density of 8 or 10 pounds per cubic foot appear to be promising possibilities for a fore filter for the No. 55 Fiberglas at 3 pounds per cubic foot.

As a result of the proposal to use American Air Filter PL-24 frames with G fiber in the 234-5 Building to protect the existing CWS filter installation during the period when the concrete floor is being chipped prior to start of work on the RM line, the filtration efficiency of this material was determined. When this filter material was tested with the canyon ventilation air stream ahead of the sand filter, a collection efficiency of 1.4% was obtained at a superficial velocity of 16 feet per minute through the filter, and an efficiency of 2.7% with a velocity of 100 feet per minute. The recommendation was made to the Design and Construction Division not to use this material for the protection of the CWS filter installation in the 234-5 Building.

INVENTION AND DISCOVERY STATEMENT

All persons engaged in work that might reasonably be expected to result in inventions or discoveries advise that, to the best of their knowledge and belief, no inventions or discoveries were made in the course of their work during the period covered by this report except as listed below. Such persons further advise that, for the period therein covered by this report, notebook records, if any kept in the course of their work have been examined for possible inventions or discoveries.

Name	Title
L. L. Burger	Solvent Extraction Equipment.
H. S. Gile and R. L. Moore	The Use of Caustic to Dissolve U-Al Alloy in the "25" Process.

R. H. Beaton

R. H. Beaton
Separations Technology Division

Date: June 1, 1950

TECHNICAL SERVICES DIVISION

MAY 1950

VISITORS & BUSINESS TRIPS

6-9-50

There were no offsite visitors to this Division during the month.

Business trips of Technical Services personnel were as follows:

L. F. Kendall spent May 24 at the Bausch and Lomb Optical Co., Rochester, N. Y., discussing the operation of the echelle grating spectrograph and its application to Hanford analytical work. He spent May 25 at the Pittsfield Works observing and discussing gas analysis equipment and procedures. On May 26 and 27 he attended the annual meeting of the Society for Applied Spectroscopy at New York City. May 31 was spent at the Oak Ridge National Laboratory observing spectrochemical techniques in use there.

ORGANIZATION AND PERSONNEL

Personnel totals in the several subdivisions are summarized below:

	April 30	May 31
Analytical Section	322	317
Engineering Section	59	66
Information Group	64	64
Statistics Group	13	14
Administrative	3	3
Division Totals	461	464

The Analytical Section employed two technical graduates, eight laboratory assistants and one steno-typist. One laboratory assistant resigned and two laboratory assistants went on leave of absence. A total of thirteen personnel were transferred from the section; one exempt chemist to the Health Instrument Divisions, five laboratory assistants to the Pile Technology Division, and one chemist, one engineer and five draftsmen to the Engineering Section.

The Information Group employed three general clerks and one returned from leave of absence. One Unit Leader and one general clerk resigned and two went on leave of absence. Seven personnel transferred into the Engineering Section, all from Analytical.

ANALYTICAL CONTROL

Work Volume Statistics

The following tabulation shows the source and volume statistics for samples on

which analyses were completed:

	April		May	
	Samples	Determinations	Samples	Determinations
Process Control - 200	3,726	9,415	3,333	8,524
Process Control - 300	689	2,289	620	1,967
Water Control - 100, 700	1,346	3,470	872	3,156
Redox & TBP Programs	2,716	4,819	4,791	8,034
Process Reagents	1,465	1,821	1,284	1,569
Essential Materials	148	828	189	829
Special Samples	3,583	12,724	2,049	9,917
Stack Gas Filters	33	59	24	106
Totals	13,706	35,425	13,162	34,102

100 Areas Water Control

The south section of the 190-H Laboratory has been marked off as a Danger Zone and the study of the activity of pile effluent water has been started there. Laboratory operating procedures for handling pile effluent water in this section have been established with the concurrence of the Health Instrument and Power Divisions.

200 Areas Control

The precision of the results of the analysis of the canyon starting solution (6-3-MR), the Isolation Bldg. starting and final solutions (P-1 and AT, respectively) and the 234-5 Bldg. starting solution (P-4) may be summarized as follows:

	Precision (± %)		
Samples	Expected	April Average	May Average
6-3-MR	1.58	1.52	1.63
P-1	2.39	3.26	5.18*
AT	1.98	2.42	1.68
P-4	2.51	2.96	2.39

* The range between duplicate analyses was high for the 1st and 3rd week, thus causing a poor average precision for the month. Investigation did not reveal the cause.

General

A total of 80 AT Retain Samples was processed in the 231 Laboratory during May. This work is still being performed on a limited basis and as the availability of technical personnel permits.

The radio-assay in addition to the chemical assay of AT samples was resumed on May 10 in the 231 Laboratory for the purpose of further evaluating isotope content as power levels increase.

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In the 234-5 Laboratory, the first 40-8 analyses on spiked metal samples utilizing the recently developed volumetric determination of 40-8 by ferrocyanide titration have indicated approximately 90% recoveries. With improved technique and minor improvements of the equipment, a recovery of 95-98% seems feasible. Plans have been made to use this new procedure in addition to that currently in use in order to evaluate further the precision and accuracy of the new method.

300 Area Control

A study of the sampling of MD-6 oxide material was completed and the results have been submitted to the Statistics Group for evaluation.

A series of tests was completed as a part of the study of the precision and accuracy of the flame photometric method for the determination of lithium in P-10 alloy.

The routine determination of halogens, reported as chloride, in all samples of chip recovery oxides (sample codes CRD-6 and CRD-2) has been commenced following a "P" Division request.

Chemical Research Service Laboratory

Work by the Chemical Research Section on the separation of aluminum and silicon in a U-235 recovery process has necessitated the determination of uranium in 10^{-6} molar solutions, as well as the determination of SiO_2 in the solutions. The fluorimetric method was used for the uranium and the colorimetric method for the SiO_2 determination.

Chemical Development Service Laboratory

During the month the Chemical Development Section began the submission of samples from RC-CO cascade runs being made under HW TBP #3 flowsheet conditions and involving modifications in the ROX stream.

Other laboratory operations continued on a routine basis.

Counting Standards

Methane flow and counting studies have shown that a short (10-15 minutes) flushing period at normal bubbling rates was sufficient to place the ASP and ASVP instruments in normal operating condition following shutdowns at night and over weekends. This procedure plus constant inspection of lines for leaks and a reduced bubbling rate, has decreased the methane consumption to 8.3% of that previously used and represents an annual saving of $5,000. Plans have been made to operate counting instruments in other laboratories in a similar manner where possible.

Miscellaneous Service Analyses

Work is being continued on the determination of hydrogen in P-10 alloy for the Metallurgy Section. In an attempt to determine the extraction efficiency

1217559 UNCLASSIFIED

of the palladium valve used in the apparatus to determine H_2, a hydrogen-nitrogen gas mixture was prepared and analyzed; 61.1% H_2 was found while an analysis by means of a Burrell Gas Analyzer gave 61.2% H_2, indicating a high extraction efficiency.

Methods Adaptation Group

The equipment required for the determination of 40-8 by ferrocyanide titration was assembled in the 234-5 Bldg. laboratory, and one person on each shift trained in the analytical procedure. Additional refinements of the method have been made including increased agitation of the mercury reductant to keep the plutonium in the + 3 state and the use of "Dry-Film" on the transfer pipets to reduce physical transfer of the aqueous plutonium solution when removing the upper organic phase. Recent results indicate that less than 0.01% of the plutonium remains with the 40-8 solution. Further modifications are necessary to obtain the required accuracy and precision on plant samples.

Analysis of P-4 samples by the carrier concentration spectrographic method gave films with high backgrounds making the determination of trace impurities difficult. A pre-arc of approximately 5 seconds reduced the background sufficiently to permit reading of the films. Heating of the samples for one hour at 800° C. reduced the pre-arc time required to 2-3 seconds without significant loss of impurities.

To provide a rapid method for the determination of $BiONO_3$ in process reagents employed in the Separations Process, the estimation of the weight percent of that salt by determination of the weight percent HNO_3 and the specific gravity of the solution was investigated. The specific gravity of twenty standard samples having from 22.3 - 26.0 weight percent $BiONO_3$ and 16.9 - 23.3 weight percent HNO_3 was determined. The equation, Specific Gravity = 0.7538 + 0.01977 (%$BiONO_3$) + 0.01076 (%HNO_3), was found to fit the data. The precision of the method estimated from the data was ± 0.74% $BiONO_3$.

A study of the precision and accuracy of the determination of lithium in P-10 alloy by means of the flame photometer indicated the major source of error to be in the use of a standard curve. The method was modified to eliminate this step by setting the instrument at 100% transmission for a 4.0% standard, measuring one of the samples, measuring a 3.0% standard and then measuring the other duplicate sample. Since the content of the sample is between that of the two standards, the sample content may be calculated by interpolation. To improve the precision of the readings, the transmission percentage is being read to within 0.1% and four readings are made for each standard and each sample.

The Kollex method for the determination of phosphate in metal waste solutions involving the precipitation of ammonium phospho-molybdate in a boiling solution in the presence of citric acid was found to be a satisfactory method for the determination of phosphate in TBP process streams. The detailed analytical procedure was issued as method RPhV-1b.

In the determination of specific gravity by the falling drop technique, the time required for a small aqueous drop to fall a given distance in an organic

reference medium is an inverse function of the difference in specific gravity of the two solutions. A study was made of the effect of viscosity of the organic reference solution on the relationship of specific gravity to the reciprocal of time. Three organic reference solutions having specific gravity of 1.5855 and viscosities of 9.75, 34.1, and 47.3 millistokes were used. The relationship of the reciprocal of falling time and specific gravity was curvilinear in all three cases; however, the curvature decreased with increasing viscosity so that for the highest viscosity a nearly linear relationship was obtained.

The feasibility of using the gasometric method for the determination of sulfamic acid was investigated for application to TBP samples for which the potentiometric method is not applicable. The detailed analytical procedure was written as method RSG-1, and personnel of the Chemical Development Service Laboratory were trained in the analytical techniques required.

Special Hazards Control

Due to the prevalence of positive air samples in Room 134 of the 234-5 Laboratory, the Berkeley type gloved box used for spectrochemical sample preparation was placed in standby status on May 17 since investigation of the reduced air pressure differential inside the box indicated the possibility of the air filter being too compact to allow effective operation of the blower. The filter will be replaced and the unit tested before it is again placed in service.

Two stationary alpha (Poppy) monitoring instruments were received and installed at the entrances of the laboratory offices in Bldg. 234-5.

Rala Laboratory Design

The reassignment to other Sections and Divisions within the Technical Divisions of all but one of the Design Unit personnel associated with this project was completed during the month following formal termination of the project on May 2. Terminal reports on methods research and development and on laboratory design are in preparation.

ANALYTICAL RESEARCH

Bismuth Phosphate Process

A 10 gram portion of plutonium as nitrate has been purified, and will be used in comparative studies of plutonium assay in the 231 and 234-5 laboratories. In addition, it will be employed in an investigation designed to determine the effect of impurities on the Hanford AT assay, on the Hanford specific gravity determination for plutonium, and on the Los Alamos plutonium determination.

A fifteen-month-old sample of plutonium prepared at the 185 g/T level yielded results on the alpha energy analyzer which indicate that, for this material, 0.9 - 1.0% of the total alpha emission results from Pu-238; no correction was made for the americium content, which was calculated to be small. These results represent the first step in a series that will employ

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materials of various g/T levels.

234-5 Process

In a study of the application of the TTA extraction procedure to the determination of impurities in plutonium, it was shown that a plutonium-free extractant can be obtained when the plutonium is held in the trivalent state, and that plutonium can be completely removed in a subsequent extraction when it is held in the tetravalent state. A method based on such techniques should thus separate both extractable and non-extractable impurities from plutonium.

A spectrophotometric determination of the concentrations of the several valence states of plutonium in P-1 solution has been developed as an aid in the study of a combination 231 and 234-5 process. Apparatus for the determination of carbon in plutonium metal has been assembled for final testing in Room 147 in the 234-5 Bldg.

Redox Process

Research on paper chromatography with an aluminum-uranium solution has shown that the rate of elution of the latter is considerably greater than that of the former and that quantitative analytical separations are thus possible. It was observed that under the conditions of the test, which involves micro samples of relatively high concentrations, the rate of elution of uranium varies directly with the uranium concentration.

Metal Recovery Process

Training of analysts is nearly complete for control application of the newly developed infra-red procedure for determination of TBP in process development samples. Infrared investigations served to show that a sample of "red oil" obtained from metal waste process development studies contained about 20% TBP.

Pile Technology Programs

A black granular solid taken from the surface of certain irradiated P-10-A slugs has been examined. Qualitative tests have shown the presence of major concentrations of aluminum, lithium and chloride, low concentrations of iron, and no organic material. Radioassays have confirmed the presence of S-35, and have shown high concentrations of Cl-36 and low concentrations of Fe-59 and Mn-54. X-ray diffraction patterns taken by the Pile Engineering Section in this cooperative program have confirmed the presence of $AlCl_3.6H_2O$. A spectrographic analysis of the material is in progress.

A precision of about ± 6% is indicated in a newly developed method for the determination of lithium in P-10-A slugs. The method, which is intended to serve as an alternate for the flame photometer procedure, involves measurement of the polarographic wave from a solution of the sample in tetraethyl ammonium hydroxide. A large lithium "maximum" is observed in all cases and no method for its elimination has been found.

A preliminary test sample has been received from the 100-H Area for the determination of impurities in circulation water from the Naval Reactor Test. Determinations of Zr and other impurities in the parts per billion range are being obtained according to the newly developed spectrographic procedure for comparison with results obtained from spectrophotometric determinations.

An investigation of the source of activity in effluent pile cooling water in the retention basin has confirmed the presence of radiosodium and radiomanganese, previously reported by the Pile Technology Division, and in addition, has shown the presence of radiocopper and radiosilicon in appreciable amounts. Trace quantities of active rare earths and radiocalcium have been detected, and other components fall naturally into four groups, having half-lives (a) about 30 minutes, (b) about two hours, (c) between 15 and 20 hours, and (d) very long. The comments given above refer to activities in the (b) and (c) groups.

ENGINEERING SERVICES

Technical Shops

General

The transfer and installation of machine tools and shop supplies from Bldg. 3706 was completed by the Maintenance Division to effect the consolidation of the machine shops in Bldg. 101. A small, one-man shop was retained in Bldg. 3706. Work on the enlargement of the Glass Shop by relocating it in the large room vacated by the Bldg. 3706 machine shops continued.

With the machine shop consolidation, one engineer (assignment) was transferred to the Equipment Design Unit.

Bldg. 101 Shops

The work load in the Bldg. 101 and Bldg. 3706 Shops may be summarized as follows:

	No. of Jobs		Man-Hours	
	April	May	April	May
Work Completed	129	70	2,332	1,201
Work Incomplete	28	41	1,228	703
Work Backlog	61	46	640	1,025
P-12 (Exponential Pile Project)	-	-	-	947
P-12 Backlog	-	-	-	5,292

Fabrication on graphite and process tubes for exponential piles 1 and 2 for the P-12 Project was completed.

The stainless steel underwater can opener for the Pile Engineering Section was completed and delivered to Bldg. 105-H. The machining of the material on hand for field installation was a major problem in meeting

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the completion-time requirement.

The 8" warp gage for the Pile Engineering Section was completed with approved modifications, and has proven satisfactory in operation. A similar gage, with modifications for measuring 4" slugs, has been requested.

During the month fourteen jobs for the 3706 Bldg. laboratories were completed in the 101 Shops to relieve work loads in 3706 Bldg. during the shops move.

The number of jobs completed for the various sections of the Technical Divisions were as follows:

Technical Services Division	
Analytical Section	9
Engineering Section	6
Pile Technology Division	
Pile Physics Section	3
Pile Engineering Section	6
Metallurgy Section	12

Bldg. 3706 Shop

There were a total of 21 jobs completed in this shop; 10 were started but not completed. The backlog was estimated to amount to 84 manhours.

Work in this shop was at a minimum due to the moving and rearrangement of shop space in this building. A number of sight glasses were calibrated and a tube furnace fabricated for the Chemical Research Section and a rotary sample holder was completed for the Pile Technology Division.

Glass Shop

The shop completed 73 jobs which could be classified as follows: New jobs, 36; repairs, 16; and revisions, 21. A backlog of 32 jobs estimated as 360 man-hours had accumulated.

Work in this shop was on a reduced scale due to the absence of the supervisor for a two week period and the assignment of one man to P-10 work outside of the shop.

300 Area Services

Normal Bldg. 3706 services continued routinely. Stockroom and work order activity is reflected by the following work volume statistics:

	April	May
Purchase requisitions		
Total processed	62	74
Requisitions requiring special expediting	18	17
Requisitions requiring emergency handling	0	0

Stores Stock Requests Processed	1	0
Store Orders		
Total processed	1,010	1,236
Emergency pick-ups and deliveries	10	21
Work Orders Processed	66	60

Maintenance Division personnel assigned to Bldg. 3706 were largely concerned with the shop moves permitting only a minimum of effort on other than necessary maintenance work in the building.

Laboratory furniture formerly stored in the Pasco Warehouses was moved to the 101 Area. This equipment is now available for inspection and proper selection, as required for laboratory installation.

New Laboratory Planning

Radiochemistry Bldg.

The preliminary layout for laboratories and offices in a preferred alternative arrangement for this building was prepared for submission to the architect-engineer along with the original plans. Arrangement of furniture and utilities in this revision was also being determined.

Approval of the design project proposal by the A.E.C. was received.

Radiometallurgy Bldg.

Effort on this laboratory related almost entirely to providing liaison between the Metallurgy Section and D & C on final design criteria being prepared for study and estimating by the architect-engineer.

The design project proposal was approved by the A.E.C.

Pile Technology Bldg.

The preliminary layout of this building was prepared and submitted to D & C for sketching and estimating. Layout and liaison for room arrangements was continuing.

The design criteria for the annex for metal forming and fabrication was presented to D & C for estimating and inclusion in the project proposal.

Mechanical Development Laboratory

The design of this building was rescoped to reduce costs. It was not advisable to include this building in the plot plan and utilities design project proposal so a separate proposal will be submitted.

Plot Plan and Utilities

The rough draft of the design project proposal for the services to the Hanford Works Laboratory Area was reviewed with D & C. Facilities for water supply, sewage disposal, laboratory waste disposal, steam, compressed

air, emergency power, boundary fences and transportation were considered.

Equipment Design Unit

Facilities at the 101 Area were improved for work on electronic gadgetry, gloved box assembly and hood and air filter testing.

Scope drawings were made for the proposed Mechanical Development Laboratory. Work continued on the 222-S cubicle mock-up as well as on cubicle and Junior Cave design and specifications. A model fiber-glass filter unit was being designed to evaluate a possible substitute for CWS filters in laboratory hoods. Additional Junior Cave manipulators were being designed.

Junior Cave outfitting was continued at a slower rate because of vacations and personnel shifts. Work on the waste treatment cave (Room 55 of Bldg. 3706) continued.

Drawings for the 30 curie cells of the Radiometallurgy Bldg., Rockwell operation equipment and the electrolytic polisher were made for the Metallurgy Section.

Designs were made for cell and electrode holders for the Analytical Section and for a crane to be used with the 300 Area waste disposal pick-up.

STATISTICAL STUDIES

300 Area Operations

Calculations of angles between 51 planes and 51 directions for each plane for subsequent crystallographic studies of uranium by the Metallurgy Section was completed. Work on calculations between planes and between directions will be reserved for IBM computing due to the quantity of calculating involved.

A shipment of uranium rods not cut in half at the rolling mill was received for machining into slugs. The first lot processed from this shipment gave a three percent reduction in solid scrap and a corresponding increase in machining yield.

In order to reduce the reactivity losses of P-10 fuel slugs during canning, an experiment was designed using bath temperature, amount of agitation, and dip time as variables. It was found that the average loss in reactivity value per Al-U(235) alloy slug could be reduced appreciably by controlling the bath temperature between 590° C and 593° C. No increase in canning rejects has resulted from operation within this temperature range.

A statistical sampling plan adopted on May 4, has reduced the reactivity testing of bare and canned P-10 fuel slugs by more than 50 percent.

Daily, weekly, and monthly statistical controls were reported on P Division operational results at Machining, Pickling, Canning, Test Pile, Autoclave and Melt Plant. A statistically significant increase of good bare slugs resulted in the highest machining yield on record. In the Melt Plant the

1217566 DECLASSIFIED

finished billet yield set an all time high. (For monthly report, see Document HW-17953).

200 Area Operations

Further analyses of stresses due to thermal expansion in proposed piping layouts in Redox design were performed for the Design and Construction Divisions.

The study of P-10-P (Concentration Bldg. final sample) and P-1 (Isolation Bldg. initial sample) comparisons was completed with the analysis of radio vs. chemical assay data from P-1 samples. No systematic difference was found to exist between isotope-corrected radio assays and corresponding chemical assays. The complete results of this test were reported in Document HW-15753.

Analysis of rat carcass radioactivity data was completed. Results, together with recommendations for future experimentation, were reported in Document HW-17756.

Certain extensive computations, utilizing IBM equipment, were made of quantities of Krypton 85. A bi-weekly report of these quantities is now routinely prepared for submission to the Atomic Energy Commission, according to their request.

A statistical comparison of Hanford and KAPL analyses on Redox samples simulating hot LAF and LAW streams was completed for the Analytical Section.

Weekly and monthly statistical controls were reported on analytical precision and accuracy of metal solutions, product solutions, and wastes, as analyzed in the 222-B, 222-T, 231, and 234 Bldg. Control laboratories. The monthly report (Document HW-17954) also includes AT and P-4 Specific Gravity Relationships; 231-234 product differences; and Hanford-Los Alamos product differences.

100 Area Operations

Final analysis of Production Test 105-278-P, testing the dimensional stability of Group V uranium slugs fabricated during October, November, and December 1948 and exposed in Hanford production piles in the 400-600 MD/T range, indicated no serious blistering, no significant changes in length and diameter, and no serious warpage.

Final analysis of Production Test 105-241-P, testing the dimensional stability of slugs quick quenched from the beta phase, indicated a significant reduction in the number of excessively blistered slugs. The length and diameter remained fairly stable. The increase in warp was not serious from an engineering standpoint.

Further work was done on the analysis of tube corrosion in 100-B.

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An attempt is being made to determine the Fourier series for the neutron distribution through and around J and Z slugs during irradiation.

LIBRARY AND FILES

Plant Library

Library work volume and book statistics were as follows:

	April	May
Number of books on order received	160	136
Number of books fully cataloged	226	162
Number of bound periodicals processed but not fully cataloged	81	81
Pamphlets added to the pamphlet file	62	6
Miscellaneous material received, processed, and routed (including maps, photostats, patents, etc.)	31	30
Books and periodicals circulated	2,190	1,807
Unclassified reports processed	178	277
Unclassified reports circulated	146	137
Reference services rendered	699	631

	Main Library	W-10 Branch	Total
Number of books	5,968	2,377	8,345
Number of bound periodicals	4,218	100	4,318

The bound periodical collection of the Plant Library was augmented by the addition of a complete run of "Civil Engineering" and a 30 year run of the "Transactions of American Society of Mechanical Engineers." Current periodicals have been set up in new Princeton files for convenient selection of issues.

Application of the Library's technical reference resources to the problems of the Plant continued on a routine basis. Following is a representative sampling from the many literature searches made:

Testing steam line insulation.
Oil pumps for lubricants.
The kind of glass used for manufacture of Fiberglas.
Cobalt content of Inconel X.
Instructions for using a volometer.
Washington state requirements for restrooms for women in industry.
Composition of Igepon AP.
Freezing point of nitric acid.
Design of cams.
Determination of rental rates on construction equipment.
Toxicity of carboxymethylecellulose.
Size of negative coefficients of expansion of polonium.
Preparation of printed circuits.
Action of anhydrous HF on glass.
Allowable head on 24" flap gates.

1217568

Technical Services Division [redacted]

Elongation of refractories.
Composition of Oakite.
Design of automatic lathes.

Classified Files

Work volume statistics for the Classified Files and the Central Report Publications Unit were as follows:

Classified Files	April	May
Documents routed	17,399	15,696
Documents issued	7,379	6,415
Reference services rendered	3,889	3,354
Reports abstracted	190	367
Registered packages prepared for offsite	558	358
Inter-area mail sent via transmittal	22,630	25,887
Holders of classified documents whose files were inventoried:		
a. Because of normal perpetual inventory procedure	36	25
b. Because of transfer of work assignment	4	4
c. Because of termination	1	2
Copies of documents destroyed in inventory reduction	308	332
Copies of documents downgraded in inventory reduction	-	135
Copies of reports declassified in inventory reduction	-	3
Classified documents located which were unaccounted for in previous inventory	-	17
Volume of unclassified mail handled by 300 Area Mail Room	20,369	28,412

Central Report Publications Unit		
Ditto masters run	791	896
Mimeograph stencils run	1,076	851
Ditto master copies prepared	26,844	25,568
Mimeograph copies prepared	79,979	95,490
Formal Research and Development Reports issued	26	12

A meeting, attended by W. I. Patnode, F. W. Test, Foster York, M. G. Froidank, C. G. Stevenson, and A. J. O'Donnell was held to discuss the coverage of the Chicago Patent Group on Hanford originated reports. The question of document accountability for these reports was also discussed, since many classified reports have been transmitted directly by Hanford to the Chicago Patent Group.

It was agreed that the Chicago Patent Group had not been receiving adequate coverage. The best solution appeared to be the transmittal of the Bi-Weekly List of Additions to the 300 and 700 Area Classified Files, to the Patent Group on a current basis. This could be checked for pertinent reports and

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these reports requested unless they had already been received. It was further agree to send to the Chicago Patent Group all previous issues of the Bi-Weekly List, which was done. It was further agreed that an effort should be made to include in this list reports of a research and development nature, originated within the Design and Construction Division, and that steps should be taken to have this carried out.

On the question of future document accountability, it was agreed that the best solution appeared to be to transmit all reports to the Chicago Patent Group (since it is not a recognized classified document transfer point) through the Argonne National Laboratory. This despite the fact that Argonne is currently not eligible to receive reports in the "Technology-Hanford Processes" category. It was agreed that this matter should be further discussed with the representatives of the AEC Division of Research attending the Technical Information Panel meeting on June 5, 6, and 7. If the proposed plan is acceptable, it is planned to transfer document accountability to the Argonne National Laboratory on all documents already transmitted directly to the Chicago Patent Group by Hanford.

The P-10 subject headings submitted to the Technical Information Division at Oak Ridge for inclusion into CA-1927, List of Current Subject Headings for the Indexing of Reports, were accepted with some suggested changes. In view of these suggestions, the headings were revised and re-submitted. The final draft of a set of metallurgical subject headings also to be used for inclusion in CA-1927 was received by the Information Group for final approval. These headings are the result of a number of meetings of Project metallurgists in which Hanford Works personnel actively participated. It is anticipated that these headings will be adequate for the organization of the metallurgical literature in accordance with the desires of the Project metallurgists.

Agreement was reached that the Technical Progress Letter would be issued in future as a single report without issuing sections of it as individual documents. A distribution list combining that used in the previous sections was developed. Circulation of the report will be limited to personnel having a 100-200-U clearance.

A sampling of the Hanford Works scientists and engineers were circularized regarding their use of Nuclear Science Abstracts, an AEC published abstract journal covering the periodical and unclassified report literature of nuclear science. The results indicated that this valuable publication had not been sufficiently publicized onsite and steps are being taken to have sample copies routed to all Plant personnel who may have possible need for it.

In this connection, the subject of unsolicited routing of incoming reference material (classified reports, unclassified reports, books, and periodicals) has been thoroughly studied. A plan to increase the volume of unsolicited routing was developed. A questionnaire, which will supply the information required to properly carry out this plan, has been prepared and, together with the proposal, submitted for review.

Classified Files employees engaged in maintaining revisions of classified Manuals of Operation, made a number of field trips to pre-announced destinations to attempt to bring up to date of a number of manuals. Handling revisions of these manuals through the mails involves a great deal of clerical work, the revisions are not always made as directed, and the classified sheets are not always promptly returned. It is felt that handling the matter directly may be cheaper and more efficient.

INVENTIONS

All Technical Services Division personnel engaged in work that might reasonably be expected to result in inventions or discoveries advise that, to the best of their knowledge and belief, no inventions or discoveries were made in the course of their work during May 1950. Such persons further advise that, for the period therein covered by this report, notebook records, if any, kept in the course of their work have been examined for possible inventions or discoveries.

Signed T W Hanford
T. W. Hanford
Division Head

TWH:mcs

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MEDICAL DIVISIONS

MAY 1950

Summary

The Medical Divisions' roll decreased by 78 from 357 to 289 because the clinic changed to private practice on May 1st. Of the 75 clinic employees, 49 continued with the clinic on the private practice basis, 11 were transferred to other medical divisions, 6 were transferred to other G. E. divisions, 3 were temporarily retained to collect clinic accounts and to do other related work, and 6 employees were given no work layoffs.

While non-profit hospitals are exempt from regulation of the Fair Labor Standards Act by act of Congress, the N. L. R. B. voted that Kadlec was subject to this act since General Electric is a profit organization. Following this decision, the N. L. R. B. has ordered an election on the part of some 68 medical division employees, including nurse aides, practical nurses, kitchen workers, janitors, orderlies, etc. to determine if they wish to be represented in collective bargaining by Bldg. Service Employees Int. Union Local No. 201, A. F. of L.

One month of operation of the clinic practice on a private practice basis has apparently been entirely satisfactory.

All available clinic space has been rented to associations of physicians and dentists by the Community Commercial Facilities Division. These doctors and dentists previously were all employees of General Electric Company. New physicians and dentists desiring to enter practice will have the choice of associating themselves with the clinic groups if clinic space is available and they are acceptable to the groups, or of renting space elsewhere in the community as it becomes available. Staff appointments to Kadlec Hospital will be made upon recommendation of the present staff of physicians subject to final approval by G. E. and A. E. C. management.

Visits

Dr. P. A. Fuqua attended the A. E. C. general information meeting in Biology and Medicine at Oak Ridge.

Our chief nurse attended the biennial convention of the National Nurses' Association.

A hospital nurse supervisor and a public health nurse attended a three day institute on nursing care in "Polio" in Walla Walla.

Dr. R. R. Sachs wrote his examinations for Specialty Board approval in Public Health, and attended along with the Health Educator and a Social Service Counselor, the Western Branch Meeting of the American Public Health Association held in Portland. Three public health nurses attended the annual meeting of the Washington State Tuberculosis Association in Walla Walla.

1217572

MEDICAL DIVISIONS

MAY 1950

Industrial

Employee physical examinations increased slightly from 2108 to 2200. First aid treatments also increased from 5987 to 7466. Six major and ten sub-major injuries were treated. One of the sub-major and none of the major injuries were sustained by G. E. employees.

The health topic for the month was "Vacations".

Sickness absenteeism dropped from 1.94% to 1.58%, while total absenteeism decreased from 2.48% to 2.12%.

Communities - Hospital and Clinic

The hospital average daily census was 86.3 as compared to 83.8 for April, and 74 a year ago.

Hospital Day was observed on May 12th with more than 500 residents inspecting the hospital and its numerous special displays. The Kadlec Auxiliary played an important role in making the day successful.

Public Health

There was a slight increase in communicable disease from 82 to 95. Classes in sanitary aspects of food handling were conducted during two days for restaurant employees. A total of 869 immunizing injections were made during May.

Costs (April)

The net cost of operating the Medical Divisions (before assessments to other Divisions and Workmens' Compensation costs) was $91,856., an increase of $12,263. While total expense dropped by $5,760., this was offset by a decrease of $18,023. in net revenue. The decrease in revenue was in part seasonal and in part due to postponement of elective cases in anticipation of private practice in May. The cost was $23,676. below the budget estimate.

Kadlec Hospital operated at a net loss of $9,561. compared to a net gain of $4,657. for the previous month and a budget figure of $16,106. While total direct expense dropped by $7,971., revenues declined by $8.839. and intra-division cost transfers dropped by $13,163. due to starting x-ray and laboratory work for construction employees in North Richland.

The clinic lost $8,611. as compared to a profit of $6,045. for March. Direct expense increased largely due to increased bonus salary payments to physicians for March work. Clinic revenue decreased by $7,514.

1217573

Industrial Medical Division

General

The number of examinations increased slightly from 2108 to 2200 in May. The first aid treatments also increased from 5987 to 7466, an increase of 1479 treatments over the previous month. General Electric employees sustained no major injuries and only one sub-major injury. Sub-contractor employees sustained six major injuries and nine sub-majors.

Dr. Fuqua attended the A. E. C. general information meeting in Biology and Medicine at Oak Ridge. The industrial physicians' scientific meeting dealt with a summary report of the association meeting of industrial physicians and surgeons.

One replacement to the industrial physicians' staff was made during the month; Dr. Everett Probst replaced Dr. Douglas Wood. Dr. Probst has had considerable industrial experience, chiefly with the Du Pont Company.

Inspection trips to the operating areas included the P-10 and P-11 projects. The Chemical Hazards Committee has been considering chemical hazards in the P-10 operation so as to make recommendations for proposed design.

The Health Activities Committee met on May 18th, and the health topic for the coming month on "Vacations" was presented. Material on this subject was prepared for distribution to all employees.

The absenteeism report was as follows:

	April	May
Total absenteeism weekly employees all causes	2.48%	2.12%
Total absenteeism weekly employees sickness only	1.94%	1.58%

There were no findings attributable to radiation exposure by any employee during the month.

Physical Examinations	April	May	Year to date
Operations			
Pre-employment	179	170	600
Rehire	56	47	280
Annual	290	417	2056
Interval	413	443	2407
A. E. C.	9	5	56
Recheck	112	94	660
Termination	108	47	295
Total	1167	1223	6354
Sub-contractors			
Pre-employment	706	136	2164
Rehire	0	529	1464
Recheck	92	142	535
Termination	143	170	606
Transfers	0	0	0
Total	941	977	4769
Total Physical Examinations	2108	2200	11123

1211514

MEDICAL DIVISIONS

MAY 1950

Laboratory Examinations	April	May	Year to date
Clinical Laboratory			
Government	84	35	388
Pre-employment, termination, transfer	5971	5503	27870
Annual	1501	2154	10669
Rechecks (Area)	2170	2367	12665
First Aid	6	2	74
Clinic	3053	2655	14555
Hospital	2626	3316	15038
Public Health	30	54	222
Total	15441	16086	81481
X-Ray			
Government	27	6	61
Pre-employment, termination, transfer	996	923	4717
Annual	285	429	2118
First Aid	114	134	528
Clinic	210	192	1100
Hospital	173	184	955
Public Health	8	1	32
Total	1813	1869	9511
Electrocardiographs			
Industrial	12	14	191
Clinic	12	4	27
Hospital	28	15	123
Total	52	33	341
Allergy			
Skin Tests	28	29	154
First Aid Treatments			
Operations			
New Occupational Cases	342	343	1767
Occupational Case Retreatments	1138	1268	6394
Non-occupational Treatments	3318	3500	16918
Total	4798	5111	25079
Construction			
New Occupational Cases	284	503	1135
Occupational Case Retreatments	749	1516	3251
Non-occupational Treatments	156	336	759
Total	1189	2355	5145
Total First Aid Treatments	5987	7466	30224
Major Injuries			
General Electric	1	0	2
Sub-contractors	7	6	17
Total	8	6	19

1217575

Sub-major Injuries	April	May	Year to date
General Electric	0	1	12
Sub-contractors	6	9	31
Total	6	10	43

Absenteeism			
Weekly employees, all causes	2.48%	2.12%	2.48%
Weekly employees, sickness only	1.94%	1.58%	1.93%
Total days lost by males due to sickness	1574	1118	8205
Total days lost by females due to sickness	698	744	4260
Total days lost due to sickness	2272	1862	12465
Investigation:			
Total calls requested	15	18	102
Total calls made	15	18	102
No. absent due to illness in family	1	0	2
No. not at home when call was made	2	4	9

Community Medical Division

General Medical Divisions' roll decreased from 357 to 289. Primary reason for this substantial reduction was that doctors and dentists entered private practice on May 1, 1950. The average daily hospital census increased from 71.7 to 76.6, as compared to 60.3 a year ago. (Adult census only.)

Nursing hours per patient day:

Medical, Surgical, Pediatrics	3.42
Obstetrical	5.99

Ratio of hospital employees to patients (excluding newborn) for the month of April was 1.98.

The net expense of the Richland community medical program for April, 1950 was $18,172. as compared to ($10,702.)* for March. Breakdown is as follows:

Kadlec Hospital net expense $ 9,561.

This is an increase of $14,218. as compared to March, due to a decrease in x-ray and laboratory work for Industrial Medical Division of approximately $13,000. (as a result of such services being rendered at North Richland and also a decrease in number of pre-employment physical examinations); a decrease of approximately $9,000. in revenue due to a decline in patient census in April partly due to anticipation of private practice and partly a seasonal decline. There was a decrease in direct expenses of approximately $8,000. * Net Gain.

Clinic net expense $ 8,611.

This is an increase of $14,656. as compared to March, due primarily to an increase of approximately $6,500. in direct expenses as a result of increased incentive payments to doctors and dentists in April for work done in March; and a decrease of approximately $7,500. in revenue as a result of a seasonal decline in illness.

1217576

MEDICAL DIVISIONS

MAY 1950

Kadlec Hospital	April	May	Year to date
Census			
Admissions - Adults	398	502	2194
Patient Days: Adults	2153	2375	11316
Infants	364	302	1661
Total Patient Days	2517	2677	12977
Average Stay: Adults	5.4	4.7	5.2
Infants	5.3	4.9	5.2
Average Daily Census: Adults	71.7	76.6	74.7
Infants	12.1	9.7	10.9
Total	83.8	86.3	85.8
Discharged against advice	0	2	9
One-day cases	68	94	356
Occupancy Percentage: Adults	80.5%	86.0%	84.1%
Infants	151.2%	122.1%	137.8%
Admission Source: Richland	82.6%	86.2%	83.7%
North Richland	8.7%	6.9%	6.7%
Other	8.7%	6.9%	9.7%
Admissions by employment:			
General Electric	78.7%	79.5%	
Government	3.0%	2.8%	
Facility	4.8%	3.8%	
Sub-contractors	8.0%	7.3%	
Schools	1.3%	3.0%	
Military	0.7%	0.6%	
Others	3.5%	3.0%	
Surgery			
Majors	36	79	327
Minors	42	94	354
Eye, Ear, Nose, Throat	61	74	293
Transfusions	39	57	265
Dental	0	4	9
Vital Statistics			
Deaths	2	4	16
Live Births	68	62	315
Still Births	3	0	5
Physiotherapy Treatments			
Clinic	145	127	461
Hospital	52	72	312
Industrial: Plant	152	110	861
Personal	20	16	106
Total	369	325	1740
Pharmacy			
Number of prescriptions filled	2803	2563	13909

1217577

Patient Meals	April	May	Year to date
Regulars	2984	3133	15422
Specials	979	998	4983
Lights	234	260	708
Softs	1661	1773	8771
Tonsils & Adenoids	145	133	661
Liquids	147	269	1015
Surgical Liquids	83	76	352
Total	6233	6642	31912
Cafeteria Meals			
Noon	1345	1326	7587
Night	285	255	1366
Total	1630	1581	8953

Public Health Division

General

Morbidity in May increased slightly over the previous month, as shown by the total number of communicable diseases reported. Chicken Pox and German Measles showed the same prevalence as the previous month. Scarlet Fever showed a slight increase, and there was one case of meningitis reported.

When three cases of influenza were reported, specimens of blood were obtained and the blood titer determined. Causative factor proved to be Influenza "A".

Immunization clinics held at various locations provided 600 individuals with additional protection against diphtheria, pertussis, and smallpox through booster and/or initial innoculations.

Letters of commendation upon the Conservation of Hearing and Wetzel Grid Program in use in Richland Schools have been received by this section.

The seminars on mental health have been favorably received with good attendance throughout the four sessions.

During the month, the health officer, the health educator, and a social service counselor attended the Western Branch Meeting of the American Public Health Association in Portland. The health educator also attended a meeting of the Health Education Section of the Washington State Public Health Association. Three nurses attended the annual meeting of the Washington State Tuberculosis Association in Walla Walla. Staff conferences were conducted to inform fellow workers of the newer trends on the mobile unit, as well as follow-up and case-finding service. The emotional factors governing the attitude of the tuberculous individual were highly stressed by Dr. Harry A. Wilmer, neurologist-psychiatrist, of California, as influencing the patient and his family in accepting and continuing under treatment until arrest of the disease.

1217578

General (continued)

The mosquito control program continued to receive emphasis from the sanitarians and their special crew.

Emergency measures have been taken to provide pumping of sewage over the dike, should flood waters imperil normal disposal of same. This is of very great importance with the water nearing flood level. There is no danger to the water supply due to possible flood conditions.

One member of the sanitation staff recently resigned. A public health student from the state university is to be employed during the summer months.

A food handlers' class covering sanitation and operation of food establishments was conducted for two days. Plans were made at that time to have similar classes this fall, which will assist in bringing restaurants to a higher level of operation. Fluid milk being delivered to the pasteurizing plants has shown definite improvement under the requirements of the Washington Uniform Fluid Milk Act.

A public health nursing supervisor was appointed May 15th to fill the vacancy created by the resignation of the former supervisor.

Education	April	May	Year to date
Pamphlets distributed	1998	10250	12248
News releases	6	2	30
Classes	6	12	25
Attendance	69	169	290
Staff meetings	6	2	24
Lectures & Talks	7	13	42
Attendance	277	204	1657
Conferences (among section members)	70	48	248
Attendance	134	75	546
Films shown	4	5	9
Attendance	134	196	330
Immunizations			
Diphtheria	412	262	1539
Influenza	0	0	1
Rocky Mt. Spotted Fever	13	0	13
Smallpox	323	600	1156
Tetanus	5	7	60
Typhoid	5	0	6
Tuberculin Test	0	0	16
Total	758	869	2791
Social Service			
Cases carried over	87	89	459
Cases admitted	12	16	89
Total	99	105	548
Cases closed	10	18	90
Remaining case load	89	87	458

1217579

Social Service (continued)	April	May	Year to date
Sources of referral:			
Public health	4	2	13
Doctors	5	6	41
Interested person	1	2	10
School	0	3	6
Personal application	1	1	9
Other agency	0	1	4
Miscellaneous	1	1	6
Total	12	16	89
Sanitation			
Inspections made	190	127	860
Bacteriological Laboratory			
Treated water samples	194	217	912
Milk samples (Inc. cream and ice cream)	22	138	407
Other bacteriological tests	226	229	1208
Total	442	584	2527
Communicable Diseases			
Pharyngeal Infection	0	1	1
Amoebic Dysentery	1	0	1
Chicken Pox	36	38	135
Erysipelas	0	0	1
German Measles	27	28	120
Gonorrhea	0	0	1
Impetigo	0	0	1
Influenza	2	3	6
Measles	0	3	5
Meningitis	0	1	1
Mumps	1	0	3
Pinkeye	5	2	12
Ringworm	1	1	4
Roseola	0	0	1
Scabies	1	0	8
Scarlet Fever	5	9	47
Syphilis	1	7	14
Tuberculosis	1	0	3
Whooping Cough	1	2	5
Total	82	95	369
Total number nursing field visits	1321	821	5518

1217580

MEDICAL DIVISIONS

PERSONNEL SUMMARY

May 31, 1950

	1100 Area				3000 Area		
	Division Administration	Industrial	Hospital	Public Health	Industrial	Public Health	Sub-total
Physicians	2	3.8	1	1	2.8		10.6
Nurses *	2	10	51	10	1	1	75.
Anesthetists			3				3.
Nurse Aides		1	25	1			27.
Orderlies & Amb. Dr.			6				6.
Tech. - Clin. Lab.			8.4		2		10.4
Tech. -X-Ray Lab.			3		2		5.
Tech. - Bact. Lab.			1				1.
Tech. - Phys. Ther.			1				1.
Secretary	2						2.
Cler. Wk. Leader	1		1				2.
Steno. & Typists	4	2	2	2			10.
Office Mach. Oper.	1	1					2.
Telephone Oper.	4						4.
General Clerks	11	10	10**		11		42.
Pharmacists			3				3.
Dietitians			2				2.
Cooks			5				5.
Kitchen Workers			10				10.
Soc. Serv. Counselors				2			2.
Sanitarians				2			2.
Health Educator				1			1.
Janitors	1	4.6	8.8	.6	.7	.3	16.
Bacteriologist			1				1.
Records Supervisor	2						2.
Accounting Suporv.	3						3.
Admin. & Assts.	2						2.
Others			7				7.
Total	35	32.4	148.2	19.6	19.5	1.3	257

* 4 part-time nurses included.
** 2 clerks working in clinic files.

Personnel in outlying areas shown on following page.

1217581

MEDICAL DIVISIONS

PERSONNEL SUMMARY

May 31, 1950

	Sub-total	Outlying Areas									TOTAL
		100-B	100-D	100-F	100-H	200-E	200-W	300	234-5	White Bluffs	
Physicians	10.6	.2	.2	.3	.1	.1	.2	.3			12
Nurses	75.	1	4	4	1	4	5	2	1	1	98
Anesthetists	3.										3
Nurse Aides	27.										27
Orderlies & Amb. Dr.	6.										6
Tech. - Clin. Lab.	10.4	.4	.4	.4	.4	.4	.8	.8			14
Tech. - X-Ray Lab.	5.										5
Tech. - Bact. Lab.	1.										1
Tech. - Phys. Ther.	1.										1
Secretary	2.										2
Cler. Work. Leader	2.										2
Steno. & Typists	10.										10
Office Mach. Oper.	2.										2
Telephone Oper.	4.										4
General Clerks	42.	.5	.5	.5	.5	.5	.5	1			46
Pharmacists	3.										3
Dietitians	2.										2
Cooks	5.										5
Kitchen Workers	10.										10
Social Serv. Couns.	2.										2
Sanitarians	2.										2
Health Educator	1.										1
Janitors	16.										16
Bacteriologist	1.										1
Records Supervisors	2.										2
Accounting Supv.	3.										3
Admin. & Asst.	2.										2
Others	7.										7
Total	257	2.1	5.1	5.2	2	5	6.5	4.1	1	1	289

Number of employees on payroll:

Beginning of month	357
End of month	289
Net decrease	68

1217582

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HEALTH INSTRUMENT DIVISIONS

MAY, 1950

Summary

The force increased by seven. Two informal Special Hazards Incidents were investigated.

With minor exceptions, surveys by the Operational Division showed no deviation from acceptable hazard control standards. Efforts to reduce significant personnel exposures arising from the P-10 process continued.

Control phases of the Biology and Development Divisions showed the normal pattern of activity.

Preliminary arrangements were made by Development Division members to provide assistance in background measurements at Arco, Idaho.

Active particles in lungs of experimental animals were observed to persist in situ for at least eight days, indicating the hazard is not lessened by rapid physiological removal.

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1217583

Health Instrument Divisions

HEALTH INSTRUMENT DIVISIONS

MAY, 1950

Organization

The composition and distribution of the force as of 5/31/50 was as follows:

	100-B	100-D	100-F	100-H	200-E	200-W	300	700	P.G.	Total
Supervisors	1	1	5	2	2	11	13	5	0	40
Engineers	6	5	18	5	11	15	8	4	0	72
Clerical	0	0	1	1	1	2	4	5	0	14
Others	11	13	44	12	33	66	58	11	8	256
Total	18	19	68	20	47	94	83	25	8	382

Number of Employees on Payroll	May 1950
Beginning of month	375
End of month	382
Net increase	7

Additions to the roll included 2 engineers, 1 technical graduate, 3 inspectors, 2 badge workers, 2 laboratory assistants, a glass washer, a moto messenger, and a steno-typist. Removed from the roll were 3 personnel meters clerks, a laboratory assistant, and 2 steno-typists.

General

Two informal Special Hazards Incidents were investigated. One involved contamination from improper removal of protective clothing, and the other arose from irregular entry into a danger zone. Neither gave serious exposure. The highest total body exposures probably continued to come from the P-10 process, which is being closely investigated.

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The following trips were reported:

D.E. Jenne - Am. Geo. Union, and Am. Meteor. Soc., Washington, D.C.
CC Gamertsfelder - Instrument Conference, San Francisco, Calif.
J.W.Healy, W.Singlevich, C.M. Patterson - Arco, Idaho.
J.W.Healy, P.L. Eisenacher - Swedish Hospital, Seattle, Wn.
K.E.Herde, W.C. Hanson - Fish & Wildlife Serv. Meeting, Portland, Ore.
M.H.Joffe - Federated Biology Mtg., B.N.L., A.N.L., U. of Rochester.
F.G.Tabb - Oak Ridge National Laboratory, Oak Ridge, Tenn.
F.E.Adley, H.M. Parker - Air Pollution Conference, Washington, D.C.
H.M. Parker - ORNL.; U. of Washington, Seattle, Wn. (2)
A.J. Stevens - Schenectady, N.Y.

Dr. G.W. Beadle, Advisory Committee for Biology & Medicine, inspected the facilities.

During the period covered by this report, all persons in the Health Instrument Divisions engaged in work which might reasonably be expected to result in inventions, or discoveries, advised that to the best of their knowledge and belief, no inventions or discoveries were made in the course of their work, except as listed below. Such persons further advised that, for the period therein covered by this report, notebook records, if any, kept in the course of their work have been examined for possible inventions or discoveries.

Inventor	Title
G.E. Driver	Alpha-beta methane flow counter

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1217585

Health Instrument Divisions

OPERATIONAL DIVISION

100 Areas

General Statistics

	April					May					1950
	B	D	F	H	Total	B	D	F	H	Total	To Date
Special Work Permits	490	1003	782	472	2747	844	1278	662	731	3515	14,259
Routine & Special Surveys	480	390	468	411	1749	405	620	404	448	1877	8,594
107 Effluent Surveys	87	123	97	185	492	86	136	99	202	523	2,137
Air Monitoring Samples	102	64	74	237	477	104	93	83	201	481	2,453

Retention Basin Effluent

The activity of the water leaving the retention basin was as follows:

	100-B	100-D	100-F	100-H
Power Level (MW)	275	305	305	370-385
Average beta dosage-rate (mrep/hr)	1.4	1.3	1.8	2.3
Average gamma dosage-rate (mr/hr)	2.8	3.0	3.5	4.1
Average total dosage-rate (mrep/hr)	4.2	4.3	5.3	6.4
Average integrated dose in 24 hrs. (mrep)	100	103	127	154
Maximum integrated dose in 24 hrs. (mrep)	120	125	149	194
Maximum integrated dose in 24 hrs. (mrep) 1950	120	139	154	194

100-B Area

Pile and Associated Buildings

High exposure rates were encountered by Pile Technology personnel engaged in preparing exposed process tube sections for corrosion studies. One individual was splattered with contaminated chromic acid when a piece of glass tubing in a siphon line broke. His face and hands were washed immediately, to protect the eyes and skin from acid burns, and subsequent survey showed no contamination. However, surveys of the immediate vicinity showed surface contamination up to 100 mrep/hr due to the contaminated acid.

Airborne activity due to effluent vapors was prevalent in the near sample rooms and spread to the outer rod room. Nineteen of thirty-nine air samples taken were above 3×10^{-5} μc/liter. An overbalance of supply air caused high airborne radioactivity in the valve pit, due to effluent water vapor. The

5

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1217586

condition was alleviated when an additional exhaust fan was turned on.

High levels of contamination are still encountered by personnel engaged in discharge operations. Pile purges are made after shutdown work rather than before due to the necessity of isolating process tubes which are scheduled for corrosion studies.

P-10 Operations - 108 Building

The contamination in the can-opening room hood reported last month was identified by the H.I Methods Laboratory as Sulphur^{35}. A concentration of 125 mc/gm of sample was reported. P-10 oxide was also present in the sample to the extent of about 30 mc/gm of sample. Extensive decontamination work was effective in removing all loose contamination from the hood, and it was released for regular operation.

Results on 92 urine samples were received, and showed the following:

	P-10 oxide/liter
17 μc or greater	0
10 to 17 μc	1
5 to 10 μc	2
1.6 to 5 μc	24
less than 1.6 μc	65

The employee removed from danger zone work during the last report period was again removed during this month after a maximum concentration of almost 12 μc P-10 oxide/liter of urine was reported on a sample obtained May 10, 1950. The most recent results on this individual (May 19, 1950) showed almost 9 μc P-10 oxide/liter of urine.

100-D Area

105-D and Associated Buildings

Extensive contamination in the discharge area resulted in several cases of hand contamination, all of which were reduced by washing. Several cases of personnel contamination occurred during work at the A and B experimental hole facilities. All contamination was successfully removed by washing. Contamination was discovered on the unrestricted section of the DR cask pad, in the adjacent construction areas on the south and west sides of the cask pad fence, and on the road east of the pad. Contamination consisted of small rust-colored specks and dosage-rates up to 19 rep per hour, and 650 mr/hr at 2 inches, uncorrected for source size were reported. Areas outside of the danger zone were decontaminated immediately, and decontamination is still in process on the cask pad proper.

Health Instrument Divisions

Low level contamination was found on the floor of a Consolidated Freightways trailer, after delivery of three empty monster casks from ORNL. Floor areas were easily cleaned and the trailer released.

105-DR Building

Experiments in the DR pile continued without incident under carefully controlled conditions. Maximum exposure-rates were obtained during the handling of exposed foils but at no time constituted a serious hazard.

100-F Area

Pile and Associated Buildings

Unusually high dosage-rates were observed during discharge operations, and were attributed to gross contamination in the area. One instance of skin contamination occurred in the discharge area, one during work on the downcomer baffles, and one during the replacement of a pigtail and nozzle. All were readily decontaminated.

Borescoping operations in VSR thimble #27, replacement of a section of the neoprene seal, a mercury traverse of a process tube, and work on the experimental level, were accomplished with good hazard control.

P-11 Operations

General Statistics

	May	1950 to Date
Special Work Permits	5	5
Routine & Special Surveys	41	41
Air Samples	38	38

Several experimental runs were made during the month without incident, and two product solution dilutions were accomplished without contamination spread. Leaks were found in the mixing tank lines, in the bottom of one of the leveling tanks, and in the product solution lines from one of the leveling tanks. About 1/2 μg of Plutonium was spread to the corridor from leaks in the leveling tanks. Decontamination was successful.

An air sample taken during the replacement of test cylinders showed 1.4×10^{-11} μg Pu/cc; assault masks were worn.

Two instances of shoe contamination occurred during the installation of the shaft drive assembly on the test unit. Both were successfully cleaned.

7

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Health Instrument Divisions [redacted]

100-H Area

The vent pipe and steam dome were removed from the near effluent line

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Health Instrument Divisions

200 Areas T and B Plants

General Statistics

	April			May			1950 to Date
	T	B	Total	T	B	Total	
Special Work Permits	569	382	951	476	398	874	3,908
Routine & Special Surveys	665	533	1,198	616	586	1,202	5,312
Air Monitoring Samples	654	916	1,670	776	666	1,442	7,252
Thyroid Checks	58	58	116	131	93	224	869

Air Sample Results

Location	No. Taken	Number Above 10^{-12} μg Pu/cc	Number Above 10^{-7} μc fp/liter	Maxima μg Pu/cc	Maxima μc fp/liter	Remarks
T Plant						
Canyon	206	*45	119	2.4×10^{-9}	5.5×10^{-5}	Cranework & Paper Pickup
221 Galleries	146	1	0	1.2×10^{-12}	10^{-7}	--------
R-13 Changehouse	80	13	11	1.9×10^{-11}	1.9×10^{-5}	High canyon air.
222	208	10	1	2.1×10^{-11}	2.3×10^{-7}	Near Goldberg
224	125	3	1	9.0×10^{-12}	1.3×10^{-7}	F-10 -Normal
Others	11	*0	0	$<10^{-11}$	$<10^{-7}$	-------
B Plant						
Canyon	80	*15	67	2.4×10^{-10}	1.9×10^{-5}	4R open-Jetting.
221 Galleries	155	3	5	5.9×10^{-12}	5.0×10^{-7}	Power shutdown
R-13 Changehouse	34	8	2	2.3×10^{-12}	2.5×10^{-7}	Power shutdown
222	150	90	12	4.6×10^{-11}	1.5×10^{-6}	Decontam.sink fuming
224	142	7	2	4.4×10^{-12}	2.1×10^{-7}	Power shutdown
Others	105	95	4	8.2×10^{-10}	2.4×10^{-7}	D-cell vent.

* Sensitivity limit 10^{-11} μg Pu/cc

1217590

Health Instrument Divisions

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Canyon Buildings

In the T Plant, considerable maintenance and crane work was done, but the general contamination condition in the canyon was greatly improved due to decontamination efforts and prompt removal of contaminated waste. Work on the Rala project was discontinued, and all materials used in a partially constructed partition were stored in the Industrial Burial Ground. Installation of new skimmers in the 9-2 centrifuge was completed; exposure-rates for this work were kept low by decontamination and local shielding. Installation of sampling positions at sections 6, 8, 10, and 11, was completed in the operating gallery permitting remote sampling of canyon air.

In the B Plant, the 18-2 centrifuge was replaced with the reworked 9-2 centrifuge, which was in turn replaced by a new centrifuge. Contamination problems were well controlled during this work. Contamination was reported under connector 2 at section 6, and connectors 41 and 42 at section 3, in the pipe gallery. Repair and decontamination were promptly effected.

Concentration Buildings

In the T Plant, maintenance work included replacement of an E-2 centrifuge dip tube, removal of a dip tube from the A-1 tank, and removal of cocooning from some tanks prior to application of new "cocoons". No contamination spread was found during this work.

In the B Plant, extensive work was performed on the E-4 sampler in an effort to unplug it. During a visual inspection of the inside of B-2 tank, a "blow-back" evidently occurred, and resulted in considerable contamination spread in the balcony and sample room with some contamination tracked into the pipe gallery. The situation was quickly realized, and decontamination was done immediately. Air samples taken at the cell roof vents indicated the following discharge of Pu during the period April 25, 1950, to May 26, 1950:

Cell Vent	µg Pu/24 hours
A	9
B	10
D	24

Waste Disposal Areas

In the T Plant, the ORNL sampler capsule was sealed in a steel tube and buried. Attendant hoses, cables, transfer box, and other equipment including a contaminated TP instrument probe and cable, were stored in the Industrial Burial Ground in wooden boxes. Cleanup work in the 241-U Area continued with about 400 cans of contaminated dirt now removed.

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Health Instrument Divisions

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Plant Laundry

Twenty-one of 69 spot and continuous air samples taken showed positive results, with a maximum of 2.1×10^{-11} µg Pu/cc obtained while rewashing T and B Plant clothing.

General

All thyroid checks were below the warning level.

The Isolation Building

General Statistics

	April	May	1950 to Date
Special Work Permits	20	22	137
Routine & Special Surveys	305	335	1,362
Air Monitoring Samples	426	485	1,741

Air Sample Results

	No. Taken	Number Above 10^{-12} µg Pu/cc	Maximum µg Pu/cc	Remarks
Operating cells	251	31	4.1×10^{-10}	SWP - Cell 3
Control Laboratory	209	16	7.4×10^{-11}	Room 6-C
Development Laboratory	17	1	2.1×10^{-12}	Room 38
Ducts	8	2	1.4×10^{-11}	-----

Operating Cells

Fourteen contaminated unregulated items, two contaminated floor locations, and three cases of skin contamination were reported. Maximum levels of gamma radiation reported were 23 mr/hr on PR containers, 3 mr/hr at Process Hoods, and 5 mr/hr on SC.

Purification Building

General Statistics

	April	May	1950 to Date
Special Work Permits	232	219	914
Routine & Special Surveys	691	723	2,475
Air Monitoring Samples	1,415	1,426	6,441

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Health Instrument Divisions

Air Sample Results

Location	No. Taken	Number Above 10^{-12} µg Pu/cc	Maximum µg Pu/cc	Remarks
234 Operating	250	71	5×10^{-9}	Rm.228- wiping process lines with damp cloth.
235 Operating	386	16	1.8×10^{-11}	Rm.231-ruptured hood glove
Control Laboratory	288	24	2.9×10^{-11}	Rm.134 - Dry Box.
General	311	11	4.7×10^{-12}	Rm.117-Used Clothing room.
Ducts after primary filtering	108	56	4.7×10^{-9}	From hoods 2 & 4 - 7.
26 in. Vacuum Discharge	20	20	9.0×10^{-10}	------
10 in. Vacuum Discharge	20	0	$<10^{-12}$	------
Stack Breech	43	0	$<10^{-13}$	------

234 Building - Operating Section

Five incidents of contamination spread within process rooms occurred. The maximum contamination was found under the 7-8 airlock tunnel, where liquid had leaked at a flange. Considerable loose contamination is still present in Room 228, and decontamination efforts are currently directed to cleanup of work locations. Contamination was found on smears from the transfer trough and the grill-work over the room air outlet. The average Pu concentration in the air in Room 228 was 1.2×10^{-10} µg/cc for this period; with a maximum of 5.0×10^{-9} µg Pu/cc reported during decontamination work. One case of skin contamination occurred and was cleaned. Ten maintenance jobs involving gross contamination included the unplugging of the transfer line from the process hoods to recovery and replacement of the lucite panel at the loading station of hood 8.

235 Building - Operating Section

Three instances of contamination spread within process rooms occurred, with a maximum of 3 µg Pu reported in room 230 under hood 14. Two cases of skin contamination were reported and successfully cleaned. Four maintenance jobs involving gross contamination included two replacements of the bell jar in hood 26, and replacement of the diffusion pump at hood 25. Oil from this pump showed 8 µg Pu/liter when analyzed.

General Building

The hood 6 tank vent canister was found to be completely disintegrated. Upon replacement of the canister, the composite exhaust air from hoods 2 and 4 through 7 dropped to about 10^{-11} µg Pu/cc. Little change was noted in the air contamination of the 26 inch Vaccuum Discharge. The primary filter canisters in the 26 inch vacuum transfer system are routinely changed monthly, but are still found completely disintegrated.

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Health Instrument Divisions [redacted]

200 Area Control Laboratories

	T	B	231	234-5
Items contaminated-not regulated	113	99	184	245
Skin contamination - plutonium	0	3	4	1
Skin contamination - fission product	0	3	0	0
Contaminated floor locations	28	47	11	170

In the T Plant, after running a sample, a laboratorian found her gloves, coveralls, and one plant shoe contaminated, with a maximum surface dosage-rate of 750 mrep/hr on the sole of her shoe. No overexposure was indicated, and no skin contamination occurred.

In the B Plant, air conditions were not significantly different from last month, with samples above 10^{-12} µg Pu/cc still common. A study of air conditions by the Industrial Hygiene Group was completed. Excavation for the dry-waste disposal tank was completed with no contamination detected. The excavation was carried to a depth of 24 feet, and within 15 feet of previously used dry-waste disposal facilities.

In the Isolation Building, an air sample result of 7.4×10^{-11} µg Pu/cc in Room 6-C led to the detection of contamination over the 6-C room floor. About 0.1 µg Pu was reported. Cause for this floor contamination was not determined but was probably due to the slurping operation.

In the Purification Building, considerable difficulty was experienced with the new Berkeley dry box in Room 134. Six positive air samples were obtained, and about 1 µg Pu was discovered near the airlocks. When it was realized that the linear flow-rate was only 30 - 35 feet/minute at the airlock, the box was removed from service. Approximately 1 µg Pu was reported on the paper around the sink in Room 155.

The 300 Area

General Statistics

	April	May	1950 to Date
Special Work Permits	104	84	681
Routine & Special Surveys	139	150	878
Air Samples	165	148	769

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Health Instrument Divisions

Metal Fabrication Plant

Forty-two of sixty-seven air samples taken were above 5×10^{-5} μg U/cc as follows:

Location	No. Taken	Number Above 5×10^{-5} μg U/cc	Maximum μg U/cc	Conditions
Extruder Building				
Main room	5	0	5.0×10^{-5}	Normal operations
Furnace room	5	3	7.0×10^{-5}	Furnaces closed.
Burn-out room	2	2	2.7×10^{-3}	Crucible Cleanout
Outgassing furnace	3	3	6.4×10^{-2}	Unloading Oxide
Free metal burning hearth	2	2	3.2×10^{-2}	Shoveling Oxide
Machining Building				
Chip Recovery	23	16	7.6×10^{-4}	Pressing
Machining	8	0	5.0×10^{-5}	Normal operations
Miscellaneous	19	16	1.3×10^{-3}	Unloading railroad cars

Thirteen air-samples were taken during unloading of three carloads of uranium rods, and all results were above 5×10^{-5} μg U/cc.

Seven pair of twenty-four pair of plant-issue shoes surveyed were found contaminated above 5,000 c/m. All were successfully decontaminated.

Test Pile Building

Special reactivity tests were continued. The use of lucite shields reduced exposure-rates by a factor of about 3 during handling of special pieces.

Technical Building

Surveys of a glove box removed from a hood in Room 98 showed contamination on outer door surfaces which was attributed to hood velocity sufficiently above the glove box to pull the contamination out when the doors were closed. Other installations of this type will be checked for this possibility.

One instance of contaminated shoes led to the discovery of low-level floor contamination in Room 96.

Cold Semi-Works Building

About 292 pounds of uranium have been discharged to the 300-N crib, and about 1,671 pounds to the waste ponds.

Hand Score Summary

There were 41,338 alpha and 42,489 beta hand checks recorded. About 0.09% of the alpha and about 0.12% of the beta scores were high. All high scores were promptly reduced.

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Health Instrument Divisions

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PERSONNEL METERS

Pencils

	100-B	100-D	100-F	100-H	E&N 200	200-W	300	Total	1950 To Date
Pencils Read	14,749	12,535	14,873	10,466	18,345	28,319	35,176	134,463	635,357
Single Readings (100 to 280 mr)	12	8	10	20	11	38	61	160	948
Paired Readings (100 to 280 mr)	0	0	0	0	0	0	0	0	12
Single Readings Over 280 mr)	15	18	16	30	28	40	43	191	981
Paired Readings Over 280 mr)	0	0	0	1	0	1	0	2	11
Lost Readings	0	1	0	2	1	0	0	4	24

None of the six significant pencil results was confirmed by the badge results Investigation of lost readings indicated no possibility of an overexposure.

Badges

	100-B	100-D	P-11 101-P 100-F	100-H	200-E	R.R.T. 200-N	200-W	300	Total	1950 To Date
Badges Processed	1961	2955	3529	1668	2079	450	3638	5679	21,959	104,888
Number Readings (100 to 300 mrep)	4	17	17	11	30	0	89	119	287	1,283
Number Readings (Over 300 mrep)	10	3	12	0	0	0	19	4	48	78
Lost Readings	0	2	2	1	7	0	1	1	14	43

Lost readings were accounted for as follows:

Light Struck	9
Badges lost in Area	3
Sensitive film not packaged (Insensitive read 0)	1
Badge dropped in paint	1
Total	14

Investigation of the above lost readings revealed no possibility of an overexposure. Two of the four results over 300 mrep in the 300 Area occurred during an audit of uranium rods when recommended time limits were exceeded. The other two results in the 300 Area were planned exposures of 300 mrep. Badge results in both cases were 300 mrep. Exposure period was about 2½ days in each instance, with the balance of the week spent in areas of no radiation.

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1217596

Health Instrument Divisions

All of the results of over 600 mrep in the other areas, where film is changed every two weeks, were attributed to fogged film.

Badge Resume, Construction Areas

	200-W Redox	100-DR	Total	1950 To Date
Badges Processed	76	2,515	2,591	12,529
Number Readings (100 to 300 mrep)	3	12	15	27
Number Readings (Over 300 mrep)	0	3	3	3
Lost Readings	0	1	1	8

Total badges processed 1950,	Operations	104,888
	Construction	12,529
	Total	117,417

In addition to the badge program, a total of 2,086 items of non-routine nature was processed during the month.

Slow Neutron Pencil Summary

	100-B	100-D	100-DR	100-F	100-H	Total	1950 To Date
Number of pairs issued	39	135	42	93	970	1,279	3,780
Number of significant readings	0	24	0	0	50	74	242
Number of significant readings (Above 100 mrem)	0	0	0	0	0	0	3

Neutron Film

		1950 To Date
Total number of film processed	427	887
Number of significant exposures	0	0

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Health Instrument Divisions

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CONTROL AND DEVELOPMENT DIVISION

Site Survey

Drinking water and sanitary water samples gave results similar to those of past periods. The activity in the Columbia River decreased, in general, by about a factor of two due to increased river flow. Samples of a floating scum near the 300 Area and Richland gave activities of 2 - 7 μc/kg. Samples of sludge from the Pasco filter plant gave activities as high as 1.4 μc/kg. Decay curves on these materials have indicated the presence of Na^{24} and P^{32}.

The air monitoring results were consistent with those of past months.

The I^{131} and non-volatile activities on vegetation remained at previous levels. The maximum activities were 108 mμc/kg for I^{131}, and 42 mμc/kg for the non-volatiles.

The 107 basin activities ranged from 340 mμc/liter at 100-D Area, to 950 mμc/liter at 100-H Area. Decay curves measured before and after changes in the purification of the water at 100-H indicated little or no difference in the shorter-lived emitters.

Geology

Contamination levels in wells 241-T-361 and 361-T-12 decreased at a greater rate than previously observed. This indicates that the ground water may be slowly moving eastward away from the T Plant ground water mound.

The revival of waste disposal operations of the 321 waste crib located 5 miles north-northwest of the 300 Area has made necessary periodic sampling of the well at that location. No activity was detected in ground water samples at this location during operations terminated in 1949. This well, #321-1, now has alpha active contamination averaging about 80 dis/min/liter.

Well 303-4 continued to show high alpha activity, averaging about 700 dis/min per liter. During this period, well 303-6 also began to show significant activity, averaging 450 dis/min/liter. Other wells in this general area all gave about 20 dis/min/liter.

A temperature survey of the ground water is now in progress to determine the extent of penetration of Columbia River water into the normal ground water.

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Meteorology

Forecasts	Number Made	Percent Reliability
Production	93	87.1
24-hour	62	81.9
Special	17	64.7

May 1950 was the fifth consecutive month with below normal temperatures, but it was the first this year in which precipitation was less than normal. All measurable rainfall occurred in the first four days, and totaled only 0.27 inch. Windspeeds during the month averaged slightly above normal, although there was no severe windstorm.

Bioassay

There were 617 urine samples analyzed for plutonium during the month. The blank samples averaged 0.03 d/m and the average yield was 97%. One resample, which was necessitated by a positive value has been processed with a value less than 0.33 d/m. Nine resamples from previous months have been processed with results less than 0.33 d/m. The results of 15 samples from 234-5 personnel indicated an average of 0.087 d/m. Ten people are now being sampled twice a week under more rigid conditions to determine the possibility of low-level contamination being transferred to the sample.

Five hundred and ninety-four samples were analyzed for fission products, with four values greater than the arbitrary resample limit of 10 c/m.

One hundred and twenty-one samples were analyzed for uranium on the fluorophotometer. The maximum result was 77 µg/liter.

A total of 252 measurements was made on 115 urine samples for P-10 oxide in the Control Laboratory. Twenty-nine of these samples were positive, with seven of the results from one man.

Methods Development

A study of the effects of current density, voltage, and potassium hydroxide concentration, in the electrodeposition of plutonium, was started. Early results indicate a loss of yield below 78 milliamperes per square centimeter, with voltages of 3.8 - 5.3 V. An ozonizer was built according to specifications obtained from the Technical Division, and some time was spent in determining the operating conditions. The results from 61 samples plated on 7 mm discs at the 706 Laboratory indicate an 80% yield with an unexplained high deviation.

Studies of the rate of fading of the latent image on the NTA film continued,

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with inconclusive results due to the small number of samples studied.

None of the methods tried for extraction of the plutonium from the air sampling filters has given consistent, high yields when applied to large papers. A procedure of muffling, followed by a HNO_3-H_2O_2 digestion, and a LaF_3 precipitation has given fairly consistent yields on a 1-1/2 inch diameter paper.

The equipment for routine P-10 analysis by proportional counting is not yet completely assembled, although several test runs have given satisfactory results.

Control Laboratory

Plans are being made to place all alpha counters in relay racks to conserve space. Favorable results were obtained with mica window GM counters when the windows were sprayed with aquadag. Further tests are in process. A pulse analyzer and an alpha-beta proportional counter were delivered by the Instrument Development Group.

Investigation of the alpha-beta ratio for samples containing uranium has not as yet indicated the cause of the discrepancy from the theoretical ratio noted on some well samples.

A summation of the work performed is given below:

Laboratory	No. of Analyses
Vegetation	1801
Water	2066
Solids	377
Fluorophotometer	613
P-10 (other than urine)	19
Miscellaneous	58
Total	4934

Counting Room	
Beta measurements	6642
Alpha measurements	4303
Control Points	2826
Decay curves (points)	1217
Absorption curves	159
Total	15,147

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Physics

When the neutron films are examined under a microscope, the number of tracks found will be subject to statistical fluctuations and to errors on the part of the observors. The reliability of the observors has been investigated in two ways.

First a group of 12 girls took two readings on each of four microscopes for a total of 96 readings; two girls read the film 96 times each. The results and a comparison with a Gaussian distribution are:

	Average No. of tracks for 40 fields	Standard Deviation	Skewness	Peakedness
Gaussian curve	---	---	0.000	3.00
12 Observors	72.6	± 9.6	— 0.057	2.33
First Observor	72.8	± 7.4	+ 0.063	3.20
Second Observor	73.1	± 8.5	+ 0.219	3.88

In this test, the single observors were within 90% limits 92% and 95% of the time, and the group of 12 was within limits 84% of the time.

The second test involved giving the observors badges which had been exposed to 0.1, 0.25, 0.5, 0.75 of two weeks tolerance. The results were very gratifying; for example, the badges exposed to 0.1 times tolerance had an average of 8.2 tracks per 40 fields with a range of 3 - 18 tracks per 40 fields. The normal background is less than one track por 40 fields.

Five radioactive gamma sources have been obtained from Oak Ridge. The gamma energies range from 0.2 Mev to 1.2 Mev. These are to be used in measurements on the energy dependence of various ionization chambers.

Industrial Hygiene

The study of atmospheric contamination in the 222-B Laboratory was completed during May. This investigation was centered largely around the findings of air samples collected in Room 7, supplementary measurements on the ventilation exhaust systems, and a check of the flow of air through the room. A new portable sampling head was built for this study which permitted greater flexibility in use than the older models. A report on this study is being prepared.

Instrument Development

The pulse analyzer was delivered to the Methods Group for use. It was found

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that drift could be practically eliminated by flowing gas through the chamber at a rate of about 10 cc/min. Using Argon-CO_2 at 1-1/2 to 2 atmospheres, operation was stable up to six hours, and an uncollimated polonium source gave a resolution of about 90 Kev half width at 1/e of maximum. Seven unknowns were run, and identification of the components seemed to be satisfactory.

After about a month of field testing, the portable BF_3 counter was modified by increasing the applied voltage and the time constant of the integrating net. Correlation between portable and mobile BF_3 measurements improved after making the changes. Poorest apparent correlation occurred when (a) the portable instrument was used at too low counting rates, and (b) when both instruments were used with moderators for estimation of intermediate energy neutron fluxes.

The combination alpha-beta counter was turned over to the Methods Group for use. The instrument will count alpha and beta particles from the same source and record them on separate scalers. The dead-time of the circuit prevents using it at counting rates above about 5,000 c/m.

A second P-10 survey counter was placed in the field. This system gives a 300 c/m normal background, a reduction by a factor of about 4, and the probe has been designed for convenient operation. The design is also adaptable to multiple wire operation if this becomes desirable. Laboratory tests indicate that counting efficiency is independent of gas flow rate after all air has been expelled from the probe.

Specifications for an alpha scintillation probe were prepared. The unit built locally has given very satisfactory field service, with only one maintenance item (light shield breakage) giving trouble. It is intended that additional units be procured off-site if interested groups desire them.

Methods for adapting existing Poppies for scintillation counting are being investigated. The objects are (1) to obtain a linear counting rate meter; (2) eliminate multiple pulsing; and (3) provide for different audio signals from different instruments.

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Health Instrument Divisions

Calibrations

RADIUM CALIBRATIONS	Number of Routine Calibrations April	May	1950 to Date
Fixed Instruments			
Gamma	395	384	1,900
Portable Instruments			
Alpha	273	328	1,387
Beta	568	668	2,747
Gamma (Radium)	896	1024	4,434
Neutron	4	--	12
Total	164	43	485
	1905	2063	9,065
Personnel Meters			
Beta	441	752	3,448
Gamma (Radium)	6450	7269	37,064
X-ray	6439	4893	29,234
Neutron	--	27	27
Total	13330	12941	69,773
GRAND TOTAL	15,630	15,388	80,738

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Health Instrument Division

BIOLOGY DIVISION

Analyses Group

1. Composition of Effluent Water

Duplicate analyses are currently being run on a sample of effluent water from 100-D. Preliminary results indicate elements from the iron and alkaline earth groups are the prime long lived constituents.

2. Determination of Radioactive Backgrounds in Biological Materials

Fish liver and bone and sheep urine have been analyzed colorimetrically for potassium. A relatively high background (10 c/m/cc) has been observed in sheep urine from the Experimental Animal Farm. Preliminary data indicate that it is not due to I^{131} nor to K^{40}.

A procedure is being developed for the radio analysis of small quantities of thorium. Yields of 50 - 95% have been experienced with a hydroxide precipitation followed by an iodate and fluoride precipitation using cerium carrier.

In cooperation with the Methods Section approximately 40 water samples have been analyzed for radon. Values ranged from less than 25 d/m/liter to a surprising 60,000 d/m/L in a sample from near the Continental Divide, with an average for water around Richland from 200 - 400 d/m/liter.

3. Alpha and Beta Analyses of Organic Material

Standard procedures were set up for measuring activity in sheep tissue and exudate based on direct plating in Na_2CO_3 solution. It was found that this simpler method gave more consistant and higher counting rates than that of preparing insoluble precipitates.

4. Miscellaneous

Services to other groups consisted of calibrating shipments of I^{131} and Y^{90}, preparation of spike solutions for feeding and the analysis, in triplicate of 303 sheep tissue and exudate samples.

Aquatic Biology Group

1. Effect of Pile Effluent on Aquatic Life

Mortalities among juvenile chinook salmon fry have been nominal except at the 10% concentration where only larger and more vigorous fish have survived.

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Their current activity density is 1.2×10^{-3} μc/g, or 40 times that of fish cultured in river water.

Spawning of the adult trout held during their entire life was completed during the month. Eggs are now incubating and some have hatched.

2. Biological Chains

Activity density of yearling trout in 5% effluent and feeding on a diet of 107 Basin algae continues to increase with temperature. Growth rate appears to be inhibited by the algae, but the specific cause is uncertain.

The study of accumulation of radioactivity by larvae of the caddis fly from various concentrations of pile effluent has been nearly completed and results will be presented separately.

3. Radiobiological and Ecological Survey of the Columbia River

Processing of forms obtained during the past year and collection of fish and plankton continue. Juvenile chinook salmon abundant during the first part of the month almost disappeared during the latter part. Activity densities ranged from about 8×10^{-5} μc/g near Hanford to 5×10^{-5} μc/g above McNary Dam, about 10 times the concentration of older and larger migrant fish.

The first sturgeon (about 10 lbs.) captured within the boundaries of the Reservation was taken on May 19, 1950. Its activity densities were comparatively low (muscle 10^{-5} μc/g, testis 10^{-4} μc/g, feces 3×10^{-4} μc/g).

Activity density of plankton remained unchanged (3×10^{-3} μc/g at Hanford) as well as numbers per unit volume. Mussels transplanted from Bonneville Dam to the Hanford section have increased in activity (visceral organs about 10^{-4} μc/g).

4. Miscellaneous

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0.5 to 30 μc/kg wet tissue. Autoradiographs of frozen lung tissue sections showed many active particles in alveoli and interstitial tissue.

2. Gastrointestinal Absorption of Plutonium

A report summarizing the latest phase of this problem is being prepared.

Botany Group

1. Separations Area Control Plot

Samples taken from three alfalfa plants growing in the R-3 danger zone showed no more activity than control plants.

2. Agricultural Field Station

Soil and vegetation activity densities were the same as during April (2×10^{-5} μc/g) with irrigation water at about 1/100 of this value. One hundred and seventy-seven fruit trees were planted.

3. Use of Algae for Removal of Activity from Pile Effluent Water

Dead E. Coli cells were found to contain 1/3 to 2/3 the radioactivity of living cells growing on the same media. Longer lived constituents, however, tend to concentrate in living cells.

4. Translocation of Radioelements in Plants

The experiment reported last month on the uptake of radioelements by Russian thistle seedlings was repeated under similar conditions except for a growth period of 16 instead of 32 days. Concentration factors (dry weight) varied from about 5 for immature fruits to about 20 for stems.

An experiment is in progress to determine whether Y^{90}, unsupported by parent Sr^{90}, is absorbed and translocated in Russian thistle and tomato plants.

In a tomato plant being watered with concentrated pile effluent about 5% of the longer lived activity was absorbed and translocated. Apparently few of the short lived elements were absorbed.

Columns of river sand were found to remove about 85% of the activity from pile effluent water. Finger particles were about 10 times more adsorbent than the coarser particles.

Physiology Group

1. Setting up, testing, and adjusting histological and photographic equipment in the Biology Laboratory continued.

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173

2. Services to other groups included sheep blood studies, photographs and photomicrographs for Aquatic Biology and Botany, histological preparations for the Experimental Animal Farm and for the Biochemistry Group.

3. It has been observed that coliform bacteria, a natural symbiont in the gastrointestinal tracts of all animals and which are grown with difficulty on artificial media, grow easily and in great numbers following the chronic administration of radio-iodine to the host animal.

Zoology Group

1. Biological Monitoring

Due to the low population of wildlife following the severe winter, no scheduled collections were made during May, which is a vital period in the breeding season. Incidental thyroid samples from two coyote pups and a jackrabbit from the vicinity of White Bluffs show beta activity of 2×10^{-6} μc/g and 2×10^{-4} μc/g, respectively. A coot taken at 200-W also had radioactivity of less than the MPC.

Hatching of Mallard and Pekin duck eggs started in May is now nearly complete Approximately 50 ducklings are to be placed on the river for monitoring purposes.

2. Toxicology of I^{131}

Since lambing began on April 10, approximately 66 ewes have lambed, 30 yielding twins to date. Necropsies performed on 15 lambs gave negative findings from all groups.

Three sheep on daily feeding of 1800 μc are showing evidence of swelling about the anteroventral cervical region. External thyroid counts fell sharply after 13-20 days from initiation of feeding.

In the 240 μc per day group a tendency was noted toward reduced concentration of iodine in the thyroid.

Members of twins at birth have shown differences by a factor of 3 in thyroid iodine concentration. Lambs have shown a general but slight increase in I^{131} uptake as lactation progressed. At birth, thyroids of lambs are usually about equal in activity to the mothers' glands.

GENERAL ACCOUNTING DIVISION

May 1950

GENERAL

In view of increased cash disbursements and to provide more adequate balances in contract bank accounts, an additional million dollars was requested from AEC which increased total advances to $4 500 000. Net cash disbursements in May chargeable to AEC totaled $5 985 914.

Considerable thought and work was devoted to the establishment of additional standard costs which at a later date may be used as bases for liquidating actual costs incurred. Work was begun on a proposed procedure to cover assessments to other divisions based on the use of standardized unit "selling price". Two new unit cost reports were prepared this month and arrangements were completed for the issuance of additional reports in June.

Fiscal Year to date IME percentage rates of all general divisions, where assessments are based on applied labor, were analyzed in an effort to establish revised standard rates for fiscal year 1951. After costs for the months of May and June have been considered, standard rates for FY 1951 are to be established.

Internal Auditors continued work in connection with the accounting for excess materials and the audit of records of the Surplus, Salvage and Scrap Section. In addition, audits were completed and reports submitted covering official toll and leased line charges, and transactions relating to sale of medical equipment to physicians and dentists.

Budget estimates covering Operating and Research and Development Costs for Fiscal Year 1950, 1951, and 1952 were revised during the month and narrative justifications of Operating Equipment budget estimates for FY-1951 and 1952 were reviewed and consolidated and forwarded to AEC.

Uncollectible Medical accounts are continuing to be forwarded to Yakima Adjustment Service for collection. To date, accounts totaling $20 754 have been forwarded but no collections have been remitted from the collection agency.

At the request of AEC, all schools with the exception of John Ball School at North Richland were transferred from plant accounts to AEC this month. Amount of this transfer was $9 155 108.

During the month considerable time was spent in connection with payroll matters, such as arranging mechanics for classification of monthly paid employees as to exempt and non-exempt and reporting results; participation in conferences and studies in connection with rotating overlapping shift schedules; notifying employees holding annuity certificates covering du Pont service of the provisions for naming contingent annuitants and the provisions for annuity payments beginning at optional retirement age; preparing employee and payroll statistical information to be published annually.

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General Accounting Division

Work continued on preparation of a draft of an Appendix C to the Prime Contract covering employee relation policies, other payroll policies, policies in connection with employees' travel and transfers, etc.

Hanford Works cash disbursements and cash receipts, excluding advances from Atomic Energy Commission may be summarized as follows:

	April	May
Disbursements		
Material and Freight - GE	$1 403 334	$1 389 241
Payrolls - GE (Net)	1 768 244	1 758 755
Payments to Subcontractors	1 670 276	2 029 419
Other	1 081 304	1 014 641
Total	$5 923 158	$6 192 056
Receipts		
House Rents	107 005	103 583
Hospital and Clinic	79 415	52 457
Telephone	11 405	12 307
Bus Fares	9 743	11 523
Other	27 196	26 272
Total	234 764	206 142
Net Disbursements	$5 688 394	$5 985 914

General Accounting Division

STATISTICS

Employees and Payroll	Total	Monthly Payroll	Weekly Payroll
Employees on Payroll at beginning of month	7 601	1 729	5 872
Additions and transfers in	175	15	160
Removals and transfers out	(94)	(6)	(88)
Transfers from Weekly to Monthly Payroll	--	14	(14)
Transfers from Monthly to Weekly Payroll	--	(4)	4
Employees on Payroll at end of month	7 682	1 748	5 934

Employees on Payroll at end of month	April	May
Manufacturing	3 218	3 254
Design and Construction	604	619
Community	723	728
Others	3 056	3 081
Total	7 601	7 682

Overtime Payments				
Weekly Paid Employees	$46 187		$38 973	
Monthly Paid Employees	12 376	(1)	15 729	(2)
Total	$58 563		$54 702	

Number of Changes in Salary Rates and Job Classifications	687	671

Gross Amount of Payroll				
Manufacturing	$1 129 410		$1 148 674	
Design and Construction	216 421		214 588	
Community	224 810		226 159	
Others	979 450		967 334	
Total	$2 550 091	(3)	$2 556 755	(4)

Annual Going Rate of Payroll		
Manufacturing	$14 702 614	$14 673 266
Design and Construction	2 649 359	2 661 390
Community	2 827 447	2 847 250
Others	12 204 339	12 212 624
Total	$32 383 759	$32 394 530

Average Salary Rate Per Hour (5)	April			May		
	Weekly	Monthly	Total	Weekly	Monthly	Total
Manufacturing	$2.017	$2.652	$2.127	$2.013	$2.653	$2.125
Design and Construction	1.558	2.699	1.978	1.531	2.704	1.969
Community	1.746	2.157	1.868	1.737	2.153	1.860
Others	1.633	2.496	1.827	1.632	2.494	1.829
Total	$1.810	$2.533	$1.970	$1.805	$2.532	$1.968

(1) Payments cover period from 16th of previous month to 15th of current month except overtime payments to Design and Construction Division employees which cover period March 1, 1950 to March 31 1950

(2) Payments cover period from 16th of previous month to 15th of current month except overtime payments to Design and Construction Division employees which cover period April 1, 1950 to April 30 1950

(3) Includes 4 weeks in case of weekly paid employees

(4) Includes 4 weeks in case of weekly paid employees

(5) Includes shift differential and isolation pay. Excludes overtime premiums commissions, Suggestion Awards, etc.

12 176 10

General Accounting Division

Employee Benefit Plans

Pension Plan

	April	May
Number participating at beginning of month	6 681	6 606
New participants and transfers in	16	26
Removals and transfers out	(91)	(80)
Number participating at end of month	6 606	6 552
% of eligible employees participating	94.7%	94.7%

Employees Retired	May	Total to Date
Number	1	124 (1)
Aggregate Annual Pensions Including Supplemental Payments	$291	$30 665 (2)
Amounts contributed by employees retired	$117	$14 525

(1) Includes 5 employees who died after reaching optional retirement age but before actual retirement. Lump sum settlements of death benefits were paid to beneficiaries in these cases.

(2) Amount before commutation of pensions in those cases of employees who received lump sum settlement

Group Life Insurance*

	April	May
Number participating at beginning of month	5 739	5 688
New participants and transfers in	40	64
Cancellations	(15)	(10)
Removals and transfers out	(76)	(33)
Number participating at end of month	5 688	5 709
% of eligible employees participating	77.1%	77.3%

*Statistics exclude 40 pensioners as of the end of April and 44 pensioners as of the end of May who were granted lump sum pension settlement and who are paying premiums at Hanford Works

Group Life Insurance Claims

	May	Total to Dete
Number of claims	-0-	40
Amount of insurance	-0-	$203 647

Group Disability Insurance (1)

Personal Coverage

	April	May
Number participating at beginning of month	12	7
New participants and transfers in	-0-	-0-
Cancellations	(5)	(2)
Removals and transfers out	-0-	-0-
Number participating at end of month	7	5

Dependent Coverage

Number participating at beginning of month	6	3
Additions and transfers in	-0-	-0-
Cancellations	(3)	-0-
Removals and transfers out	-0-	-0-
Number participating at end of month	3	3

Employee Benefit Plans (continued)

U. S Savings Bonds	Mfg.	D&C	Comm'y	Other	Total
Number participating at beginning of month	1 700	254	334	1 456	3 744
New authorizations	17	9	4	37	67
Voluntary cancellations	(29)	(7)	(9)	(34)	(79)
Removals and transfers out	(1)	(3)	(5)	(33)	(42)
Transfers in	8	-0-	1	1	10
Number participating at month end	1 695	253	325	1 427	3 700
% Participating	52.1%	40.9%	44.6%	46.3%	48.2%
Bonds issued					
Maturity Value	$ 80 100	$ 11 700	$ 14 125	$ 63 900	$ 169 825
Number	1 572	221	284	1 275	3 352
Refunds issued	24	4	4	46	78
Revisions in authorizations	19	10	10	22	61
Annual going rate of deductions					
G.E. Employees Savings and Stock Bonus Plan	$720 792	$102 413	$125 206	$575 883	$1 524 294
General Electric Savings Plan	$214 264	$ 30 719	$ 38 492	$148 768	$ 432 243
Total	$935 056	$133 132	$163 698	$724 651	$1 956 537

Suggestion Awards	May	Total to Date
Number of awards	33	563
Total amount of awards	$ 575	$9 220

Employees Sales Plan

	May		
	Major Appliances	Traffic Appliances	Total
Certificates Issued	41	279	320
Certificates Voided	1	9	10

Salary Checks Deposited	April		May	
	Weekly	Monthly	Weekly	Monthly
Richland Branch - Seattle First National Bank	774	835	774	802
North Richland Area Office - Seattle First National Bank	10	6	11	6
Richland Branch - National Bank of Commerce	132	84	136	93
Out of state banks (Schenectady Staff)	--	3	--	3
Total	916*	928	921**	904

*Week Ended 4-23-50
**Week ended 5-28-50

Special Absence Allowance Requests	April	May
Number submitted to Pension Board	12	2

Absenteeism (Weekly Paid Employees)		
January 1 to May 21	1949	1950
	2.63%	2.53%

1217612

General Accounting Division

Group Disability Insurance (1) (continued)

Claims (2)	April	May
Number of claims paid by insurance company:		
Employee Benefits		
Weekly Sickness and Accident	11	7
Daily Hospital Expense Benefits	3	12
Special Hospital Services	3	12
Surgical Operations Benefits	3	12
Dependent Benefits Paid		
Daily Hospital Expense Benefits	-0-	1
Special Hospital Services	-0-	1
Amount of claims paid by insurance Company:		
Employee Benefits	$1 400	$1 845
Dependent Benefits	-0-	23
Total	$1 400	$1 868

Premiums		
Personal - Employee Portion	$ 12	$ 9
- Company Portion	7	5
- Total	$ 19	$ 14
Dependent- Employee Portion	$ 3	$ 3
- Company Portion	-0-	-0-
- Total	$ 3	$ 3
Grand Total	$ 22	$ 17

(1) Group Disability Insurance Plan was discontinued November 30 1949. April and May statistics cover employees absent with continuous service who are participating in the Group Disability Plan. They were not actively at work on December 1, 1949, and therefore were not eligible to participate in the new Group Health Insurance Plan

(2) Statistics are for claims paid during the month and do not necessarily indicate that claims were incurred during the month

Group Health Insurance (1)

Personal Coverage	April	May
Number participating at beginning of month	6 905	6 927
New participants and transfers in	101	102
Cancellations	(2)	(5)
Removals and transfers out	(77)	(69)
Number participating at end of month	6 927	6 955
% of eligible employees participating	94.4%	94.6%

Dependent Coverage		
Number participating at beginning of month	4 619	4 622
Additions and transfers in	59	47
Cancellations	(14)	(11)
Removals and transfers out	(42)	(23)
Number participating at end of month	4 622	4 635

1217613

General Accounting Division

Group Health Insurance (1) (continued)

Claims (2)	April	May
Number of claims paid by insurance company:		
Employee Benefits		
Weekly Sickness and Accident	73	92
Daily Hospital Expense Benefits	139	116
Special Hospital Services	147	121
Surgical Operations Benefits	95	84
Dependent Benefits Paid		
Daily Hospital Expense Benefits	207	227
Special Hospital Services	252	259
Surgical Operations Benefits	145	151
Amount of claims paid by insurance company:		
Employee Benefits	$18 547	$17 440
Dependent Benefits	21 774	22 998
Total	$40 321	$40 438

Premiums				
Personal - Employee Portion	$14 895		$14 956	
- Company Portion	7 177	(3)	7 206	(3)
- Total	$22 072		$22 162	
Dependent- Employee Portion	$12 942		$12 967	
- Company Portion	10 307	(3)	10 327	(3)
- Total	$23 249		$23 294	
Grand Total	$45 321		$45 456	

(1) Group Health Insurance Plan was made effective December 1, 1949
(2) Statistics cover only claims paid and not all claims incurred during the month
(3) Gross company cost before dividend

Vacation Plan

Number of employees granted permission to defer one week of their 1950 vacation to 1951

	May			Total to Date		
	Weekly	Monthly	Total	Weekly	Monthly	Total
Manufacturing	10	3	13	121*	28	149*
Design and Construction	1	0	1	6	2	8
Community	2	1	3	10	9	19
Technical	2	4	6	24*	17	41*
Health Instrument	0	0	0	3	2	5
Employee & Community Relations	3	4	7	3	4	7
Plant Security & Services	1	4	5	72**	20	92**
Purchasing & Stores	2	0	2	5	5	10
Medical	4	0	4	7	1	8
General Accounting	0	0	0	5	0	5
Total	25	16	41	256	88	344

*Total to Date reduced by one cancellation
**Total to Date reduced by four cancellations

Annuity Certificates (For duPont Service)	May	Total to Date
Number issued	-0-	69

1217614

General Accounting Division

PERSONNEL AND ORGANIZATION - GENERAL ACCOUNTING

Number of Employees	April	May
On Payroll at beginning of month	172	174
Removals and transfers out	(4)	(3)
Additions and transfers in	6	5
Number at end of month	174	176
Net increase (or decrease) during month	2	2
% of terminations and transfers out	2.3%	1.7%
% of absenteeism	2.55%	2.91%

Changes by division in number of Accounting Division employees during May were as follows:

General: No Change

Accounts Payable: No Change

Cost: Increase of one employee

One new hire

General Accounts: Increase of one employee

One transfer from Medical

Plant Accounting: Decrease of one employee

One new hire
One transfer to Design and Construction
One transfer to Project Engineering - Control

Weekly Payroll : No Change

One return from illness absence
One termination

Monthly Payroll: No Change

Special Assignments: No Change

Budgets: Increase of one employee

One transfer from Medical

Internal Audit: No Change

Injuries	April	May
Major	-0-	-0-
Sub-major	-0-	-0-
Minor	-0-	-0-

PERSONNEL AND ORGANIZATION - GENERAL ACCOUNTING (continued)

Number of Accounting Division employees as of May 31, 1950 were as follows:

	Number of Employees		
	Non-Exempt	Exempt	Total
General	3	3	6
Accounts Payable	15	1	16
Cost	11	1	12
General Accounts	13	2	15
Plant Accounting	23	3	26
Weekly Payroll	67	6	73
Monthly Payroll	15	2	17
Special Assignments	1	1	2
Budgets	3	1	4
Internal Audit	-0-	5	5
Total	151	25	176

Non-exempt employees may be summarized as follows:

	Number as of	
Classification	4-30-50	5-31-50
Accounting A	2	1
Accounting B	1	1
Accounting C	2	2
Accounting D	6	6
Business Graduate	8	9
Clerical Working Leader	5	5
Cost Clerk A	1	1
Cost Clerk B	2	2
Cost Clerk C	1	1
Cost Clerk D	2	2
Field Clerk B	1	-0-
Field Clerk C	1	1
General Clerk A	22	23
General Clerk B	39	38
General Clerk C	18	20
General Clerk D	8	8
General Clerk E	1	1
Office Machine Operator B	16	16
Secretary B	1	1
Steno-Typist A	2	2
Steno-Typist B	6	6
Steno-Typist C	2	2
Steno-Typist D	3	3
Total	150	151

Open employment requests as of May 31, 1950 were as follows:

Business Graduate	2
Steno-Typist B	2
Accounting B	1
Total	5

General Accounting Divisions

	April	May
Accounts Payable*		
Balance at Beginning of Month	$ 68 789	$ 51 650
Vouchers Entered	1 080 331	1 011 212
Cash Disbursements	1 098 023 Dr.	992 003 Dr.
Cash Receipts	553	790
Balance at end of month	$ 51 650	$ 71 649
Number of vouchers Entered	1 660	2 114
Number of Checks Issued	1 141	1 323
Number of Freight Bills Paid	246	325
Amount of Freight Bills Paid	3 458	5 583
Number of Purchase Orders Received	1 151	1 063
Value of Purchase Orders Received	168 819	217 973

Cash Disbursements	April	May
Community	$ 42 170	$ 71 607
Design & Construction	1 934 267	2 517 326
General	3 021 564	2 930 630
Manufacturing	925 157	672 493
Total	$5 923 158	$6 192 056
Material and Freight	$1 403 334	$1 389 241
Lump Sum and Unit Price Subcontracts	124 012	196 665
CPFF Subcontracts		
Labor	1 366 372	1 475 360
Others	179 892	357 394
Payrolls (Net)	1 768 244	1 758 755
Payroll Taxes	507 649	342 491
U. S. Savings Bonds	155 297	179 872
General & Administrative Expenses	200 000	200 000
Miscellaneous	218 358	292 278
Total	$5 923 158	$6 192 056

Cash Receipts		
Community	$ 95 238	$ 99 405
Design & Construction	27 075	31 014
General	6 206 483	6 747 707
Manufacturing	12 214	12 410
Total	$6 341 010	$6 890 536

* General Divisions Only.

General Accounting Divisions

		April	May
Detail of Cash Receipts			
(1)	Advances from A.E.C.	$6 106 246	$6 684 394
(2)	Rents	107 005	103 583
(3)	Hospital	79 415	52 477
(4)	Miscellaneous Accounts Receivable	4 713	12 364
(5)	Telephone	11 405	12 287
(6)	Bus Fares	9 743	11 523
(7)	Refunds from Vendors	997	6 031
(8)	Scrap Sales	15 841	4 270
(9)	Employee Sales	1 122	884
(10)	Educational Program	138	68
(11)	All Other	4 385	2 655
		$6 341 010	$6 890 536
Number of Checks Written			
	Community	188	216
	Design & Construction	275	389
	General	1 143	1 323
	Manufacturing	582	654
	Total	2 188	2 582
Bank Balances at End of Month			
	Chemical Bank & Trust Company - New York		
	Contract Account	$ 359 514	$1 429 653
	Seattle First National Bank - Richland		
	Contract Account	2 309 418	1 714 533
	U. S. Savings Bond Account	213 920	97 603
	Salary Account No. 1	20 000	20 000
	Salary Account No. 2	30 000	30 000
	Travel Advance Account	21 777	23 475
	Seattle First National Bank - Seattle		
	Escrow Account	57 496	57 496
	National Bank of Commerce - Richland		
	Contract Account - Manufacturing	174 843	427 507
	Contract Account - Community	57 830	28 393
		$3 244 798	$3 828 660
Travel Advances and Expense Accounts			
	Cash Advance balance at end of month*	$ 16 988	$ 18 173
	Cash Advance balance outstanding over one month*	607	265
	Traveling and Living Expenses:		
	Paid Employees	14 118	19 587
	Billed to Government	12 434	18 750
	Balance in Variation Account at end of month	6 814 Dr.	7 651 Dr.

* General Divisions Only.

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General Accounting Divisions

Hospital Accounting

Accounts Receivable		
Balance at Beginning of Month	$ 181 126	$ 168 047
Invoices Issued	97 667	49 400
Refunds	-0-	885
Cash Receipts	79 415 Cr.	52 477 Cr.
Payroll Deductions	32 429 Cr.	22 343 Cr.
Bad Debts Written Off	269 Cr.	-0-
Balance at End of Month	$ 168 047	$ 143 512
	Total to Date	May
Scrap Sales		
(a) Number of Sales	189	13
(b) Revenue (Not Including Sales Tax)		
Revenue to G. E.	$ 167 928	$ 3 732
Revenue to A.E.C. (Sale of Tract Houses)	32 723	538
Total Revenue	$ 200 651	$ 4 270

1217619

General Accounting Divisions

ACCOUNTS PAYABLE

The greatest number of vouchers booked in any one month since decentralization of the Accounting Divisions in 1948 was recorded in May. The number was 2 114 amounting to $1 011 212.00. This was an increase in volume of 27% over April.

The 1 323 checks issued totaled $992 003 and paid 2 022 vouchers; an average of 1.53 vouchers per check as compared with April's average of 1.49. The average number of vouchers paid per check has been steadily increasing due to the new procedure of paying certain vendors only once each month.

At the month end there was a total of 1 261 vouchers on hand requiring additional supporting data before they could be considered complete. This included vouchers received during the past few days which had not yet been audited, vouchers which did not agree with purchase orders, and vouchers for which receiving reports had not yet been received. Details, compared with April, are as follows:

	May	April
Number on Hand - Paid	275	214
Number on Hand - Unpaid	986	938
Total	1 261	1 152

Of the above 275 paid vouchers, there were only 12 which were more than 60 days old amounting to $4 036. Of these 12, only 2 were more than 90 days old.

Number of freight bills paid is continuing its steady increase. The number paid in May was 325 amounting to $5 583, compared with 246 paid in April, or an increase of 32%.

The Accounts Payable balance in general ledger on May 31 was $71 649.13, most of which (99%) represents items recorded in May which are not due for payment until June. Details by months of this balance are as follows:

January	$ 126.70
February	13.94 Dr.
March	36.07 Dr.
April	322.97
May	71 249.47
Total	$71 649.13

1217620

ACCOUNTS PAYABLE (Continued)

New purchase orders received decreased in May, however the value of orders received increased considerably. Details are as follows, pertaining to General Accounting Division:

	May		April	
	No.	Amount	No.	Amount
New Purchase Orders	1 063	$217 973	1 151	$168.819
Alterations	80		63	

A draft of the new manual of Accounts Payable Procedures was completed in May. The finished manual is expected to be completed by the end of June.

BUDGETARY CONTROL

All budget schedules and summaries which included first six months actual costs and last six months estimated costs for FY 1950, and estimated costs for Fiscal Years 1951 and 1952 as submitted to the Appropriations and Budget Committee, were revised showing nine months actual costs and submitted to the A.E.C.

Narrative justification of the Operating Equipment Budget for Fiscal Years 1951 and 1952 were received from division heads during the forepart of the month. A thorough review was made of the justifications and corrections made where necessary. A final consolidated narrative was then prepared and submitted to A.E.C. as a supplement to the Operating Equipment Budget submitted to them on April 26, 1950. Copies of the final narrative were likewise forwarded to the respective division heads.

Supplemental information requested by A.E.C. concerning certain items included in the Construction Budget for Fiscal Years 1951 and 1952 and statistical information concerning the Hospital and Clinic operations and Public Health Budgets was received and submitted to the A.E.C. during the forepart of the month.

Certain revisions were made in the Construction Budget after it was reviewed by the Appropriations and Budget Committee and submitted to A.E.C.

Revised copies of Research and Development Budgets showing nine months' actual costs for FY 1950, estimated costs for fourth quarter FY 1950, and estimated costs for FY 1951 and FY 1952 were submitted to division managers and division heads of the Technical and Health Instrument Divisions during the month. Original Research and Development budgets of these divisions showed six months actual costs and six months estimated costs for Fiscal Year 1950.

1217621

BUDGETARY CONTROL (Continued)

A preliminary balance sheet budget was prepared and distributed to the Department Comptroller and Division Accountants for their review on May 26, 1950.

The first Research and Development Authorizations, in draft form, were received from the Separations Technology Division on May 19, 1950. Technical Services Division and Pile Technology Division submitted their Research and Development Authorizations during the last week of the month. According to word received from the Health Instrument Divisions theirs will be forthcoming during the latter part of week ending June 11, 1950.

Upon receipt of the authorizations an analysis was made of the amounts shown therein in comparison to the budget amounts for Fiscal Years 1951 and 1952. Differences were revealed and the necessary adjustments were made after reviewing the reflected variances with the respective division heads or their delegates.

COST

General Divisions Operating Reports for the month of April were issued on May 15, 1950. Detailed report of Research and Development costs was issued on May 19, 1950. Summary of Costs Report was issued on May 24, 1950.

Letters were issued to division managers on May 22 detailing the variance in divisional costs between March and April and explaining the points of major variance. Also included was a summary of the liquidation of these costs and a detailed analysis of Research and Development Expense for the Health Instrument and Technical Research and Development Programs.

A deferred charge account (Cost of Furniture Repairs - Prison Industries) was established in order to charge cost monthly for furniture repairs. Monthly charge is based on average of total estimated costs thru June 1951.

At the request of the Health Instrument Division and in conjunction with the Budget Section, all "Unallocated Funds" in the H. I. Research and Development Budget were distributed over existing programs for the months of May and June, and added to budgets now in effect. The sole exception is the Soil Science program which will show budget of $12 000 against which no costs have been accumulated.

Time was spent in an analysis of March assessments to D & C. All charges were tabulated on the basis of number of operational employees whose time was expended on work for Design & Construction Divisions. As a result of this study, assessments to D & C from Employee and Community Relations Division were increased to include the cost of the Union Relations office at North Richland serving Subcontractor personnel.

1217622

COST (Continued)

During the month, unit cost reports for the following operations were prepared and issued:

700 Area Laundry Cost Comparison - Comparison to Commercial Bids
200 W Laundry - Breakdown of Laundry and Monitoring Services
Janitor Service - Cost per Sq. Ft. by area
Patrol - Cost by area
Safety & Fire Protection - Cost by area
Mail and Stationery - Cost by type handled
Stenographic Service - Cost for training and for productive output
Technical Divisions Research & Development - Cost per man-month

In addition, final arrangements were completed for the compilation of necessary information to issue similar reports for the Printing and Office Machine Repair Sections of the Plant Security and Services Divisions.

Much work has been done in analyzing divisional costs in an effort to determine standard IME liquidation rates which are to be used during fiscal year 1951. This study will be continued as May and June cost figures are made available.

Considerable thought and work has been done in the field of unit cost studies, having in mind the establishment of standard unit costs for various services which will be the basis of liquidating the actual costs incurred by the servicing division. It is expected that continuance and enlargement of this program will provide adequate bases for establishing the actual value of standard costs.

GENERAL ACCOUNTS

Cash Control

The General Accounting Division issued 1 323 contract checks during May amounting to $2 930 630, which represents a decrease of $90 934 in expenditures as compared with April.

Advances from A.E.C. were increased from $3 500 000 as of the beginning of the month to $4 500 000 at the months end. These advances may be summarized as follows:

	May	April
Cash in Bank - Contract	$3 600 085	$2 901 606
Cash in Transit	484 915	184 394
Expenditures Disallowed by A.E.C.	5 000	4 000
Cash in Bank-Salary Accounts	50 000	50 000
Travel Advance Funds	60 000	60 000
Advances to Subcontractors	300 000	300 000
Total	$4 500 000	$3 500 000

GENERAL ACCOUNTS (Continued)

Cash Control

Net disbursements to be applied against advances from the Atomic Energy Commission were reduced by $1 000.00 this month increasing Expenditures Disallowed by the Atomic Energy Commission to $5 000.00. This is in connection with payments to straight day workers - GAO Informal Inquiry No. GE-37.

Accounts Receivable - Miscellaneous

The balance of this account increased from $1 630.80 to $12 985.24 due principally to the booking of charges to the U. S. Army for the use of facilities at the North Richland Camp in the amount of $11 190.00.

Six accounts in the Accounts Receivable-Miscellaneous account are over 60 days old. Five of these are claims against carriers and are being followed by Traffic Section of the Purchasing and Stores Divisions. The sixth account was settled in June.

Accounts Receivable - Sale of Safety Shoes to Employees

During the month of May the Purchasing and Stores Division sold 295 pairs of safety shoes through payroll deductions. Weekly Personnel purchased 251 pairs and Monthly Personnel 44 pairs. There was $2 002.59 entered in Accounts Receivable for these sales, of which $925.14 was collected through payroll deduction leaving a balance to be collected of $1 077.45.

Expense Accounts

During May 111 Expense Reports amounting to $12 474.42 were processed by this section. Of this amount, reimbursement from the A.E.C. was received for $12 311.19 and the balance of $163.23 was charged to the Travel and Living Expense Variation Account. The open cash advances at the end of the month were $18 172.90 compared with $16 987.78 the previous month. All open accounts over 30 days old have been followed with respective Division Managers and satisfactory reasons received for accounts appearing to be past due.

Fiscal Year to Date, the Travel and Living Expense Variation Account has been charged for $7 651.00 (All Divisions) for which the A.E.C. was not asked for reimbursement. This account was increased $837.46 this month which represents $207.46 difference between expenses incurred by employees of all Divisions and reimbursement received from A.E.C. and $630.00 entertainment expense.

Second Class Invoices

To date, 196 outgoing Second Class Invoices amounting to $8 334 790.41 and 77 Second Class Invoices from other Divisions amounting to $144 409.61 have been handled. This portion of the work is not closed as books are open for assessments and Plant & Equipment entries until June 14, 1950.

GENERAL ACCOUNTS (Continued)

General Ledger

During May the following new General Ledger Accounts were authorized:

Account No. 36.1 Costs-Cancelled Projects
Account No. 36.2 Costs-Expense Portion of Construction Projects
Account No. 47.14 Accrued Liabilities-Dental Commissions Retained

During May Memorandum Billings from Knolls Atomic Power Laboratory covering General Engineering and Consulting Laboratory Assistance to Hanford in the amount of $230 126.11, Research Laboratory Assistance to Hanford in the amount of $39.50, and KAPL Assistance to Hanford in the amount of $10 349.72 were received. To date transfers amounting to $3 006 838.81 covering twenty-two different KAPL jobs have been received from General Engineering and Consulting Laboratory.

Special Reports

General Ledger Trial Balances were received from all Accounting Divisions on May 16, 1950. Hanford Works Financial Statements were completed on May 17 and Consolidated Financial Statements on May 19, 1950.

Considerable work has been done on a Consolidated Source of Construction Cost Report and it is expected that when this work is completed a regular monthly report will be issued. This report will give a detailed breakdown of the source of Construction costs for each Project in Construction Work in Progress.

Government Cost Transfers and Scrap Sales

The General Ledger Account - Government Cost Transfers has decreased $10 107 342.23 so far in May. The major cause for this decrease is the transfer of the value of schools amounting to $9 155 107.94 to the Atomic Energy Commission. The Atomic Energy Commission transferred $557 398.57 consisting of Bonneville Power charges, fuels and lubricants, telephone charges, miscellaneous equipment, and miscellaneous supplies. Charges transferred to the Atomic Energy Commission amounted to $10 664 740.80 and consisted of transfer of schools, Excess Materials, Assessments, and Special Requests and Back Charges.

INTERNAL AUDITING

Audit of the Excess Material records is being continued at North Richland. Two auditors from this section and two clerks borrowed from other Accounting Sections are presently assigned to this work.

1217625

INTERNAL AUDITING (Continued)

Audit was completed and submitted in May covering review of official telephone toll and leased line charges.

Review of proposed financial transactions, such as sale of equipment, in connection with the transfer of doctors and dentists to private practice was continued in May by one auditor.

One auditor was assigned to investigate a list of major equipment items for which Design and Construction has not received billing.

MEDICAL ACCOUNTING

Accounts Receivable

The decrease in the accounts receivable balance from $168 047 to $143 512 was anticipated and is due to the following:

(1) Sales decreased $48 267 from last months figure. This decreasewas due to the doctors entering private practice and charges for x-ray, laboratory, and out patient treatment being made by the doctors.

(2) Collections have been high; payments on account were only slightly less than last month's figure.

(3) Prompt payment of group insurance claims by Metropolitan.

Out-patient invoices numbered 2 222 and amounted to $8 347 as compared with the April total of 10 268 amounting to $42 919. Of this month's total, cash invoices numbered 1 301 and amounted to $4 518; charge invoices numbered 921 and amounted to $3 829. In-patient revenue increased $6 000 over the prior month. A total of 20 invoices have been issued to Military personnel in the amount of $653.85. The billing procedure is in accordance with that furnished by the Office of the Surgeon at Fort Lewis.

Accounts forwarded to the Yakima Adjustment Service for collection in accordance with the collection agreement number 117 to date and total $2 754.23. Of these accounts, two in the total amount of $4.00 have been paid, and two in the total amount of $236.30 have been recalled in accordance with paragraph 2 of the agreement.

An estimated $12 000 represents accounts over 90 days old in the accounts receivable ledgers. A large percentage of these accounts will be submitted to the Yakima Adjustment Service by months end.

1217626

MEDICAL ACCOUNTING (Continued)

Cost

Since this is the first month the Clinical Doctors have been in private practice, the May cost report will show a decided reduction in both costs and revenue. The Clinic cost report will show some expenses necessary for cleaning up of accounts receivable items and for Medical Records personnel who are loaned to the Doctors until such time as they are able to set up their own records. The Clinical revenue shown for the month will represent billings and adjustments of prior month's cost.

Pharmacy items purchased by the Doctors from the Kadlec Hospital Pharmacy are being billed to the Doctors currently and entered in accounts receivable. Laboratory and x-ray services requested by the Doctors on out-patients are being included in the Doctors' charge to the patient. The Doctors will be billed for these services as soon as approval is obtained from A.E.C. covering the percentage of discount to be allowed.

The Community Divisions have taken over the responsibility for rental of offices to Doctors. Assessments to the Medical Division for Maintenance Costs, etc. will be reduced accordingly.

Clinical Doctors are not to be billed on a pro-rata share of costs for Bacteriological Laboratory, Clinical Laboratory and X-ray work done for out-patients, but will be billed at fee schedule less a percentage in order to allow them a profit on these services. This makes a decided change in the budget in that the costs of these Sections instead of being charged partly to the Clinic, will now be charged to Hospital. Clinical revenue from these Sections will likewise be credited to Hospital. This procedure has been established to permit current billings to the Doctors for these services, rather than waiting until such time as a cost report for each Section has been prepared.

No change is being made in the Industrial Medical budget. Charges are to be made on a pro-rata share of costs based on services rendered.

The A.E.C. has requested that the budgeted Hospital revenue for in-patients be increased by approximately $29 000 for 1951 and $33 400 for 1952. They have also requested that Public Health Costs be reduced by approximately $13 000 in 1951 and $14 000 in 1952. These adjustments are now being made.

PLANT ACCOUNTING

Under date of May 1, 1950 the Atomic Energy Commission, Hanford Operations Office, issued a Property Accounting manual, the purpose of which is to present in compact and standardized form the essential principles and procedures pertaining to the acquisition or disposition of fixed assets. The Manual also sets forth methods for calculating expense and lists and defines the various Plant Accounts.

PLANT ACCOUNTING (Continued)

This Manual was carefully reviewed by Plant Accounting personnel and a letter was written to the Atomic Energy Commission taking exception to specific requirements in the manual. The principle exception is to the requirement that all additions and all retirements be accounted for in Work In Progress ledgers. The manual, however, will be of great assistance to the Plant Accounting Section.

Atomic Energy Commission approval was received in connection with suggested modification in the accounting treatment for poles, transformers and electric motors. The modifications were proposed in a letter to the Commission dated February 28, 1950. The principle change in the requirements was that routine replacements of the above items will not be recorded through the Plant Accounts. Necessary arrangements to place the modified procedures in effect are nearing completion.

The Property Record Unit catalogue is being revised to reflect the above changes and also to incorporate various other changes which have become necessary in the last several months. At the time these revisions are issued detailed instructions as to the exact nature of the changes will be issued.

The first issue of a new Plant Accounting Report entitled "Summary of Expenditures by Divisions for Equipment Excluding Construction Projects Covered by AEC Directives or Informal Approval" was issued May 26, 1950. This report shows expenditures by Divisions covering the acquisition of Plant items. The budget as prepared for the fiscal year 1950 did not provide separately for the purchase of equipment and this report therefore will be of limited use for the balance of this fiscal year. However, each Division's budgets prepared for fiscal years 1951 and 1952 provided for the purchase and acquisition of equipment, and the report will indicate expenditures against the funds provided.

A review of the Construction Work in Progress Account of all divisions was made and comments furnished the division accountants.

A memorandum on depreciation accounting was prepared and circulated to Division Accountants and to members of the Plant Accounting Group. Copies were also forwarded to the Atomic Energy Commission for their information and distribution.

At present Plant Accounting personnel are conducting an inventory of certain types of office furniture in the areas. Results obtained in this inventory will be reconciled with the record and adjustments will be made.

A reconciliation of the subsidiary Plant Account - Unclassified Property in Service, was prepared and letters written to each division accountant informing him what steps were needed to enable Plant Accounting to classify these costs and include them in the regular Plant Accounts.

PLANT ACCOUNTING (Continued)

The review Work Orders of a capital nature or of a possible capital nature is continuing. Work of developing new Work Order procedures is still being prosecuted by other divisions, principally Manufacturing Divisions, and most of the recommendations of the Plant Accounting Group are being included in the drafts of the new procedures.

In response to a letter received from the Atomic Energy Commission requesting transfer of school buildings to their accounts, all entries were completed by May 30. This included all school buildings in Richland proper, but excluded the John Ball School at North Richland. Equipment within the schools will be transferred to the Excess Division by means of a Declaration of Excess signed by the Community Division.

A letter was prepared and forwarded to the Atomic Energy Commission covering the discontinuance of Memorandum Construction Records by the Plant Accounting Group in view of financial accounting to be established by the Design and Construction Divisions.

General Accounting Divisions

PAYROLLS

During the month of May there were 94 removals from Payroll, of which 10 were removals due to lack of work, and there were 175 additions to the Payroll, resulting in a net increase of 81 employees on the Payroll. There were no transfers to or from other units of the Company during the month.

* * * * * * * *

Approximately 78,950 items were addressographed in Weekly Payroll Division during May for other divisions at Hanford Works in addition to regular routine addressograph work.

During the past six years, service work on addressograph equipment has been performed by the Addressograph Section. Due to the volume of work performed in the Addressograph Section, the age of our equipment, and the fact that the equipment has never been serviced by the Addressograph Company, and as a precaution against a major breakdown, the Addressograph Company was requested to send a representative to examine our equipment and submit his recommendations.

The Addressograph Company has submitted recommendations for servicing, repairing, and replacement of equipment. Study and analysis of these recommendations is currently being made and a decision will be reached during June as to the action to be taken.

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Under the Group Health Insurance Plan, 520 claims for benefits by employees were forwarded to Metropolitan Life Insurance Company during May, and 853 checks were received from the Insurance Company covering 589 claims submitted by employees for benefits under the Plan.

* * * * * * * *

Under the General Electric Employee Savings and Stock Bonus Plan, 191 participating employees withdrew from the Plan 730 U. S. Savings Bonds having a maturity value of $35,330. U. S. Savings Bonds and Custody Receipts covering purchases by employee through Payroll Deductions in April were delivered to employees on May 26, 1950. There were 758 U. S. Savings Bonds and 3,114 Custody Receipts distributed to employees. As of May 31, 1950, percentage of Hanford Works employees participating in the G. E. Employees Savings and Stock Bonus Plan and G. E. Savings Plan was as follows:

	Mfg.	D & C	Community	Other	Total
G. E. Employees Savings and Stock Bonus Plan	47.6%	37.2%	40.0%	41.7%	43.7%
G. E. Savings Plan	12.2%	7.9%	9.3%	9.0%	10.3%
Both Plans	52.1%	40.9%	44.6%	46.3%	48.2%

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1217630

General Accounting Divisions

PAYROLLS (CONT.)

Division Managers granted permission in May to 25 Weekly Paid employees and 16 Monthly Paid employees to defer one week of their 1950 vacations until 1951. To date, permission to defer one week of 1950 vacations until 1951 has been granted to 256 Weekly Paid employees and 88 Monthly Paid employees.

* * * * * * * *

There were 63 time cards received late in Weekly Payroll during the month of May as follows:

Week Ending	Number
5-7-50	18
5-14-50	35
5-21-50	5
5-28-50	5
Total	63

* * * * * * * *

During May, we received 51 new authorization cards for Check-off of Union Dues, for members of seven Unions affiliated with Hanford Atomic Metal Trades Council, as follows:

Unions	Number
International Union of Operating Engineers, Stationery Local #280	15
International Chemical Workers Union, Local #369	17
International Brotherhood of Electrical Workers, Local #112	1
United Association of Journeymen and Apprentices of the Plumbing and Pipefitting Industry of the United States and Canada, Local #598	9
Instrument Craftsmen's Guild	1
International Brotherhood of Teamsters, Warehousemen, Garage Employees and Helpers, Local #839	6
Building Service Employees Union #201	2
Total	51

H.A.M.T.C. presented revised authorization cards for 36 employee members of the International Union of Operating Engineers who have transferred from Local 370-C to Stationery Local 280 of this Union. Authorizations for Check-off of Union Dues

 1217631

PAYROLLS (CONT.)

in effect at May 31, 1950 cover 405 employee members of eleven Unions. Two authorizations were cancelled in May as a result of one death and one termination of employment.

* * * * * * * *

Several meetings of representatives of Payroll Divisions and Employee and Community Relations Divisions were held to discuss formulation of a plan to give recognition to Hanford Works employees who maintain perfect attendance records during the current year or during previous years of employment at Hanford.

Administration of the proposed plan will require that Payroll Divisions furnish information with respect to employee attendance records for periods for which recognition is to be given.

* * * * * * * *

One retroactive payment of Isolation Pay and Shift Differential, in accordance with H.A.M.T.C. Agreement, was made to an employee who was not on the Payroll at May 31, 1949, and returned to work with continuous service on April 26, 1950. The payment amounted to $23.92. The total amount of retroactive salary adjustments as of May 31, 1950 under the Union Agreement was $236,671.41, paid to 5,110 employees.

* * * * * * * *

In January of 1950, the Employees Services group of the Employee and Community Relations Division directed our attention to certain employees of the Medical Division who complained that they were not receiving payment of time and one-half for hours in excess of eight in a 24 hour period resulting from short shift changes. Investigation revealed that Supervision had not marked time cards properly to indicate to Payroll that there was a short shift change, which would result in premium payments.

Accordingly, time cards of Medical Division employees were reviewed for the period September 1, 1946 to January 22, 1950. The Medical Division supplied information in those cases of shift changes where the employee did not use time clocks.

As a result of this review, it was determined that salary adjustments were due for 128 employees. Payment of these adjustments was made during the month of May, as follows:

65 Employees actively at work	$1,533.20
63 Employees removed from Payroll	544.15
Total	$2,077.35

Time cards of Medical Division employees have been marked for short shift changes since January 23, 1950, and premium payments have been made on a current basis since that date.

* * * * * * * *

PAYROLLS (CONT.)

The Plan for employee purchases of Safety Shoes through Payroll Deductions was made effective May 1, 1950. Deductions covering purchases of Safety Shoes were made for the first time on the payroll for the week ended May 14, 1950. There were 203 authorizations for Payroll Deductions under this Plan received in the Payroll Divisions during the month of May.

* * * * * * * *

In connection with administration of the Annuity Plan for former Du Pont employees, letters were drafted explaining the privileges of Optional Retirement and Continuation of Retirement Annuity to a Contingent Annuitant. Drafts of the proposed letters were submitted to Connecticut General Life Insurance Company for review and approval. After making changes as suggested by Connecticut General, letters explaining the two options under the Annuity Plan were mailed to 19 participants who have received annuity certificates. Letters to 50 other employees who have received annuity certificates will be issued before the end of June, 1950.

In the future, a similar letter of explanation will be forwarded to participants at the time of transmittal of the annuity certificate.

* * * * * * * *

Draft of proposed Appendix C to the Prime Contract which was started in February of this year, was reviewed and revised to incorporate recent changes in plans, policies and practices. It is expected that the first draft of Appendix C will be completed by June 30, 1950.

* * * * * * * *

Study and analysis is currently being made for the purpose of issuing a Hanford Works report to include charts, graphs, and statistical information covering employment trends, participation in Employee Benefit Plans, payroll statistics including statistics such as marital status, dependency status, segregation of employees by sex, absenteeism, employees' age distribution, and similar statistics. Approximately 180 man hours per month are expended on this work.

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In connection with installation of salary determination plans, position descriptions were prepared for all Exempt employees of the Payroll Divisions. These descriptions are currently being reviewed and will be in final form on or before June 16.

* * * *

During the month of May, charts were prepared indicating salary distribution as of April 30, of Technical Graduates on the Monthly Payroll excluding female employees, physicians and dentists.

* * * *

All of the divisions were furnished lists of employees in connection with installation of salary determination plans and classification of Monthly Paid employees under the Fair Labor Standards Act and Walsh Healey Act.

1217633

PLANT SECURITY AND SERVICES DIVISIONS

MONTHLY REPORT - MAY 1950

SUMMARY

There were no major injuries during May leaving the number for the year to date at two. The Major Injury Frequency Rate for the year to date is 0.32.

There was one minor fire caused by a spark from a welder's torch resulting in a $20.00 loss.

Pickup and delivery schedules were revised this month for the 200-West Laundry which reduced delivery service to the Process Buildings from a two-shift schedule to a one-shift schedule. Accordingly, the number of personnel was reduced by two employees.

Office furniture stocks have now been moved from the Pasco warehouse to Warehouse No. 63 in North Richland.

The formation of the Office Methods Division as a separate division of Office Services was accomplished this month. All previous work of this nature had been carried out under the Records Control Division up to the establishment of the new group. One Methods Engineer and one forms designer were added to the staff of the new division.

A new identification numbering system for forms has been put into effect. This revised system is designed to indicate the function of the form, method of reproduction and location of supply. The system being replaced was established in accordance with the divisions that existed in 1946. Organization changes that have since occurred have caused the old system to become obsolete.

Beginning May 10, a new Security Patrol manual was issued to each member of the Security Patrol Division covering regulations and general instructions for the use and guidance of each member of the Division.

On May 17, Procedure Memorandum No. 26, Revision No. 3, was issued to govern lost or forgotten photo identification passes. All future replacement passes will contain a large red letter "R" on the face of the pass, and all area badges will be marked in the same manner. Comparison will be made between the badge and pass to remove the possibility of unauthorized personnel utilizing the original pass.

Effective May 31, the 108-B Area was designated as a separate exclusion area from the 105-B Area. Approval to enter this area must be obtained from the Pile Technology Division.

1217634

PLANT SECURITY AND SERVICES DIVISIONS

MONTHLY REPORT - MAY 1950

ORGANIZATION AND PERSONNEL:

Number of employees on payroll:

	Beginning of Month	End of Month	Increase	Decrease
Staff	3	3		
Patrol and Security	582	585	3 (a)	
Safety & Fire Protection	145	145 (b)		
Office Services (General Services, Clerical Services, Records Control and Office Methods)	222	228	6 (c)	
TOTALS	952	961	9	

NET INCREASE: 9

(a) - Patrol and Security

5 - New Hires (Patrol)
1 - Returned from Leave of Absence (Patrol)
2 - Removed from Roll due to Leave of Absence (Patrol)
1 - Discharged (Patrol)

(b) - Safety and Fire Protection

1 - Transferred from Community Division (Safety)
1 - Termination (Fire)

(c) - General Services

4 - New Hires
1 - Removed from Roll due to Reduction of Force
1 - Transferred to Clerical Services

Clerical Services

10 - New Hires
1 - Returned from Leave of Absence
1 - Transferred from General Services
8 - Transferred to other Divisions
1 - Termination
1 - Removed from Roll due to Leave of Absence

Records Control

1 - Transferred from Medical Division
2 - Transferred to Office Methods Section

Office Methods

2 - Transferred from Records Control Section
1 - New Hire

1217635

Plant Security and Services Divisions

SAFETY AND FIRE PROTECTION

Injury Statistics

Days since last Major Injury	43
Accumulated Exposure Hours since last Major Injury	1,781,238
Major Injury Frequency Rate (start-up to date)	0.85

	April	May	Year to Date
Major Injuries	1	0	2
Sub-Major Injuries	0	1	12
Minor Injuries	314	302	1,564
Exposure Hours	1,246,620	1,282,590	6,188,207
Major Injury Frequency Rate	0.80	0.0	0.32
Major Injury Severity Rate	0.002	0.0	0.002
Minor Injury Frequency Rate	2.52	2.35	2.53

Sub-Major Injury No. 177

On May 13, at approximately 10:30 A.M., an employee of the Electrical Division working in the 200-East Area received a chip fracture to the extreme tip of the nasal bone. The injured and a fellow employee had been assigned the job of removing a circuit breaker and placing it on a test rack. After the breaker had been placed on the test rack, the racking crank was put on the shaft to raise the breaker. While in a crouched position, the injured started to crank the rack hurriedly, and in doing so, the crank slipped off the shaft and struck him on the nose causing the injury.

Safety Activities

A traffic survey was conducted at the North Richland traffic barricade. A report and recommendations were submitted. The survey included normal plant traffic and U.S. Army activ ities.

Tests were conducted on a new metal cleaning solvent, "Du Pont No. 49", and reported as favorable substitute for carbon tetrachloride. Further studies are being made.

Research is continued on new process "G.E. Cacoon". Highly flammable and toxic. Standard procedures are being processed.

Standards were issued covering purchase, use and care of wood and metal ladders.

Standards were established for dismantling deareator equipment in the 100 Areas; major operation being performed by outside contractors.

Educational programs were conducted incorporating use and need of special types of safety equipment such as carbon monoxide detectors, Chemox masks, pressure testing devices and dust and fume analysis.

Plan was outlined for plantwide "Safety Sense-Us" program. Approval of Nucleonics Safety Council was secured.

Plant Security and Services Divisions

Safety Activities (Contin.)

Complete Fire Surveys were made on Buildings 1720-B, 1704-B, 1717-B, 2701-E, 2720-E, 274-E, 275-E, 3701 and 3705. Established fire procedures for P-11. Approved new installations of equipment in this Area.

Standards were established for storage and use of ditto fluid.

Designs of semi-works were approved, including recommendations for sprinkler coverage in 200-W new Redox Building.

Industrial Fire Investigation

Division	Area	No. of Fires	Cause	Loss
Power	100-D	1	*Welding	$ 20.00

*Fire was started by spark from construction worker's welding torch.

OFFICE SERVICES DIVISION

General Services

Laundering volumes were as follows:

Plant Laundry (Building 2723)

	April	May
Coveralls - Pieces	28;019	27;451
Towels - Pieces	7;480	8;009
Miscellaneous - Pieces	67,559	55,171
Total Pieces	103,058	90,631
Total Dry Weight - Lbs.	145,087	141,385

Richland Laundry (Building 723)

Flatwork - Pieces	57;839	57;376
Rough Dry - Pieces	30;056	33;365
Finished - Pieces	3,079	2,689
Total Pieces	90,974	93,430
Total Dry Weight - Lbs.	59,133	60,730

Monitoring Section - (Building 2723-W)

Poppy Check - Pieces	98;041	100;632
Scaler Check - Pieces	108,849	135,540
Total Pieces	206,890	236,172

1217637

Plant Security and Services

General Services (Contin.)

Beginning with this report a more accurate system of arriving at actual weight volume handled by the plant laundries has been placed in effect which will tend to lower the weight reported for the 200-West Laundry and raise the weight of the 700 Laundry. Formerly an averaged weight per piece and an estimated count on necessary rewashes was used. The new system will provide an actual weight on each item handled as well as a definite count on rewashes. The justification for this more detailed reporting was lacking until more detailed cost figures became available. This new method now appears advisable in order to provide closer analysis of volume vs cost and to allow possible improved control over work efficiency.

Pickup and delivery schedules were revised this month for the 200-West Laundry which reduced delivery service to the Process Buildings from a two-shift schedule to a one-shift schedule. Accordingly, the number of personnel was reduced by two employees.

Clerical Services

Mail Room

The Mail Room employees worked one overtime Saturday to mail and distribute the new telephone books.

	April	May
Pieces of Internal Mail Handled	486,834	502,645
Pieces of Postal Mail Handled	60,553	68,309
Pieces of Registered Mail handled	1,283	1,190
Pieces of Insured Mail handled	464	508
Pieces of Special Delivery Mail handled	282	270
Total Mail handled	549,416	572,922
Total Amount of Postage Used	$2,160.15	$1,666.64
Teletypes Sent	1,824	1,584
Teletypes Received	1,321	1,554
Total Teletypes Handled	3,145	3,138
Total number of Stores Orders filled and delivered	1,212	1,480

Office Equipment Section

Office furniture stocks have now been moved from the Pasco warehouse to Warehouse No. 63 in North Richland.

1217638

Plant Security and Services Divisions

Office Equipment (Contin.)

	April	May
Office Machines repaired in shop	240	265
Office Machine service calls	347	306
Total Machines Serviced	587	571

Printing Section

	April	May
Multilith Orders received	242	281
Multilith Orders completed	218	313
Multilith Orders on hand at month end	62	30
Mimeograph Orders received	504	789
Mimeograph Orders completed	504	789
Mimeograph Orders on hand at month end	0	0
Ditto Orders received	258	386
Ditto Orders completed	258	381
Ditto Orders on hand at month end	0	5

Stenographic Services Section

	April		May	
	Hours	Quantity	Hours	Quantity
Dictation and Transcription	8:45	14	3:35	4
Machine Transcription	104:55	274	109:05	215
Letters	135:56	414	78:35	109
Manual and Procedures	170:05	308	134:50	189
Duplicating--Stencils, Ditto	313:50	555	448:15	705
Special	689:57	2,844	439:20	810
Training	95:12		184:06	
Unassigned Time During Month	42:48		55:30	
Meeting Time	50:00		20:48	
Total Hours	1,611:28		1,474:04	
Employees loaned to Other Divisions	519:30		775:48	
Total Hours Available	1,423:48		2,249:52	

The 700 Area Budget was revised and re-submitted during the month due to the necessity of adding several projects.

1217639

Plant Security and Services Divisions

Records Control Division

Quantity of records received, processed and stored:

Administrative Division	1	Standard	Records	Carton
Community Divisions	43	Standard	Records	Cartons
Design and Construction Divisions	42	"	"	"
General Accounting Division	88	"	"	"
Health Instrument Division	141	"	"	"
Manufacturing Accounting Division	60	"	"	"
Medical Division	1	Standard	Records	Carton
Power Division	6	Standard	Records	Cartons
Project Engineering Division	5	"	"	"
Stores Division	7	"	"	"
Transportation Division	8	"	"	"
Total	402	Standard	Records	Cartons

Persons furnished records services:	281
Standard Records Cartons issued:	521

The records inventory review is complete with exception of Health Instrument, Design and Construction, and Technical Divisions. The time required on these divisions in proportion to volume of records will be greater than on other divisions due to the nature of the records.

Shipping date on sixty sections of shelving on order from Prison Industries has been moved up to June 1, 1950 instead of July 1, 1950.

Records received this month, 402 cartons, is equivalent to the contents of 67 four-drawer file cabinets. This figure is higher than usual with the exception of January, 1950 when 460 cartons were received and processed.

An Atkinson and Jones Construction Company employee spent a week in the Records Center being trained in our Records Control procedure for use in handling Atkinson and Jones records in their records building in North Richland.

Rough drafts on all material to be included in the new stenographic manual are being reviewed by the Special Programs Section of Employee and Community Relations for recommendations on style, continuity, presentation, etc.. The cover design is completed, and a requisition issued to Purchasing to obtain bids with samples of cover stock, color and type for final selection of the binder for the manual. An issuance date for the manual will be soon after delivery of the binders which is 45 to 60 days from receipt of order at the factory.

Office Methods Section

The formation of the Office Methods Division as a separate division of Office Services was accomplished this month. All previous work of this nature had been carried out under the Records Control Division up to the establishment of the new group. One Methods Engineer and one formes designer were added to the staff of the new division.

Office Methods (Contin.)

A complete study of the project Printing Plant has been started and will be completed within the next ten days, dependent upon certain comparative information requested from outside sources. The purpose of this study is to establish methods and controls that will result in a more efficient flow of work, set up a standard and adequate method of pricing, determine that work which can most profitably be done on the project and that which should be done by an outside printer; and establish a method of reporting that will accurately show a comparison of project printing costs as against the cost of similar printing obtainable from an outside vendor.

An increase of personnel in the Employment Division resulted in an inefficient allocation of office space. It was recommended that a hallway be straightened, thereby adding 36 square feet to three offices and removing an offset in the lobby which consisted of 62 square feet, a net gain of 46 square feet of usable space. This move also improved traffic and safety conditions by elimination of four blind corners. In conjunction with this move, a different type reception counter was recommended to consist of standard counter section files. This will permit the reception clerk to maintain application files which are now kept in a nearby office and eliminate the need for one file clerk.

A new identification numbering system for forms has been put into effect. This revised system is designed to indicate the function of the form, method of reproduction and location of supply. The system being replaced was established in accordance with the divisions that existed in 1946. Organization changes that have since occurred has caused the old system to become obsolete.

Thirty-seven new or revised forms were approved for adoption during the month. These forms originated from the following divisions: Medical, Health Instrument, Design and Construction, Manufacturing, Community and Employment. One series of eighteen forms is being reduced to four forms.

PATROL AND SECURITY

General

On May 2, the temporary post designated as 'Escort' in the MJ-1 Area was discontinued.

The manning of the 305 Badge House, 300 Area, on the No. 3 shift was discontinued on May 8.

Beginning May 10, a new Security Patrol manual was issued to each member of the Security Patrol Division covering regulations and general instructions for the use and guidance of each member of the Security Patrol Division.

A temporary Security Patrol post was established May 11 in the 200-East Area and will be known as Vehicle Gate No. 811. This post will be manned on the No. 2 shift only. The functions of this post will be to permit the removal of construction buildings from the area.

Plant Security and Services Divisions

Patrol and Security (Contin.)

Effective May 12, Operations Order No. 208, Revision No. 4, was issued to govern visitors entering or leaving the areas. A visitor will be required to sign the register at the time he enters the Main Badge House and/or the Exclusion Area Badge House.

A new Travel Pass, Form No. 4.302, revision, was placed into use on May 16.

On May 17, Procedure Memorandum No. 26, Revision No. 3, was issued to govern lost or forgotten photo identification passes. All future replacement passes will contain a large red letter "R" on the face of the pass, and all area badges will be marked in the same manner. Comparison will be made between the badge and pass to remove the possibility of unauthorized personnel utilizing the original pass.

At 5:30 P.M., May 19, the post known as the 105-DR Tunnel was discontinued in the 105-DR Area.

Beginning May 20, a new post was established in the 100-DR Area and will be known as the 184 Building Escort.

A new post was added to the 100-B Area Security Patrol at 8:00 A.M., May 31, and will be known as Roving Patrol 108-B Area. At shift change time the man on this assignment will check badges at the 108-B Badge House.

Effective May 31, the 108-B Area was designated as a separate exclusion area from the 105-B Area. Approval to enter this area must be obtained from the Pile Technology Division.

Representatives of the Security Field Inspection Division conducted 85 investigations during the month in matters pertaining to security violations, such as leaving "restricted data" unattended and unusual incidents.

"Q" orientation talks were given during the month by representatives of the Security Division to 89 new employees.

Patrol

The 200 Areas handled 87 process escorts between the areas.

Requests handled totaled 352, consisting mainly of opening doors, buildings, gates and issuing keys for employees of other divisions.

A total of 78 Unusual Incident Reports were received, consisting mainly of Security Violations, lost badges, pencils, contraband picked up at barricades, traffic accidents and fires.

A total of 626 pat searches were made of employees leaving the operating areas during the month.

Classified escorts totaling 236 were handled during the month.

A total of 21 traffic escorts were handled during the month.

Patrol made 11 ambulance runs for the Medical Division during the month.

Plant Security and Services Divisions

Patrol (Contin.)

Patrol assisted in one fire call during the month.

Practice evacuations were held as follows:

100-B Area	5-31-50	10:08 A.M.
100-D Area	5-18-50	10:35 A.M.
100-F Area	5-19-50	1:13 P.M.

Arrest Summary

	April	May
Warning Tickets issued	3	3
Verbal warning given	1	0
Citation tickets issued (traffic only)	0	0

Accident Summary

Total accidents	4	6
Government permits suspended	1	0

Training

Training courses held during the month were as follows:

	Hours
Pistol	1/2
Operations Class No. 1	3 1/4
Operations Class No. 2	3 1/4
Safety	1/4
Health	1/4
Security	1/2

Security

G.E. Security Bulletin No. 53 entitled "Contra-Sabotage" was issued on May 11.

There were 203 security meetings held and attended by 2,643 employees during the month.

Employee Clearance

Class "Q" clearances received on old employees this month	0
Class "Q" clearances received on old employees to date	4,460
Class "Q" clearances received on new employees this month	91
Class "Q" clearances received on new employees to date	6,507
Class "Q" clearances received on both old and new employees since February 17, 1947	10,967
"Formal P" clearances awaiting change to "Q"	55
Authorization clearances issued this month	65

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Plant Security and Services Divisions

Security (Contin.)

Statistical Summary of Outstanding Area Badges

	April				May				
	A	B	C	Total		A	B	C	Total
100-B	1778	606	447	2831	100-B	1350	577	444	2871
100-D	854	934	470	2258	100-D	861	938	473	2272
100-F	681	1124	398	2203	100-F	682	1152	398	2232
100-H	1702	803	508	3013	100-H	1714	890	509	3113
200-E	908	1830	335	3073*	200-E	912	1847	336	3095*
200-W	1376	1764	334	3474	200-W	1382	1786	328	3496
200-N	25	840	126	991	200-N	25	844	125	994
300	1293	1701	220	3214	300	1297	1722	214	3233
100-DR	2072	6		2078	100-DR	2212	6		2218
P-11	48	24	4	76	P-11	51	23	4	78

*Includes 36 "A" badges at Riverland Yards

*Includes 37 "A" badges at Riverland Yards

Visitor or Temporary Badges

Area	April	May
100-B	607	643
100-D	1093	1121
100-F	980	1024
100-H	533	578
200-E	832	961
200-W	1315	1410
200-N	733	741
300	1693	1772
100-DR	10	39
P-11	5	13
Total	7801	8302

Special Clearance Section

Following is a statistical summary of clearance status of vendor and consultant vendor companies:

Total companies forwarded to AEC this month:	15	Personnel:	32
		Consultant Personnel:	1
Total companies forwarded to AEC last month:	16	Personnel:	47
		Consultant Personnel:	1
Total companies forwarded to AEC to date:	261	Personnel:	2,527

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Plant Security and Services Divisions

Total companies cleared for "Restricted DAta" this month:	6	Personnel:	15
		Consultants:	2
Companies reinstated:	2	Personnel:	3
Total companies cleared for "Restricted Data" last month:	9	Personnel:	25
		Consultants:	1
Companies reinstated:	20	Personnel:	64

New Companies forwarded to the Atomic Energy Commission this month:

Ray Colley
Carryall and Bulldozer Work
1724 Olive Street
Pasco, Washington

Holaday - Edworthy
2014 S. 1st.
Yakima, Washington

Kaiser Engineers Division
Kaiser Industries, Incorporated
1924 Broadway
Oakland 12, California

Whiting Corporation
Harvey, Illinois

Williams Glass Company
312 W. Yakima
Yakima, Washington

Paul R. Henley
P. O. Box 201
Sunnyside, Washington

Hydropress, Incorporated
570 Lexington Avenue
New York, New York

Valley Roofing
P. O. Box 1514
Yakima, Washington

Welsbach Corporation
1550 Walnut and 2409 Westmoreland
Philadelphia, Pennsylvania

Number and type of clearance granted by Atomic Energy Commission this month to vendors and consultants:

Formal "Q"	16	
Emergency "Q"	2	(One for Fluor Caporation Employee and one for G.E. Employee)
Formal "P"	38	
"Q" Reinstatement	3	

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HANFORD WORKS
General Electric Company
Richland, Washington

REPORT OF VISITORS FOR PERIOD ENDING MAY 31, 1950

Name - Organization	Purpose of Visit	Person Contacted	Arrival	Departure	Restricted Data Class	Restricted Data Unclass	Areas
ACCOUNTABILITY DIVISION							
I. Visits to other Installations							
V. D. Donihee to: Atomic Energy Commission New York Operations Office New York, New York	Conference with SF Accountability Branch and discussion with Special Chemicals Division	S. R. Gustavson	5-19-50	5-22-50	X		
V. D. Donihee to: Oak Ridge National Lab. Oak Ridge, Tennessee	Conference with SF Accountability Branch, AEC	W. C. Youngs, Jr.	5-25-50	5-26-50	X		
W. A. Lewis to: Atomic Energy Commission St. Louis Area Office St. Louis, Missouri	Preparation of shipping data; processing and measurement of oxides	J. J. Koenig	5-16-50	5-16-50	X		
W. A. Lewis to: Mallinckrodt Chemical Wks. St. Louis, Missouri	Observation of processing and measurement methods on HW oxides.	J. Graham	5-16-50	5-18-50	X		
C. J. Shortess, Jr. to: Los Alamos Scientific Lab. Los Alamos, New Mexico	Conference with SF Accountability Section	G. R. Champion	5-22-50	5-23-50	X		
C. J. Shortess, Jr. to: Oak Ridge National Lab. Oak Ridge, Tennessee	Conference with SF Accountability Branch, AEC	W. C. Young, Jr.	5-25-50	5-26-50	X		

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Name - Organization	Purpose of Visit	Person Contacted	Arrival	Departure	Restricted Data Class	Restricted Data Unclass	Areas
MEDICAL DIVISION							
I. Visitors to this Works							
S. T. Cantril Tumor Institute Swedish Hospital Seattle, Washington	Medical consultation	W. D. Norwood, M.D. P. A. Fuqua	5-24-50	5-24-50	X		100-B XXX
II. Visits to other Installations							
P. A. Fuqua to: K-25 and Y-12 Oak Ridge National Laboratory Oak Ridge, Tennessee	Attend meeting of laboratory and medical directors and meeting of industrial physicians	A. Holland	5-7-50	5-10-50	X		
DESIGN AND CONSTRUCTION DIVISIONS							
I. Visitors to this Works							
C. G. Munger Amercoat Corporation Seattle, Washington	Redox construction	W. B. Webster	5-9-50	5-12-50	X		200-W 222-S
W. F. Hodges General Electric Company Schenectady, New York	Design consultation	D. E. Irons	5-9-50	5-12-50	X		
V. D. Nixon Knolls Atomic Power Laboratory Schenectady, New York	Consultation regarding construction	L. O. Hasselblad A. P. Nicholson	5-9-50	5-12-50	X		
R. L. Tower C. J. Yost Company Seattle, Washington	Instrument inspection	C. O. Clemetson	5-19-50	5-19-50	X		300 321
C. A. Hansen, Jr. Knolls Atomic Power Laboratory Schenectady, New York	Design consultation	G. H. Syrovy E. Hilgeman	5-25-50	5-25-50	X		100-H 105

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Name - Organization	Purpose of Visit	Person Contacted	Arrival	Departure	Restricted Data Class	Restricted Data Unclass	Areas
II. Visits to other Installations							
W. J. Dowis to: Gen. Eng. & Con. Lab. Schenectady, New York	Consultation on electric furnace applications and stabilized voltage supplies	D. H. Marquis O. S. Haskell K. N. Mathis T. R. Rhead	5-24-50	5-27-50	X		
W. J. Dowis to: Knolls Atomic Power Lab. Schenectady, New York	Consultation on 432 Project regarding installation of electrical equipment	D. H. Marquis K. M. Mathis	5-24-50	5-31-50	X		
W. J. Dowis to: Kellex Corporation New York, New York	Consultation on electrical problems	G. White, Jr.	5-29-50	6-2-50	X		
J. M. Frame to: Kellex Corporation New York, New York	Engineering consultation	J. S. Atwood	5-3-50	5-5-50	X		
P. M. Murphy to: Kellex Corporation New York, New York	Engineering consultation and review of design work on project C-362	J. S. Atwood	5-3-50	5-5-50	X		
T. W. Jeffs to: Gen. Eng. & Con. Lab. Schenectady, New York	Consultation regarding electrical equipment installation on 432 project	D. H. Marquis R. S. Noblett B. R. Prentice	5-22-50	6-2-50	X		
J. B. Modlin to: Y-12 and X-10 Oak Ridge National Laboratory Oak Ridge, Tennessee	Consultation on "J" slug manufacture	N. H. MacKay J. H. Frye	5-22-50	5-25-50	X		
R. J. Schior to: Y-12 and X-10 Oak Ridge National Laboratory Oak Ridge, Tennessee	Consultation on "J" slug manufacture	N. H. MacKay J. H. Frye	5-22-50	5-25-50	X		

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Name - Organization	Purpose of Visit	Person Contacted	Arrival	Departure	Restricted Data Class	Restricted Data Unclass	Areas
G. S. Cochrane to: Gen. Eng. & Con. Lab. Schenectady, New York	Engineering consultation	D. H. Marquis B. R. Prentice R. S. Neblett	4-29-50	5-26-50	X		
R. F. Klein to: Huntington Rubber Mills Seattle, Washington	Witness tests on charging machine seal	E. F. Vezzani	5-25-50	5-30-50		X	
I. Visitors this Works (cont'd)							
D. S. Cochrane General Electric Company Schenectady, New York	Discuss instrumentation	P. E. Lowe	5-25-50	5-26-50	X		
ELECTRICAL DIVISION							
I. Visits to other Installations							
H. A. Carlberg to: Schenectady Works Schenectady, New York	Attend Plant Engineers Meeting (Power Systems Committee)	D. L. Beeman	5-15-50	5-17-50	X		
II. Visitors to this Works							
L. C. Ford Apparatus Department General Electric Company Pasco, Washington	Inspect installations of equipment	F. J. Mollerus	5-1-50	5-30-50		X	100-DR (constr) 100-H XXX
HEALTH INSTRUMENT DIVISIONS							
I. Visitors to this Works							
G. W. Beadle Advisory Committee Division of Biology and Medicine, AEC Washington, D. C.	Inspect Hanford facilities	H. A. Kornberg	5-15-50	5-16-50	X		

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Name - Organization	Purpose of Visit	Person Contacted	Arrival	Departure	Restricted Data Class	Restricted Data Unclass	Areas
L. J. Deal Division of Biology and Medicine Atomic Energy Commission Washington, D. C.	Health Instrument consultation and inspection of facilities	H. M. Parker W. Singlevich J. W. Healy	5-17-50	5-19-50	X		
M. E. Eneminger Washington State College Pullman, Washington	Inspection of biology facilities	K. E. Nordo	5-16-50	5-17-50	X		100-F 108-F
II. Visits to other Installations							
D. E. Jenne to: Washington, D. C.	Joint meeting of Am. Geo. Union, Am. Meteor. Society and Tech. Conf. on air pollution	- -	4-30-50	5-6-50		X	
C. C. Gamertsfelder to: Naval Radiological Defense San Francisco, California /Lab./	Attend conference on hazards from nuclear radiation	R. I. Condit	5-25-50	5-26-50	X		
C. M. Patterson to: Idaho Operations Office Arco, Idaho	Assistance in health instrument program	- -	5-4-50	5-6-50	X		
H. M. Parker to: Oak Ridge National Lab. Oak Ridge, Tennessee	Attend Laboratory directors meeting	A. Holland	5-2-50	5-11-50	X		
M. H. Joffe to: Atomic Energy Commission University of Rochester Lab. Rochester, New York	Inhalation experiments of radioactive material	H. E. Stokinger	5-8-50	5-9-50	X		
F. E. Adley to: Washington, D. C.	Conference on air pollution	- -	5-2-50	5-7-50		X	
H. M. Parker to: Washington, D. C.	Conference on air pollution	- -	5-2-50	5-7-50		X	

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Name - Organization	Purpose of Visit	Person Contacted	Arrival	Departure	Restricted Data Class	Restricted Data Unclass	Areas
P. L. Eisenacher to: Swedish Hospital Seattle, Washington	Consultation on health problems	S. T. Cantril	5-12-50	5-13-50	X		
J. W. Healy to: Swedish Hospital Seattle, Washington	Consultation on health problems	S. T. Cantril	5-12-50	5-13-50	X		
F. G. Tabb to: Oak Ridge National Lab. Oak Ridge, Tennessee	Confer on specific design problems of an expansion project and on general health physics problems	N. H. MacKay K. L. Morgan	5-13-50	5-19-50	X		
A. J. Stevens to: Knolls Atomic Power Lab. Schenectady, New York	Discuss health protection methods, waste disposal and instruments for protection	L. L. German	5-22-50	6-2-50	X		
J. W. Healy to: Idaho Operations Office Arco, Idaho	Consultation on background measurements	L. J. Deal	5-23-50	5-25-50	X		
W. Singlevich to: Idaho Operations Office Arco, Idaho	Consultation on background measurements	L. J. Deal	5-23-50	5-25-50	X		
PROJECT ENGINEERING DIVISIONS							
I. Visitors to this Works							
C. J. Brous Argonne National Laboratory Chicago, Illinois	Consultation on installation of cooling unit which uses Dowtherm "A" as medium of heat transfer	J. T. Lloyd	5-10-50	5-27-50	X		100-H 105
II. Visits to other Installations							

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Name - Organization	Purpose of Visit	Person Contacted	Arrival	Departure	Restricted Data Class	Restricted Data Unclass	Areas
W. D. Richmond to: Iron Fireman Co. Portland, Oregon	Galvanized nozzle casting problems	Mr. Bryant	5-2-50	5-3-50		X	
W. D. Richmond to: Central Brass & Foundry Co. Portland, Oregon	Galvanized nozzle casting problems	Mr.Goehler	5-2-50	5-3-50		X	
H. J. Bellarts to: Puget Sound Naval Shipyard Bremerton, Washington	P-11 fabrication, Jr. cave fabrication, aluminum nozzle fabrication, well sampler progress	S. L. Allison	5-15-50	5-16-50		X	
"P" DIVISION							
I. Visitors to this Works							
A. Burvee International Business Machines Seattle, Washington	Check IBM machines in 105-H control room	J. R. Young	5-26-50	5-26-50	X		100-H 105
POWER DIVISION							
I. Visits to other Installations							
A. Frew to: Tacoma, Washington	Attend Pacific Northwest Water Work Ass'n and Northwest Sewage Ass'n convention	- -	5-10-50	5-12-50		X	
W. R. Conley, Jr. to: Tacoma, Washington	Attend Pacific Northwest Water Work ass'n and Northwest Sewage Ass'n convention	- -	5-10-50	5-12-50		X	
H. F. Measley to: Schenectady Works Schenectady, New York	Plant Facilities, Power System Committee, Plant Engineers meeting	D. L. Beeman	5-15-50	5-17-50	X		

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Name - Organization	Purpose of Visit	Person Contacted	Arrival	Departure	Restricted Data Class	Restricted Data Unclass	Areas
PLANT SECURITY AND SERVICES DIVISION							
I. Visits to other Installations							
F. J. McKinnon to: Brookhaven National Lab. Upton, Long Island New York	Attend annual conference AEC-Contractor Safety and Fire Protection personnel	- -	5-11-50	5-13-50	X		
PURCHASING AND STORES DIVISION							
I. Visitors to this Works							
G. Mullholland Lee & Estes, Incorporated Pasco, Washington	Deliver material on order HW 6-397 M	H. O. Monson	5-1-50	5-1-50		X	300 303-J
C. Freauff Lee & Estes, Incorporated Pasco, Washington	Deliver material on order HW 52269-M	H. O. Monson	5-2-50	5-2-50		X	100-F XXX
A. Freuhling United Truck Lines Pasco, Washington	Deliver material on AEC order 54427	H. H. Hart	5-3-50	5-3-50		X	200-W 234
J. Laird West Coast Freight Pasco, Washington	Deliver material on order HW 52269 M	H. H. Hart	5-8-50	5-8-50		X	108-D 105
A.Schuman United Truck Lines Pasco, Washington	Deliver material on order HW 61056-M	H. H. Hart	5-10-50	5-10-50		X	200-W 221-T
H. Brockman West Coast Freight Pasco, Washington	Deliver material on order HWC 7839	H. H. Hart	5-15-50	5-15-50		X	100-H 1713H

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Name - Organization	Purpose of Visit	Person Contacted	Arrival	Departure	Restricted Data Class	Restricted Data Unclass	Areas
D. A. Westermeyer Consolidated Freightways Pasco, Washington	Deliver material on order HW 52269-M	H. H. Hart	5-17-50	5-17-50		X	100-D 105
J. Tallont United Truck Lines Pasco, Washington	Deliver material on order HW 60398-M	H. H. Hart	5-18-50	5-18-50		X	200-W 271-T
J.Tallont United Truck Lines Pasco, Washington	Deliver material on order HW 58796	H. H. Hart	5-19-50	5-19-50		X	100-D XXX
A. R. Woigand United Truck Lines Pasco, Washington	Deliver material on order HW 58796	H. H. Hart	5-19-50	5-19-50		X	100-D XXX
G. Mullholland Lee & Estes, Incorporated Pasco, Washington	Deliver material on order HW 60386 M	H. H. Hart	5-22-50	5-22-50		X	300 303-J
E. Straight Receiving - Lee & Estes Pasco, Washington	Pick up material for shipping	H. H. Hart	5-22-50	5-22-50		X	300 XXX
E. Sanders Centennial Flour Mills Granger, Washington	Deliver material on order HW 63541G	H. H. Hart	5-22-50	5-22-50		X	100-F 141-M
F. Schenke Centennial Flour Mills Granger, Washington	Deliver material on order HW 63541 G	H. H. Hart	5-22-50	5-22-50		X	100-F 141-M
F. Schenke Centennial Flour Mills Granger, Washington	Deliver material on order HW 63541 G	H. H. Hart	5-23-50	5-23-50		X	100-F 141-M
D. A. Westermeyer Consolidated Freightways Pasco, Washington	Deliver material on order HW 8802	H. H. Hart	5-29-50	5-29-50		X	200-W 234-5

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Name - Organization	Purpose of Visit	Person Contacted	Arrival	Departure	Restricted Data Class	Restricted Data Unclass	Areas
II. Visits to other Installations							
L. G. Jones to: Iron Fireman Mfg. Company Portland, Oregon	Set up inspection procedure on completed aluminum nozzles on purchase order HW 53221 M and H 53225 M	T. L. Bryant	5-25-50	5-26-50		X	
R. H. Burrell to: Bailey Meter Company Cleveland, Ohio	Expedite purchase order HWC- 8265 AJ	R. E. Wooley J. Robinson	5-12-50 5-16-50	5-12-50 5-16-50		X X	
R. H. Burrell to: Westinghouse Electrical Mfg Co. East Pittsburgh, Pennsylvania	Expedite order HWC-8457	F. R. Butt L. J. Steidman	5-15-50	5-15-50		X	
R. H. Burrell to: Bethlehem Steel Company Chicago, Illinois	Expedite delivery of structural steel for A & J Company	Mr. Lange	5-17-50	5-17-50		X	
TRANSPORTATION DIVISION							
I. Visits to other Installations							
L. R. Richards to: American Locomotive Co. Schenectady, New York	Attend Alco-Diesel Electric Locomotive Switcher Course	G. Y. Taylor S. E. Lodge D. W. McLaughlin G. R. Stevens	5-1-50	5-5-50		X	
TECHNICAL DIVISIONS							
I. Visitors to this Works							
L. J. Burris Argonne National Laboratory Chicago, Illinois	Consultations on P-10, "25" and TBP processes	R. H. Beaton J. C. Chatten R. B. Richards F. W. Albaugh	5-15-50	5-16-50	X		100-B-105 300-3706, 321 200-W, 231 221-U, 224-U

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Name - Organization	Purpose of Visit	Person Contacted	Arrival	Departure	Restricted Data Class	Restricted Data Unclass	Areas
M. Levinson Argonne National Laboratory Chicago, Illinois	Consultations on P-10, "25" and TBP processes	R. H. Beaton J. C. Chatten R. B. Richards F. W. Albaugh	5-15-50	5-16-50	X		100-B-105 300-3706, 321 200-W, 231 221-U, 224-U
R. C. Vogel Argonne National Laboratory Chicago, Illinois	Consultations on P-10, "25" and TBP processes	R. H. Beaton J. C. Chatten R. B. Richards F. W. Albaugh	5-15-50	5-16-50	X		100-B-105 300-3706, 321 200-W,231 221-U 224-U
W. D. Davis Knolls Atomic Power Laboratory Schenectady, New York	Work on P-10 analysis	A. A. Johnson M. J. Szulinski	5-22-50	5-26-50	X		300-3706 100-B-105 200-W,231 271-T
K. H. Kingdon Knolls Atomic Power Laboratory Schenectady, New York	Assistance to Hanford Program	A. B. Greninger	5-4-50	5-5-50	X		None
D. H. Marquis General Eng. & Consulting Lab. Schenectady, New York	P-10 Consultation	A. A. Johnson	5-1-50	5-5-50	X		300-3706 100-B-105
R. A. Koehler General Eng. & Consulting Lab. Schenectady, New York	P-10 consultation	A. A. Johnson	5-1-50	5-5-50	X		300-3706 100-B-105
H. W. Bousman General Eng. & Consulting Lab. Schenectady, New York	P-10 consultation	A. A. Johnson	5-1-50	5-5-50	X		300-3706 100-B-105
J. R. Humphreys Argonne National Laboratory Chicago, Illinois	Consultation on ANL-141	L. W. Fromm	5-1-50	5-6-50	X		300-3706 100-F-105 100-H-105

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Name - Organization	Purpose of Visit	Person Contacted	Arrival	Departure	Restricted Data Class	Restricted Data Unclass	Restricted Data Areas
P. E. Brown Argonne National Laboratory Chicago, Illinois	Consultation on ANL-141	L. W. Fromm	5-1-50	5-6-50	X		300-3706, 100-F-105 100-H-105
A. H. Seybolt Knolls Atomic Power Laboratory Schenectady, New York	Metallurgical problems on P-10 project	A. B. Greninger R. Ward	5-3-50	5-5-50	X		300-3706 100-B-105
D. W. White Knolls Atomic Power Laboratory Schenectady, New York	Metallurgical problems on P-10 project	A. B. Greninger R. Ward	5-3-50	5-5-50	X		300-3706 100-B-105
A. C. Cooley Knolls Atomic Power Laboratory Schenectady, New York	Metallurgical problems on P-10 project	A. B. Greninger R. Ward	5-3-50	5-5-50	X		300-3706 100-B-105
T. B. Drew Columbia University New York, New York	Discuss heat transfer problems relative to Hanford pile	W. K. Woods	5-3-50	5-6-50	X		300-3706 100-D-105 100-H-105
A. D. Callihan Oak Ridge National Laboratory Oak Ridge, Tennessee	Consultation on critical experiments and P-11	P. F. Gast	5-8-50	5-13-50	X		300-3706 100-H-105 P-11
G. Dessauer General Electric Company Schenectady, New York	Consultation on DR experiments	P. F. Gast	5-8-50	5-26-50	X		300-3706 100-D-105-D and 105-DR 101 100-H-105 also 305 in 300
C. G. Munger Amercoat Corporation Seattle, Washington	Design work in 3708 and 3706 Buildings, 300 Area	V. R. Cooper R. B. Richards	5-8-50	5-8-50	X		300-3702 3706

II. Visits to other Installations

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Name - Organization	Purpose of Visit	Person Contacted	Arrival	Departure	Restricted Data Class	Restricted Data Unclass	Areas
P. H. Reinker to: North American Aviation Co. Downey, California	Technical consultation	W. E. Parkins	5-1-50	5-2-50	X		
L. A. McClaine to: North American Aviation Co. Downey, California	Technical consultation	W. E. Parkins	5-1-50	5-2-50	X		
R. E. Smith to: Kellex Corporation New York, New York	MJ-4 consultation	J. S. Atwood	5-3-50	5-5-50	X		
A. A. Johnson to: Knolls Atomic Power Laboratory Schenectady, New York	P-10 consultation	J. Marsden	5-8-50	5-12-50	X		
W. H. McVey to: Radiation Laboratory Berkeley, California	Consultation on heavy elements	K. Street	5-10-50	5-10-50	X		
C. W. Botsford to: Brookhaven National Lab. Patchogue, New York	Consultation on boron and steel	T. V. Sheean	5-15-50	5-15-50	X		
E. A. Eschbach to: Argonne National Laboratory Chicago, Illinois	P-10 consultation	C. E. Stevenson	5-15-50	5-19-50	X		
V. R. Cooper to: Oak Ridge National Laboratory Oak Ridge, Tennessee	TBP consultation	F. L. Steahly	5-21-50	5-24-50	X		
M. K. Harmon to: Oak Ridge National Laboratory Oak Ridge, Tennessee	TBP Consultation	F. L. Steahly	5-22-50	5-24-50	X		

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Name - Organization	Purpose of Visit	Person Contacted	Arrival	Departure	Restricted Data Class	Restricted Data Unclass	Areas
C. M. Slansky to: Oak Ridge National Laboratory Oak Ridge, Tennessee	TBP consultation	F. L.Steahly	5-22-50	5-24-50	X		
E. A. Smith to: Oak Ridge National Lab. Oak Ridge, Tennessee (including Y-12)	Consultation on "J" slug manufacture	N. H. MacKay J. H. Fryo	5-22-50	5-24-50	X		
C. E. Lacy to: Simonds Saw & Steel Co. Lockport, New York	Serve as technical advisor on an experimental rolling test	A. D. Potts	5-22-50	5-26-50	X		
V. R. Cooper to: Knolls Atomic Power Lab. Schenectady, New York	Long Range Bearing Program	D. E. Garr	5-24-50	5-26-50	X		
M. K. Harmon to: Argonne National Laboratory Chicago, Illinois	Discussion "25" process	S. Lawroski	5-25-50	5-26-50	X		
C. M. Slansky to: Argonne National Laboratory Chicago, Illinois	Discussion "25" process	S. Lawroski	5-25-50	5-26-50	X		
L. F. Kendall to: Bausch & Lomb Optical Co. Rochester, New York	Discuss echelle grating spectrograph with view to application in uranium, plutonium isotope studies and determinations of impurities	D. Richardson	5-24-50	5-24-50		X	
L. F. Kendall to: Pittsfield Works Lab. Pittsfield, Massachusetts	Discuss determination of carbon and oxygen by vacuum fusion and observe use of method for oxygen	S.E.Q. Ashley	5-25-50	5-25-50		X	
L. F. Kendall to: Society for Applied New York, New York Spectroscopy	Attend technical papers of special interest to Hanford	- -	5-26-50	5-27-50		X	

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1217659

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Name - Organization	Purpose of Visit	Person Contacted	Arrival	Departure	Restricted Data Class	Restricted Data Unclass	Areas
L. F. Kendall to: Oak Ridge National Laboratory Oak Ridge, Tennessee	Discuss applications of porous cup electrode to Hanford problems and other techniques and apparatus	M. T. Kelley C. Feldman	5-31-50	6-1-50	X		
R. H. Beaton to: Knolls Atomic Power Lab. Schenectady, New York	Separations Process Research Unit consultations	J. Marsden L. B. Bragg	5-31-50	6-2-50	X		
R. H. Beaton to: Gen. Eng. & Con. Lab. Schenectady, New York	432 Project discussions	D. H. Marquis	5-31-50	6-2-50	X		

MANAGEMENT - TECHNICAL AND EDUCATION SECTION

I. Visitors to this Works

F.W. Test Argonne National Laboratory Chicago, Illinois	Re patent matters	W. I. Patnode	5-14-50	5-19-50	X		300-3706
F. York Argonne National Laboratory Chicago, Illinois	Re patent matters	W. I. Patnode	5-14-50	5-19-50	X		300-3706

1217660

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PURCHASING AND STORES DIVISIONS
SUMMARY
MAY, 1950

Personnel of the Purchasing and Stores Divisions showed a net increase of nineteen people as indicated by the tabulation below:

	Total Personnel as of 4-30-50	Total Personnel as of 5-31-50	Net Change
Exempt	57	55	Minus 2
Non-Exempt	272	293	Plus 21
TOTALS	329	348	Plus 19

* Includes 2 Administrative personnel not shown on divisional reports.
** Includes 1 Administrative personnel not shown on divisional reports.

Although the over-all work load in the Purchasing Division decreased somewhat during the month, there was a marked increase in the number of requisitions received for construction material and equipment.

As a result of cancellation of MJ-3, it was necessary to cancel a total of fifty-three orders. At month end forty-five of these orders had been closed out and negotiations were underway on the other eight with respect to cancellation charges.

Two new sources of supply for high purity aluminum required for P-10 operations were developed.

It was found necessary to change the design of aluminum nozzles on order for B, D, and F Areas to overcome casting difficulties. New prices and delivery schedules were established and approved by representatives of the Manufacturing Divisions.

Negotiations continued with the General Chemical Division, Allied Chemical and Dye Corporation, on the ANN contract. It appeared at month end that this contract would be concluded and executed during the ensuing month.

The Commission elected to supply our requirements of argon gas for the twelve-month period beginning 6-1-50.

Bids on our annual requirements of steam coal were being received and evaluated at month end.

Materials valued at $22,621.29 were declared excess from current Stores inventories.

1,303 purchase requisitions were screened against project inventories and 1,313 items were supplied as a result of screening, thus obviating the necessity for outside purchase.

The sale of safety shoes increased sharply due to the payroll deduction plan inaugurated on the first of the month.

Activity in the Receiving Section continued at a high level, there being a total of 5,001 receiving reports written during the month.

1217661

PURCHASING AND STORES DIVISIONS
SUMMARY

Due to threat of flood, it was deemed advisable to move automotive parts and supplies in Warehouse 1133 at the old Labor Yard up to a level of approximately twenty-four inches above the floor.

A project proposal based on Recommendation Report No. 134 was submitted for a central warehouse facility and an appropriation request for funds for engineering costs was submitted at the same time.

Shipment of surplus materials from the Pasco Base continued at an accelerated pace--most of this material being consigned to schools or other governmental agencies.

The Traffic Section at the request of the Commission assumed responsibility for issuing government bills of lading on outbound shipments of surplus materials.

As a result of rate reductions obtained from the carriers, total savings in freight charges for the month amounted to $6,461.03.

1217662

PURCHASING AND STORES DIVISIONS
STAFF SECTION
MAY, 1950

GENERAL

During May, the Methods and Procedures Group of the Staff Section continued in Operating Maintenance Stores with the development and accumulation of material statistics in conjunction with stock item value analysis to determine our inventory position of actual stock on hand in relation to our projected needs.

The statistical and usage survey is 80% complete and as a result 3,000 items (value $85,250) representing 22.7% of 13,000 items will be listed as non-moving for appropriate action. The value of these non-moving items ($85,250) is 14.3% of all captions studied.

A definite plan was formulated for the Stores Division to assume responsibility for Construction Railyard Materials. Necessary physical segregation and proper warehousing is in progress, as well as preparation for a physical inventory and audit.

Reports on the following were prepared for the Commission for budget representatives from Washington D.C.:

a. Disposition of steel plate, reinforcing bar, and reinforcing mesh.
b. Status of the material disposal program.
c. System for screening and use of project stocks.
d. Method of furnishing materials and supplies from construction stores.
e. Inventory control methods and procedures.
f. Recapitulation of inventory balances as per financial statement and inventory accounts controlled by Purchasing and Stores and others.

A composite report was developed to simplify divisions' personnel statistics resulting in time saving of 66 2/3%.

A study of charges to all divisions by the Surplus, Salvage, and Scrap Section (Code 131) was made in cooperation with the General Accounting Division, resulting in the following allocation:

39.7% to Design and Construction
3.35% to Operating
56.95% to Reserve

In the second half of May, six employees of the Staff Section were working full time in cooperation with the Internal Auditing Section of the General Accounting Division to reconcile the 10.10 account of the Surplus, Salvage, and Scrap Section.

Discussions were held on area inventories with supervision of the Manufacturing Divisions.

To date, six operating areas have been visited in which forty-two warehouses were inspected, for accumulation of data to prepare a proposal on methods to follow for the Stores Division to assume responsibilities for accounting, storing, and disbursing of manufacturing inventories.

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PURCHASING AND STORES DIVISIONS
STAFF SECTION

The Audit and Inventory Group of the Staff Section completed the physical inventories and reconciliations of the following accounts:

903-6 Electrical
903-18 Lead not fabricated
903-14 Janitor and Laundry supplies
903-19 Oil and grease
903-20 Paint and painters supplies
903-24 Medical (50% completed)

The above accounts with the exception of 903-24 represent approximately 3,800 items. The total valuation of the accounts is $245,500.00 and an inventory overage of $3,448 or 1.4% was established. In making the audit, variances were evident and were discussed with the Superintendent of Stores for immediate action. General warehouse conditions in caption 903-6 were greatly improved, since last inventory.

General Stores and Spare Parts Inventory Valuation Report for the month was completed. Catalogues of 903-27, Stationery Supplies, have been assembled and distributed. Eighty-eight man hours were expended on Flood Control Work. Inspection trips were made to White Bluffs, North Richland, and Pasco to determine progress in warehousing and accounting functions and operations.

PERSONNEL

	As of 4-30-50			As of 5-31-50			Net Change	
	Ex.	Non-Ex.	Total	Ex.	Non-Ex.	Total	Ex.	Non-Ex. Total
Administrative	1		1	1		1		
Methods-Procedures Cost and Budget Control	1	3	4	1	4	5	+1	+1
Audit Section	2	8	10	2	9	11	+1	+1
Total	4	11	15	4	13	17	+2	+2

Safety and Security Meetings held - 1
Number of Employees attending - 9

STATISTICS

Recapitulation of short and long range surveys made by the Staff Section since March 6, 1950, and percentage completed.

	March	April	May
1. Examine and develop the screening procedure for operating and construction programs.	100%		
2. Examine the within-division charges for budgets based on load.	100%		
4.			

1217664

PURCHASING AND STORES DIVISIONS
STAFF SECTION

		March	April	May
3.	Examine the assessments from other divisions budgets	100%		
4.	Prepare charges to other divisions for budgets, based on load.	100%		
5.	Prepare balance sheet budget - based on load.	100%		
6.	Prepare construction material budget.	100%		
7.	Examine and make recommendations on construction procedures affecting sub-contractor stores control.	100%		
8.	Examine and develop transportation and construction equipment budget.	100%		
9.	Prepare and install procedure for payroll deduction purchase of safety shoes.	100%		
10.	Analysis of studies and recommendations for business machines utilization.	5%	15%	60%
11.	Organizational Studies			
	Inventory Control Section (Operations and Maintenance Stores)			
	a. Functional job descriptions	40%	90%	90%
	b. Form and paper work write-ups	40%	75%	75%
	c. Functional Flow charts	30%	60%	60%
	d. Work load statistics	0	0	0
	e. Analysis and recommendations	0	0	0
12.	Receiving, Warehousing, Disbursing Section (Operational and Maintenance Store)			
	a. Functional job descriptions	95%	95%	95%
	b. Forms and paper work write-ups	95%	95%	95%
	c. Functional flow charts	C	0	0
	d. Work load statistics	0	0	0
	e. Analysis and recommendations	0	0	0
13.	Inventory Control (Construction Held Materials)			
	a. Functional job descriptions	98%	98%	98%
	b. Forms and paper work write-ups	98%	98%	98%
	c. Functional flow charts	0	0	0
	d. Work load statistics	0	0	0
	e. Analysis and recommendations	0	0	0
14.	Excess, Salvage, and Scrap Section			
	a. Functional job descriptions	90%	90%	90%

PURCHASING AND STORES DIVISIONS
STAFF SECTION

		March	April	May
	b. Form and paper work write-ups	90%	90%	90%
	c. Functional flow charts	90%	90%	90%
	d. Work load statistics	20%	90%	20%
	e. Analysis and recommendations	0	0	0
15.	Develop method, procedure and forms for accumulating budget data.	0	5%	100%
16.	Analyze, review, and change methods for establishing reorder quantities for stores stock.	0	30%	80%
17.	Prepare for management, a report in relation to internal auditing of Surplus, Salvage, and Scrap, with Internal Chief Auditor of General Accounting Division.		90%	100%
18.	Examination and presentation of procedures and inventories to AEC Property Management and protective clothing data.		57%	100%
19.	Examination of record cards for excess materials to reflect total quantity of like items available.		25%	25%
20.	Plan and study centralized warehousing in cooperation with Project Engineering and Superintendent of Stores.	20%	25%	40%
21.	Plan and study in cooperation with Project Engineering conversion of Dormitory I into office facilities for Purchasing and Stores.	75%	100%	
22.	Examine area warehousing in cooperation with Manufacturing Divisions.		8%	75%
23.	Examine, recommend improvements in cooperation with Design and Construction Division, control of construction tools.			100%
24.	Formulate plan for controlling Hanford Railyard materials.		20%	70%
25.	Examine and determine duties of accounting personnel of the Surplus, Salvage, and Scrap Section.		75%	100%
26.	Examine and revise C.E.V. request.			100%
27.	Analysis of construction inventory account 10.20 in preparation for physical inventory.		5%	
28.	Analyze and prepare indirect labor costs estimates and actual. This study is kept current.			100%

1217666

PURCHASING AND STORES DIVISIONS
STAFF SECTION

		March	April	May
29.	Retention and listing of stainless steel.			100%
30.	Established methods and procedure for reconciling account 10.10 (Surplus, Salvage, and Scrap Section)		30%	100%
31.	Actual reconciliation of account 10.10 (Surplus, Salvage, Scrap Section)			3%
32.	Establishing of spot audit procedure.		30%	75%
33.	Preparatory steps of Standard Practice Manual for Stores Division			3%

The Staff Section is currently compiling and issuing the following Monthly Reports:

a. Force Reports.
b. Force forecast.
c. Overtime request.
d. Material Inventory controlled by the Purchasing and Stores Division.

7.

1217667

PURCHASING AND STORES DIVISIONS
PURCHASING DIVISION
MAY, 1950

GENERAL

The over-all work load decreased during the month. 1,626 purchase orders were placed as compared to 1,985 placed in April. 2,569 purchase requisitions were received and assigned as compared with 2,765 during April. Requisitions on hand at month end totaled 676 as compared with 764 at the end of the previous month.

There was a marked increase however in the number of requisitions received during the month for construction material and equipment. Of 307 received there were 40 for the 100-DR Water Works project, 54 for MJ-1, 8 for MJ-2 and the balance for miscellaneous projects. Alterations to requisitions affecting changes in design and quantities ordered are being received daily from the Redox group as its designs are firmed up. These alterations necessitate going out for rebids and often delay procurement time three to four weeks in addition to increasing the work load of the Division.

Work continued on an accelerated basis for projects P-10-A, P-10-B and P-11. Percentage of completion on these projects were 95 per cent on both P-10-B and P-11, and 70 per cent on P-10-A. Careful follow-up was maintained on these projects as well as on D&C projects.

Notice of cancellation of MJ-3 was received on May 2, 1950 and prompt action was taken to stop work on all orders pending cancellation. A total of 53 orders were involved in the cancellation; 45 of these orders were closed out by month end. Negotiations were continued on the remaining orders which will involve cancellation charges. $94.00 in cancellation charges have been paid to date.

Due to increasing indications of the possibility of a flood, a purchase was made on May 11, 1950 for 60,000 sand bags for immediate delivery.

A three-month stock pile of high purity aluminum required for P-10 operations was established. The invitation to bid directed to five prospective extrusion plants developed two new sources which were given trial orders. Satisfactory extrusions were made on both orders and the use of both plants is being considered to insure uninterrupted production in the event either plant should be shut down due to unforeseen contingencies.

The design of the aluminum nozzles being purchased for the B, D, and F Areas was changed in order to overcome casting difficulties experienced on the original designed nozzles for these areas. New prices and delivery schedules were established and approved on the two nozzle orders.

Preliminary drafts of the ANN contract have been received, reviewed by the Law Division, and our comments sent back to General Chemical Division, Allied Chemical and Dye Corporation. Barring unforeseen difficulties, this contract should be concluded during the coming month.

Leslie Salt Company, Newark, California was the successful bidder on our requirements for rock salt for the coming year. Niagara Alkali Company, New York, New York, was the successful bidder on our requirements for potassium hydroxide.

PURCHASING AND STORES DIVISIONS
PURCHASING DIVISION

GENERAL (Cont.)

Ammonium silico fluoride requirements for the coming year will be split between Davison Chemical Corporation and the American Agricultural Chemical Company.

Argon gas requirements will be supplied by the Atomic Energy Commission as contract was handled by the Atomic Energy Commission's procurement office.

Steam coal requirements for the month of June will be furnished by the Kemmerer Coal Company, Frontier, Wyoming. This coal will move over the new Union Pacific spur into Richland. Compared to the cost of coal under the 1949-50 contract which expired May 31, 1950, this represents a saving of approximately $25,000 in the cost of coal to be used in June.

Bids on our annual requirements for steam coal and for soda ash are due June 1,1950.

Market research leading to sources of supply for new materials required for MJ-1 and MJ-4 continues. Studies are in progress on the storage requirements for nitric acid and caustic soda.

PERSONNEL

	As of 4-30-50			As of 5-31-50			Net Change		
	Ex.	Non-Ex.	Total	Ex.	Non-Ex.	Total	Ex.	Non-Ex.	Total
Administrative	1		1	1		1			
Purchasing	12	11	23	12	11	23			
Expediting	5	4	9	4	5	9	-1	≠ 1	
Inspection	13	1	14	13	2	15		≠ 1	≠ 1
Clerical	1	17	18	1	18	19		≠ 1	≠ 1
TOTALS	32	33	65	31	36	67	-1	≠ 3	≠ 2

SAFETY AND SECURITY

Safety and Security Meetings scheduled	4
Number of Employees attending	60
Minor Injuries	0

STATISTICS

	G	D	Total
Requisitions on hand 5-1-50 (includes 60 assigned to Govt.)	640	124	764
Requisitions assigned during May	2,262	307	2,569
Requisitions placed during May	2,337	320	2,657
Requisitions on hand 5-31-50 (includes 62 assigned to Govt.)	565	111	676

1217669

PURCHASING AND STORES DIVISIONS
PURCHASING DIVISION

STATISTICS (Cont.)

		Number	Value
HW Orders placed		1,454	$364,963.94
HW Alterations placed		117	39,656.46
	Total	1,571	$404,620.40
HWC Orders placed		172	$423,999.82
HWC Alterations placed		52	15,004.95
	Total	224	$439,004.77
AEC Orders placed		131	$ 85,637.38
DC Orders placed		13	28,349.12

	OR	ORC	Total
Government Transfers	2	0	2

Open Orders

HW Orders	1,271
HWC Orders	343
Govt. Orders	29

Number of new orders requiring inspection during month	25
Number of orders requiring inspection completed during month	28
Number of orders outstanding requiring inspection at month end	84
HW Orders expedited (Special Request)	310
HW Orders expedited (Routine)	548
HWC Orders expedited (Routine)	315

1217670

PURCHASING AND STORES DIVISIONS
STORES DIVISION
May, 1950

GENERAL

Materials valued at $22,621.29 ($5,891.06 maintenance materials, $16,730.23 spare parts originally purchased for the 186 Buildings) were declared excess from Stores active inventories during the month. This was accomplished by excessing materials representing more than a year's supply and by the deletion of 401 obsolete stock items.

1303 purchase requisitions were processed through screening and 1313 items were furnished from plant inventories.

During the month the sale of safety shoes increased sharply due to the payroll deduction plan for the purchase of safety shoes inaugurated May 1, 1950.

Receipts of incoming shipments remained relatively high for the month reflecting a total of 5001 receiving reports being issued.

Shipping activities continued at an accelerated pace at the Pasco Depot as 422 truckloads of material and/or equipment were shipped to schools or government agencies.

Personnel engaged in receiving, filing, and shipping activities were consolidated in Warehouse No. 6 to insure more efficient utilization of manpower, equipment, and facilities.

Automotive parts and supplies in Warehouse 1133 and adjacent hutments below the 24" level were moved or raised as a precautionary measure against possible flood conditions.

Recommendation Report No. 134 for the consolidation of Stores warehousing and subsequent request for appropriation covering engineering costs were submitted during the month.

Formal excess lists totaling $793,264.68 were submitted to the Commission during the month, and 579 shipping documents were processed.

Materials and equipment valued at $486,033.51 were removed from excess and returned for use on the Project.

186 representatives of government and private businesses were escorted through our warehouses and scrap yards for the purpose of negotiating the purchase of scrap and the transfer of excess property.

1217671

PURCHASING AND STORES DIVISIONS
STORES DIVISION

PERSONNEL

	As of 4-30-50			As of 5-31-50			Net Change		
	Ex.	Non-Ex.	Total	Ex.	Non-Ex.	Total	Ex.	Non-Ex.	Total
Administrative	3		3	3		3			
Construction Matl.Sect.	5	47	52	4	47	51	-1		-1
Operations Matl. Sect.	4	94	98	4	92	96		-2	-2
Surplus, Salvage & Scrap Materials Section	5	81	86	~~5~~	98	103		~~+~~17	~~+~~17
TOTALS	17	222	239	16	237	253	-1	~~+~~15	~~+~~14

SAFETY AND SECURITY

Safety and Security Meetings Scheduled	11
Number of Employees attending	234
Minor Injuries	3

STATISTICS

INVENTORY CONTROL SECTION

Construction Materials Section	
Items in Stores Stock	52,166
Items in Small Tools (Estimated)	17,800
Items added to Stock	384
Items completely liquidated from stock	4,015
Store Orders Posted - Materials (Items)	7,604
Store Orders Posted - Tools (Items)	17,883
Number of Requisitions screened - A.J.	520
Number of Items furnished from stock	321
Value of Disbursements - Materials	$653,543.03
Value of Disbursements - Tools	477,066.~~94~~
Inventory Valuation at month end - Materials	9,289,955.06
Inventory Valuation at month end - Tools	963,746.00
Operations Materials Section	
Number of items added to Stores Stock	134
Number of items deleted from Stores Stock	401
Items in Stores stock at month end	47,717
Store orders posted	23,083
Number of requisitions screened this month - G.E.	1,303
Number of items furnished from plant sources this month	1,313
Inventory valuation at month end (903-all captions, 906 & 912)	$1,282,297.42
Inventory valuation at month end (Spare parts)	1,648,568.91
Inventory valuation at month end (Special Materials)	3,195,634.~~43~~
Total value Inventory Accounts	6,126,500.76
Value of disbursements, not including cash sale items	213,074.27*
Value of Cash Sales	938.93
Value of materials declared excess	22,621.29
Value of materials returned to Stores stock for credit	8,096.20

* Includes $11,190.89 disbursed to Construction and CPFF subcontractors.

1217672

STATISTICS (Continued)

WAREHOUSING, RECEIVING, DISBURSING & SHIPPING SECTION	
Construction Materials Section	
Store Orders Filled	4,976
Items Excessed	593
Operations Materials Section	
Receiving Reports Issued	5,001
Emergency Store Orders Filled	2
Returnable Containers on hand Month End	3,221
Shipments Processed (Containers & Material)	261
Store Orders Filled	27,555
Surplus, Salvage & Scrap Materials Section	
Store Orders Filled	666
Items Filled on Shipping Documents	3,426
Truckloads of Material Shipped	422

1217673

PURCHASING AND STORES DIVISIONS
TRAFFIC SECTION
MAY, 1950

GENERAL

Effective May 15, 1950 the Washington Public Service Commission granted rail carriers permission to increase intrastate rates on Cement and Limestone by approximately 4 per cent.

In response to our proposal, the motor carriers published reduced rates on Trichlorethylene from Seattle, Tacoma, and Portland to Richland and Hanford effective May 8, 1950, which will result in savings of approximately 31 cents per cwt.

On May 22, 1950, at the request of the Atomic Energy Commission, this Section assumed the responsibility for issuing Government bills of lading on outbound shipments of excess materials. This procedure will provide closer contact between the Surplus, Salvage and Scrap Section and this Section and will result in more efficient and economical shipping of excess materials.

Upon recommendation of this Section, H.W. Instructions Letter No. 145 was issued effective May 1, 1950. This Instructions Letter detailed the procedures and policies which will be followed with respect to moving employees' household goods and personal effects at Company expense. As a result of the changes effected, large annual savings will accrue from the following:

1. Elimination of payroll expense of one foreman, one checker, two laborers, two packers, one truck driver - heavy, and one truck driver - light.

2. Release of houses for above personnel.

3. Release of office and warehouse space and automotive equipment required in performing necessary services in connection with moving employees' household goods and personal effects.

4. Elimination of inventories of materials required for preparation of outbound shipments, such as barrels, cartons, wardrobes, shredding, corrugated, wrapping and tissue papers.

Effective May 24, 1950, this Section assumed the responsibility for directing and advising the Stores Division with respect to such matters as the type of equipment to be used, the method of loading to be employed, and the minimum weights to be observed on each outbound carload movement of material.

As a result of rate reductions obtained from the carriers, there was a total savings in freight charges for the month of May amounting to $6,461.03. This makes a total savings from September 1, 1946 to date of $1,308,623.94.

PERSONNEL

	Total Personnel as of 4-30-50	Total Personnel as of 5-31-50	Net Change
Exempt	2	2	0
Non-Exempt	5	6	Plus 1
TOTALS	7	8	Plus 1

PURCHASING AND STORES DIVISIONS
TRAFFIC SECTION

SAFETY AND SECURITY

Safety and Security Meetings Scheduled	1
Number of Employees attending	7
Minor Injuries	0

STATISTICS

Savings Report

1. Rate reductions obtained from the Carriers:

Commodity	Origin	Savings for May	Savings 9-1-46 thru April,1950	Total Savings 9-1-46 to date
Acid, Nitric	Dupont, Wash.	$ 2,197.84		
Gas, Chlorine	Tacoma, Wash.	312.00		
Soda, Caustic	Willbridge, Ore.	2,603.42		
Ferric Sulphate	Stege, Calif.	1,347.77		
		$ 6,461.03	$1,302,262.91***	$1,308,623.94***
2. Freight Bill Audit		578.62	46,876.27	47,454.89**
3. Loss and Damage and Overcharge Claims		179.02	95,335.82	95,514.84
4. Ticket Refund Claims		107.67	7,970.76	8,078.43
5. Household Goods Claims		17.11	13,843.71	13,860.82
		$ 7,343.45	$1,466,289.47	$1,473,632.92

** Includes $19,495.23 for the AEC
*** Corrected figure due to error in April report

Work Volume Report

Reservations Made	Rail	59
	Air	121
	Hotel	75
Expense Accounts Checked		126
Household Goods & Automobiles	Movements arranged inbound	7
	Shipments traced	2
	Insurance riders issued	7
	Requests for Claim billing	2
	Claims filed	1
	Claims Collected - Number	2
	Claims Collected - Amount	$ 17.11
Ticket Refund Claims	Filed	22
	Collected - Number	6
	Collected - Amount	$ 107.67

1217675

PURCHASING AND STORES DIVISIONS
TRAFFIC SECTION

STATISTICS (Cont.)

Work Volume Report (Cont.)

Freight Claims	Filed	18	
	Collected - Number	3	
	Collected - Amount	$179.02	
Freight Bill Audit Savings		$578.62	
Freight Shipments Traced		33	
Quotations	Freight Rates	168	
	Routes	151	
Bills Approved	Boat	1	
	Air Express	16	
	Carloading	155	
	Express	152	
	Rail	1,152	
	Truck	222	
Carload Shipments	Inbound - GE	1,342	
	Others	40	
	Outbound - GE	54	
	Others	0	

Report of Carloads Received

Atkinson & Jones Construction Company			
	Asphalt	6	
	Merchandise	1	
	Mineral Wool	1	
	Pipe	9	
	Roofing	4	
	Sand	3	
	Steel	10	
	Storage Silos	1	
Bonneville Power Administration	Circuit Breakers	1	
	Insulators	1	
Rust Engineering Company	Brick	1	
J. A. Terteling & Company	Ballast	2	40

1217676

PURCHASING AND STORES DIVISIONS
TRAFFIC SECTION

STATISTICS (Cont.)

Report of Carloads Received

General Electric Company	Acid	1	
	Ammonium Silicofluoride	1	
	Assemblies	1	
	Castings	1	
	Caustic Soda	14	
	Cement	57	
	Chemicals	3	
	Chlorine	5	
	Coal	1,181	
	Crane	1	
	Express	3	
	Ferric Sulphate	8	
	Hydrofluoric Acid	1	
	Lime	3	
	Machinery	1	
	Merchandise	10	
	Nitrate of Soda	1	
	Nitric Acid	17	
	Paint	2	
	Phosphoric Acid	2	
	Pipe	4	
	Pumps	1	
	Salt	2	
	Shingles	1	
	Soda Ash	4	
	Sodium Bichromate	1	
	Ties	6	
	Transformers	1	
	Valves	9	1,342
Total Entire Project			1,382

121677

EMPLOYEE AND COMMUNITY RELATIONS DIVISIONS

SUMMARY -- MAY, 1950

The number of applicants interviewed decreased from 1,888 during April to 1,643 during May. 429 of these applicants were individuals who applied for employment with the General Electric Company for the first time. In addition, 124 new applications were received through the mail. Open, nonexempt, nontechnical requisitions increased from 241 at the beginning of the month to 248 at the end of May. Total plant personnel increased from 7,646 to 7,679. Turnover rate increased during May from .89% to 1.25%. The majority of this increase is attributed directly to the removal of 10 dentists and 16 doctors to go into private practice, plus voluntary terminations of some supporting personnel to continue their employment with the doctors. At the end of May there were 93 nonbargaining unit employees in lack of work status and 160 bargaining unit employees. Forty-three new requests for transfers to other types of work were received from employees during the month. As a result of these requests, 31 transfers were effected. The Olympic Junior College, Bremerton, Washington, was visited by a representative of the Employment Group and the Technical Personnel Office for the purpose of recruiting two-year college level people for the Technical and Instrument Divisions. The Instrument Division advised that 60 instrument mechanic trainees will be required during the next 12 months. Due to the nationwide shortage of such personnel, an extensive advertising campaign is being conducted.

Final results of the Employee Services Fund indicated that 56% of all employees desired to participate, with 70% required in order to place the Fund in operation. A letter signed by the General Manager was mailed to all employees on May 17 advising them of the results. Visits were made by the Employee Services Group to 3 retired employees, 215 employees who were ill in the hospital, and 1 employee who was ill at home. In addition, 67 salary checks were delivered to employees confined to the hospital or to their homes due to illness. Plans are about completed for establishing a procedure at this Works for recognizing perfect attendance. Tentatively it is agreed that the program will be placed into effect September 1, 1950. Fifty-seven suggestion awards, totaling $ 1205, were made during May. These suggestions resulted in an estimated savings of $ 16,343.16. Suggestion publicity was carried in each issue of the Works News during the past month. A poster was designed for the suggestion boxes which reflects the presentation of the $ 1000 suggestion award made during April. Copies of this poster were also forwarded to all Employee Relations Divisions of other Departments.

Thirty-eight supervisors participated in the Supervisor's 40-Hour Training Program during May. This program will be omitted during the summer months of June, July, and August, but will again be made available to supervisors beginning in September. During the weeks of May 15 and May 22, 27 meetings were held throughout the Works for supervisors to discuss uniform administration and application of the disciplinary action procedure outlined in H.W. Instructions Letter No. 140. A total of 558 supervisors participated. As assistance to the "S" Division, a special program was presented to their new supervisors in training by the Training and Program Development Group. Further specialized training is to be given to these supervisors at a later date.

12176 78

Employee & Community Relations Divisions
Summary

A story was prepared during May concerning General Electric's opinion about the question of whether or not the Washington Public Service Commission has jurisdiction over the long distance toll rates charged for calls placed from Richland residence, business, and other non-plant phones. Although this story was not published, the discussions of it with Hanford Works officials of G.E. and A.E.C., and with officials of the Washington Public Service Commission resulted in a public announcement by the Washington Public Service Commission resulted in a public announcement by the Washington Public Service Commission that an investigation and public hearings would be held in connection with the question of jurisdiction over Richland toll rates.

The Nucleonics Department News Bureau had a record production of 123 information releases during the month.

The one-arm robot, designed by G.E. for use at atomic energy projects it operates for the Atomic Energy Commission was originally announced by the Company's News Bureau in Schenectady. A series of six pictures was cleared for publication by the Atomic Energy Commission and released on May 25from the News Bureau in Richland, the News Bureau in Schenectady and the Advertising and Publicity Department offices in San Francisco.

Through the Community Divisions Public Information Supervisor, assistance was rendered during the month to the Richland Community Council. A member of the council approached him and received help in publicizing a Humane Society Chapter in Richland.

The Public Functions and Services Supervisor, together with the group whom he supervises, received and cleared during the month of May for delivery before the American Chemical Society Northwest Regional Meeting in Richland a total of 31 manuscripts prepared by Hanford Works employees.

Two radio programs were produced through the Public Functions and Services group, and recorded on tape for rebroadcast by radio station KALE during the month.

Hanford Works Photo House experienced an increase in the number of 8" x 10" prints produced during the month of May, and at the same time effected a reduction in the number of negatives exposed which resulted in considerable saving in material and labor.

Special Programs activities during the month of May included the publicity, a sourvenir booklet, and follow-up stories and news pictures for local papers concerning the Third Annual Kadlec Hospital Open House, as well as after-the-fact news photos of the Telephone Building Open House.

Special Programs also publicized the Hanford Works Suggestion System through the creation of a special suggestion box poster which focused attention upon the recent $1,000 award made at this plant.

Employee & Community Relations Divisions
Summary

Hanford Works News started publication during the month of May of the Neil Carothers economics articles, and was the prime media for publicity for the Kadlec Hospital Open House, significant organization announcements, and the new plan for purchase of safety shoes through payroll deduction.

A Decision and Direction of Election was received from the NLRB in connection with the Building Service Employees Union, setting up a bargaining unit including nurses aides and orderlies-ambulance drivers. The election was scheduled for June 9. The first negotiation meeting between the Company and the HAMTC for the purpose of discussion wage adjustments was held on May 23. The union demands were for a $10.00 a week raise, to be retroactive to April 11, 1950. The Council was asked to consider the fringe benefits which accrue to operations personnel. It was mutually agreed to adjourn and reconvene the following week; however, the reopening date was later postponed to June 12. One meeting was held with the Council Grievance Committee. The issue of DST versus PST within the Project Construction Program was not resolved during the month. A series of meetings and conterproposals resulted in a decision to select a fifth man for the Arbitration Committee and proceed according to the original May 4, 1950, arbitration agreement. Preparations for this procedure were in progress at month end. Negotiations between Atkinson-Jones and the Office Workers Local #100, Teamsters Local #556 and Ironworkers Local #14 were attended by a member of this Division. A meeting of the Joint Board of the United Association of Plumbers and Steamfitters in Seattle was attended by a member of this division. The discussion involved travel time to Plumbers outside the barricaded area. A threatened work stoppage was successfully averted. During the month a series of conferences were held with division representatives regarding the classification of employees under the application of the Fair Labor Standards Act and the Walsh-Healey Act. As a result of the Division Managers' review, a total of 61 individuals out of a total of approximately 1,600 now classified as exempt, were said to come under the provisions of the Federal regulations.

1217680

EMPLOYEE AND COMMUNITY RELATIONS DIVISIONS

MAY, 1950

ORGANIZATION AND PERSONNEL

Employee Relations

Employment:

Effective May 2, a Stenographer-Typist "C" was employed and assigned to the Investigation and Files Group.

Effective May 26, a General Clerk "D", assigned to the Investigation and Files Group, resigned.

Effective May 29, a General Clerk "D" was employed and assigned to the Investigation and Files Group.

Employee Services:

There were no organization changes in this group during the month of May.

Training and Program Development:

There were no organization changes in this group during the month of May.

Community and Public Relations

No organization changes were made during the month.

Union Relations and Wage Rates

One General Clerk "A" terminated voluntarily on May 26, 1950.

Number of employees on payroll	May, 1950
Beginning of Month	86
End of Month	86
Net gain or loss	0

4 1217681

Employee and Community Relations Divisions

ACTIVITIES

Employee Relations

Employment:

	April, 1950	May, 1950
Applicants interviewed	1,888	1,643

429 of the above applicants interviewed during May were individuals who applied for employment with the General Electric Company for the first time. In addition, 124 new applications were received through the mail.

Open Requisitions	April, 1950	May, 1950
Exempt	5	2
Nonexempt	241	248

Of the 241 open, nonexempt requisitions at the beginning of the month, 136 were covered by interim commitments. Of the 248 open, nonexempt requisitions at the end of the month, 132 were covered by interim commitments. In addition, 2 open, exempt requisitions were being processed.

During May, 83 new requisitions were received for a total of 145 people.

	April, 1950	May, 1950
Employees added to the rolls	155	173
Employees removed from the rolls	74	140
Net gain or loss	+ 81	+ 33

Of the 140 removed from the rolls during May, 44 were removed due to lack of work, or which 43 were outside the bargaining unit.

Turn-over:	April, 1950 Male	April, 1950 Female	May, 1950 Male	May, 1950 Female
Including employees laid off for lack of work	.56 %	2.65 %	1.05 %	4.99 %
Excluding employees laid off for lack of work	.46	2.65	.63	3.79

Overall Plant Turn-over:	April, 1950	May, 1950
Including employees laid off for lack of work	.97%	1.83%
Excluding employees laid off for lack of work	.89	1.25

Increase in separations during May was directly affected by the revised plan for providing medical services for the village of Richland. This plan resulted in 16 doctors and 10 dentists being removed from the Company's payroll in order to enter private practice in Richland. As a result of these separations a number of supporting employees were also removed from the rolls, either on a lack of work basis or on a voluntary termination in order that they might continue employment with the doctors.

5

1217682

Employee and Community Relations Divisions

At the end of May, there were 253 employees in lack of work status, divided into the following categories:

	April, 1950	May, 1950
Nonbargaining unit employees	110	93
Bargaining unit employees	166	160

During May, 43 new requests for transfers were received and reviewed by the Procurement Group. Transfers were effected for a total of 31 of those employees who had filed requests for consideration of transfer. In addition, transfers were effected for 2 employees who had received notice of removal due to lack of work.

On May 26, a visit was made to the Olympic Junior College, Bremerton, Washington, by a representative of the Procurement Group and a representative of the Technical Personnel Office for the purpose of recruiting two-year college level people for the Instrument and Technical Divisions. This was the first contact with this school, and the results were quite satisfactory.

The Instrument Division just recently advised the Employment Office that it would be necessary to supplement their forces by approximately 60 qualified instrument mechanic trainees within the next 12 months. Recognizing that there is a nationwide shortage of this type of personnel, a rather extensive advertising campaign has been instituted in various newspapers in Buffalo, Cleveland, Philadelphia, Chicago, Detroit and St. Louis, as well as the major cities on the West Coast. An advertisement has also been inserted in the Instrument Society's Journal for June, July and August. Information concerning our needs has also been furnished to the Brown Instrument Company in Philadelphia, as well as other Departments in the General Electric Company who might have such individuals available.

Employment Statistics:

Number of employees on rolls	4-30-1950	5-31-1950
Exempt	1,759	1,745
Nonexempt	5,887	5,934
TOTAL	7,646	7,679

ADDITIONS

	Exempt	Nonexempt	Total
New Hires	13	133	146
Re-engaged	1	8	9
Reactivations	0	17	17
Transfers (from other plants)	0	1	1
Actual additions	14	159	173
Payroll Exchanges	13*	4	17
Gross Additions	27	163	190

*Transferred from Weekly Salary Roll

1217683

Employee and Community Relations Divisions

	Exempt	Nonexempt	Total
TERMINATIONS			
Actual terminations	35	77	112
Removals from Roll	2	26	28
Payroll Exchanges	4	13*	17
Gross Terminations	41	116	157

Approximately 53% of all terminations were on a voluntary basis, and most of these were for the following reasons (a) Another job (b) Personal reasons.

GENERAL

	4-30-1950	5-31-1950
Applicants interviewed	1,888	1,643
Photographs taken	265	260
Fingerprint impressions taken (in duplicate)	353	381
Procurement letters written	431	487

ABSENTEEISM STATISTICS
(Weekly Salary Roll)**

Male	2.43%	1.80%
Female	3.22%	3.08%
Total plant average	2.63%	2.12%

INVESTIGATION STATISTICS

Cases pending at beginning of month	912	1,035
Cases received during the month	277	242
Cases closed	154	143
Cases pending at month end	1,035	1,134
Cases found unsatisfactory for employment	1	7
Cases found satisfactory for employment	269	230
Cases closed before investigation completed	4	20
Special investigations conducted	8	14

* Transferred from Monthly Salary Roll
** Statistics furnished by Weekly Payroll Division

Employee Services:

Final results of participation in the Employee Services Fund were obtained on May 15, with approximately 56% of all employees desiring to participate. A total of 70% was required in order to place the Fund in operation. On May 17, letters signed by the General Manager were mailed to all employees advising them of this fact. The 5 participating agencies were also advised by letter that the Fund would not be placed into effect. In an effort to ascertain from the employees information which might be used in determining what further action might be taken with respect to this Fund, questionnaires were returned with the enrollment cards to the employees on May 25. Upon receipt of these questionnaires, this information will be tabulated and used as a guide in determining whether further efforts should be made to establish such a fund at a later date.

Employee and Community Relations Divisions

Efforts made to visit 8 retired employees during the month resulted in 3 actual contacts. These visits, which were to ascertain the well-being of the pensioners and to render any assistance that we might be able to offer, were very much appreciated by those visited.

During May, the Payroll Division forwarded to the Employee Services Group 8 requests for the latter Group to contact beneficiaries or widows of deceased employees, requesting them to obtain tax waivers from the Washington State Inheritance Division in order that their G.E. Stock Bonus could be paid.

In an effort to provide employees with all information possible regarding the Employee Sales Plan, arrangements were made during the past month with the Employees' Store in Schenectady for employees at Hanford Works to purchase merchandise direct from that store, when it is not possible to obtain such merchandise through local merchants who are handling G.E. products at employee prices. Information concerning items available to employees through the Schenectady Store are being supplied through the Works News. Some difficulty has been experienced in employees submitting their order to the Schenectady Store in the past, and as a result a memorandum to all supervisors informing them of the proper procedure, was issued during the past month. In addition, it is planned to furnish information to all employees through the Works News.

During May, 3 employees in lack of work status requested that their separations be changed to resignation in order that their pension contributions might be refunded.

Four publications of Employee Benefit Plans Information were prepared and released to the Works New during the month.

The following visits were made with absent employees during the past month by representatives of the Employee Services Group:

Kadlec Hospital	215
Employees at home	1
Salary checks delivered to employees confined at Kadlec Hospital	60
Salary checks delivered to employees confined at home	7

The following employee retired during May:

Herbert H. Oakley, Power Division.

Employee Services Statistics:

Number of employees registered under the Selective Service Act	674
Number of employees for whom deferments have been requested and granted	6
Number of technically trained single men not classified. (potential 1-A classifications)	11

Employee and Community Relations

Suggestion System:

At the end of May the volume of work in the Office of the Secretary of the Suggestion System was as follows:

	April, 1950	May, 1950	Total since 7-15-1947
Suggestions received	126	141	4,880
Investigation reports completed	168	165	4,411
Awards granted by Suggestion Committee	49	57	664
Cash awards	$ 1,545.00	$ 1,205.00	$ 10,265
Estimated savings resulting from suggestions	27,019.50	16,343.16	

Publicity concerning the awards made during the month were carried in the Works News issues of May 5, May 12, May 19 and May 26. On May 16, the Secretary gave a 40-minute talk on the Suggestion System to the 40-Hour Supervisors Training group. A special poster was prepared as the result of the recent $ 1,000 suggestion award, which reflected the General Manager congratulating the suggestor. This poster was placed on suggestion boxes. Copies were also mailed to Employee Relations Division of other Departments of the Company.

On May 9, the annual Suggestion Conference was attended by the Secretary in Schenectady. This Conference is held for the purpose of establishing uniform policies on Suggestion System operation throughout the Company. A day was also spent by the Secretary in studying the Schenectady Suggestion System operation.

Insurance and Compensation:

Public Liability

-- A communication has been received from Attorney Ralph A. Rogers of Pasco, in which he advised that the above named employee sustained a fractured jaw undergoing a dental treatment at the Dental Clinic. Attorney Rogers has been advised that this matter has been referred to the Travelers Insurance Company, and that he will be contacted by them regarding this claim at a later date.

On May 2, a fire occurred at the Heavy Equipment Shop in the 100-DR Area, which resulted in considerable damage to tools belonging to employees of the Atkinson and Jones Company, a sub-contractor. The fire occurred as a result of a spark from a welder's torch. 25 claimants submitted tool loss claims, totalling $ 2,340.21. The Travelers Insurance Company has advised that this is not a true liability claim, and accordingly, efforts are being made to ascertain if these claims can be paid by the Company as a reimbursable item.

Compensation:

As the result of two appeals made by the Company with the Board of Industrial Insurance Appeals from an order by the Supervisor of Industrial Insurance, Washington State Department of Labor and Industries, a special appeal has been entered before the Board of Appeals by the Supervisor of Industrial Insurance

1217686

PRIVACY ACT MATERIAL REMOVED

contending that the Company could not properly appeal any Supervisor's order to the Board since the Agreement between the Company and the Washington State Department of Labor and Industries does not provide for such an appeal. This matter has been referred to the Legal Division to ascertain the Company's rights.

Arrangements have been effected with the Atkinson and Jones Safety Division whereby all industrial accidents incurred by sub-contractor employees, who are protected under the Company's Workman's Compensation Agreement with the Washington State Department of Labor and Industries will be investigated by the Atkinson and Jones Safety Division, and a report furnished to the Insurance and Compensation Group.

Life Insurance:

Code information for use by insurance companies in issuing insurance to employees of this Works was furnished to 94 insurance companies and investigation agencies during May.

Insurance Statistics:

	4-1950	5-1950	Total since 9-1-1946
Claims reported to the Department of Labor and Industries	64	44	3,351
Claims reported to Travelers Insurance Company	4	2*	437

* Of the above claims reported during May to the Travelers Insurance Company, 1 was a property damage claim and 1 was a bodily injury claim.

Training and Program Development:

During the week of May 15-19, the Supervisor's 40-Hour Training Program was again made available to the supervisors at this Works, with a total of 38 supervisors from the various Divisions participating in the Program. The 40-Hour Training Program will be omitted during the months of June, July and August, and again offered to supervisors in September.

During the weeks of May 15 and May 22, a total of 27 meetings were conducted throughout the plant for the purpose of discussing with supervisors the proper application of the procedure relative to disciplinary action as outlined in a recent Hanford Works Instructions Letter. This program consisted of a 30-minute lecture relative to the philosophy and use of disciplinary action by supervisors. This lecture was followed by a one-hour discussion on the uniform administration and application of the disciplinary action procedure with all members of the group participating. A total of 558 supervisors participated in this Program over the two-week period.

Supervisor's Handbooks on Employee Relations were distributed to 51 supervisors during May. To date, a total of 1,347 Supervisor's Handbooks have been issued. During the past month three revisions to the Handbook were distributed. One of these revisions included a complete revised table of contents. Three additions to the Handbook are presently in the hands of the printers.

Employee and Community Relations Divisions

During May, a total of 140 new employees were given orientation. Of this number 78% elected to participate in the Group Health Insurance Plan, and 63% elected to participate in the Group Life Insurance Plan. In addition to the above, 9 re-engaged employees were given orientation, of which 100% elected to participate in the Group Health Insurance Plan, and 90% elected to participate in the Group Life Insurance Plan. Arrangements are presently being made by members of the Safety Division for a revision of the Hanford Works Safety Manual which is distributed to all employees. As soon as this revision is completed, it will be substituted in orientation for the booklet, entitled "Safety is Part of Your Job", which is now being distributed to new employees. In order to assure that new employees complete the application for Group Life Insurance in accordance with the insurance company's requirements, a new visualizer form indicating the proper method to use has been prepared and included in the orientation program.

Considerable time was spent by a member of the Training and Program Development Group, together with a member of the Employee Services Group, in conferences relative to the proposed procedure for recognition of perfect attendance by all employees. This proposed procedure, the idea for which originated in the Nucleonics Safety Council, has been developed in detail by the Employee Relations Division, and approved by the Nucleonics Safety Council. Further arrangements are being made at the present time toward completion of this plan in order that it might be placed into effect beginning September 1, 1950.

During the past month, the "S" Division submitted to the Training and Program Development Group a proposed plan to purchase several courses from the International Correspondence School for use in specialized training for new supervisors in that Division. A review of the proposed courses reflected that information along similar lines was available through the Training and Program Development Group, and in view of the fact that purchase of this material by the Company for these supervisors would, to a certain extent, by discriminating as to other supervisors, a suggestion was submitted and accepted by the "S" Division that these courses be covered through special training meetings prepared and offered by the Training and Program Development Group to the "S" Division supervisors. On May 26, the first of these meetings was held with the "S" Division supervisors, in which the subject of "The Supervisor and Labor Relations" was covered.

Employee and Community Relations Divisions

Community and Public Relations Division

NUCLEONICS DEPARTMENT NEWS BUREAU

During the month of May, 123 releases of information were made by the News Bureau. The number, above, includes release of 30 single or groups of photographs. Of the remaining 92 news releases distributed by the News Bureau, 13 were written by Special Programs or Community Divisions Public Information and 79 were written by News Bureau personnel.

Local News Releases

During May, 75 releases of stories and/or photos on the following topics were made to the "local list" of media, which is comprised of the Columbia Basin NEWS, Tri-City HERALD, Yakima Morning HERALD, Lind LEADER, Walla Walla Union-BULLETIN, Spokane CHRONICLE, WORKS NEWS, and radio stations KPKW, KWIE, KIT and KALE.

Organization changes - A. C. Beltzner to General Assistant, Community Accounting Division. G. C. Gabler to Assistant Manager of Production and Mechanical Division of Design and Construction Divisions. E. W. Slusher to Supervisor of the new Office Methods Division. R. C. Grant to Administrative Assistant to the Manager of the Production Division of Manufacturing Divisions.

Community Recreation - The following stories about recreation sponsored by Community Activities Division were released in May. The first practice of Little League Baseball; notice of two yo-yo contests; a general story of a complete children's and adult's summer recreation program; notice of a free demonstration for children by the Dog Training Club; a description of how to obtain sports equipment and reservations of facilities at Riverside Park; an invitation to Richland families to spend week ends at Camp Dudley; another long feature story describing in detail the coming summer recreation program for children and adults.

Commercial Facilities - It was announced that construction had begun on McVickers' super market and the Uptown Thrifty Drug Store.

General Community News - It was explained in a release to local papers that the same orchards and fruit trees will be maintained by G.E. this year as were last year. A sketch explaining diagramatically the theory behind Richland's shelter belt was released with a story explaining progress made so far on the shelter belt. It was pointed out that the bypass highway would be closed for a few days for repairs, that several other streets in Richland would be rebuilt this summer and that the extension of Jadwin Avenue north of Richland had been completed. A release reported that the Superintendent of Public Works had attended the Northwest sewage and water convention. It was reported that only two bids were received for the installation of certain fencing in Richland.

Electrical Interruptions - Seven power outages were described through local media so that residents could prepare for them.

1217689

12

Employee and Community Relations Divisions

Kadlec Hospital Open House - Nine photographs and seven stories arranged for and written by Special Programs personnel were distributed to local media in order to focus attention on the Open House both before and after it took place.

Speakers - It was announced that the Manager of the Employee and Community Relations Divisions would address trade and technical training apprentices at Yakima High School.

Safety and Fire Protection - The Community patrol chief warned residents of the danger of children playing with blasting caps. Also during May, the Richland Fire Chief warned against the danger of fire through careless use of certain kinds of solvents. A $15,000.00 fire was reported to have occurred in one of the production areas.

Employee Benefit Plans - Community Housing Superintendent announced that arrangements had been completed for employees retiring on the G.E. Pension Plan to remain in their houses in Richland for 30 days after going off the Payroll.

Daylight Saving Time - Four articles to local media reported the refusal of members of the Pasco-Kennewick Building and Construction Trades Council to work on Daylight Saving Time, which was officially adopted by the plant and town. It was explained that on May 1 only one-fourth of all construction workers went to work, that the following day drivers of construction buses did not appear, that the question would be arbitrated while the construction program went ahead on Standard time, and later, that arbitration was lagging because of the refusal of Council representatives to select an impartial member of the arbitration board.

General - It was announced that G.E. had been selected as one of four corporations chosen among 10 winners of the Public Relations News annual achievement award for distinguished accomplishment during 1949. The earning of Washington State Professional Engineer Licenses by three G.E. engineers at Hanford was announced. A 1,000 word feature story about the rise and fall of the town of Hanford was sent to local media.

Releases Sent Throughout the Northwest

During May, 30 informative news releases were sent to 72 of the leading daily newspapers, wire services and radio stations in the four northwestern states in addition to the local mailing list. Below are the subjects of the 12 releases.

Organization Changes - The following organization changes were released to the daily list: L. F. Huck to Community Manager, Richland Washington; G. C. Butler to Acting Nucleonics Department Counsel; C. A. Priode to Administrative Assistant to the Manager of Manufacturing Divisions; Dr. D. W. Pearce to assistant to A. B. Greninger, Manager of Technical Divisions. Photographs of the first two men listed first above were sent to local papers.

Employee and Community Relations Divisions

Safety - Richland was announced as the recipient of a special award for the highest grade to be made by any city in the nation in the National Safety Council traffic safety contest. Ten photographs of W. M. Milton receiving the award in Washington, D.C. were sent to selected papers. Also during May, 12 photographs of some of the persons in Community Divisions most responsible for winning a national award for fire prevention were sent to Northwest papers.

Employee Benefit Plans - A feature story about Art Hildebrandt, current winner of a $150.00 suggestion award was distributed. He has submitted 30 suggestions, has had six adopted and is still waiting to hear from five of them.

Construction - During May, preliminary notices of intention to invite bids for a concrete aggregate plant, 5,000 feet of fencing, in addition to the Biology Laboratory and for re-roofing six two-story dormitory buildings were sent to the daily list. Apparent low bidders were announced as follows: A. D. Patton, remodel 722-A, $16,694; Fred J. Early, Jr.,Co., Inc., waste disposal facilities, $1,567,126.00; Empire Electric Co., 13 traffic signals, $16,498.00; Associated Engineers Inc., plant grass and install irrigation system, $89,462.05.

It was announced that the freight railroad spur entering the project from the south was completed. It was later announced that Union Pacific and Northern Pacific officials had inspected the new line, OK'ed it, and scheduled the first freight shipments. Eight photos of the inspection crew were distributed.

Community - Certain conclusions included in the completed Curtis Middlebrook housing survey were announced. It was pointed out that ground had been broken in the Uptown Business District for a drug store, a super market and an investment building. A feature story explaining the theory behind and progress to date on Richland's shelter belt system was sent to the daily list. Six photographs of a portion of the belt were sent to selected papers.

Releases to Columbia Basin News Only

At the request of the NEWS, a story was released about a new fence being placed around the sewage disposal plant. The NEWS also requested a definition of boundaries for hunting on the project and a statement about the identity of the next Community Manager. The answers given to the two requests did not result in stories. Exclusive photos given the NEWS consisted of three photos publicizing the Kadlec Hospital Open House, a photo of Hanford construction union officials touring Kadlec Hospital, a photo of the completion of the railroad bridge across the Yakima River, a photo of the 10,000 new Richland classified tele phone directories and a sketch, suitable for reproduction, of the new Jadwin-Stevens intersection with its safety features emphasized.

14 1217691

Employee and Community Relations Divisions

Tri-City HERALD Only

On two different occasions during May, construction hiring rates were given to the HERALD. On the second occasion the figures were printed incorrectly in the paper through an error by the HERALD. A correction was made in the next day's issue. A request for an interview with Harry Kramer, concerning his flood predictions was turned down at the request of Mr. Kramer. It was announced that a disc jockey -type radio program would be sponsored on a local station by the Richland Safety Council. Exclusive photographs given the HERALD had as subject: the Telephone Open House; the Kadlec Hospital Open House (4); completion of work on the new rail spur; the distribution of the 10,000 new telephone directories.

Yakima Morning HERALD Only

At the request of the HERALD, considerable background information about the construction sub-sub-contractor firm, Hanley and Sons, and its personnel was furnished.

Walla Walla Union-BULLETIN Only

A story and photograph drawing attention to Richland's new telephone directory and with special emphasis on the fact that they were printed by the BULLETIN was sent to this paper.

Spokane CHRONICLE Only

Certain information about G.E. personnel including the average weekly paycheck and the nationalities represented among employees was furnished to the local representative of the CHRONICLE. A photo publicizing the Kadlec Hospital Open House was also sent to the CHRONICLE.

Other Projects

_____ - An Associated Press story stated that this woman died recently in California and that her doctor had named over-exposure to radioactivity as the cause of her death. It was claimed she had worked at Hanford Works at one time. Health Instrument, personnel files and AEC security files failed to show a record of her employment here. AP and local papers were told of this finding and local papers reported it.

G.E. Exodus - Request for confirmation or denial of a story alleging that G.E. had requested of the AEC that it be relieved of its responsibility for administration of Richland was received first from the SPOKESMAN-REVIEW and later the Tri-City HERALD. The story was carried by a hitherto unknown press service in the East which quoted as its source the Women's Wear Daily. The story quoted G.E. officials and Sumner Pike among others. It was emphatically denied after telephone calls by G.R. Prout to G.E. President Wilson and Sumner Pike. It was learned later that the HERALD planned originally to run a page-wide headline in red ink. The story finally appeared as a two-column front page story with the denial in the headline.

Health Instrument - Cut lines for about two dozen photographs of G.E. Health Instrument personnel at work here were prepared for the AEC for

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PRIVACY ACT MATERIAL REMOVED

submission with the photographs to Washington, D.C. for possible use in the next semi-annual report.

Acme Photos - A representative of Acme News Photos, which makes pictures for United Press, spent a day in Richland. The News Bureau helped him obtain the photographs he wanted and supplied him with considerable background information for a story to accompany them.

Wall Street JOURNAL- Interviews were arranged for a representative of this paper during May. The News Bureau accompanied him to talk to the Manager of the Employee and Community Relations Divisions and the Community Manager and supplied him with several photographs and background information on Richland and Hanford Works.

Vacationland - The PACIFIC NORTHWEST GROCER AND MEAT DELAER, a trade magazine, requested and was sent four photos of Richland scenes and a 600-word story on the town for possible use in a special vacationland edition of the magazine.

Construction Hiring - Lack of continuity in construction hiring forecasts led to the preparation of a news release which brought the expected need for workers up-to-date. The story was not used because of the decision to clear up all previous inconsistent figures at a press conference for the AEC Hanford Office Manager. The conference was written up by the News Bureau and distributed to key personnel.

Tool Dolly - This ingenious invention by General Electric, which is used at Hanford Works, was cleared to be photographed. Photographs and descriptive material was distributed in the area by the Nucleonics Department News Bureau, and simultaneously by the Company's General News Bureau in Schenectady, and the Advertising and Publicity Department Offices in San Francisco.

Organization Changes - The policy has been adopted by the News Bureau to write news stories about all organization changes affecting exempt personnel that are reported in organization announcements. Previously only job changes of key management personnel were publicized.

Railroad Spur - Two test runs were made over the newly completed ten miles of track that is the plant's new freight access from the south. Local newspapers representatives were invited to travel on both of the test runs. Community and Public Relations personnel accompanied news people on the trips. A public relations representative for Union Pacific covered the inspection of the track for his company. He was furnished with information that he needed to write news releases.

Construction Contracts - The cost of operation of Richland or Hanford Works can be kept at a minimum by attracting the lowest possible bids for work that is contracted.

Employee and Community Relations Divisions

Notices of intent to invite bids are sent to a large group of potential bidders by the Design and Construction Division's Contract Section. With the hope of attracting additional bids, the News Bureau, Community and Public Relations Division, re-writes the notices into news story form and sends them to some 70 daily newspapers in the Northwest as well as to certain magazines written expressly for contractors.

At a bid opening during May, the low bidder for the installation of irrigation facilities and grass seeding was Associated Engineers, Inc. of Palo Alto, California. Their bid was $89,462.05. The next lowest bid for this particular work was $92,741.80.

The News Bureau was informed by the Contract Section that the low bidder was not one of the firms regularly contacted, but that the firms learned of the invitation to bid through the press.

The saving to the project on this contract was $3,279.75, which is approximately the annual salary of one Publicity Writer. It seems possible that such savings have been effected in the past, and can be made in the future as a result of this News Bureau service.

PUBLIC INFORMATION - Community Divisions

Humane Society Publicity - At the request of the community councilman attempting to form a Humane Society Chapter in Richland, Community Divisions Public Information prepared newspaper and radio publicity aimed at stimulating interest in the Humane Society.

Traffic Safety Citations Publicity - The six national citations awarded Richland for its 1949 traffic and fire safety record were publicized in newspapers and on the radio, through the cooperation of Community Divisions Public Information and the News Bureau.

Traffic Safety Citations Banquet - The Community Divisions Public Information Supervisor was appointed by the Richland Safety Council to serve on the committee responsible for planning and directing the banquet at which community and Company leaders will accept national awards for Richland's outstanding 1949 traffic and fire safety record.

G.E. Management-Businessmen Meeting - A detailed program for a "Let's Get Better Acquainted" meeting between Company and community business leaders was outlined by Community Divisions Public Information.

Cancer Drive Report - Following his service as publicity chairman for the 1950 Benton County Cancer Drive, the Community Divisions Public Information Supervisor prepared an analytical report aimed at noting those factors and activities believed to have made the Campaign successful.

Community Relations Bulletin - A list of 114 Plant people believed to be interested in receiving the new Company publication, "Community Relations Bulletin," was compiled by Community Divisions Public Information, with the cooperation of the Public Functions and Services and News Bureau groups.

Employee and Community Relations Divisions

Patrol Instructions Letter - The Community Divisions Public Information Supervisor wrote an Instructions Letter aimed at discouraging members of the Patrol Division from discussing investigated cases off-the-job, or with unauthorized persons. The letter was presented to the Division Head, Community and Public Relations Division, for his approval and action.

Community Divisions' Activities - With the cooperation of all groups within the Community and Public Relations Division, Community Divisions' activities were reported to residents through newspaper stories, radio broadcasts, and other public information media.

Community and Plant Meetings Attended - The Community Divisions Public Information Supervisor attended the U.S. Army Engineers' meeting at Pasco to learn what recreational facilities will be made available as a result of McNary Dam waters; attended the May meeting of the Richland Community Council to keep abreast of its activities and proposals; attended the May meeting of the Richland Safety Council; attended all Community Divisions and Community and Public Relations Division staff meetings, in an effort to maintain close liaison between these groups.

PUBLIC INFORMATION - Public Functions and Services

Papers and Speakers - Thirty-one papers and/or texts on technical and general subjects reviewed and cleared through this group during May.

A presentation was prepared by Public Functions for Mr. Howard E. Callahan, Manager Employee and Community Relations Divisions, Principal Speaker at the graduation services of Trade Apprentices at Yakima.

Arrangements were made by this group for Miles G. Patrick of Project Engineering Divisions to speak before the Montana Section of American Chemical Society at Montana State University, Missoula, Montana on May 27.

A complimentary letter was received by the Public Functions Group from J. A. Pauze of the Papers and Speakers Committee at Schenectady concerning a recent report to the Papers and Speakers Committee.

The supervisor of Public Functions and Services spoke before a group of Senior Sutdents at Columbia High School on May 25, 1950, on the subject, "This Business of Radio Entertainment."

Development of an easy reference file for Speakers, Films and Institutional Booklets was begun during the month.

AudioVisual Aids - Twenty-six orders for General Electric Motion Pictures were filled during the month from requests from individuals, plant divisions, tri-city schools and community organizations.

Preparation of a tape-recording of the Kadlec Open House activities for presentation over radio station KALE was made by Public Functions and Services in conjunction with the program arranged by Special Programs.

Employee and Community Relations Divisions

A tape recording of a Safety Quiz program was prepared at the 700 Area Manufacturing Divisions Safety meeting by the originator, "Doctor Quizme" (Whitney A. Halteman) on May 11 and presented over radio station KWIE on Sunday, May 14.

Twelve radio scripts were prepared by this group for presentation over local radio stations on Safety and Community subjects during the month of May.

Art Work - Time Magazine-styled backgrounds were prepared for color film photos of Dr. W. I. Patnode for use in illustrating his talk at the 1950 Island Camps.

Six cartoons, one full-page photo layout and two column-head drawings were prepared for the Works NEWS.

A large volumn of additional finished art work was prepared by the artist during the month of May, including: Letterhead design in two colors on "The Nucleus," a news letter prepared for H.W. rotational training program; cover design in two colors and 12 drawings for Kadlec Hospital Open House booklet; also color design for a 14" x 17" Safety Poster; and design and final art work for a map and diagram of the Richland shelterbelt for local newspapers coverage.

Ken Staley, artist in Public Functions and Services, recently received recognition, along with his fellow artists of the Allied Arts Club, in the "Candid Camera" and also captured high honors in the Art Exhibit held in Richland.

Program Development Activities - A special assignment for the preparation of color slides and tape recordings to augment Dr. Winton I. Patnode's Association Island presentation was completed by this group.

Mr. and Mrs. Francis R. Line, world-wide lecturers from Pasadena, California were escorted on a "location" tour of Richland to assist them in their color filming of historical points of interest.

Public Functions assisted in the development of a weekly recorded program of Conferences held by the Richland Council of Churches.

Distribution of over 80 charts on the Nuclides and the supplemental pamphlets was made in response to a recent letter to all Divisions Managers that these items were available.

The Photo House supplied the Chemical Research Section - Process Studio Group - with a used motion picture camera, 16 mm for their use in photographing classified experiments.

Assistance was rendered the Transporation Division by the Photo House, which prepared special photographs required for their Progress Report.

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Employee and Community Relations Divisions

An increase was experienced in the number of 8" x 10" prints for the month of May, whereas a reduction was experienced totalling 108 negatives which constitutes a savings in material and labor.

Photo House services were expanded considerably during May because of requests received from Divisions not heretofor availing themselves of these facilities.

Preliminary "location" tours of the 700 Area were taken by the Public Functions Supervisor and the 700 Area Safety Engineer in preparation for the forthcoming "shooting schedules" of the commemorative film to be produced by this group.

EMPLOYEE INFORMATION - Special Programs

A letter to G.E. pensioners was prepared by Special Programs during May for use by the Employee Services group. This form letter will be sent to Hanford Works G.E. pensioners living outside the immediate area.

Employee Services Fund activities during May included preparation of a Fund Questionnaire and a letter from the General Manager mailed to all Hanford Works employees' houses informing them that because the required 70 per cent was not reached, the Services Fund will not go into effect. The Fund Questionnaire was prepared to determine whether or not the employees in general want specific changes made in the Fund, and to find out if a plan incorporating such changes would be accepted by a large majority of Hanford Works employees. Writing and production of the questionnaire was handled by Special Programs.

The generosity of Hanford Works people during the 1950 Red Cross Fund Campaign was commended by the General Manager in a letter prepared by Special Programs and published in the Hanford Works NEWS.

The current Savings Bond Independence Drive of the U.S. Treasury Department was given emphasis at Hanford Works through a letter from the General Manager urging participation in the G.E. Savings Plan and the G.E. Employees Savings and Stock Bonus Plan which was prepared by Special Programs during May and published in the June 2 issue of the Hanford Works NEWS.

The $1000 Hanford Works Suggestion Award which was made during April, received further publicity during May through a suggestion box poster which was produced through Special Programs. The number of suggestions received during May was approximately three times the number received during May of last year.

Kadlec Hospital's third annual Open House on May 12, which was publicized by Special Programs, attracted approximately 500 visitors. Held on National Hospital Day, the open house had as its theme "Know Your Hospital" and through it, the modern, efficient facilities which are available to

Hanford Works employees and their families were publicized. Advance publicity included the use of posters which were placed throughout Richland and Hanford Works, 13 news photographs with captions and 6 news stories which were prepared by Special Programs and released to local newspapers and radio stations through the News Bureau. Hanford Works NEWS carried advance publicity in four issues, including news stories, photographs and an editorial cartoon. Follow-up stories and news pictures covering the open-house were printed in the Hanford Works NEWS and released to the newspapers through the News Bureau. In addition, an on-the-spot type radio

[redacted]

broadcast over a local radio station while the evening portion of the hospital open-house was still in session. A graphic word picture of the hospital tour and the many exhibits prepared for the Open House at the hospital was thereby presented to a large portion of the Tri-city area listeners. A special Kadlec Hospital booklet, which was designed for distribution to open-house visitors and to hospital visitors throughout the year, was written and produced through Special Programs.

Telephone Building Open House after-the-fact news photographs with captions which were prepared through Special Programs, were printed in the Hanford Works NEWS, and released to local newspapers through the News Bureau.

The Home Nursing course for local residents which is being sponsored jointly by the Richland Public Health Section and by the Benton County Chapter of the American Red Cross was publicized during May through

Employee and Community Relations Divisions

A news heading sheet for the Rotational Training Program News entitled "The Nucleus" was designed and production arranged through Special Programs during May. Printing is being accomplished in the Plant Printing Section.

EMPLOYEE INFORMATION - Works News

Suggestion System Features were run throughout the month and plans were made for continuation of this trend through June.

Two "Can You Tell Me?" Columns were run during the month.

"Candid Camera" ran three pictures from Hanford Works on the front page. The insert came with the May 26 edition of the Works NEWS.

More Feature Pictures and Stories were run during May to meet the demand for human and local interest among the readers.

Obituaries will be run on plant people as a result of arrangements completed during May. Information will be received from the Employees Services Division.

Pensioners' Activities were publicized and such features will be carried in the future periodically to better keep in touch with former employees, now retired, and to give their friends an idea of what they're doing now. Information for these features will be obtained through the cooperation of the Employees Services Division.

Distribution was increased to 8,400 copies for the month.

Economic Series - Publication of the series of economics articles by Neil Carothers was begun May 5 and will be continued for an indefinite period of time.

A Ten-Page Issue was printed on May 5, an increase of two pages.

G-E Sales Plan Items were listed as available through the Schenectady Employees Store, followed by local available appliances listed in the two subsequent issues.

Compliments for Generosity during the Red Cross Drive were handed Hanford Works people in form of a front page letter by the Plant Manager.

Conclusion of the Cancer Drive was given play in this and the following issue.

Boosting Safety Shoe Use by buying through payroll deduction was done by a feature story on the Lifeline page giving details of types of shoes available, prices, how they might be purchased and the shoe bus and store schedule.

Employee and Community Relations Divisions

EMPLOYEE INFORMATION - Women's Activities

Two women's pages appeared in the Works NEWS during the month of May. "Women Try New Tricks with 'I Made it Myself' Arts and Crafts Projects", appeared on May 5. Courses offered under the G.E. Education Program and the Richland Public Schools Adult Evening School were featured. Pictures of employees taking courses in woodwork, art metals, oil painting, and millinery accompanied the article. Also featured was a G.E. Consumer's Institute recipe for corned beef.

Free patterns for summer sewing were featured in the May 19 issue of the Works NEWS. One-hundred free patterns were mailed to readers at their request. A G.E. Consumer's Institute recipe for easy hot rolls accompanied the feature along with a recipe for strawberry shortcake and an article on safe sun tanning.

"What's Doing?" is a column written as a service to Hanford Works people interested in local recreation schedules. Publicized this month were the Richland Riders Club horse show, concert of the Richland Symphony Orchestra, softball jamboree, Kadlec Hospital open house, Dormitory Club Snake River excursion, soprano Mildred Knapcik, YWCA Canasta, "Slim for Slacks" and tennis lessons, D &C Gardenaires flower show, Richland Glider Club sail plane heat, United World Federalist rally, A.A.U.W. "Town Hall" series, P.T.A. Pre-School Health Round-up, I-Mac trips to Nesika Lodge, and Mt. Hood, picnics in Riverside Park, Tiel Tulips, growing in community Rose Gardens and help on vacation planning.

Nurses Aides at Kadlec Hospital who are eligible to become licensed Practical Nurses under the new state law, were the subject of a story and pictures in the May 5 Works NEWS and local newspapers.

The "Town Hall" series presented by the American Association of University Women was publicized through a story in the May 26 issue of the Works NEWS which included brief descriptions of the speakers in the series.

"Share a Ride" answered 390 requests for rides and riders for week end and vacation trips during the month of May. Calls were received for the following destinations: Walla Walla, Seattle, Portland, Yakima, Spokane, Enumclaw, Denver, Reno, Salt Lake, Los Angeles, Birmingham, Louisville, Chicago; Wilkes Barre, Pa.; Bismark, N.D. to Richland; Calgary, Canada ; Casper, Wyo.; Billings, Mont.; Minneapolis, Minn.; St. Paul, Minn.; Memphis, Tenn.; Sheridan, Wyo.; Detroit, Mich.; Indianapolis, Ind.; Fargo, N.D.; Cheyenne, Wyo; St. Louis, Mo.; Great Falls, Mont.; Pittsburg, Pa.; Beaumont, Corpus Christe, Tex.; Kansas City, Kansas City to Richland; Oklahoma, Texas, Louisiana, Missouri, Alabama, Southern California, Tennessee, Illinois, Nebraska, Ohio, Minnesota.

A feature article about Richland's women's chorus, the "Treble Clef," was prepared for the G-E MONOGRAM. Pictures and cut lines accompanied the article.

Employee and Community Relations Divisions

Two round-up stories on the G.E. Parks and Recreation Division and Richland Public Schools co-sponsored summer recreation program, were written for Works NEWS and local newspaper release. A story on the registration of Richland boys for the YMCA camp at Clear Lake also pointed out the availability of camp facilities for family and work party groups before official camping season starts. A short story was written on the outdoor fire places in Richland's Riverside Park. A story was written on the summer band concerts to be held in the park.

One hundred letters were sent out to Northwest resorts and recreation areas to bring the vacation files up-to-date. Material will be loaned to employees through plant mail upon their request. Information was obtained on Oregon, Washington, Montana, Idaho, and Canada.

24 1217701

Hanford Works Photo House Production during May, 1950

DIVISIONS	TYPE OF PRINTS								
	8"x10"	5"x7"	2"x4"	2"x2"	Negatives	Color Slides	Prefab. "A" Badges	Laminated	Motion Pictures (16 mm.)
EMPLOYEE & COMMUNITY RELATIONS									
EMPLOYMENT			498	2094	260		498	178	
SPECIAL PROGRAMS	74				36				
NEWS BUREAU	107				58				
WORKS NEWS	194				100				
PUBLIC FUNCTIONS	97				22	60			
AEC SECURITY	166								
TRANSPORTATION	363				74				
COMMUNITY DIVISIONS									
COMM. ENGINEERING	74				11				
COMM. SAFETY	24				24				
COMM. ACTIVITIES	7				7				
MEDICAL DIVISIONS	20	24			20	5			
SAFETY DIVISION	74								
TECHNICAL DIVISIONS									
CHEMICAL RESEARCH GROUP ROTATIONAL TRAINING	25				12				900 ft. (16 mm.)
MANUFACTURING DIVS.	10								
PURCHASING & STORES DIVS.									
STORES RECEIVING	12				12				
HEALTH INSTRUMENT	10				7				
DESIGN DIVISION									
REPRODUCTION	6				3				
TOTALS	1218	24	498	2094	646	65	498	178	900 ft. (16 mm.)

NEGATIVES	646
PRINTS	3810
PHOTO ASSIGNMENTS	74

1217702

Employee and Community Relations Divisions

Union Relations and Wage Rates

Union Relations - GE Personnel:

A Decision and Direction of Election was received from the N.L.R.B. on May 15, 1950, which stated that all employees at the Kadlec Hospital, including nurses' aides and orderlies-ambulance drivers, but excluding doctors, registered nurses, other professional employees, technicians, office and clerical employees, watchmen, and supervisors constitute a unit appropriate for the purposes of collective bargaining. It further stated that an election should be conducted within thirty days from May 10, 1950, the date of the Decision.

On May 23, in a meeting with N.L.R.B. officials, plans were made for the above-mentioned election which was scheduled for June 9.

A revised Instructions Letter No. 67 was issued, clarifying the various types of possible overtime -- call-in time, scheduled overtime and hold-over time.

On May 22, a special committee composed of representatives from the Building Trades Unions and the Hanford Atomic Metal Trades Council met with Company officials for the purpose of discussing the standard practices in industry as they apply to construction and maintenance work.

The first negotiation meeting between the Company and the Hanford Atomic Metal Trades Council for the purpose of discussing wage adjustments was held on Tuesday, May 23, 1950. The union demands were for a straight $10.00 a week raise for all members of the bargaining unit to be retroactive to April 11, 1950. The union contended that their request for wage increases was prompted by three factors: (1) There have been nationwide increases in other plants and other industries; (2) Housing costs in Richland have increased due to modification of leases in August, 1949; and (3) other living costs, food, clothing, etc., have increased.

The Company pointed out that they found nothing significant in the proposed retroactive date of April 11, 1950, and were unwilling to discuss any effective date until it had been established that wages paid at Hanford Works were less than those paid in comparable industries in the Pacific Northwest. The Council was asked to consider the fringe benefits which accrue to operations personnel on the project and which should be considered, along with take-home wages, in determining whether or not the pay scale is fair and equitable.

It was mutually agreed to adjourn and reconvene during the week of May 29 to June 2 so that both parties could review the demands and discussion of this initial session. However, due to the unexpected illness of the spokesman for the HAMTC, further negotiations were postponed until June 12, 1950.

1217703

Employee and Community Relations Divisions

Grievance Statistics:

Eighteen grievance reports were received during the month, bringing the total received this year to 93. Two hundred sixty-nine grievances have been received since the grievance procedure was established. Grievances were received this month from the following divisions:

Accounting Payroll	7
H.I. Operational	1
Mfg. "P"	2
Mfg. "S"	1
Mfg. Transportation	6
Village Labor	1
Total	18

Employee grievance reports received during the month of May were regarding the following subjects:

Jurisdiction	3
Overtime Rates	1
Seniority	3
Wage Rates	4
Miscellaneous	7
Total	18

The status of all grievances received to date is as follows:

	1949	1950	Total
Settled satisfactorily, Step I	55	18	73
Not settled satisfactorily, Step I	121	75	196

Of the 75 grievances received this year which were not settled at the Step I level, 19 have been satisfactorily processed at the Step II level and were settled. Only 13% of the total grievances received this year have been submitted by employees outside the bargaining unit as compared with 7% of the total at the end of last month.

Meetings:

The Council Grievance Committee and the Company Negotiating Committee met once during the month for the purpose of processing grievances at the Step II level.

Union Relations - Subcontractor Personnel

The issue of Daylight Saving Time versus Pacific Standard Time within the construction program continued to demand a disproportionate amount of the time and efforts of this Division during the month.

Employee and Community Relations Divisions

The period from May 1 to May 4, inclusive, was one of confusion in which the Project operated on DST, some members of some crafts reported on DST, while others reported on Standard Time. On May 2, the Teamsters did not report for work until 8:00 a.m. Standard Time, which resulted in those workers who depend on Project transportation not being on the job until 9:00 a.m. DST. During these 4 days many workers were paid for only 6½ or 7 hours.

On May 2, 1950, both the Pasco and Kennewick City Councils rejected DST in favor of PST. This determination resulted in a joint "Ultimatum" from the Unions demanding that the job be placed on PST. A telegram reply from AJ on the same day expressed disagreement with Labor's position, established the fact that a "Dispute" existed as provided under Article XII of the Master Agreement, and demanded that the dispute proceed to arbitration in accordance with the terms of that Agreement.

At a meeting in the Pasco Labor Temple on May 4, 1950, attended by Atkinson-Jones and General Electric representatives, as well as representatives of most of the Local Unions, an agreement was reached whereby arbitration of the dispute would be carried out and a decision rendered by May 25, 1950. During the ensuing period, Atkinson-Jones agreed to return the job to PST without prejudice. The latter provision was carried out on the following day.

On May 6, 1950, the Arbitration Committee, composed of Messrs. Aikins and Myers for the Unions, Messrs. Fassett and Fitzmaurice for Atkinson-Jones, met at the Pasco Hotel. At this meeting the Unions offered a compromise proposal; viz., the various crafts would accept DST on the Project for payment of all wages lost as a result of the confusion from May 1, to May 4, inclusive, an amount estimated at $17,500.

After due consideration the proposal was rejected in the second meeting of the Arbitration Committee on May 16, 1950. The representatives countered by offering a letter from their Attorney, Mr. J. J. Molthan, which advised them to "categorically reject the arbitration proposal of your (AJ) firm."

Subsequent correspondence and a new proposed agreement to arbitrate with the Building Trades Council were received from Mr. Molthan. The proposal was promptly rejected by both Atkinson-Jones and General Electric and each Union was notified by telegram on May 29, 1950 of Atkinson-Jones' insistence that arbitration proceed according to the original agreement. The telegram resulted in a June 1, 1950 meeting of the Arbitration Committee at which time the Union representatives concurred with the proposal to select the fifth man and conduct a joint arbitration to include al Unions signatory to the Master Agreement.

Conciliation Service has been notified and stand ready to assist upon request.

Employee and Community Relations Division

All negotiations between Atkinson-Jones and the Office Workers Local No 100, as well as the Teamsters Local No. 556, were attended by a member of this Division.

Negotiations of wage revisions applicable to Ironworkers continued during the month. The Union's demand is for an increase for Reinforcing Ironworkers from $2.10 to $2.25.

A meeting of the Joint Board of the United Association of Plumbers and Steamfitters in Seattle was attended by a member of this Division. The discussion involved travel time to Plumbers assigned to work outside the barricaded area.

Several meetings were attended in regard to the current question of work to be done by General Electric forces.

Meetings were attended regarding the establishment of Plumbing shops in Richland.

Requests for Reimbursement Authorizations:

Bricklayer - Overtime Rates
Military Pay Allowance - Non-Manual, Nonexempt Employees
Overtime Compensation - Mealtime
Plumbers - Medical Rejects
Holiday Payments - Non-Manual, Nonexempt Employees

Reimbursement Authorizations Received:

Overtime Compensation - Mealtime
Plumbers - Medical Rejects
Military Pay Allowance, Non-Manual, Nonexempt Employees

Work Stoppages:

A threatened work stoppage involved refusal by the Union to furnish Reinforcing Iron Workers to Erwin (Laundry 200 W) for the prevailing Project rate of $2.10 per hour. Considerable discussion was had with the Business Agent of the Iron Workers, which resulted in his agreement to furnish men at $2.10. No actual time was lost.

Wage Rates:

During the month of May, 1950, papers were processed entailing the investigation and approval of 833 transfers, requisitions, automatic and merit increases, occupational changes, reactivations, new hires, etc.

The 833 transactions involving actual rate or classification changes and the studies including 47 interdivisional transfers, 182 job reclassifications, 323 automatic increases, 9 merit increases, 14 nonexempt to exempt changes, 26 reactivations, 134 new hires and 98 requisitions.

Employee and Community Relations Divisions

During the month a series of conferences were held with division representatives regarding the classification of employees under the application of the Fair Labor Standards Act and the Walsh-Healey Act.

As a result of the Divisions Managers review, a total of 61 individuals out of a total of approximately 1600 now classified as exempt, were said to come under the provisions of the Federal regulations.

At the month end the Wage Rate Division was in the process of evaluating the 61 jobs to determine their proper job rate as nonexempt functions.

Proposed rules which, if accepted by the Hanford Atomic Metal Trades Council and approved by the Atomic Energy Commission for reimbursement, will enable us to give comparable treatment to employees laid off for lack of work and those who are downgraded in lieu of layoff, were forwarded to the Union Relations Division for presentation to the HAMTC.

In connection with the recent Pension Board action in approving reinstatement of the service of several Hanford Works employees, the question of its effect on automatic increases, vacations, etc., was brought up. Our New York Office was queried on prevailing company policy and counseled that the reimstatement of service benefited the employee only insofar as fringe issues were concerned, and the restoration of service was not intended to affect an employee's rate of pay.

During the period the regular program of job reviews was continued. In addition, a special study was made of all jobs in the 300 Area. The evaluations of these functions were later discussed in detail with the Hanford Atomic Metal Trades Council representative.

1217707

COMMUNITY DIVISIONS
SUMMARY - MAY, 1950

ORGANIZATION AND PERSONNEL

Number of employees on roll:	Beg. of month	End of month
Community Administration	6	6
Community Accounting	26	25
Community Public Works	430	435
Community Safety	3	3
Community Commercial Facilities	15	15
Community Housing	44	44
Community Fire	102	102
Community Patrol	84	84
Community Activities	12	13
	722	727

There was an increase of five employees in the Community Divisions during the month of May, 1950.

	Reduced	Increased
Community Administration	-	-
Community Accounting	1	-
Community Public Works	-	5
Community Safety	-	-
Community Commercial Facilities	-	-
Community Housing	-	-
Community Fire	-	-
Community Patrol	-	-
Community Activities	-	1
	1	6

GENERAL

Richland was awarded first place among the three cities (Los Alamos, Oak Ridge and Richland) in the National Traffic Safety Contest, by the National Safety Council. Richland also received the highest score of any city in any population class in the same contest.

Housing applications increased from two hundred ninety (290), on April 30, 1950, to two hundred ninety-seven (297), on May 31, 1950.

The following new businesses began operation during May: Stanley Randolph Insurance Agency, Milhaven Kennels, Amusement Enterprises, Inc., and Kennell-Ellis Photographic Studios.

In anticipation of a high Columbia River water run-off level, several precautionary measures have been taken to protect Community property and equipment. At the Richland drainage ditch two portable pumping units have been installed and put in service pumping ditch flow over the dike. Pumping was commenced on May 21, 1950.

MTBinrs/jak
6/12/50

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COMMUNITY DIVISIONS
PUBLIC WORKS DIVISIONS
MAY, 1950

ORGANIZATION AND PERSONNEL

	EXEMPT	NON-EXEMPT	TOTAL
Number of employees on payroll:			
April 30, 1950	57	373	430
May 31, 1950	57	378	435
Personnel changes made during month:			
New Employees	1	14	
Transfers from Minor Construction		1	
Transfers to Maintenance		2	
Transfers to Stores Transportation		1	
Transfers to Power		4	
Transfers to Transportation		2	
Transfers to Community Accounting	1		
Leave of Absence		1	

GENERAL

Surveys were made of river conditions for both the Yakima and Columbia Rivers to assure maximum flood protection with resources available. Pumps were set and pumping started when the water level reached 341' at the drainage ditch near Gowen Street. An emergency pump was set at the sewage lift station to handle any leakage into the sewer system which might occur due to high water. This is necessary because of the already overloaded condition of the pumps at this lift station would cause sewage to back up into basements if larger amounts of water should leak into the sewer system The open place in the dike around the sewage plant was closed by removing mud and vegetation from the drain ditch and filling with soil well compacted. The dike level was brought up to elevation 355' at this point and will be left there until a higher elevation is indicated. The effluent from the old plant is being pumped over the dike, and the effluent from the new plant was taken out thru the dike at elevation 348' where it will flow out by gravity until river elevation at the park gauge board reaches 349', at which time the flap valve at the outfall will close and the effluent will be pumped over the dike. The required pump is now in place.

Bids have been received and award will be made next week on the Irrigation installation and seeding of the Carmichael Jr. High and the Spaulding School, and Columbia High Playground and additional irrigation at Riverside Park. Work will start immediately. Drawings and specifications are completed for a new well to be added to the Richland Water System this summer.

1217709

Community Public Works Divisions

PROJECTS

C-203-III - Water Supply & Sewage Facilities for Richland Village and North Richland Construction Camp - 85% payment made to Subcontractor. Final inspection exceptions are being cleared. Modification of directive is in progress Job is approximately 80% complete.

C-232-Part II - Construction of Robert Gray Jr. High School
C-233-Part II - Construction of Spalding School - Bids were opened 5-22-50 incidental to the work covered under Specifications HW-4548 and HW-4549. Associated Engineers of Palo Alto, California, were low bidders and have been recommended for award.

A field release covering the site work at the five locations covered under the HW specification will be released early in June. The work will be closely coordinated with irrigation installations and grass seeding to prevent unnecessary wind erosion of the areas.

C-282-R - Richland Community Dust & Pollen Program - Tail ditches have been washed out for Shelterbelt sections. Minor clean-up along the belt has been completed and the watering is now being charged to grounds maintenance.

No grass seeding was done during the month. This work should be started as soon as manpower can be made available.

No street trees were planted during the month. This work was stopped because the trees advanced into leaf in the nursery. The supply of street trees in the nursery has been well exhausted during the planting season. No inventory as yet has been taken. There are no large quantities of street trees left in stock. The trees on hand will help supply material for parks and public areas, and it will be necessary to purchase street trees as needed for fall street tree program.

C-348 - Cover Administration Building #703 - Asbestos Siding - Cost reports and inspection reports were issued. Exceptions were cleared, and request to close project was issued 5-25-50.

C-351-R - Installation of Irrigation Systems - Public Grounds - Bids were opened 5-22-50 incidental to the work covered under specifications HW-4548 and 4549. Associated Engineers of Palo Alto, California were low bidders and have been recommended for award.

Topog and cross-sections were taken on Columbia High Playground.

Irrigation heads were staked at Riverside Park.

C-352 - Jadwin Avenue - Jadwin Avenue Extension was accepted 5-26-50, with few exceptions.

Community Public Works Divisions

PROJECTS (CONTD)

C-356 - Recreational Facilities - Equipment list was issued to Material Control Group. Field Release (1) was prepared 5-22-50.

C-357 - Additional Capacity of Richland Sewage Lift Station - Contract Section is ready to advertise for bidders. Procurement of General Electric furnished equipment is in progress.

C-359 - Duane Avenue - Field Release (1) was issued 5-22-50. Plans and Specifications are complete and ready for contract.

C-363 - Prefab Rehabilitation - Letter issued to Housing Division on inspection of siding at 1512 Perkins. Awaiting AEC approval.

C-367 - Moving 10 Prefabs from Columbia Camp to Richland - Specifications were issued to Contract Section for checking.

C-372 - Exterior Painting - 141 Houses, 24 Dorms, and Bldgs. 770, 770-A, 770-B - Field Release (1) issued 5-26-50. Plans and specifications 90% complete.

C-373 - Roof Replacement - South Storage Reservoir - Project was submitted to little A & B Committee. Note was written to Accounting Division to revise appropriation request.

C-374 - Casey Street Improvement - Field Release (1) was issued 5-22-50. Plans and specifications are complete and ready for Contract.

C-376 - Irrigation Laterals - Carmichael & Spalding - Field Release (1) was issued 5-22-50. Bids were opened 5-22-50. Associated Engineers of Palo Alto, California were low bidders.

C-382 - Additional Well 1100-D - Duke Field Area - Drawings and specifications complete. Procurement of materials is being made. Field release and cost code summary prepared and issued.

"S" PROJECTS

S-86 - Water Shut-Off Valves, Precuts - Letter written requesting cancellation of AEC informal approval #32.

S-229 - Furnace Cleaning, Conventional Houses - Approximately 96% complete.

S-255-A - Levee Irrigation - Irrigation plans are being drawn for the remaining new construction work at levee from Newton to Gowan Street.

S-258 - B. O. Q. Dorm Re-Roofing - Field Release (1) issued 5-22-50.

1217711

Community Public Works Divisions

"S" PROJECTS (CONTD)

S-269 - Fence Around Water Recharge Basins - Fair price estimate made 5-25-50. Field Release (1) issued 5-22-50. Bids opened 5-25-50.

S-290 - Traffic Signals - Field release (2) issued 5-25-50. Bids opened 5-17-50.

S-299 - Radio Communication System - Fire Division - Field release (1) issued 5-25-50. Rough draft for specifications is complete.

S-311 - Remodeling Building 722-A - Field release (1) issued 5-25-50. Bids opened 5-11-50. Low bidder above appropriated amount - obtaining additional funds.

S-321 - Rearrangement of Steam Pits - Dorms - Field release issued 5-24-50. Working on specifications and plans.

S-333 - Air Conditioning - Dorms - Field release (1) issued 5-26-50. Plans and specifications 75% complete.

S-366 - Exterior Painting - Hospital - Medical-Dental & Municipal Buildings - Project proposal and appropriation request were issued for processing.

ENGINEERING DIVISION

Number of Employees on Payroll:	EXEMPT	NON-EXEMPT	TOTAL
April 30, 1950	17	12	29
May 31, 1950	18	13	31

Two new employees were added during the Month of May.

Miscellaneous

Material procurement items handled during the month are as follows:

Purchase Requisitions	75
Store Stock Requests	10
Store Stock Adjustment Requests	3
Purchase Orders Expedited	16

Vendor contacts concerning materials and equipment were made for Housing Division as well as Public Works Divisions.

The following number of jobs were completed on continuous engineering service requests:

ESR #97-CH - Elec. & Struct. Inspections	84
ESR #118-CF - Approved Alteration Permits	6
ESR #207-CA - Alteration Permits Approved	1

Community Public Works Divisions

Miscellaneous (Contd)

The following Engineering Service Requests were completed or cancelled:

Job No.	Description	Date Completed
232-CF	Kaiser & Johnson Food & Drug Store	5-1-50
271-PW	Casey Street Improvement	5 29-50
295-CH	Advisability of Revising Cold Air Returns (Precuts)	5-11-50
333-CH	Air Conditioning Controls in Dorms	5-29-50
344-CF	Service Drive Lighting in No. Commercial Area	5-29-50
361-SS	Changing Hot Water Steam Supply to 700 Area Bldgs.	5-25-50
368-FS	Fire Hydrant at Knight and Flagler	5-30-50
371-CA	Eliminate Flooring Nails Rising Through Linoleum	5-1 50

Technical information and instructions were furnished the following prospective facility operators, clubs, churches, and schools.

Union Club - Preliminary Plans
Rifle Club - Regarding Installation of Indoor Pistol Range
Carnation Milk Company - Installation of gas tank and pump

The Status of Commercial Facility Division Sponsored Construction is as follows:

Theater - Construction started 12-14-49 - 50% complete

Cascade Radio Station - Still awaiting information

Morgan & Olberg Drugstore - Approved 10-18-49 - Awaiting detailed plans

Ellis Photographic Studio - Construction started 2 28-50 - 95% complete

McVicker Food Store - Construction started 5-22-50 - 10% complete

Playland Park - Construction started 4-12 50 - 90% complete

Spencer-Kirkpatrick Insurance - Construction started 5-3-50 - 50% complete

Joseph's Investment Building - Construction started 5-22-50 - 25% complete

Carnation Company - Reviewed plans 5-18-50 - Awaiting start of construction

Johnny's Minute Man Service Building Addition - Reviewing plans

Community Public Works Divisions

The Status of Community Activities Division Construction is as follows:

Latter Day Saints Church - Construction started 2-5-49 - 95% complete

South Side United Protestant Church - Construction started 11-5-48 - 99% complete

Richland Baptist Church - Construction started 11-27-48 - 99% complete

Assembly of God Church - Construction started 5-23-50 - 1% complete

Church of Nazarene - Construction started 4-12-49 - 99% complete

Church of Christ - Construction started 12-19-49 - 90% complete

Swimming Pool Association - Awaiting information

Reorganized Latter Day Saints Church - Construction started 8-22-49 - 25% complete

Christian Science Society - Awaiting information

Catholic Church - Awaiting information

Northwest United Protestant Church - Approved 3-8-50 - Awaiting detailed plans.

Westside United Protestant Church - Approved 10-14-49 - Awaiting detailed plans

First Baptist Church - Approved 3-22-50 - Awaiting detailed plans

Episcopal Church - Awaiting information

Central United Protestant Church - Awaiting information

Redeemer Lutheran Church - Approved 3-22-50

Relocation of Masonic Temple - Construction started 5-19-50 - 50% complete

The Status of School Construction is as follows:

Chief Joseph School - Construction started 4-24-50 - Subs to issuance of Bldg. permit. No further work unless requested by AEC.

New Elementary School - Awaiting information

Agricultural Building - Construction started 3-6 50 - 75% complete

1217714

Community Public Works Divisions

Alteration Permit Progress is as follows:

Facility	Description	Approved	Remarks
The Mart	Alteration Elect. System	12-6-49	95% complete
Desert Inn	Remodel Entrance	3-7-50	90% complete
The Mart	Install Air. Cond. Evergreen Lounge	3-28-50	95% complete
Milhaven Kennels	Extend present dog kennels	4-27-50	75% complete
The Mart	Additional Elect. System (Alterations)	2-2-50	95% complete
Stanley Randolph Ins. Brokers	Const. 2 interior walls forming room	5 3-50	95% complete
The Mart	Structural Alterations	10-5-49	95% complete
Desert Inn	Install Air Cond. North Wing	5-11-50	25% complete
Richland Softball Association	Press Shack & Scoreboard	5-5-50	95% complete
The Mart	Install new doors	3-24-50	95% complete
Depot Cafe	Alt. for draining waste from sink	5-8-50	95% complete

Leased Areas were surveyed and plot plans prepared for the following:

Joseph's Investment Building

The following work was done on streets and storm sewers:

Relief ditch for culvert west of Riding Academy on Van Giesen was excavated.

Proceedings started to replace bridge across canal on McMurray Road between George Washington Way and Stevens Drive with a culvert pipe.

River gauge was placed on Van Giesen Bridge over the Yakima River.

Work done on grounds maintenance is as follows:

The hospital and public health building grounds were fertilized.

1217715

Community Public Works Divisions

Work done on irrigation is as follows:

Engineering assistance was given in regard to proper utilization of sprinkler systems.

Swift Boulevard was converted from full circle sprinklers to part circle sprinklers, resulting in less spraying of cars traveling on the street.

Quick-coupling installations are being operated by the main control valve in an attempt to reduce manpower requirements in these areas. This method should be changed to single unit operations because the control valves are gate valves and will not stand up under continued opening and closing.

Preliminary inspection was made of irrigation extensions being replaced by the Corps of Engineers east of the Desert Inn. Possible exceptions were pointed out.

Report on garage building is as follows:

Eight garage permits have been issued. Four garages have been completed and checked. A number of applications were received and being processed.

Follow-up on Unit Price contractor is being made and reports submitted weekly by members of the Community Engineering Division.

OPERATION AND MAINTENANCE DIVISION
MAINTENANCE SECTION

Organization and Personnel

	EXEMPT	NON-EXEMPT	TOTAL
April 30, 1950	19	183	202
May 31, 1950	19	181	200

Personnel changes made during the month:

Transfers to Maintenance	2
Transfers to Power	1
Rehire	1

Miscellaneous

Renovations of vacant houses completed during May amounted to 39 orders, 23 being conventional houses and the remaining 17 prefab houses. The work involved on these orders include 29 complete interior paint jobs, 8 partial paint jobs, and miscellaneous repairs and cleaning as required to bring these houses to an acceptable condition. There are 14 open renovation orders on hand at the close of the month.

121716

Miscellaneous (Contd)

Painting of walls that were water stained was completed in 42 houses and the interior of 47 baths or kitchens were wholly or partly painted and the south wing of the hospital clinic had walls, ceilings, and woodwork refinished. Restrooms in 770-A and 1131 Garage were painted with enamel. Approximately 20 houses had walls repaired so tenant could do his own painting.

Spray painting was completed on 100 gas cylinders, and 2 trash wagons, and spraying of Cosmoline on 7 trucks (A. E. C.) that are being shipped overseas was also completed. Spray painting of all community fire plugs, which had been started earlier in the year, was completed on May 31, 1950.

Nine houses had floors refinished and one tract house was completely painted on interior.

The usual type of work completed in the Sign Shop with traffic signs having priority.

A total of 4 conventional houses and 75 prefabs were completed in the interior paint program. This work includes all minor carpentry repair and painting throughout.

Carpentry labor as necessary to prepare 45 railroad carloads of excess material for shipment was furnished to Stores Division.

Floors in 45 "A & J" houses and 27 Precuts were leveled and doors eased through jacking, shimming, and reinforcing of floor joists, and deteriorated timbers in foundations of 26 Prefab houses were replaced.

Leaking or cracked concrete bath tubs were replaced with metal bath tubs in 34 houses and tile-board installed at the same time. In addition to these 34 tile-board completions, tile-board was also installed in 68 houses where bath tubs were not replaced, or a total of 102 tile-board completions.

Remodeling of space to provide 4 additional industrial medical offices in Kadlec Hospital was completed, and the remodeling and installation of acoustic tile in Room 333 at this same location was also finished.

Overhaul of evaporative coolers at the hospital and clinic buildings is now 90% complete, this work including the installation of overflow drain pans and secondary drain lines to eliminate recurrence of damage to ceilings and walls due to drain line stoppage.

Revision and expansion of rest room space and facilities was completed at 1131 bus dispatcher's building.

Partitions, light fixtures, and other essentials were installed in Warehouse #6 to provide additional office space for Stores Divisions' employees.

1217717

Miscellaneous (Contd)

Remodeling work was completed in Building 705 which utilized unnecessary space in the lobby to provide additional space for interviewers offices.

The roof of Coordinate Club hutment, which was in leaking condition, was repaired by application of hot asphalt, fiber glass and aluminum coating.

Concrete walkways (which originally were laid at too low a grade and were constantly flooded by irrigation water) were raised at the rear of 33 Ranch houses by pouring concrete over existing walks.

Venetian blinds were installed on 550 windows in 700 Area, this being part of program for elimination of canvas awnings which required constant maintenance.

A "settling" tank was fabricated and installed in a 3" water line from Columbia well field which serves several tract houses. Considerable trouble had been encountered due to the large amount of sand being carried by this line, and present indications are that this tank is successfully settling out a large percentage of this sand.

Work necessary to place all irrigation systems in operating condition has been completed, and several hundred feet of "invasion" or "rain-maker" pipe has been placed to serve areas newly seeded to grass.

The River Pump at Columbia field was raised to its high water position and 5 pumps and necessary discharge lines have been installed to handle drainage and sewage pumping during the high water period.

Domestic Well 1182-B was overhauled and is back in service.

Air compressor at Commercial Laundry had a bearing failure and was overhauled while out of service.

Utility closets in 18 Prefabs were lined with celotex for insulation and condensation elimination purposes.

A total of 15 water service taps were made in mains at school and park areas, these take-offs to be tied to irrigation systems which will be installed by subcontractors, and water and sewer services were run to Amusement Center on Stevens Drive.

A listing of miscellaneous work completed during May, 1950, includes replacement of 7 kitchen sinks, 3 laundry trays, 21 water heaters, 2 lavatories, 2 toilets, 6 prefab stop and waste valves and 11 refrigerator units; repair or replacement of linoleum on 103 floors and 100 kitchen sink boards, and the sealing and caulking of linoleum edge around sinks in 472 houses; rebuilding of 12 electric ranges; repair of 20 roofs, 124 screen doors or windows; reupholstering of 19 chairs, 9 cushions; recovering of 3 pool tables; repair and refinishing of 11 tables, 9 chairs and 6 chests of drawers.

Community Public Works Divisions

Service Order Group

A total of 2170 orders were completed by the Service Order Group, 90.1% of this work being for Housing Division, 6.3% for General Division, 1.6% for Concessions, .8% Public Works, 1.4% for various other divisions.

The following is a status report on service orders as of the end of May:

On hand at beginning of month	256 orders
Received during month	2042 orders
Completed during month	2170 orders
On hand at end of month	128 orders

UTILITIES SECTION

Organization and Personnel

	EXEMPT	NON-EXEMPT	TOTAL
April 30, 1950	9	56	65
May 31, 1950	9	55	64

Personnel changes made during the month:

Leave of absence	1

Miscellaneous

In anticipation of a high Columbia River water run-off level, several precautionary measures have been taken to protect Community property and equipment. At the Richland drainage ditch two portable pumping units have been installed and put in service pumping ditch flow over the dike. Pumping was commenced on May 21st. The Sewage Lift Station overflow through the dike has been blanked off, and an emergency portable pumping unit installed. At the Sewage Treatment plant the effluent ditch from #1 Plant has been diked off, portable pumping units installed and the effluent flow from plant #1 is being pumped over the dike. This pumping was commenced May 26th. Another pumping unit is in place to handle the #2 plant effluent in case the river exceeds elevation 348'.

Steam Facilities

Routine normal operations were carried on throughout the month. The steam load has necessitated keeping two boilers in service.

Overhaul work on #3 boiler has been completed. It was necessary to replace all boiler tube abrasion protection sleeves on this boiler. Most of the tube sleeves had been cut through but the tubes had not been seriously damaged.

A heat exchanger is being installed on the continuous blowdown. Work on this job is to be completed by the end of June.

1217719

Community Public Works Divisions

Steam Facilities (Contd)

Operation of boilers at the 1131 Garage was discontinued on May 19th.

Central Steam Plant

Steam Generated	21,194 M. lbs.
Steam Sent Out	16,174 M. lbs.
Coal Consumed	2,896 M. lbs.

Domestic Water

Routine normal operations have been continued throughout the month. Water production from wells has been distributed to allow underground water table to recover in areas where it was low because of late irrigation ditch opening. Water table measurements at present indicate that the water table has recovered to normal.

A sand trap has been installed in the service water line to tract houses south of Columbia field where considerable trouble with sand in the water has been encountered. Experience up to date indicates that the sand trap is very satisfactory.

Domestic Water System

	Well Production Million Gallons	Avg. Daily Production	Total Consumption Million Gallons	Avg. Daily Consumption
Richland	131.7435	4.2498	286.0498	9.2274
North Richland	143.4582	4.6277	33.3938	1.0772
Columbia Field	79.8345	2.5753		
300 Area			34.9642	1.1279
Totals	355.0362	11.4528	354.4078	11.4325

Sewage System

Routine normal operations have been continued throughout the month. All major work on Project C-203-III is nearing completion. Grass seeding of the area has been started.

The digester at #1 disposal plant has completely worked out. Production of gas has completely stopped. The digester has been safety checked for explosion hazard, and has been cleared for inside work. At present the digester has been emptied down to about 8 feet from the bottom. Some difficulty has been encountered in removing the heavy blanket material through the sludge draw-off pipe lines. It may be necessary to use a pumping unit to completely empty the digester.

1217720

Community Public Works Divisions

Sewage System (Contd)

Sewerage

	Total Sewage Flow Million Gallons	Average Daily Flow Million G.P.D.	Average Rate Flow Gals. per min.
Plant No. 1	26.000	0.8387	582
Plant No. 2	48.200	1.5548	1080
Totals	74.200	2.3935	1662

Irrigation System

Operations have been normal throughout the month. All irrigation stations and systems have been put in operation Repairs necessary to irrigation water mains and outlets have been excessive. This is to be expected due to the age, condition, and usage of these lines.

A surge chamber has been installed at #1 irrigation station on the gravity suction line to the pumps in an attempt to eliminate repeated breaks and leaks in the line under Lee Boulevard.

LABOR SECTION

Organization and Personnel

	EXEMPT	NON-EXEMPT	TOTAL
Number of Employees on Payroll:			
April 30, 1950	8	120	128
May 31, 1950	8	127	135

Personnel changes made during the month:

New Employees	12
Transfers to Transportation	2
Transfers to Power	3
Transfers to Stores Transportation	1
Transfers from Minor Construction	1

Miscellaneous

The garbage and refuse collection continued as usual, with the residential refuse collection Wednesday of each week. Two complete collections of garbage were made each week in the residential area during the month. Six days, Monday through Saturday, coverage of garbage and refuse collection from eating facilities and stores.

1217721

Community Public Works Divisions

Miscellaneous (Contd)

Maintenance of lawns for houses in renovation was started during May.

The mowing and trimming of Public Areas continued during May. This work consists of parks, playgrounds, open seeded areas and inner-block areas.

Spraying for pests on street trees, maintenance of shelter belts, irrigation of orchards and handling of grounds work such as seeding, grading, and miscellaneous tree work continued during May.

There were six acres of new grass seeded during the month on Work Order from Housing Division.

The miscellaneous labor crew completed excavation for installation of the irrigation system at Marcus Whitman School, six other excavations, and the repair of irrigation main on Lee Blvd. Approximately twenty-five work orders were completed on miscellaneous excavations and backfill in repair of utilities, walk raising, etc. Routine work orders included removal of sludge from 784 Building, removal of waste oil from filling stations, mower maintenance, and janitor and watchman service.

The Public Area irrigation crew continued watering of approximately three hundred acres of parks, playgrounds and public areas, and this is progressing satisfactorily. Watering of numerous trees by water truck method is also being continued.

The lawns of twenty to forty vacant houses were watered during the month.

Irrigation farm lines are being maintained.

Two Canal Tenders are on loan to the Utilities Section.

The repair of blacktop walks and steps has been heavy this month, and we still have a large backlog of such work to do.

Street repair is progressing and the excessive water runoff from lawns increases the maintenance problem.

The earth plug in the dike below the Sewage Treatment Plant is completed. It was necessary to clean out the old ditch before this work was started. Placement and compaction of 2000 yards of earth was necessary in making fill, also 200 yards of pit run gravel was placed on slope on river side of dike.

The parking lot for the United Protestant Church on Stevens Drive was completed this month as well as two railroad crossings on the By-Pass Highway.

1217722

Community Public Works Divisions

Miscellaneous (Contd)

Materials used this month:

Pre-Mix

Road Maintenance	77.9 tons*
*This includes 46.7 tons used on railroad crossings at Duane and By-Pass Highway, of which 16.725 tons was purchased from McCorkle.	
Steps and Service Walks	13 tons
Total	90.9 tons**
** 5 tons furnished contractors for lift - Van Giesen and Jadwin.	

Top-Soil

Dike fill east of disposal plant	1902 C. Y.
Grading at disposal plant (Grounds Maintenance)	1074 C. Y.
Total	2976 C. Y.

Pit-run Ballast

Dike stabilizing east of disposal plant (rip-rap)	200 C. Y.
Stabilizing shoulder around culverts on West Van Giesen (rip-rap)	70 C. Y.
Total	270 C. Y.

Railroad X-Ties

Bumper logs at parking lots	42

Bitumuls

Used for all blacktop work	8 barrels

Gravel and Chips

3/4" Minus Gravel - Maintenance of Roads	70 C. Y.
Parking Lots	60 C. Y.
Miscellaneous Work Order	57 C. Y.
Total	187 C. Y.
5/8" Clean Chips - Protestant Church Parking Lot	66 C. Y.
Memorial Field pitchers surface	9 C. Y.
Total	75 C. Y.

1217723

Community Public Works Divisions

Miscellaneous (Contd)

	Sand
Cushioning pipe for backfill	7 C. Y.
Flood Control - Sand bags	6 C. Y.
Total	13 C. Y.

Material delivered to yard:

250 Tons Pre-Mix

1217724

COMMUNITY COMMERCIAL FACILITIES DIVISION

MAY, 1950

ORGANIZATION AND PERSONNEL	MAY
Number of employees on payroll	
Beginning of month	15
End of month	15

COMMERCIAL FACILITIES:

Number of Commercial Facilities Employees:

April	1,054
May	1,055
Net Increase	1

The following routine items were processed:

Work Orders	21
Service Orders	22

CONTRACTS AND NEGOTIATIONS:

Commercial Facility Leases were entered into with the following firms for the construction of buildings and operation of businesses as outlined below:

Richland Thrifty Drugs - Lease dated May 4, 1950 - covering the construction and operation of a drugstore in the Uptown Business Area.

Virgil O. McVicker - Lease dated April 18, 1950 - covering the construction of a supermarket food store in the Uptown Business Area. This building is to be subleased to C & H Foods.

Spencer-Kirkpatrick Insurance was authorized to sublet spaces in its new building in the Uptown Business Area to:

Columbia Basin News;
International Business Machine Company of New York; and
E. R. Crutcher and Associates, Accountants.

John F. Gerdes was authorized to construct an addition to the east end of his service station for use as a motor tune-up station and minor repair garage.

1217725

Negotiations for the following proposed subleases were discontinued prior to their establishment:

The Desert Inn - car rental service with Hales Car Rental Service; and
Village Pharmacy - fountain operation with Leo Farance (formerly reported under the name "Leo France").

Waiver letters were mailed to all Operators and Lessees waving certain general conditions in their Operating Agreements and Commercial Facility Leases which no longer appear necessary.

Invitations to Submit Proposals were forwarded on May 11, 1950 to prospective bidders for the construction of a roller skating rink to be located at the southwest corner of George Washington Way and McMurray Road, Richland, Washington.

An award was made to the Automatic Laundry Company to construct an investment building in Block 1, Uptown Business Area.

An award was made to Byron Meyers to construct a drive-in restaurant to be located at the northwest intersection of Duane Avenue and Gillespie Street, Richland, Washington.

COMMERCIAL FACILITIES EXPANSION PROGRAM:

	April	May
1. Number of Government-owned Buildings	35	38
(a) Number of businesses operated by Prime Lessees	48	50
(b) Number of businesses operated by Sublessees	11	11
(c) Total businesses operating in Government-owned buildings	59	61
2. Number of Privately-owned Buildings	29	31
(a) Number of businesses operated by Prime Lessees	33	35
(b) Number of businesses operated by Sublessees	12	12
(c) Total businesses operating in Privately-owned buildings	45	47
3. Total Number of businesses in operation	104	108
4. Doctors and Dentists in private practice, leasing space in Government-owned buildings	-0-	22
5. Privately-owned Buildings under constructions	3	4
6. Leases awarded	2	2

The following Commercial Facilities opened for business this month:

Stanley Randolph Insurance opened for business May 1 in Government-owned building, formerly occupied by Villagers, Inc., 713 George Washington Way.

1217726

Milhaven Kennels opened for business on tract K-772 on May 1.

The dentists and medical doctors terminated with General Electric and commenced private practice in the Clinic Building and portions of the Public Health Building and Kadlec Hospital on May 1.

Amusement Enterprises, Inc. opened their Playland Park in the Light Industrial Area at 1305 Mansfield Street on May 15.

Kennell-Ellis Photographic Studios opened for business on May 15.

Construction on Cannon and Joseph Investment Building in the Uptown Business Area started on May 15.

Construction on McVicker Investment Building to house a supermarket in the Uptown Business Area started on May 25.

REQUESTS FOR ESTABLISHMENT OF BUSINESSES IN RICHLAND:

A number of individuals and firms, the majority of which were not interested in constructing their own buildings, expressed a desire during the month to establish and operate businesses in Richland. The types of establishments desired are shown in the following list:

Auto Sales & Service
Book & Stationery Store
Cigar & Newsstand
Contractor, General
Drive-in Restaurant
Infants' & Children's Wear
Laundry (Diaper)
Lingerie Shop
Merchandise Trading & Commission Sales
Real Estate
Seafood Store
Skating Rink
Variety Store

1217727

COMMUNITY DIVISIONS

COMMUNITY HOUSING DIVISION

May, 1950

ORGANIZATION AND PERSONNEL

Number of employees on payroll	May
Beginning of month	44
End of month	44

RICHLAND HOUSING

Housing Utilization as of Month End

Houses Occupied by Family Groups	Conventional	Block	T	Precut	Ranch	Prefab	Apt.	Tract	Total
Operations	2206	261	4	371	836	1146	60	40	4924
Commercial Facilities	93	6	1	27	68	59	2	5	261
Community Activities	9			1	7	3		1	21
Post Office	5			1	2	13		3	24
Government	107	32	1	13	40	23	4	4	224
Schools	41			6	12	47	1		107
Kellex Corporation	1	5		5	5				16
Atkinson-Jones	8	15		6	11	2	3		45
J. G. Turnbull		1		2	5	3			11
C. T. Main Co.	2			5	4	1	1		13
J. A. Terteling			4	1	1				6
Newberry Neon	3	1		1					5
Vernita Orchards								3	3
Medical Facilities	10	12		2	2	1	1		28
Roberts Filter						1			1
TOTAL HOUSES OCCUPIED	2435	333	10	441	993	1299	72	56	5689
Houses Assigned-awaiting tenants	9			5	6	24	1	3	48
Houses assigned-leases written	6			4	1	9	1	1	22
TOTAL HOUSES	2500	333	10	450	1000	1332	74	60	5759

COMMUNITY HOUSING DIVISION

Housing Turnover During Month	Begin Month	Moved In	Moved Out	Month End	Difference
Conventional Type	2489	33	37	2485	Minus 4
Block Type	331	5	3	333	Plus 2
T Type	10	0	0	10	None
Precut Type	444	9	12	441	Minus 3
Ranch Type	993	20	20	993	None
Prefab Type	1298	31	30	1299	Plus 1
Apartments	72	1	1	72	None
Tract	57	2	3	56	Minus 1
TOTAL	5694	101	106	5689	Minus 5

Dormitory Statistics

Dormitories		Occupants	Vacancies	Total Beds
Men - Occupied	13	516	0	516
Men - Unoccupied				
Women - Occupied	13	*455	**176	631
Women - Unoccupied	2			

Women's Dormitories occupied by:	
G. E. Office	1
Education	1
Apartment	1
	31

* This includes space of 4 beds in W-9 used for supply rooms and dormitory offices.
**This includes 100 beds in "Standby Condition" in W-17 and W-20.

GENERAL	
Houses Allocated to new tenants	54
Exchanged houses	26
Moves (Within the Village)	29
Turnovers	8
Total Leases Signed	101
Terminations	35
Total Cancellations	106
Applications Pending	297

Allocation Section Statistics	
Voluntary Terminations	22
R.O.F.	3
Transfer	2
Retirement	1
Moves Off Project	7
Houses assigned "As Is"	29
Houses sent to renovation	36

On May 30, 1950 a fire started in a closet of Room 201 in Dormitory M-2. Neither the cause of the fire nor the amount of the damage has been determined. The fire was confined to Room 201 but there was some smoke damage in Room 203 and water damage in Rooms 101 and 103 downstairs.

Tract house L-854 was rented during the month.

On May 1, 1950 all doctors and dentists not employed in the industrial section of the Medical Division were removed from the General Electric rolls. They, and their employees, were permitted to retain their houses and dormitory rooms as facility operators under the name of "The Richland Medical Service."

General Electric Company entered into an agreement with Curtiss Middlebrook and Company to make a survey of available housing in the immediate vicinity of Richland. This report has been completed and was submitted on March 31, 1950.

1217729

TENANT RELATIONS

Processing of Service Orders, Work Orders and Service Charges

	Issued from May 1 to May 31, 1950	Incomplete May 31	Issued Previous Month
Service Orders	2042	128	2150
Work Orders	866	3065	622
Service Charges	163	49	204

4 Conventional houses were painted on the interior by Project forces as compared to 31 the previous month.

75 Prefab houses were painted on the interior as compared to 70 the previous month.

47 Kitchens and bathrooms were repaired and spot painted as compared to 83 the previous month.

9 Conventional houses had floors sanded and refinished or floor boards installed.

27 Precuts were jacked up and shimmed as compared to 66 the previous month.

45 A & J houses were jacked up and shimmed as compared to 32 the previous month.

26 Prefab foundations were repaired and leveled as compared to 24 the previous month.

42 Work orders were completed on walls damaged by ice and water.

1 Tract house was completely painted on the interior.

20 Houses had walls and ceilings spackled and repaired so that tenants could paint.

ITEMS OF INTEREST	Total Outstanding	Total Outstanding Previous Month
Laundry Tubs	64	39
Bathtubs	203	169
Kitchen sink linoleum	147	145
Bathroom tileboard	314	298
Bathroom floor linoleum	192	182
Kitchen floor linoleum	33	28

Alteration permits issued during the month of May totaled 148 as compared to 118 the previous month.

Air conditioners	61	Automatic washers	11
Back door in prefab	2	Basement windows	1
Automatic dryer	3	Electric wiring	5
Clothes poles	2	Floor refinishing	3
Fences	31	Driveways	3
Cooling pads	3	Tool sheds	3
Walk	1	Fireplace	1
Front door glass	1	Concrete strip	1
Waterfall	1	Water softener	1
Patio	7	Partition	1
Basement excavation	1	Reverse range and refrigerator	1
Reduce coal bin size	1	Concrete block retaining wall	2
		Paint outside of house	1

1217730

TENANT RELATIONS

1075 Inspections were made during the month of May, 1950. A breakdown of the inspections shows the following distribution:

Linoleum	126	Walls	98
Sidewalks	89	Grass Seed	78
Top Soil	76	Tileboard and bathrooms	68
Lot Lines	56	Floor boards	40
Shades	31	Screen doors	31
Alteration permits	29	Leaking basements	4

In addition, inpsectors contacted 64 George Washington Way Apartment tenants, informing each that project forces would mow this area on Wednesdays.

DORMITORIES

Experiments with various products of companies that manufacture floor seals are being conducted to determine which, under test, will prove best to preserve the dormitory floors.

1217731

M. S. WAREHOUSE SUMMARY FOR April 26 thru. May 25, 1950

TOTAL INV. $101,497.70

INVENTORY ITEMS AMOUNT $61,565.67

RECEIVED IN INVENTORY	CODE	AMOUNT
ON STORE ORDERS	____	$2896.33
ON PURCHASE ORDERS	____	586.43
FROM EXCESS	____	____
FROM HOUSING (20-20)	____	507.22
FROM DORMS (21-20)	____	53.45

TOTAL RECEIPTS $4,043.43

INVENTORY DISBURSED		
Misc. Charge	____	509.20
TO SALVAGE	____	____
FREE ISSUE	____	3,247.91
CASH ITEMS	____	80.36
DORM SUPPLIES	____	846.57
DORM LINENS	____	180.79
DORM FURNITURE	____	3.90
WHSE. SUPPLIES	____	76.29

TOTAL DISBURSED $4,945.02

INVENTORY ITEMS BALANCE $60,664.08

PLANT ITEMS AMOUNT $39,932.03

	CODE	AMOUNT
RECEIVED	____	$1123.18
DISBURSED	____	1285.70
DISBURSED TO SALVAGE	____	270.00

PLANT ITEMS BALANCE $39,499.51

GRAND TOTAL INVENTORY $100,163.59

	PIECES
DORM FURNITURE EXCHANGE	51
RANGES EXCHANGED	11
REFRIGERATORS EXCHANGED	3
PRE FAB HEATERS EXCHANGED	33
SENT TO MAINTENANCE	106
RECEIVED FROM MAINT.	119

1217732

COMMUNITY SAFETY DIVISION

May 1950

ORGANIZATION AND PERSONNEL

Number of employees on Payroll	May
Beginning of month	3
End of month	3

GENERAL

During the month of May, Richland was given first place in the National Traffic Safety Contest by the National Safety Council, among the three government cities, Los Alamos, Oak Ridge and Richland. Richland also received the highest score of any city in any population class in the same contest from the National Safety Council, and tied second place in the pedestrian Safety Contest among cities of 10,000 population or less. This contest was sponsored by the American Automobile Association, and in a phone call to the AAA, their comment was that when the award was presented, their account of the entry would be made to the effect that Richland would have tied for second place in any classification of any city. Richland also was awarded a tie for second place by the International Chiefs of Police Association for Traffic Enforcement Activities.

Plans are being made by a committee of the Richland Safety Council for an Award Banquet which will be held on the 29th of June this year in Richland. Sidney Williams, the Vice-President of the National Safety Council, has agreed to attend and present the awards. Also representative from the International Chiefs of Police Association will present their award. The American Automobile Association has been invited to attend for the purpose of presenting their award to the city.

Work is now being done on a weekly radio program which will be sponsored by the Richland Safety Council. Services from various residents of Richland have been offered and accepted.

Two radio programs were held during the month of May on automobile maintainance for safety, which is in keeping with the National Safety Council theme. A number of radio spot announcements and three news items were also carried.

The Richland American Legion started a program of scotch-lighting of all bicycles in Richland, going from one school to the other and taping them while the students are attending school.

The Fire Survey that is being made by this office - the first group of recommendations has been submitted to the Commercial Facilities, regarding the two theatres. The action that the Commercial Facilities Division takes on these items will determine the action taken by this office in regard to the recommendations for the 5-year program.

1217733

COMMUNITY FIRE PROTECTION DIVISION

MAY 1950

Organization and Personnel

Number of employees on payroll	May
Beginning of the month	102
End of the month	102

	Richland	North Richland
Response to alarms	18	11
Fire Loss (estimated)		
Hanford Works	$436.00 *	$ 23.50
Personal	3.00 **	128.88
Investigation of minor fires and incidents	14	3
Safety Meetings	8	4
Outside Drills	61	30
Inside Drills	40	12
Fire alarm boxes tested	186	74

* Included in this figure is a preliminary estimate of labor and material cost of $400 for repair of fire damage at Dormitory M-2.

** Loss on personal property at Dormitory M-2 not available at time of this report.

Miscellaneous Fire Department Activities

A vacant nursery shack on George Washington Way was used as a smoke chamber on gas mask drill for all Richland Firemen.

Tank Truck T-3 sent to prime emergency pump at dike on George Washington Way.

Engine Co. 15 and Ladder truck dispatched to stand by at Boy Scout Circus in Bomber Bowl.

Conducted a class in artificial respiration for twelve members of the Utilities Division.

Landscaping at Richland fire stations completed.

Kindergarten group and a seventh grade class were given conducted tours of the North Richland fire station.

Fourteen sections of 2½ inch fire hose were excessed to 3000 Area Realty Division.

COMMUNITY FIRE PROTECTION DIVISION MAY 1950

Richland Fire Prevention

Fire Inspections:		Fire Extinguishers:	
700 Area Buildings	84	Inspected	394
1100 Area Buildings	51	Refilled	29
Commercial Facilities (Gov't owned)	41	Installed	3
Schools, Clubs, Churches	12	Relocated	28
Government Airport	6	Removed	9
Tract Houses	29	Missing	1
Total	223		

Demonstrations and Lectures:

A lecture on vacation fire hazards, including precautions to take before leaving home, was delivered to employees of Building 713.

Fire Exit Drills:

On May 16th a fire drill was held in 703 Building. The alarm system functioned satisfactorily except for one horn in Wing 3 which was later replaced. Air conditioning units shut off on activation of alarm, observing electricians advised. Some violations of evacuation procedure were noticed and reported to the chief warden.

A drill was conducted in Kadlec Hospital on May 26th. Being the first drill, several errors in procedure were observed and failure of buzzers to be heard over normal noise level were discovered. After the drill a meeting was held with all wardens to discuss procedure errors and Hospital administration issued orders for correction of inadequate signal buzzers.

Evacuation procedures were reviewed with wardens of other buildings to determine if revisions are necessary and to schedule drills for the near future.

Miscellaneous Activities:

At our request, studies are being made on interconnecting air conditioning and exhaust equipment with fire alarms systems in dormitories and Kadlec Hospital so that such equipment will shut off automatically when an alarm is turned in from these buildings.

Assistance was given the Maintenance Division while minor alterations were made on the sprinkler system in "C" Wing of Kadlec Hospital.

1217735

COMMUNITY FIRE PROTECTION DIVISION MAY 1950

A new procedure for operating and servicing ditto machines was issued at our suggestion by the Safety and Fire Protection Division. Distribution of procedures is to be made to all Richland offices by members of the Fire Marshal staff.

An inspection of weed and grass conditions along the railroad right-of-way from the Yakima River bridge to the North Richland yards indicated grass fires may be expected from coal burning locomotives now operating over this line.

Parking of private automobiles on the west side of 705 Building has been discontinued since appropriate signs were erected by Patrol at our suggestion.

Recommendation was made for "No Parking" signs to replace the barricade in front of the fire hydrant west of 716 Garage.

Two fire prevention news releases were submitted to the News Bureau for publicity.

The Stores Division accepted responsibility for periodically testing evacuation horns in the 713 Building where the evacuation alarm is not connected to the Fire Department alarm system.

The 1949 Fire Prevention Contest book was displayed for teachers and pupils of the Lewis and Clark Grade School.

A recommendation was submitted to the Community Activities Division that a weed accumulation south of the city park be removed. A work order was issued to carry out this recommendation.

Following alterations in the fire alarm system in buildings 705 and 1125-6, tests were conducted by the fire alarm electrician and Assistant Chief Quane.

On recommendation of this office, work orders were issued to install four fire hose standpipes in the Richland Laundry.

COMMUNITY DIVISIONS

COMMUNITY PATROL

MAY, 1950

ORGANIZATION AND PERSONNEL

Number of employees on payroll:	May
Beginning of month	84
End of month	84

GENERAL

The judges of the 1949 National Traffic Safety Contest awarded a special citation to Richland among the three government cities that were competing with each other. This citation was awarded to Richland for first place among the three cities and also a special citation has been awarded to Richland for having made the highest total grade not only among these three government cities but among all cities of all population groups in the nation.

The International Association of Chiefs of Police named Richland first place winner of the IACP award for the most outstanding performance in the traffic law enforcement field in Richland's population class in 1949. Richland and Peru, Indiana, tied for first place in the same population group, but the judges awarded equal honors to each city.

Richland also received a second place award from the American Automobile Association for outstanding pedestrian safety during the year 1949.

Capt. J. S. Johnson attended the Sixth Annual Seminar Arson Investigation and Detection Course at Purdue University, Lafayette, Indiana, from May 8 to 12, 1950.

Effective May 10, 1950, Community Patrol discontinued the check of the G. E. Engineers Office Building (Old McNeil Building). The responsibility for checking this building was transferred to the Plant Security and Services Division.

To keep Patrol uniform appearance at its best, a full length mirror was installed in the Patrol locker room in Richland on May 18. The mirror is mounted on black plywood with such lettering as "Cap Straight", "Trousers Pressed", and "Shoes Shined" painted at the side of the mirror to serve as reminders of the necessity for neat apperance before the Patrolman goes on duty.

On May 19, 1950, the Richland Yacht Club supplied the Community Patrol Division with a key to the gate surrounding their club. This was for the convenience of personnel taking river readings and in the event of a flood emergency. Keys to the Metz-Garmo dock were also furnished to Patrol as a matter of protection in case of fire or other emergency.

Members of the Community Patrol Division attended a meeting of the Yakima River Peace Officers Association held in Naches, Washington, on May 26, 1950.

During the month frequent checks were made of the Yakima River rise at the culvert located on Van Giesen extended.

1217737

During the month, Community Patrol began sending copies of the Patrol Daily Bulletin to the Benton County Sheriff's Office in Prosser, Washington, and to the Police Department in Kennewick, Washington.

During the month, 163 traffic violation reports were received which consisted mainly of Speeding, Stop Sign Violation, and No Drivers License. A total of 141 other reports were received which consisted mainly of Petit Larceny, Investigation, and Public Intoxication.

During the month, a total of 62 letters were received, consisting of 55 inquiries on arrests and 7 requests for assistance.

During the month, 21 prisoners were processed through the Richland Jail.

During the month, 18 gun registrations were taken by Community Patrol.

TRAFFIC

The new arterial, Jadwin Avenue extended, designed to speed north-south traffic was opened to traffic on May 19, 1950.

There were ten traffic accidents in Richland during the month of May. This number was the same as the April total.

Traffic volume over the streets of Richland increased slightly. Counts taken in front of the Richland Electric and Furniture Company over a period of one week showed an average of 9,488 cars every 24 hours, compared to approximately 8,000 during the previous month.

The Richland Traffic Committee recommended that Davenport Street be converted into a secondary arterial, in a meeting held during February of this year. The recommendation was forwarded to various interested groups and final approval was given by the A. E. C. in April. Necessary signs were installed on Davenport on May 17, 1950. The arterial is patrolled and voluntary obedience to the signs is approximately 98 per cent, according to the patrolmen, at the present time.

A second recommendation to restrict parking on narrow streets was also submitted by the Traffic Committee. This recommendation was also approved and installation of restricted parking signs was started on May 31, 1950. The streets to be posted are: Torbett Street, McPherson Avenue, Marshall Avenue, Mahan Avenue, Kimball Avenue, and Farrell Lane.

Patrolman E. L. Edgar gave nine traffic safety lectures and showed traffic safety films to various civic and plant groups during May.

Plans are being formulated to have the American Legion sponsor a picnic and entertainment for all Richland and North Richland boys and girls who served on the School Patrols.

1217738

TRAINING

Lt. H. V. Meigs and Lt. A. F. Novotny attended the F. B. I. Basic Law Enforcement school at Fort Lewis, Washington, from May 15 to 26, 1950.

Subjects covered in the lieutenant's training classes for the month of May were as follows:

Law of Arrest
Public Relations
Accident Investigation

Advance training for Community Patrol members at the small arms range for the period in field instruction was as follows:

Pistol 1½ hours

The 38 caliber revolver was used in controlled firing at the standard F. B. I. target at a distance of seven yards. Scores were taken, but no qualifications were made. A total of 55 men reported to the Range for training.

ACTIVITIES AND SERVICES (RICHLAND)

	March	April	May
Check on absentees	3	6	1
Persons assisted *	205	216	140
Doors and windows found open	41	26	40
Lost children	29	16	16
Ambulance runs	32	28	34
Lost dogs reported	8	7	4
Dog, cat, loose stock complaints	58	53	44
Persons injured by dogs	6	8	10
Bank escorts and details	45	39	42
Fires investigated	22	32	18
Miscellaneous escorts	20	21	22
Complaints investigated	28	46	60
Natural deaths reported	2	1	0
Lost and found articles		43	46
Totals	509	542	477

ACTIVITIES AND SERVICES (NORTH RICHLAND)

	March	April	May
Check on absentees	2	0	0
Persons assisted *	79	84	14
Doors and windows found open	40	45	44
Lost children	4	2	10
Ambulance runs	2	4	5
Lost dogs reported	0	1	1

1217739

ACTIVITIES AND SERVICES (NORTH RICHLAND) CONTINUED

	March	April	May
Dog, cat, loose stock complaints	0	4	2
Persons injured by dogs	0	0	2
Bank escorts and details	25	20	4
Fires investigated	6	7	9
Miscellaneous escorts	18	21	13
Complaints investigated	1	2	0
Natural deaths reported	0	0	0
Totals	177	190	104

* Includes: Assisting other departments, assisting outside police agencies, assisting private persons, delivering emergency messages, etc.

1217740

COMMUNITY PATROL DIVISION
RICHLAND JUSTICE COURT CASES

May 1950

VIOLATION	NO.OF CASES	NO.OF CONV.	NO.OF FORF.	CASES CON'T.	CASES PEND.	CASES DISM.	WARR. ISS.	SENT. JAIL	SENT. SUSP.	LIC. REV.	TOTAL FINES	TOTAL SUSP.	TOTAL BAIL
Driver's License, No *	19	8	2	6	2		1				$ 51.00	$ 5.00	$ 15.00
Drunken Driving	1	1								1	$ 77.50		
F.T.Y.R.O.W. **	7	6	1								$ 67.50	$12.50	$ 12.50
F.T.S.A.I.	3	1		2							$ 12.50		
Illegal Turns	1		1										$ 5.50
Improper Parking	10	5	2	1	2						$ 17.50	$14.00	$ 7.00
Improper Passing ***	4	1	2	1							$ 5.50		$ 20.00
Negligent Driving ****	16	8	6		1	1					$145.00	$17.50	$110.00
Reckless Driving	7	5			1			1		6	$177.50		
Speeding *****	26	12	8	2	4						$130.00		$110.00
Stop Sign ******	14	5	5		3		1				$ 25.00		$ 29.00
Others	5	1		2	2						$ 7.50		
2cnd. Degree Assault	1							1					
3rd. Degree Assault	1			1									
Grand Larceny	1						1						
Larceny by Check	2						1	1					
Petit Larceny	3					1		2	1				
Public Intoxication *******	5	3	1		1						$ 52.50		$ 12.50
Public Nuisance	1							1	1				
TOTALS:	127	56	28	15	16	2	4	6	2	7	$769.00	$49.00	$321.50

Cases proc. thru crt.....	127
Other cases incl., with above viol.....	13
Cases Pending.....	16
Cases orig., in prev's mo's and tried in May.....	12
	168

Note: One pick up for Outside Agency, apprehended on J.P. Warrant from Davis County Utah, for Failure to Provide for Family.

(continued on page two)

121744

(continued from page one) May 1950

CASES INCLUDED WITH VIOLATIONS ON PAGE ONE:

* 1 Defective Equipment case included with this violation.
* 2 License plates, cases included with this violation.
* 1 Improper Parking case included with this violation.
** 1 No Left Signal case included with this violation.
*** 1 No Vehicle License Plates, case included with this violation.
**** 1 Driver's License case included with this violation.
***** 3 Driver's License cases included with this violation.
***** 2 Red Light cases included with this violation.
***** 1 Stop Sign case included with this violation.
***** 1 Vehicle License case included with this violation.
****** 3 Driver's License cases included with this violation.
****** 1 Red Light case included with this violation.
******* 1 Disorderly Conduct case included with this violation.

CONTINUED CASES THAT ORIGINATED AND WERE INCLUDED IN APRIL REPORT AND WERE TRIED IN MAY

Speeding	Fined $7.50
License Plates & No Registration certificate	Fined $7.50
Stop Sign	Fined $7.50 - $5.00 - susp.
Negligent Driving	Fined $10.00
Negligent Driving	Fined $12.50
Negligent Driving	Fined $12.50
Illegal Parking	Holding Case
Illegal Parking	Holding Case

WARRANTS ISSUED ON CASES THAT ORIGINATED AND WERE INCLUDED IN APRIL REPORT AND WERE TRIED IN MAY

Speeding	Holding Warrant
Stop Sign	Holding Warrant
Stop Sign	Forf: $5.50
Illegal Parking	Holding Warrant

1217742

COMMUNITY PATROL DIVISION
NORTH RICHLAND JUSTICE COURT CASES

May 1950

VIOLATION	NO.OF CASES	NO.OF CONV.	NO.OF FORF.	CASES CON'T.	CASES PEND.	CASES DISM.	WARR. ISS.	SENT. JAIL	SENT. SUSP.	LIC. REV.	TOTAL FINES	TOTAL SUSP.	TOTAL BAIL
Driver's License, No *	5	4					1				$30.00	$ 5.00	
Driving while Lic - susp.	1							1					
F.T.Y.R.O.W.	1	1									$12.50	$10.00	
Imp. or Invalid Lic. Plts.	3	2					1				$15.00		
Improper Parking	1	1									$ 3.50	$ 3.50	
Improper Passing	3	2	1								$10.50		$ 5.50
Negligent Driving	3	1	1	1							$27.50		
Rockloss Driving	1	1								1	$37.50		
Speeding **	11	4	5	1			1				$45.00		$81.50
Stop Sign ***	23	5	12	3			2				$30.00		$65.00
Public Intoxication	5	3	2								$37.50		$30.00
Public Nuisance	3	3									$72.50		
TOTALS	60	27	21	5			5	1		1	$321.50	$18.50	$182.00

Cases proc. thru crt..... 60
Other cases incl., with above viol..... 4
Cases Pending..... 0
Cases orig., in prev's mo's and tried in May..... 12

76

* 1 Defective Lights case included with this violation.
** 1 Stop Sign case included with this violation.
** 1 Refusal to Sign Ticket, case included with this violation.
*** 4 Driver's License, cases included with this violation.

WARRANTS ISSUED ON CASES THAT ORIGINATED AND WERE INCLUDED IN APRIL REPORT AND WERE TRIED IN MAY

Stop Sign. ..... Holding Warrant

1217743

(continued on page two)

∞(continued from page one) May 1950

CONTINUED CASES THAT ORIGINATED AND WERE INCLUDED IN APRIL REPORT AND WERE TRIED IN MAY

Stop Sign	Fined $5.00
Stop Sign	Fined $5.00
Stop Sign	Fined $5.00
No Driver's License	Fined $7.50
No Driver's License	Dismissed

PENDING CASES THAT ORIGINATED AND WERE INCLUDED IN APRIL REPORT AND WERE TRIED IN MAY

F.T.Y.R.O.W.	Fined $7.50 * $5.00 susp.
Stop Sign	Fined $5.00
Stop Sign	Forf: $5.00
Stop Sign & No Driver's License	Fined $5.50
Speeding	Fined $20.00
Improper Passing	Forf: $5.00

1217744

PATROL DIVISION - TRAFFIC CONTROL STATISTICS
May - 1950

MOTOR VEHICLE ACCIDENTS:

	Total Number		Fatalities		Major Injuries		Minor Injuries	
	April	May	April	May	April	May	April	May
Richland	10	10	0	0	0	1	3	1
North Richland	0	0	0	0	0	0	0	0
Totals	10	10	0	0	0	1	3	1

ACCIDENT CAUSES:

	Negligent Driving		Failure to Yield Right of Way		Reckless & Drunken Driving		Other Causes	
	April	May	April	May	April	May	April	May
Richland	5	2	0	4	1	2	4	2
North Richland	0	0	0	0	0	0	0	0
Totals	5	2	0	4	1	2	4	2

PLANT WARNING TRAFFIC TICKETS ISSUED:

	Speeding		"Stop" Sign		Parking		Imp. License		Def. Equipment		Other Violations		Totals	
	Apr.	May	April	May	Apr.	May	April	May	April	May	April	May	April	May
Richland	0	0	0	0	97	25	1	6	2	3	1	1	101	35
North Rich.	0	1	0	0	66	114	0	0	5	0	0	0	71	115
Totals	0	1	0	0	163	139	1	6	7	3	1	1	172	150

TRAFFIC CHARGES AND COURT CITATION TRAFFIC TICKETS ISSUED:

	Speeding		"Stop" Sign		Drunken Dr.		Reckless Dr.		Right of Way V.		Neg. Dr.		Parking V.		Other V.		Totals	
	Apr.	May	April	May	April	May	April	May	April	May	Apr.	May	April	May	Apr.	May	Apr.	May
Richland	25	27	15	14	2	1	2	7	0	7	14	15	24	9	31	44	113	124
N. Rich.	8	10	27	25	2	0	1	1	1	1	2	3	0	1	17	19	58	60
Totals	33	37	42	39	4	1	3	8	1	8	16	18	24	10	48	63	171	184

TRAFFIC VOLUME: Average 24-hour Traffic Volume Count for week ending on 5-29-50, in front of Richland Electric and Furniture Company, on George Washington Way - 9,488 Motor Vehicles.

NOTE: Traffic Control Statistics show ORIGINAL CHARGES ONLY.

1217745

COMMUNITY PATROL DIVISION
RICHLAND CRIME REPORT
MAY, 1950

Classification of Offenses	Offenses Known or Reported to Patrol	Offenses Unfounded	Actual Offenses April	Actual Offenses May	Cleared by Arrest	Cleared by Other Action	Perpetrators Involved
Possible Attempted Arson	1	0	1	1	0	0	u
Breaking and Entering	1	0	0	1	0	1	1 (a)
2nd Degree Assault	1	0	0	1	1	0	1
3rd Degree Assault	1	0	0	1	0	1	4
Larceny by Check	6	0	0	6	6	0	1
Larceny (Except Auto & Bike)							
Over $50.00	5	0	5	5	3	2	2 (b)
Under $50.00	34	0	24	34	4	15	12 (c)
Bike Theft	20	0	15	20	0	8	u
Dest. of Personal Property	2	0	1	2	0	2	2
Dest. of Government Property	6	0	3	6	0	6	11 (d)
Loss or Theft of Gov't. Property	0	0	2	0	0	0	0
Investigation	11	0	7	11	0	8	17 (e)
Disturbance	8	0	11	8	0	7	6 (f)
Missing Persons	4	0	3	4	0	2	4 (g)
Offense Against Family & Children	3	0	2	3	0	3	6
Prowlers	1	0	3	1	0	0	u
Public Intoxication	5	0	6	5	5	0	5
Public Nuisance	1	0	0	1	1	0	1
Pickup for Outside Agency	1	0	0	1	1	0	1
Vandalism	5	0	7	5	0	1	1 (h)
Malicious Mischief	2	0	7	2	0	2	5
Pickup of Soldiers for Provost Marshall	1	0	2	1	0	1	2
Auto Theft	1	0	2	1	0	1	u
Dog Poisoning	1	0	1	1	0	0	u
Unauthorized Use of Vehicle	4	0	0	4	0	4	4 (i)
OMFP (IMPERSONATION)	0	0	0	0	1	0	1
TOTALS	125	0	102	125	22	64	87

(Continued on Page Two)

1217746

(a)	1 Case	Perpetrated by	2	Juveniles,	Ages 10 & 11.
(b)	1 Case	"	1	"	Age 14.
(c)	1 Case	"	1	"	Age 11.
	1 Case	"	1	"	Age 9.
	1 Case	"	1	"	Age 11.
	1 Case	"	2	"	Ages 13 & 13.
	1 Case	"	3	"	Ages 14, 15, & 16.
	1 Case	"	1	"	Age 10.
(d)	1 Case	"	1	"	Age 11.
	1 Case	"	3	"	Ages 11, 11, &10.
	1 Case	"	2	"	Ages 16 & 16.
	1 Case	"	3	"	Ages 6,7, & 9.
(e)	1 Case	"	1	"	Age 10.
	1 Case	"	2	"	Ages 15 & 16.
	1 Case	"	4	"	Ages 15,16,16, & 17.
	1 Case	"	1	"	Age 16.
(f)	1 Case	"	1	"	Age 17.
	1 Case	"	3	"	Ages 5,9, & 10.
(g)	1 Case	"	1	"	Age 12.
	1 Case	"	1	"	Age 15.
(h)	1 Case	"	1	"	Age 11.
(i)	1 Case	"	1	"	Age 16.
	2 Cases	"	2	"	Ages 14 & 14.

30 of the Juveniles Involved Were Males.
9 of the Juveniles Involved Were Females.

u Represents Unknown.
Property Recovered for the Month, $779.20 (8 Bikes)

1217747

COMMUNITY PATROL DIVISION
NORTH RICHLAND CRIME REPORT
MAY, 1950

Classification of Offenses	Offenses Known or Reported to Patrol	Offenses Unfounded	Actual Offenses April	Actual Offenses May	Offenses Cleared By Arrest	Offenses Cleared By Other Action	Perpetrators Involved
Assault	0	0	1	0	0	0	0
Burglary	0	0	1	0	0	0	0
Breaking & Entering	2	0	0	2	0	1	1
Larceny (Except Auto & Bike)							
Over $50.00	3	1	2	2	0	0	u
Under $50.00	2	0	3	2	0	0	u
Dest. of Government Property	1	0	0	1	0	0	u
Disturbance	1	0	1	1	0	1	1
Dest. of Personal Property	0	0	3	0	0	0	0
Investigation,	1	0	0	1	0	1	1
Missing Persons	1	0	1	1	0	1	1
Public Intoxication	5	0	3	5	5	0	5
Public Nuisance	3	0	0	3	3	0	3
Drunk & Disorderly Conduct	0	0	1	0	0	0	0
Vagrancy	0	0	1	0	0	0	0
Prowlers	2	0	2	2	0	0	u
Malicious Mischief	2	0	0	2	0	0	u
Unanthorized Use of Vehicle	1	0	0	1	0	1	1
TOTALS	24	1	19	23	8	5	13

Two of the Perp. Were Colored
No Juveniles Involved.

1217748

COMMUNITY PATROL DIVISION
CRIME COMPARISON REPORT
MAY, 1950

Number of offenses known to police per 25,000 inhabitants in cities of 25,000 inhabitants:

Class.	Wash. Oregon & Calif. Six Months (Jan-June 1949)	Wash. Oregon & Calif. One Month Average	Richland (Jan-June 1949) Six Months	North Richland Six Months (Jan-June 1949)	Richland April 1950	Richland May 1950	North Richland April 1950	North Richland May 1950
Murder	.60	.10	0	0	0	0	0	0
Robbery	15.80	2.63	0	1	0	0	0	0
Aggrav. Asslt	10.15	1.69	4	16	0	1	1	0
Burglary	90.90	15.15	8	5	0	1	1	2
Larceny	254.22	42.37	181	97	44	59	5	4
Auto Theft	38.4	6.40	4	5	2	1	0	0

Number of offenses known to police per 25,000 inhabitants regardless of whether offenses occurred in cities or rural districts:

Class.	State of Washington Six Months (Jan-June 1949)	State of Washington One Month Average	Richland Six Months (Jan-June 1949)	North Richland Six Months (Jan-June 1949)	Richland April 1950	Richland May 1950	North Richland April 1950	North Richland May 1950
Murder	.79	.13	0	0	0	0	0	0
Robbery	11.25	1.87	0	1	0	0	0	0
Aggrav.Asslt.	3.82	.63	4	16	0	1	1	0
Burglary	74.35	12.39	8	5	0	1	1	2
Larceny	241.60	40.26	181	97	44	59	5	4
Auto Theft	38.05	6.34	4	5	2	1	0	0

The portion of offenses committed by persons under the age of 25 years, is shown by the following figures:

Class.	National Average Six Months (Jan-June 1949)	Richland Six Months (Jan-June 1949)	North Richland Six Months (Jan-June 1949)	Richland April 1950	Richland May 1950	North Richland April 1950	North Richland May 1950
Robbery	53.4	0	0	0	0	0	0
Burglary	59.9	1	0	0	1	0	0
Larceny	45.1	25	44	5	7	0	0
Auto Theft	67.8	3	0	0	0	0	0

Note: Statistics of Juvenile Offenses throughout the United States were taken from the Uniform Crime Report published by the Federal Bureau of Investigation, which states: "It should be remembered that the number of arrests recorded is doubtless incomplete in the lower age groups because of the practice of some jurisdictions not to fingerprint youthful offenders."

1217749

COMMUNITY DIVISIONS

COMMUNITY - ACTIVITIES DIVISION
May, 1950

ORGANIZATION AND PERSONNEL

Number of employees on roll

Beginning of month		12
Additions	2	
Terminations *	1	
End of month		13

*Leave of absence

SCHOOLS

The following is a tabulation of full-time paid School District #400 personnel as of May 31, 1950:

Administration	6
Principals & Supervisors	16
Clerical	18
Teachers	243
Health Audiometer	1
Building Custodians	49
Cooks	33
Nursery School & Ex. Day Care	11
Bus Drivers	2
Farm Manager	1
	380

CLUBS AND ORGANIZATIONS

As of May 31, 1950, organization's personnel include:

American Legion	2
Coordinate Club	1
Youth Council	1
Boy Scouts	1
Camp Fire Girls	2
Hi-Spot Club	2
Red Cross	3
Castle Club	1
Post Office	48
Veterans Administration	2
Girl Scouts	2
Masonic Lodge	1
Justice of Peace	1
	67

1217750

Community - Activities Division

Twelve members of the Richland Civil Air Patrol Squadron were chosen to represent the Washington Wing of the C.A.P. in Ogden, Utah, scene of the Regional Meet. These members were chosen from their participation in the State Meet held in Ellensburg, Washington on April 29.

The Independent Order of Foresters were formally chartered on May 6, during a charter banquet held in the Columbia High School.

The Richland Riders Club held their annual horse show at their arena on Sunday, May 7, before an estimated crowd of 2,500. Horses from Oregon, Idaho, and Washington participated in the show.

The Minnesingers, formerly the Richland Boys' Choir, presented their spring concert in Carmichael Junior High Auditorium on May 8, 1950, before a large audience. The choir is under the direction of Mrs. Evelyn Nagely. Several guest artists presented selections during the program.

The Sacajawea Rifle and Pistol Club purchased building #3 located at Columbia Camp for the purpose of making an indoor firing range. Atomic Energy Commission permission was granted on May 8, 1950, to the club to move this building in.

At the regular meeting of the Recreation Advisory Committee on May 9, 1950, the following organizations were recommended for approval: Knights of Columbus (Richland Council), Richland Republican Club, Automobile Club of Washington, and the International Union of Operation Engineers Local 280. A request for the clearance of Malotta Accordian Studios of Yakima, private instructors, was also submitted. The minutes of the April 11, meeting were approved by the Atomic Energy Commission on May 8.

The Meistersingers and the Richland Symphony presented a combined concert in the Carmichael Junior High Auditorium on May 11, before a capacity audience.

Representatives of the Community Property Section, Atomic Energy Commission Property and the Activities Division took a complete inventory of the American Red Cross building on May 15. This inventory was taken for the purpose of pricing the equipment for sale and to close out Mr. Walt Sommers responsibilities. Mr. Sommers passed away on May 11.

On May 16, the American Legion Americanism and Education Program oratory contest was held in the American Legion Hall. Awards were also presented to the outstanding athletes for the past school year. The Ortory Contest was for junior and senior high school students.

On May 18, permission was granted the Richland Boat and Yacht Club to use the south end of the construction road, used for the dike, as a boat launching area.

1217751

Community - Activities Division

Richland Veteran and Reserve Organizations, Boy Scouts, Civil Air Patrol Cadets, and soldiers stationed at North Richland participated in the Armed Forces Day Parade on May 20. Armed Forces Day parade route was arranged by the Activities Division.

An estimated 4,000 people attended the Annual Boy Scout Circus on May 20. The Circus was held in the Bomber Bowl.

On May 23, the Town Planning Board disapproved the Knight of Columbus' request for the assignment of Tract House K-764 to be used as a meeting hall.

The Activities Division issued a backcharge work order to raise power lines and other necessary work to prepare the right of way for the moving of the Masonic Temple. The final move was made on May 25.

Representatives of the Activities Division and the Atomic City Union Club inspected the New Clubsite Area on May 26. The site to be used by the organization for their clubhouse is No. 7.

The First Pacific Northwest Championship Soaring Regatta, sponsored by the Richland Glider Club was held on Memorial weekend. Over $200 in prizes and trophies were awarded and several records were recorded for this section of the country.

Memorial Day services were held in Richland by the Service Clubs and Boy Scout units. Services were held in the Cemetery following a parade led by the high school band.

The second annual Rose Show was sponsored by the Richland Rose Society on Memorial Day. The contest was held in the Desert Inn lobby.

Twenty-seven work orders were written and seventeen service orders were issued by the Activities Division during the Month of May.

CHURCHES

The following is a tabulation of full-time paid church personnel, as of May 31, 1950:

	Minister	Staff	Total
Assembly of God	1	0	1
Catholic	2	2	4
Central United Protestant	2	2	4
Church of Christ	1	0	1
Church of God	1	0	1
Episcopal Church	1	0	1
Free Methodist	1	0	1
Foursquare Gospel	1	0	1
Mission Baptist	1	0	1

1217752

Community - Activities Division

	Minister	Staff	Total
Mo. Synod. Lutheran (Redeemer)	1	1	2
National Lutheran	1	2	3
Nazarene	1	0	1
Regular Baptist	1	0	1
United Protestant - North Richland	1	0	1
United Protestant - West Side	1	0	1
United Protestant - Southside	1	0	1
United Protestant - Northwest	1	0	1
	19	7	26

The church construction program status is as follows:

CHURCH	DATE STARTED	ESTIMATED % COMPLETE	OCCUPANCY DATE
Nazarene Church	April 12, 1949	99%	11/30/49
Latter Day Saints	February 5, 1949	95%	3/5/50
Latter Day Saints (Reorganized)	August 22, 1949	25%	
U. P. Southside	November 5, 1948	99%	4/10/49
Richland Baptist	November 27, 1948	99%	4/17/49
Church of Christ	December 21, 1949	90%	3/19/50
Assembly of God	May 23, 1950	1%	

The plans and specifications for the Assembly of God Church building were approved by the Community - Public Works Division on May 23. The site assigned to the church is on the east side of Stevens Drive and immediately south of the Central United Protestant Church.

On May 24, the Atomic Energy Commission approved an additional site for the Richland Lutheran Church. This site is located on Stevens Drive and is immediately north of the houses located on the north side of Van Giesen. This area will be used for parking and the construction of a parish hall.

The Church of Jesus Christ of the Latter Day Saints was granted a 68' extension south along the new Jadwin right of way, to their presently assigned land. This allotment was granted by the Atomic Energy Commission on May 24, and will balance up the area assigned to the church.

Approval was granted on May 24, by the Atomic Energy Commission for the sale of government-owned salvage buildings used by the Richland Baptist Church. Sections of the old Hanford Hospital were moved into town by the church and remodeled at church expense for their church and church school.

Rev. Roy L. Smith of the Central United Protestant Church resigned due to retirement eligibility, as pastor of the church on May 31. Rev. R. Kenneth Bell is being transferred to another location. The replacement minister is Rev. Uphoff.

1217753

COMMUNITY

Park Development

A tour of the Richland Park System was made with the Appropriations and Budget Committee on May 16, 1950.

Representatives of Community - Public Works and Activities Division investigated the possibility of converting the present well fields into a lake or lagoon. This study is being made in conjunction with the proposed park system expansion.

Plans were completed for the Hetrick Playlot. A sketch was also submitted on a picnic fireplace made from an oil drum.

A complete inspection of all park area was made with the Labor Division regarding the proper maintenance of the areas.

RECREATION

The number and types of organizations presently served by the Community - Activities Division include:

Business and Professional Clubs		21
Churches & Church Organizations		25
Civic Organizations		4
Fraternal Organizations		22
Music & Art Associations		8
Recreation & Hobby Groups		41
Schools & Parent Teachers Associations		13
Social Clubs & Organizations		11
Veteran & Military Organizations		12
Welfare		6
Youth	Boy Scouts	19
	Camp Fire Girls	36
	Girl Scouts	49
	Misc.	10
Miscellaneous		9
	Total	285

The summer program schedule of events and activities has been released to the press. Copies of the schedule will be distributed to all school children of the Village during the last week of school.

Selections for summer recreation work have been made and all employees will be hired on June 8. All new employees will participate in a program of orientation and preparation for the start of the program on June 12. Other recreation employees to be hired by School District #400 have been selected with the exception of the dancing instructor.

1217754

Community - Activities Division

The fencing group which operated under the Activities Division program during the winter have organized a club and will continue their activities during the summer. Equipment has been loaned to them for use during this period with the understanding that membership is open and that no special dues or assessments will be made. Meetings will be held at 1631 Howell.

The program of activities for the school boy patrol picnic has been completed. Activities Division personnel will assist the American Legion in conducting the program on June 7. The American Legion is sponsor of the event.

Triple "O" Softball (Old Men's League) got under way on May 24. Nine teams are entered in the League which is sponsored and promoted by the Activities Division. This League was popular as a recreational outlet for older men during the past summer and is off to a good start this year with increased interest and enthusiasm.

Participation in the various recreational activities at Community House during the month was very good. Average weekly attendance was approximately 400, in addition to the established teen age functions on Wednesday and Saturday nights.

Assistance was given to Richland's Little Leagues (baseball) in setting up the program and facilities for their jamboree on Saturday, June 3.

Recreational copy for the revised "Guide to Richland" is partially completed.

Maintenance

The following maintenance work and improvements were completed during the month.

Press box at Memorial Field financed by Richland Softball Association and electrical service provided by the Activities Division.

Memorial Field warm-up area completed - includes backstops, lights, and pea-gravel surfacing of area 60 feet by 35 feet.

Sound system at Memorial Field relocated for better efficiency and stations established in the press box.

Bleacher seats at Memorial Field repaired and painted.

Started routine maintenance and conditioning of the Park Swimming Pool and Wading Pool for summer use.

General cleanup of the Falley Playground area was started. It is anticipated that this area will be utilized extensively by picnickers and for youth groups' day and overnight camping.

1217755

Community - Activities Division

Columbia Playfield tennis court floodlighting has been improved in order to facilitate the evening programs scheduled on the courts during the summer. Loud speakers have also been installed.

Play equipment at Spalding Playground has been repaired and painted as required.

The home made variety of play equipment has been installed at Barth Playlot. Plans for the equipment are available through the Activities Division for any local resident who is interested.

Services and Special Events

Arrangements were made for routing and a Patrol escort for the Armed Forces Day parade on May 20.

The Activities Division provided materials and equipment for the Cub and Boy Scout Circus held at Columbia Stadium on May 20.

The Activities Division arranged for routing and Patrol escort for the Memorial Day parade and services on May 30.

Activities Division representatives attended the public hearing on park and recreational developments along the McNary Pool in Pasco on May 19.

Division representatives conferred with the Junior Chamber of Commerce relating to the third annual Atomic Frontier Days celebration scheduled for August 11 and 12, 1950. Tentative plans indicate that the general program will be similar to that of 1949

MAJOR ACTIVITIES DURING THE MONTH

May	8	- Minnesingers Concert	Carmichael Junior High
	11	- Meistersingers & Symphony Concert	" " "
	14	- Softball Jamboree	Memorial Softball Field
	20	- Armed Forces Day Parade	Community
	20	- Boy Scout Circus	Bomber Bowl
	27-30	Glider Meet	Vista Field
	30	- Memorial Day Services	Community
	30	- Rose Show	Desert Inn

1217756

GENERAL ELECTRIC COMPANY
HANFORD WORKS
COMMUNITY ACCOUNTING DIVISION

MONTHLY REPORT FOR MAY - 1950

ORGANIZATION

Effective May 15, 1950, A. C. Beltzner was relieved of his position as Cost Supervisor and became General Assistant to the Community Accountant. As of this date, W. E. Bridges was transferred from the Public Works Division to replace A. C. Beltzner.

Employees - Beginning of month	26	Exempt	5	Male	9
Net Terminations or transfers	1	Non-Exempt	20	Female	16
Total-End of month	25	Total	25	Total	25

Rents

	May	April
House Leases Processed		
New Leases	110	125
Modifications	4	9
Cancellations	119	122
Total Active House Leases	5,680	5,689
Dormitory		
New Assignments	95	101
Removals	99	97
Total occupancy	984	988
Rental Revenue was as Follows		
**Equipment	24.90	35.19 cr
*House	255,730.58	254,879.17
*Dormitory	13,835.95	13,675.57
*Facilities	37,060.30	40,010.75
	$ 306,651.73	$ 308,530.30
Unoccupied Dormitory Revenue Loss	796.55	956.93
Unoccupied House Revenue Loss	2,126.87	2,965.78
Total Potential Revenue	$ 309,575.15	$ 312,453.01

* Includes utilities which are collected as a part of rent.
**Six Facility Operators still have equipment on a rental basis.

Telephone

Number of work orders handled	312	404
Number of working phones	4,072	4,318
Revenue including services	$16,510.63	$16,047.81

Of the twenty-six delinquent telephone notices issued this month, all but three accounts have been paid.

1217757

Miscellaneous

	May	April
Invoices prepared during the month	234	221
Revenue from above invoices	$2,665.70	$1,946.77

The following building permits were issued during May:

Lloyd L. Sweeney	7.00
Stanley Randolph	1.20
Gail's	3.40
L. A. Bowls	2.00
Spencer Kirkpatrick	98.80
C. A. Joseph	106.25
Assembly of God Church	215.46
Total	434.11
Previously reported	5,518.46
Total to Date	$5,952.57

General

Fifty-three collection letters were written during the month resulting in the collection of $464.62.

No additional accounts were submitted to the Yakima Adjustment Service.

ACCOUNTS PAYABLE

Statistics

	May	April
Accounts Payable Voucher Processed	235	220
Freight Bills Processed	21	11
Purchase Orders Received	102	79
Net Amounts of Purchase Orders	$9,359	6,157
Receiving Reports Received	121	79
Total Net Amount Disbursed	71,607	42,170
Number of Checks Issued	211	183

A summary of active Community Subcontracts is shown below:

Subcontractor	Subcontract Number		Amount Awarded	Paid This Month	Total Paid	Amount Retained
Frederickson, Dr.J.L.	---	**	2,047.00	150.00	2,047.00	-0-
Newland Cafeteria	---	*	30.25	6.93	30.25	-0-
Richland Maintenance	---		91,874,83	6,958.67	91,874.83	-0-
West Coast Painters	G-219		58,746.27	-0-	43,974.85	2,926.34
Holaday & Edworthy, Mc	G-284		4,700.00	3,525.00	3,525.00	-0-
Pringle, R. A.	G-289		10 000.01	2,892.03	8,132.39	496.25
Curtis Middlebrook & Co.	G-290		10,800.00	7,200.00	10,800.00	-0-
Roof Service, Inc.	G-291		12,684.43	8,815.68	12,054.93	629.50
Bailey's Plumbing & Heating	G-293		8,256.89	6,605.52	6,605.52	412.84
Mathews Brothers Contractors	G-295		7,196.45	7,196.45	7,196.45	-0-
			$206,336.13	$43,350.28	$186,241.22	$4,464.93

1217758

* Total amount of contract will be total of estimates as submitted.
** To be cancelled since Benton County will pay dog pound charges.

The Community Divisions Obligations and Expenditure Report, and compilation of the B & O tax was submitted for consolidation to the General Division.

COST

Reports

The April Operating Report was distributed on May 15, 1950.

The Comptroller's Appropriation Report for April was issued on May 16, 1950.

The Utilities Reports for April and May will be issued in June as units necessary for the report preparation have not been received.

Budget

The responsibilities of the Operation Budget were transferred to the General Assistant to the Community Accountant.

The Construction Budget Schedules 8B as requested by the AEC were delivered May 9, 1950.

Appropriation Requests

Appropriation Requests were prepared as follows:

"Exterior Painting - Hospital Building, Medical Building, and the Municipal Building"

"Alteration of Basement Stairs -"A" and "B" type houses - Division #1".

"Installation of Relief Valves - Residential Water Heaters."

"Bathtub, tileboard, and linoleum replacement in conventional type houses."

"Roof Replacement - South Domestic Water Reservoir" was rewritten.

Service Orders

The increase in Service Orders is accounted for mostly in Plumbing. Maintenance loaned a plumber to Irrigation the previous month, so when he was returned, a large part of the plumbing backlog was made up.

1217759

Service Orders Costed

	Service Orders		Labor		Material		Total	
	April	May	April	May	April	May	April	May
*1.	$ 757	$1,093	$1,358.98	$1,819.62	$ 668.58	$ 948.05	$ 2,027.56	$ 2,767.67
*2.	1,909	2,051	1,982.60	2,307.31	3,152.36	3,032.00	5,134.96	5,339.31
*3.	251	145	491.76	337.44	658.33	401.56	1,150.09	739.00
*4.	102	113	269.37	468.75	137.69	188.84	407.06	657.59
*5.	297	346	437.07	574.16	730.25	715.84	1,167.32	1,290.00
*6.	426	351	871.78	805.54	293.13	141.14	1,164.91	946.68
*9.	14	8	52.78	21.58	55.83	23.98	108.61	45.56
	$3,756	$4,107	$5,464.34	$6,334.40	$5,696.17	$5,451.41	$11,160.51	$11,785.81

*1. Plumbing
*2. Electrical
*3. Heat & Vent
*4. Glazing
*5. Lock & Key
*6. Carpentry
*9. Sheet Metal

Work Orders

	March	April	May	Net Chance
Active Routine	421	425	420	- 5
Active Normal	2,063	1,959	2,053	+ 94
	2,484	2,384	2,473	+ 89
Work Orders Received	2,241	2,003	2,191	
Work Orders Completed	1,923	2,103	2,102	
	+ 318	- 100	+ 89	

General Ledger

	No.	Amount Debit	Amount Credit
Second Class Invoices Received	62	$309,072.22	$279,279.26
Second Class Invoices Issued	46	191,191.05	14,058.11

1217760

[redacted]

DESIGN AND CONSTRUCTION DIVISIONS

MAY 1950

I. ORGANIZATION AND PERSONNEL

Number of employees on payroll:	
Beginning of month	603*
End of month	604*
Net increase	1
*Does not include the following personnel:	
Instrument Division (Loan)	7
Kellex Corporation (Contract)	8
Fluor Corporation (Contract)	13
Chas. T. Main, Inc. (Contract)	14
Total	43
Total beginning of month	658
Total end of month	647
Net decrease	11

II. INVENTIONS OR DISCOVERIES

All persons within the Design and Construction Divisions engaged in work that might reasonably be expected to result in inventions or discoveries advise that, to the best of their knowledge and belief, no inventions or discoveries were made in the course of their work during the period covered by this report, except as listed below. Such persons further advise that, for the period therein covered by this report, notebook records, if any, kept in the course of their work have been examined for possible discoveries or inventions.

Inventor	Subject	Date of Report
V. G. Blanchette	Weather recording	April 19, 1950
D. L. Peterson and R. R. Wall	Friction Roller Rod Drive	None
P. P. Smith	Rod Drive-friction Driven Tape Cable	May 15, 1950
P. P. Smith	Under Rug Heating Pad for Home Heating	May 15, 1950

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ACCOUNTING DIVISION

I. SUMMARY

During the month of May the following projects were financially completed and transferred to Finished Plant:

C-288-A Commercial Facilities--Expansion of Existing General Business District--Richland

C-288-B Commercial Facilities--Richland Light Industrial Area

C-288-C Commercial Facilities--New Commercial Area

C-288-D Commercial Facilities--Richland Neighborhood Shopping Area

C-328 Improvements to Lee Boulevard

A net increase of 423 employees was reported by CPFF subcontractors, bringing the total as of May 29 to 3,735. During the four-week period ended May 21, CPFF payrolls totalled $1,187,591 (exclusive of retroactive disbursements) as compared to $979,64. the previous four weeks, an increase of $207,947. Average weekly earnings were $85.23.

Total cash disbursed in settlement of construction obligations was $2,517,325 for a 30 per cent increase over April.

II. STATISTICAL AND GENERAL

During May discussions were held with the Manager of the Separations Division and representatives of Kellex relative to the adequacy of design funds for Project C-187-D, Redox Production Plant. Comparable data obtained from the project cost estimate, the Kellex estimate to complete, and the project budget were developed for the discussions.

Upon cancellation of Project C-343, Rala, on May 2, one man was assigned the responsibility to work with Separations Division representative and Project Engineering Division representative to expedite paper flow to close the project financially.

Discussions were held with Atkinson-Jones resulting in a revised form of reporting MS Stores activity which will be inaugurated with reports for May.

The previous backlog of billings to A-J for their withdrawals of small tools will be current at the month-end closing of the books. The total of such charges for the year to date approximate $365,000, which is 25

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per cent of original acquisition cost.

Total credits to Accounts Payable amounted to $2,411,447 of which $1,441,054 represented cash billings received from A-J. General Electric purchases of material which were billed to A-J totalled $295,341.

Open commitments on Studies AEC-21, Rehabilitation of Pre-Fabs; GES-39, Administration of Office Space, Community Division; and GES-52, Design of 300 Two-bedroom Multiple Housing Units, were accrued which permitted transfer of those studies as complete.

III. ORGANIZATION AND PERSONNEL

Number of employees on payroll:

Beginning of month	71
End of month	70
Net decrease	1

CONSTRUCTION SERVICES DIVISION

I. SUMMARY

On May 15 a Small Tool Control Section was organized. The purpose of this section is to develop accountability records of the small tools assigned to CPFF construction subcontractors and to periodically make field checks to determine that small tool control procedures established by CPFF subcontractors are adequate and efficiently and economically administered.

Due to the close relationship between the activities of the Construction Services Division and the construction subcontractor, it was necessary to change the work schedule of approximately 115 employees of this division to Pacific Standard Time as of May 8 to coincide with the subcontractor's work schedule.

II. STATISTICAL AND GENERAL

North Richland Construction Camp

(Period covered: April 27, 1950 to May 27, 1950, inclusive)

Beginning of Month	End of Month	Net Change
3,331	3,558	+ 227

Camp Population*

(Barracks	721)
(Trailers	2,186)
(Houses	651)

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* Note: Does not include Army personnel.

Barracks in Use

20 wings one-story male barracks
2 wings one-story female barracks

Trailer Lots

Occupied - 776
(Two trailer bathhouses were reopened, making a total of 37 presently in use.)

Houses

Of the 201 houses available in North Richland Camp, 14 houses were vacant at the end of the period. Twelve houses were assigned during the period and 13 vacated.

Maintenance

The construction subcontractor's maintenance force at the end of the month totalled 54.

Work order control:

Number brought forward 4/27/50	59		
Issued during May	107		166
Completed during May		110	
Voided during May		5	115
Balance carried forward 5/26/50			51

Barracks 196 and 120 were turned over to the Army, and the utilities relative thereto were energized by the maintenance group.

Steam Generating Plant

The following is a resume of the operation of the Steam Generating Plant from April 27, 1950, through May 27, 1950.

Steam generated, M lbs.		21,301.23
Oil consumed, gallons		9,933.00
Coal consumed, tons		1,452.57
Boiler efficiency, average per cent		75.60
* Steam cost per M lbs.	$0.993	

* Note: Computation of unit cost of steam is based on an estimated cost of coal of $8.60 per ton and does not include indirect cost of fire protection and camp administration.

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Water consumption for the month was 30,701,200 gallons or an average daily consumption of 1,023,373.33 gallons.

Commercial Facilities

There were 19 commercial facilities operating at the close of the month.

The CMStP & P Railroad, because of conditions developing in the railroad situation, are discontinuing the office which they have maintained in the 3000 Area.

From the information available at this time, the trend of business of the commercial facilities has remained static during the month.

Community Activities

The enthusiastic interest continues in baseball and softball. The North Richland Improvement Group supplied volunteer workers to improve four new ball fields, which are being utilized by Little League Baseball teams and teems of the older groups.

There were 40 religious group meetings and 34 other gatherings scheduled in the community during the month.

Camp Columbia

The dismantling and disposal of Camp Columbia was practically completed during the month except the moving of the ten prefabs. The Community Division expects that the pre-fabs will be moved the first part of June. The custodian will remain on duty until the moving is completed.

Office Services

Due to reorganizational activities, reassignment and reallotting of office space in the 760 Building was necessary. This involved the moving and shifting of 49 people in various offices in the 760 Building, 761 Building, and 500 Thayer Drive.

Services performed during the month by this section included the following:

Ditto masters processed	3,219	Copies	94,985
Stencils processed	2,261	Copies	155,240
Mail handled (pieces)	182,417		
Mail registered (pieces)	82		
Teletypes sent and received	847		
Telegrams sent and received	1,031		

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Orders issued for stationery	182
Stationery issued (requests)	1,184
Phone installations requested	22
Phone moves requested	72
Office furniture moved (pieces)	40
P.I.T. processed	22
Special messenger runs	89
Office machines delivered Repair Shop	12
Service calls	525
Work orders issued	11
Requisitions approved	8
Reports prepared	12

Security Administration

A summary of activities is as follows:

Visitor passes issued	148
Badge number changes	311
Lost badges	17
Hires	789
Terminations	400
Number of subcontractor and vendor payroll as of May 26, 1950	3,943
"FP" clearances requested this month	474
"FP" clearances received this month	440
"Q" clearances requested this month	270
"Q" clearances received this month	475
"P" clearances requested this month	31
Visitor clearances requested this month	13
Total clearances requested this month	788
Total clearances received this month	915

Area Badges Added

	IN				OUT		
	A	V.O.D.	B	T	A	V.O.D.	B
100 DR Limited	170	0	1	27	34	0	0
200 W Operations	0	9	0	42	0	0	1
200 E Operations	0	2	0	110	0	0	0
100 B Operations	0	0	0	4	0	0	0
100 F Operations	0	0	0	16	5	0	0
100 H Operations	0	0	0	16	0	0	0
100 D Operations	0	0	0	1	0	0	0

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Army Occupation

Pasco-type barracks numbers 158, 159, 168, 169, 178, and 179 which had been previously been declared available for Army occupancy have been withdrawn and will remain available for G.E. use.

Barracks 196 and 120 were turned over to the Army.

The Army is presently supplying the maintenance necessary for their occupied facilities.

Major Construction Equipment

1. Major construction equipment assigned as of May 27, 1950:

Atkinson-Jones	1,199
Design and Construction Divisions	115

2. Shop equipment assigned as of May 27, 1950:

Atkinson-Jones	648

Safety Report

Construction Injuries	C.P.F.F. Contractors	Lump Sum Subcontractors
Major injuries	6	0
Sub-major injuries	8	1
Minor injuries	446	14

Two motor vehicle accidents were reported, both by Atkinson-Jones. (1) Bus, estimated damage - $96.00; (2) Station wagon, estimated damage - $250.00.

Four fires were reported:

(1) 100-DR Construction Equipment Shop
Loss estimated:

Building	$8,400.00
Contents (Government)	7,830.82
Contents (Private Claims)	2,346.21

(2) Unused construction shack at Duportail and Ash Streets, Richland
Estimated damage: $25.00

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(3) Trailer (owned by P. Hedgman, AJ 3-393)
Estimated damage: $100.00

(4) Burlap sacks used for keeping concrete wet (100-DR)
Estimated damage: None

Labor Relations

Agreement was reached between the construction subcontractor and the Building Trades Unions to arbitrate the dispute concerning Daylight Savings Time with the understanding that a decision would be reached on or before May 25. Due to the delaying tactics employed by the Building Trades Unions, arbitration has not been completed, and the date of a decision is very indefinite at this time.

III. ORGANIZATION AND PERSONNEL

Beginning of month	138
End of month	143
Net increase	5

CONTRACT DIVISION

I. SUMMARY

Initial negotiations are under way with Atkinson-Jones for the following work: (1) Reinstatement of Phases II and III of the 234-5 Program and (2) The Waste Disposal System of the Redox Analytical and Plant Assistance Laboratory.

The utility tie-in for Redox has been fully negotiated with Atkinson-Jones and has been incorporated in their contract by Modification No. 14. The Commission has approved negotiating with the Leland S. Rosener Company of San Francisco for a lump sum design contract for the Radiochemistry Building and negotiations are in progress.

II. STATISTICAL AND GENERAL

Sixteen contract items were completed during the month. Fifty-seven contract items remained open at the end of the month.

III. ORGANIZATION AND PERSONNEL

Number of employees on payroll:

Beginning of month	27
End of month	28
Net increase	1

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ENGINEERING SERVICES DIVISION

I. SUMMARY

The Division has completed its second month of operation. The Drafting workload was reduced considerably by the cancellation of Project C-343, which permitted a reduction in force in this section. The workload on the Reproduction Section increased, and efficiency reached an all-time high.

Progress was made in the Analysis Section in methods for analyzing the elements of project cost, and in the preparation of basic charts to show schedules, progress, and costs.

An effort is being made to increase the personnel in the Estimating and Standards Section, and in the History Writing Group in order to get current with these workloads.

II. STATISTICAL AND GENERAL

Drafting Section

Due to the cancellation of the C-343 project, it was found necessary to reduce the number of men supplied by Chas. T. Main, Inc., under Contract G-285 from a total of twenty-seven to three. There are three men now working in the Drafting Room in the 760 Building. Nine men were released to the Project Engineering Division, thirteen men were returned to Boston, and two men were terminated in Richland.

After a review of budget and reduction of Chas. T. Main men, it was determined that a new fixed rate of $27 per man per day would be used for liquidating the May expenses.

Scope work on Projects C-361 and C-362 is showing good progress. Projects C-187-D and E have shown increasing activity within the month. The workload on Project C-198, III, is steadily increasing.

The two men loaned to the Technical Divisions were called back on May 8.

The following man-days report indicates the work distribution in the Drafting Section:

	Man-days
General administration and miscellaneous	13.5
Loaned to Technical Divisions	10.0
Addition to Kadlec Hospital	22.5

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Richland Water Study	6.2
Outside facilities for Hanford Works Laboratory	7.7
Addition to 703 Building	18.5
Pile Technology Building	18.0
100-G Development	601.3
DR Water Works	4.8
234-5, Phases II and III	71.4
C-343, Productive	115.2
C-343, Close out	302.0
C-187-D, Redox	399.3
C-187-E, Redox Laboratory Waste System	18.1
C-362, Waste Metal Recovery	170.3
C-361, Metal Sweetening	28.6

Reproduction Section

The square footage volume of all work completed in the Production Group for the month of May showed an increase of 6.6 per cent over production for March, 1950. Our efficiency rating again topped the previous record established last month, averaging 26,696 square feet of production per employee.

The conversion of the Print Reference File from a two-print filing system to a one-print subject file is approximately thirty per cent complete as of this date.

Construction prints issued to the field increased 24 per cent over last month's requirements and the volume of prints received from off-site installations increased 62 per cent during May.

The price structure for reproduction work was revised this month to reduce the amount of over-liquidations. The new schedule of prices will result in an average savings of 30 per cent to using customers.

A revised budget was prepared for the months of May and June of the 1950 fiscal year, and the budget for the fiscal year of 1951 is being compiled at this time.

The new reproduction order forms were received and are being used generally, resulting in better records as to proper charge codes, etc.

Overtime work continued through this month to keep abreast of the increasing workload, with the next two months' forecasts showing a continued need for Saturday crews tailored to fit the volume of work on hand.

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Personnel, Records, and History Section

Security Clearances Processed:	
Requests for area badges	88
Area badge cancellations	2
Requests for access authorizations	19
Requests for Material & Package Passes	166
D&C Payroll Additions, Terminations and Transfers:	
Additions	20
Terminations	5
Transfers within D&C Divisions	5
Transfers out of D&C Divisions	1
Secret and Confidential Documents Processed:	
Documents issued	896
Documents routed	563
Procedures Issued:	
D&C Instructions issued	17

Reports Issued:
- Force Report (weekly)
- Force Forecast (monthly)
- Overtime Forecast (monthly)
- Roster (monthly)
- Personnel Report (weekly)
- Force Report for Employment Office (monthly)
- Man-hour Report for Safety Office (monthly)
- Visitors' Report for Security Office (monthly)
- Destroyed (extra copies) and reclassified document report for Security Office

On May 22, 1950, an Engineer was transferred to the Personnel, Records and Histories Section to write histories.

Project Cost and Progress Analysis Section

Considerable progress was made toward the goal of having a group of basic charts which will quickly portray the progress and cost of a project. This work continues over and above our gathering of information and the arranging of this data to keep some 75 charts up to date. Five new charts were designed and mounted, and one chart was revised.

Investigation work was completed for analyses of concrete yardage and costs, and utilization of heavy construction equipment. The reports will be issued shortly.

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The part of this section charged with reports and forms issued the usual reports. The AEC Monthly Progress Report received considerable time and effort toward improvement. One new report was prepared and issued by this group. One new form was designed, approved, and issued. Two forms were redesigned to meet new requirements.

The Scope of Work Book was kept current during the month with revisions to the following projects:

1. C-187-D, MJ-1 Production Plant
2. C-204-B, Hospital Extension

Listed by titles are the new charts, revised charts, new reports, and revised reports referred to above:

New Charts:

DR Water Works

1. Concrete Yardage and Costs
2. Physical Percentage Completion

Miscellaneous:

3. A-J Force by Projects
4. Construction Force on Payroll, Cost-plus-fixed-fee Subcontractors' Force, Plus Lump-sum Subcontractors' Force, Plus Unit Price Subcontractors' Force.
5. A-J Labor Costs. Direct Costs by Projects plus Indirect Costs, plus Other Labor Costs.

Revised Charts:

1. A-J Labor Costs

New Reports:

1. Construction Force on Payroll

Revised Reports:

1. AEC Monthly Report of Construction Jobs.

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Estimating and Standards Section

For Division	No. of Estimates Requested	Type of Estimate	Completed Total Dollars	Estimates Not Completed
P & M	3	Preliminary	$1,175,000.	3
	1	Fair Cost	780.	0
	1	Order of Magnitude	379,375.	2
	2	Firm	199,256.	0
	7		$1,754,411.	5
Separations	1	Check	$4,499,950.	2
	3	Preliminary	31,119.	1
	1	Firm	277,893.	0
	1	Order of magnitude	117,672.	1
	1	Review	2,178,038.	0
	7		$7,104,672.	4
Reactor	0			0

III. ORGANIZATION AND PERSONNEL

Number of employees on payroll:

Beginning of month	177
End of month	173
Net decrease	4

PRINCIPAL CIVIL ENGINEER

I. SUMMARY

A. MAJOR ASSIGNMENTS

1. Technical Center Master Plan - Rescoping and Re-estimating

During the week ending May 5, 1950, review of determination and appraisal of J. Gordon Turnbull's work pursuant to Subcontract G-230, Modification 1, was completed.

2. Report, Study on Production of Aggregates, GED-46 (1), PM-1959

During the month of May all information necessary for subcontracting the production of aggregates required by the Central Mix Plant

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was developed by the Committee and presented to the Contract Division, including review and recommendations pursuant to "Invitation to Bid" and "Information to Bidders."

3. Site Selection for "G" Area

Responsibility for reviewing and recommending site for "G" reactor assigned by Reactor Division Manager.

B. MINOR ASSIGNMENTS

1. Consideration of "Mix Design Studies and Concrete Aggregate Investigation for the Atomic Energy Commission, March 1950"

Reviewed above quoted study in conjunction with Recommendations, Tentative Specifications, and Tentative Design Criteria for Portland Cement Concrete construction. Recommended further consideration of study by General Electric and Architect-Engineers employed for process design work.

2. Floor Protection Investigation

As a member of the D & C Floor Control Committee, reported on adequacy of Richland protection dikes and dike protecting "F" Area access road.

3. Review of Design Subcontract for Radiochemistry Building

Reviewed proposed "Statement of Work" in draft of Leland S. Rosener contract. Made recommendations accepted by Rosener and General Electric representatives, and prepared rough estimate of lump sum architect-engineer price which might be considered allowable under AEC November 5, 1948 Contract Manual.

4. Richland Water Study

Reviewed Alvord, Burdick & Howson's May 3, 1950 Letter Proposal and discussed same with L. R. Howson. Reviewed Alvord, Burdick & Howson's May 17, 1950 letter of understanding and prepared May 23, 1950 letter setting forth degree of architect-engineer services required and contemplated by project proposal as modified by AEC Directive HW-152.

5. Recreational Use of McNary Dam Reservoir Marginal Lands

Attended May 19, 1950 public hearing by USED Walla Walla District Engineer. Advised General Electric Community Divisions representatives and AEC Chief Engineer and AEC Chief, Community Division, that General Electric Design and Construction Divisions

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contemplated no further action unless specifically requested and properly authorized.

6. Town Planning Board

Attended and participated in all main meetings.

7. Consulting Services

(a) Rip-rap protection for Yakima River railroad bridge.

(b) Sizing and design of syphons for disposal of drainage waters at Richland sewage disposal plant, recommendations for plugging abandoned storm drain under Richland protection dike. Discussion of special precautions necessary for pipes laid through Richland protection dike.

(c) Explanations and recommendations for placing TENTATIVE SPECIFICATIONS FOR MANUFACTURE AND DELIVERY OF CONCRETE, RECOMMENDATIONS FOR PRODUCTION OF CONCRETE REQUIRED FOR PROCESS CONSTRUCTION BY CENTRAL MIX PLANT, and TENTATIVE CRITERIA FOR FORMING, PLACING, FINISHING, AND CURING OF PORTLAND CEMENT CONCRETE, into effect, and advisability of requesting modification of lump sum architect-engineer specifications prepared prior to the effective date thereof.

(d) Recommended further analysis of the 221-U Canyon Building structure to determine safe and effective method for modification to accommodate MJ-3 process equipment including acceptable analysis methods.

(e) Prepared rough estimate of probable lump sum architect-engineer subcontract price allowance under AEC November 1948 Contract Manual.

II. ORGANIZATION AND PERSONNEL

Beginning of month	2
End of month	2
Net increase	0

PRINCIPAL ELECTRICAL ENGINEER

I. SUMMARY

As separate projects originate and develop within an area, there is a growing and changing demand on the electrical power and communication systems. The effects of the existing and proposed projects in the 200 West and 300 Areas on the utility systems were studied and steps taken toward the

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coordination of the expansion of these utilities. The first step was the issuance of an instruction from the Manager, D & C Divisions, designating the Principal Engineers as coordinators of work on common utility systems to cooperate with Contact Engineers appointed from the Manufacturing Divisions. This was followed by:

1. A recapitulation of the estimated electrical power and communication demands of the various projects in the 200-West and 300 Areas, this information to be revised and reissued as necessary.

2. The development of the outline of over-all systems to serve the individual loads yet have the characteristics of an integrated and economical installation.

3. The designation to each Project Engineer of the portions of the utility properly chargeable to his project, and to be included within its scope.

4. The coordination of construction schedules as they affect services to other projects.

As of this date, steps 1. and 2. above are complete for electrical power and telephone systems, and steps 3. and 4. are in progress.

II. STATISTICAL AND GENERAL

Project proposals were reviewed and commented upon for:

C-257: H. I. Control and Development Laboratory
C-342: Design and Construction of DR Water Works
C-300: Design of New Pile Area G

Technical information was provided for:

C-361, Metal Conversion Facilities: Application of the electric furnaces and its control for the conversion of UNH to UO_3.

C-300, Design of New Pile Area G: Reappraisal of the electric motor drives on the main process pumping units in the 190 Building. Discussions on certain details of equipment for heat transfer test.

C-257, H. I. Control and Development Laboratory: Consultation with J. Gordon Turnbull engineers on ventilation motor controls.

C-187-E, Redox Laboratory: Review of purchase requisitions for major electrical equipment.

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C-343, Design and Construction of a Rala Facility: Discussion with engineers on insulation materials to withstand intense gamma radiation.

C-381, Radiochemistry Building for Technical Center: Review of and comments on design criteria.

Standards Committee:

Method of providing neutral conductor for primary cables toward the possible future conversion of the Village distribution system to 12.4 KV wye.

Reply to AEC inquiry:

Use of various types of wire and cable insulation as denoted in Standards, and as particularly applying to Project C-342, DR Water Works.

Procedures were developed for:

Participation of Manufacturing Divisions in review of bids on major (as defined) electrical apparatus.

II. ORGANIZATION AND PERSONNEL

Beginning of month	1
End of month	1
Net increase	0

PRINCIPAL MECHANICAL ENGINEER

I. SUMMARY

During the month this office starting reviewing project proposals as presented for D & C Divisions Manager approval.

The function of coordinating the work to provide steam and water facilities in 200 West to serve the Separations Division project program was initiated.

Study of the Reactor water pumping problem continued during the month.

Decision was made and work started by the Principal Mechanical Engineer to assist the Manager of the Engineering Services Division in an acting supervisory capacity on a 75 per cent of time basis on a special problem involving the construction costs estimating function.

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II. STATISTICAL AND GENERAL

200 West Steam and Water Facilities

A review was made of steam and water quantity requirements for the full projected program in this area. A summary was submitted to the P & M Design Engineer requesting a tabulation of the major physical requirements. Construction costs have been prepared to evaluate possible reduction in investment on the basis of providing the ultimate facilities initially as against piece-meal additions for separate projects. A report of this study will be made to the Separations Division Manager.

Service to Engineering Services Division

Work has been started to investigate the present functioning of the Estimating Section and its relation to other groups with the objective of staffing appropriately and setting up procedures for period ahead.

III. ORGANIZATION AND PERSONNEL

Beginning of month	2
End of month	2
Net increase	0

POWER AND MECHANICAL DIVISION

I. SUMMARY

Construction work on all outstanding village projects authorized to date has been completed with the exception of concrete steps in front of eight residences included in the paving work on Jadwin Avenue, Project C-352.

The first inspection train carrying approximately fifty plant officials went over the UP-NP railroad connection from the North Richland classification yard to the UP connection on May 23. J. A. Terteling and Sons, Inc., completed the project for slow freight nine days ahead of schedule. The using railroads, NP and UP, are now carrying freight as of May 29 into the area over this line. Inspection of all trackage and bridges will be made for final acceptance on or before June 23.

Construction progress on the DR Water Works continued throughout the month in an efficient manner with the exception that considerable confusion arose over the establishment of Daylight Saving Time for the Richland area. The Union and Trade Council refused to go along with Daylight Saving Time and as a result during the first week of May craftsmen were working 6-1/2 hours a day with not too much work efficiency during this time. The issue was settled on May 5 and con-

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struction personnel have since been working on Pacific Standard Time. Construction progress reported as of May 31 is approximately 40 per cent. During the month the Minor Construction Division fabricated pipe work for their work in the modification of the 115-D Building gas system, and it is expected that the SWP work can be started the latter part of June. Approximately 40,550 cubic yards of concrete have been placed to date, which represents over 80 per cent of the total job.

Construction work on the 200-West laundry was started May 15 with Edmund P. Erwen as construction subcontractor.

The General Engineering Section charged approximately 50 per cent of their time to work for the Separations Division and 50 per cent to the Power and Mechanical Division projects.

II. STATISTICAL AND GENERAL

Briefly described in the following are notes covering active design and construction projects:

C-185, Railroad Connection South of Richland: This project is approximately 95 per cent complete. Effective May 29, the using railroads, Northern Pacific and Union Pacific, initiated freight service into the area over this newly constructed line. Final inspection of trackage and bridges and acceptance by the using division is expected on or before June 23.

C-204-B, Additions and Alterations to Kadlec Hospital: Detail plans for the site work and outside services have been approved. Detail plans and specifications for the Medical Arts Building were submitted to the Atomic Energy Commission for approval on May 11, 1950.

C-276, Over-all Plant Telephone System (Part II): This project was released for construction and work was started on the section from 200 West to the 200 East-West exchange May 17. Poles for this section are 100 per cent installed with 90 per cent of the cable strung.

C-288-A, B, C, D - Development of Commercial Areas: Additional "as-built" information was incorporated on construction drawings. Property unitization for Project C-288-A was completed on May 12. Unitization work for Projects C-288-B, C and D is under way.

C-289, Additional Laundry Facilities, 200 West: The construction contract for the laundry building was approved May 10 and construction work started May 15. Edmund P. Erwen, construction contractor, was the successful bidder. A construction schedule on this work has been issued by Erwen. As of May 31, concrete footings and foundation walls have been poured except for the west wall. Progress completion as of May 31 is 1 per cent.

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C-342, DR Water Works: On the DR Water Works, Chas. T. Main, Inc., has completed all construction drawings with 100 per cent distribution to the field. The design expense for both office and field work of Chas. T. Main is within the estimate.

All M and E items are on order with delivery dates to plant site on schedule with the exception of several items of major equipment which are approximately two weeks off. The Purchasing Division is expediting such critical items daily.

Directive HW-138, Modification 7, dated May 28, 1950, has been received from the Atomic Energy Commission establishing "ready for use" date of October 1, 1950 and the physical completion date of January 1, 1951. Also, the Directive reduces the cost in accordance with the cost estimate appearing in Part III of Project Proposal C-342.

The estimated design progress as of May 15 is 92.1 per cent against the scheduled 94.7 per cent. The estimated construction progress as of May 31 is 40 per cent against a scheduled 48 per cent. Heavy shipments of equipment during the latter part of June and early July are expected to improve construction progress over the present status.

C-352, Jadwin Avenue and Vicinity: This project is approximately 95 per cent complete. Final inspection has been made and all work accepted. The only portion of work remaining is the construction of concrete steps in the front of eight residences along Jadwin Avenue.

C-353, Richland Water Study: Collection of detailed information for use of the prospective architect-engineer continues.

C-364, Aquatic Biology Laboratory: A Project proposal requesting funds for the services of an architect-engineer will be submitted to the A & B Committee June 2. The scope work for this project has been obtained from the Project Engineering Division.

C-381, Hanford Works Laboratory - Radiochemistry Building: Negotiations with the recommended architect-engineer were carried on during the month. On advice from the Atomic Energy Commission of approved fee, more definite progress can be made with Leland S. Rosener towards finalizing negotiations.

MC-964, Records Depository: The Atomic Energy Commission has been holding the project proposal for several months. The Commission will handle this project.

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GES-61, Additions to Administration Building, No. 703: A letter request for funds to prepare a project proposal and preliminary plans for additions to Building 703 was prepared May 1. Authorization has been received and this work has now started.

GET-15, Hanford Works Laboratory - Radiometallurgy Building: AEC approval of the project proposal is anticipated during the first part of June. The scope of engineering is being modified to incorporate changes in the ventilation system required by the Technical Divisions.

GET-16, Hanford Works Laboratory - Plot Plan and Outside Utilities: The project proposal which was due May 12 was deferred to permit restudy of the Mechanical Development Laboratory. The project proposal, however, will be submitted exclusive of the laboratory during the first week of June.

GET-17, Pile Technology Building: Scope drawings and design criteria are in preparation for the Pile Technology Building and its annexes, the Pile Engineering Laboratory and the Metal Forming and Fabrication Laboratory.

III. ORGANIZATION AND PERSONNEL

Personnel on payroll:

Beginning of month	77
End of month	74
Net decrease	3

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REACTOR DIVISION

I. SUMMARY

More tangible accomplishments were realized during the month of May than during any previous similar period devoted to the "G" program. The most significant results are enumerated under the following headings:

1. Ball 3-X Third Safety System

The first drop test was made at the White Bluffs Test Tower with a prototype hopper and release mechanism, a full length graphite column and a full load of glass balls. No attempt was made to obtain conclusive data from this first test, which was made primarily to check the operation of the test setup. Several changes have been made in the test equipment and the drop tests will be resumed on June 2.

2. 189-D Development Test Laboratory

Atkinson-Jones started work on the necessary modifications to the building preparatory to the installation of the heat transfer and other development test equipment. Approximately 75% of the necessary laboratory equipment has been procured.

3. Assistance from KAPL

The KAPL Engineering Division has agreed to take on several subprojects for the Reactor Division. These will probably include:

1. Instrument Review and Design for "G" Reactor.
2. Magnesium Oxychloride and Brookhaven Concrete Program.
3. Pile Rear Face Viewing Equipment.
4. Fabrication of zirconium into Hanford process tubing.
5. Development of low density boron-containing metallic balls for a Third Safety System.
6. Study of gadolinite (gadolinium ore) with the idea of determining whether investigation of cheaper gadolinium refining processes are warranted.

4. Detailed Drawings

Development drawings have been completed for the following development assemblies:

A. Control rod drive.
B. Gate Valve which is required when the rod is removed from the pile.
C. Inverted thimble, control rod and decelerating piston.
D. Discharging equipment for the postum tubes.

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5. Process Tube Heat Transfer Tests

The test construction work is underway, the necessary mechanical test equipment is on schedule, but some of the electrical equipment is slightly behind schedule. Some of the electrical and piping installation work has been started.

The heater element for the full scale heat transfer test has been shipped from Schenectady.

6. Graphite to Graphite Heat Transfer Tests

The test equipment design has been completed and released for bids. The necessary test equipment has been procured and will be set up and run in the 189-D Test Laboratory.

7. Moderator Temperature

The electrical analog has been completed, and the first problem being studied is one involving "H" geometry and operating conditions.

II. STATISTICAL AND GENERAL

1. Shielding

Four full-size steel crates, of the type proposed for the pile shield, are being fabricated and will be used for bulk pour tests. These tests will not be performed until the exact composition of the MO concrete has been verified.

2. Gas System

A test request has been prepared for the investigation of the reaction between graphite and CO_2. Design of the test equipment was started.

3. Site Selection

Mr. C. O. Henning, the principal Civil Engineer, was requested to initiate action toward the selection of a site for the "G" reactor. This is necessary so that the location of the various buildings can be estimated as required for the selection of the equipment for the Water System.

4. 105-G Reactor Building

The assistance of the principal Mechanical and Electrical Engineers, as well as the Power and Mechanical Division, was requested in preparing recommendations for the design of the 105-G Building. Before this can be done, they will have to review the adequacy of the design of the 105-H Building, which may necessitate tests of such items as the ventilation system.

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II. STATISTICAL AND GENERAL (continued)

5. Concrete Irradiation Tests

These will be performed to determine the effect of irradiation on the physical properties of concrete. The scoping and cost estimate for the tests have been completed, and the production test request has been written.

6. Metal Handling

The preliminary tests of the bar plug and Hansen coupling will be completed on June 1. The prototype slug ejector counter and nozzle seal assembly is being installed in the "F" Area flow laboratory and the test will start on June 2.

The detail drawings of the charging and discharging machines for the plutonium tubes are 90% completed.

The detail drawings of the discharging equipment for the postum tubes have been completed. The design of the charging machine has been approved and detail drawings will be started week of June 5.

7. Control Rods

Plans have been made for the in-pile experiments to determine the heat generated in several of the most promising control rod materials. The Production Test Request has been written, and the design of the test apparatus will be started the week of June 12.

8. Water System Design

The revised completion date for the installation of the recirculation test equipment is July 28. Various items of equipment are being installed as manpower becomes available.

Flow diagrams for a full scale through flow, as well as the Recirculating Water Plant for the "G" reactor, has been started. The scope of work has been prepared for the selection of a mechanical equipment for the final Water Plant.

9. Heat Transfer

A. Film Formation

In production test 105-80-E, HW-10558, the observation was reported that build-up of pressure drop film on the slug affected the operating temperature of the slug less than 3°C.

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The acceptance of this conclusion has not been general. Consideration has been given to the advisability of another pile test using a fringe tube with significant film pressure build-up and involving the use of purging equipment that does not necessitate pile shutdown.

B. Heresite Coating

Test samples have been prepared and plans have been made to evaluate the effectiveness of the Heresite coating. Reports from the Heresite Company indicate that the coating should be satisfactory, although tests at Schenectady have not been encouraging.

10. Materials Development

A. Aluminum Alloys

Continued creep testing of standard process tubing at 400 and 600 psi fluid pressure of 100°C has shown negligible dimensional change now for a total of 1900 hours.

72S-like alloys containing higher amounts of zinc were returned by Battelle after fabrication into sheet. Corrosion testing of these alloys coupled with aluminum alloys has been started in Hanford process water.

Arrangements for creep testing 28-H14 aluminum under proposed "G" operating conditions at Battelle under the existing Chicago AEC Contract have been completed. Material for this test has been furnished Battelle.

B. Zirconium

Additional samples of low hafnium zirconium produced by various techniques in the AEC sponsored Zirconium Development Program have been received.

Low hafnium iodide zirconium obtained previously from the Foote Mineral Company was fabricated into test specimens by Battelle. Corrosion testing in Hanford process water has been started.

C. Control Rod Alloys

All attempts to date by the Research Laboratory to produce a stainless steel (or iron) gadolinium alloy has been unsuccessful.

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10. Materials Development (Con't)

C- Control Rod Alloys (Con')

Work on 1.3% boron stainless-steel suitable for safety rods is continuing. A 15 pound heat containing 1.3% boron has been forged successfully as a preliminary to other investigations.

Test Project #38 was issued to cover the installation of gas corrosion test equipment and the testing of alloy specimens. Procurement of equipment has been started.

11. P-10 Design Section

Effective May 17, the nucleus of a P-10 Design Section was organized within the Reactor Division for the purpose of designing facilities for the manufacture of feed and fuel slugs by the Manufacturing Divisions at Hanford (Project C-388).

The activities of this section to date were devoted primarily to becoming familiar with the processes to be installed and obtaining data for pre-scoping these facilities.

12. Inventions and Discoveries

All persons in the Reactor Division engaged in work that might reasonably be expected to result in inventions or discoveries have advised that, to the best of their knowledge and belief, no inventions or discoveries were made in the course of their work during the period covered by this report except as listed below. Such persons further advise that, for the period therein covered by this report, notebook records, if any, kept in the course of their work have been examined for possible inventions or discoveries.

INVENTOR	SUBJECT	REPORT OF INVENTION (date)
V. G. Blanchette	Weather Recording	April 19, 1950
D. L. Peterson and R. R. Wall	Friction Roller Rod Drive	None
P. P. Smith	Rod Drive - Friction Driven Tape Cable	May 15, 1950
P. P. Smith	Under Rug Heating Pad for Home Heating	May 15, 1950

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13. Organization and Personnel

Number on Payroll:

Beginning of Month	43
End of Month	44
Net Change	+ 1

SEPARATIONS DIVISION

I. SUMMARY

Project C-343, Rala Facilities, was concelled effective May 2, 1950. All work performed since that date has been on termination of the project.

The fisrt concrete for the 202-S building was placed on May, 9, 1950. Approximately 2500 cubic yards have been placed to date.

Project C-388, P-10 Program, was initiated and on May 15, 1950 a project organization was established to handle the work in the Separations Division.

The Fred J. Early Company was low bidder for the construction of the Redox Tank Farm and the subcontract is now being processed.

Phase I of Project C-198, 234-5 Program, was closed out April 30, 1950. The 234-5 Program was re-estimated and funds were transferred to GE & CL to cover estimated overrun and cost of modification to design previously requested by General Electric. The revised cost estimate for the total 234-5 Program is within the authorized funds.

The determination that i ntolerable corrosion rates exist in a portion of the TBP process has made necessary major changed which will result in an extended scoping period.

With the cancellation of the Rala Program and the initiation of the P-10 Program, the organization of the Separations Division has been rearranged and increased. The staff groups, Process Design, Mechanical Design, Construction, and Control have been strengthened. The Redox group has been reduced due to the reduction in checking work required on Kellex design. The P-10 group was made up from engineers available from the Rala and Redox groups. Additions to the Separations Division have been for the Construction and Control groups.

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II. STATISTICAL AND GENERAL

A. Control and Staff

The basic requirements regarding reports, schedules, estimates, etc., required from Atkinson-Jones Company have been established through a series of meetings between Mr. Carriere and Mr. Fassett. Meetings have been held with representatives of Atkinson-Jones Company to discuss their operation in matters of material control, scheduling, etc., so that we can make use of material which they have available and to set up the means of furnishing to Atkinson-Jones estimates, material status reports, etc., required from General Electric Company.

The construction cost code system is being reviewed with Atkinson-Jones to attempt simplification of the system. It is probable that any simplification will be at the expense of property accounts.

B. Project C-187-D - Redox Production Plant

1. Design

During this month arrangements were made to reduce the amount of General Electric review of all Kellex construction drawings to a minimum consistent with the current status of design progress. On May 15 a "spotcheck" was instituted, with Kellex assuming the responsibility for complete integration of any necessary design changes as illustrated by the General Electric review of a selected list of "key" drawings. Requisitions are being similarly expedited and Kellex has been given the responsibility for all engineering interpretation of design reflected in their purchase requisitions.

The design work on the main plant is approximately 55% complete, according to Kellex. This compares with a scheduled completion of 63%. Kellex has reaffirmed its intention to substantially complete the design by October of this year. As of May 27, out of a total of 1959 drawings to be made. 761 had been received for approval, 752 were scheduled for approval, and 733, or 37.5% of the total to be made, were approved.

The bulk of the Class I vessel drawings have been approved: the exceptions being the extraction towers and the remaining "key" drawings. The greatest delay is in the piping drawings. For 277-S, the design drawings are all approved. No drawings have been received for 291-S at this time.

An indicated overrun of design costs in being analyzed in order to either reduce expenditures, or provide a basis for requesting additional funds. The requested report on Kellex budget figures has been received and is being studied.

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B. Project C-187-D - Redox Production Plant (Con't)

1. Design (Con't)

Procurement of engineered material is behind schedule. Revised required delivery dates have been requested of Atkinson-Jones in order to provide a clearer picture of the procurement forecast. The total number of Kellex requisitions to be written was increased from 370 to 420. Of these, 243 have been received by the Separations Division, 181 were issued to the Procurement Division, and approximately 160 purchase orders have been place. Seventeen requisitions have been cancelled, and proctically all of the Class I vessel requisitions have been returned by Procurement without action, pending receipt of Approved-for-Construction drawings. A complete procurement status report is due June 1.

The design of the outside facilities being designed by General Electric are approximately 54% completed, which is behind the scheduled completion of 65%. The work progressed at scheduled rate during May, but ground lost previously due to lack of firm scope and tie-in data has not yet been recovered. Out of a total of 361 drawings to be made, 135, or 37.5% have been approved. All information necessary for the Laboratory Waste Disposal project proposal was transmitted to the Laboratory Contact engineer on schedule.

2. Construction

Atkinson-Jones has been requested to furnish data for use in announcing firm construction progress percentages. The June report will reflect actual physical completion rather than the tentative percentages given below:

> Concrete pouring for 202-S started May 9, and at this date, approximately 90% of the foundation footings (first lift), 2400 cubic yards, has been poured. Progress is tentatively estimated at 0.5%.
>
> About 40% of the 277-S Building (Mock-Up) first lift (70 cubic yards) has been poured. Progress is tentatively estimated at 3%.

The outside facilities--steam, water and railroad, have been started by Atkinson-Jones. Release for this work was given May 23, 1950, after two weeks delay in obtaining the required contract modification approval from the AEC.

Approximately 680 direct workers are presently employed by Atkinson-Jones.

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2. Construction (Con't)

The construction of the Waste Disposal Facilities is being awarded to the low bidder, Fred J. Early Company, for $1,567,126. based on contract quantities. The contract has been drawn and is being processed for signatures.

C. Project C-198 - 234-5 Program

The Separations Division have evaluated the present status of 234-5 Building Program and in conference with both Technical and Manufacturing Divisions have made decisions for completion of this project. Cost information submitted by GE & CL has been studied and additional project funds amounting to $352,000 were transferred to GE & CL to cover both their estimated over-run and modification to design ;made by Hanford. Analysis of construction requirements haveing ruled out Minor Construction, negotiations for completion of the work by A&J were started. Re-estimates of installation costs based on additional design detail from GE & CL verify our November 1949 estimate of possibility for completion of entire porject within available funds, so Phase II and other Phase III items are being scheduled for construction concurrently with R. M. Line on a priority basis. Improved reporting of GE & CL costs has been initiated and closer control through this means is expected.

Phase I was closed out effective April 30, 1950 at $19,112,556 with only a few minor unfinished work order items remaining in the commitment portion of the total cost.

Procurement of conduit for sub-floor installation was initiated during the month and considerable time was spent getting barrier design detail in shape for vendor bidding. These two items are quite critical on our time schedule and construction on them if not started immediately will cause additional delays and increased costs.

Statistical

	Design	Construction
Phase I	100%	100%
Phase II	80.2	5
Phase III (Richland)	9.0	0
Phase III (Schenectady)	74.4	77

(Revised schedules will be issued June 5, 1950.)

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D. Project C-343 - Rala

This project was terminated effective May 2, 1950, and a cost code to cover "closeout" costs was assigned. All purchase orders were cancelled effective on that date. Two work orders were written for rehabilitation of 200 W and 200 E Areas where construction work was in progress. Materials on hand have been handled as follows:

a. Restocked with Vendor
b. Excessed
c. Transferred to other Projects

All materials received for this project have been accounted for.

A "Completion Report", Document HDC-1770, dealing with the technical aspects of this project was issued May 19, 1950.

The remaining work in connection with termination of this project is as follows:

a. Cancellation Report from Vendors
b. Excess Remaining Materials
c. Final Report and Cost Estimate

It is estimated that this work will be completed by June 15, 1950.

Termination proposals, excess reports, and other statements required for final accounting for this project will be coming in over a period of several months.

All work orders for this project were cancelled effective May 2, 1950. Two work orders were written for the rehabilitation of the 200 W and 200 E Areas where construction work was in progress. This work is substantially completed.

E. Project C-361 - Metal Conversion (UO_3)

Preparation of scope has reached the 15% point with completion scheduled for July 22 and submission of a project proposal to Manufacturing scheduled for July 28.

Recognizing the considerable financial savings to be derived from a modification of the 224-U portion of TBP to suit the feed requirements of UO_3 and a combination of the now separate UO_3 and TBP projects (approximately $1,000,000 less for the two conversion facilities required) as well as the administrative advantages in planning, scheduling, and actual construction, a

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E. Project C-361 - Metal Conversion (UO_3) (Con't)

recommendation was made to the Manufacturing Division (letter W. E. Johnson to C. N. Gross dated May 18, 1950) that action be taken to effect such a combination. To date, Manufacturing has not advised us of their action on this recommendation.

F. Project C-362 - (TBP Plant)

Phase I. (First Waste Metal Removal System)

Uncompleted scope material was reviewed by General Electric representatives at the Kellex offices in New York during the first week in May. In view of the urgency of the project and the nature and degree of completion of the scope material thus far prepared, the Kellex Corporation was then authorized to proceed with detailed design work, such design to be subject to revision upon final approval of the basic scope material to be completed by Kellex in early June.

Phase II. (Balance of Waste Removal Systems)

Scope preparation will be authorized after approval of Phase I. Scope.

Phase III. (Underground Fluid Transfer System)

Scope material (prepared by General Electric) will be submitted for approval by June 1. Detailed design will follow immediately upon scope approval.

Phase IV. (Metal Recovery Process)

Scope preparation by General Electric is currently 90% complete. A delay of approximately seven weeks in the submission of the project proposal has been introduced by the necessity of preparing alternate scope material for that portion of the process involving the waste concentration and neutralization as a result of recent technical studies disclosing intolerable corrosion rates in the process equipment involved. In order to reduce this delay to a minimum, six Kellex engineers temporarily assigned to work under G. E. technical supervision for the preparation of Phase IV scope will be retained beyond their scheduled release date of June 1 until the additional work is completed. In addition, the work is being carried out on a six-day week basis.

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F. Project C-362 -(TBP Plant) (Con't)

General

A letter project proposal has been sent to the Commission requesting construction funds in the amount of $6,925,000 for the removal of existing U*Tree process equipment, the construction of the 277-U Mock-Up Building, and the construction of the First Recovery System. No reply has been received.

G. Project C-388 - P-10 Program

An organization was established on May 15, 1950, to handle that portion of the P-10 Program assigned to the Separations Division. Work was initiated on preliminary studies of a U-235 Decontamination plant, P-10 extraction plant, and slug storage facilities. This work was requested by the Manufacturing Divisions in Document HW-17792 and $5,000 was provided from the Manufacturing Division's operating budgets to finance work until separate funds were authorized by an A.E.C. directive. Of the $5,000 $3,500 was allocated to the Separations Division and $1,500 to the Reactor Division.

AEC Directive HW-177 was received May 22, 1950 and authorized Funds in the amount of $100,000; $60,000 were allocated to the Separations Divison and $40,000 to the Reactor Division. The Program; establishment of a preliminary break-down of the component parts of the program; preliminary evaluation of the components; initiation of preliminary design studies and formulation of tentative scope basis for various component parts of the program; studies of manpower requirements and manpower availability for the program; the possible effects of the P-10 Program on other work currently in progress; and other corollary studies and reviews which may be required to insure integrated progresson the study of the over-all P-10 production program.

Thursday, May 25, verbal notification was received by G. E. that the U-235 decontamination plant would not be constructed at Hanford and all work on this facility was stopped. Three preliminary drawings having to do with this facility had been prepared for the purpose of comparing characteristics of "remote" versus "direct maintenance" plants and a functional block diagram had been completed showing various steps of the process.

Tentative design bases, manpower estimates and scoping schedules were compiled and reviewed with the Manufacturing and Technical Divisions. This data and information was to have been submitted to the Manufacturing Divisions prior to June 1 for transmission to the A.E.C. However, a management decision was made during the latter part of the month to reconsider and review the basis upon which the P-10 Program would proceed, and a pre-scoping committee

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G. Project C-388 - P-10 Program (Con't)

composed of management personnel was established for the purpose. As soon as the basic assumptions are established by this committee and transmitted to the D & C Divisions, scoping of facilities will begin.

At the present time, personnel assigned to this project are engaged in making preliminary studies of the requirements for the P-10 extraction and slug storage facilities.

H. Redox Analytical and Plant Assistance Laboratory and Associated Waste Disposal Facilities

1. Design

All construction drawings and specifications have been issued for construction.

All equipment drawings have been completed and approved by General Electric Company. Requisitions have been received for the hoods, canopies, junior caves and associated equipment. The cubicle requisition will be issued about June 5, 1950. Requisitions for other items of special equipment will be issued during June.

Design of the Waste Disposal System is 23% complete. An investigation is being made relative to the use of tanks from the 221-U canyon. It is expected that the use of these tanks will save money and time as the tanks will be a critical procurement item.

A project proposal for this project was due May 31, 1950. It will be completed and submitted to the Manager, Design and Construction Divisions on June 12, 1950.

2. Construction

Construction of the Redox Laboratory is reported at 8% Complete. Excavation work has been substantially completed, and most of the substructure concrete has been poured. The walls of the changed area and the first floor slab are being placed. A total of approximately 2000 cubic yards of concrete have been placed to date. The work has not proceeded with full force due to a delay in receipt of structural steel, although no work stoppage has occurred. The first shipment of structural steel was received June 2, 1950, considerable ahead of schedule.

Negotiations with Atkinson-Jones Company are in progress for fee determination of the Waste Disposal System. This Construction is scheduled to start about September 1, 1950.

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I. Project C-257 - Health Instrument Control and Development Laboratory

The architect engineer reports design of this facility at about 91% complete.

A change order was issued to the architect engineer on May 5, 1950, to revise the design, using standard commercial hoods replacing the special designed hood. This change revised the piping and architectural details, but was considered worth-while due to substantial savings in construction costs and improved operational layout.

Design of this facility is now scheduled for completion on July 1, 1950. It is expected that the architect engineer will complete by that date. However, all drawings and specifications may not be approved by the General Electric Company by that date.

III. ORGANIZATION AND PERSONNEL

Num Beginning of Month	103*
End of Month	109**
Net Increase	6

* Includes 12 Fluor engineers and 8 Kellex engineers on loan.
** Includes 12 Fluor engineers and 6 Kellex engineers on loan.

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HW 17971 Del

PROJECT & RELATED PERSONNEL MAY 1950

	4-28-50		5-31-50	
GOVERNMENT EMPLOYEES				
Civilian Personnel - Atomic Energy Comm.	346		350	
Civilian Personnel - G. A. O.	8		8	
Total		354		358
RICHLAND VILLAGE PERSONNEL				
Commercial Facilities (Includes No. Richland)	1054		1055	
Organizations, Clubs, Etc.,	68		67	
Schools	386		380	
Churches	26		26	
Total		1534		1528
CONSTRUCTION SUB-CONTRACTORS				
Atkinson & Jones	2718		3102	
Newberry Neor	199		221	
Urban Smyth, Warren Co.,	284		336	
Hanley & Co.	74		97	
Kellex Corp.,	401		422	
J. A. Terteling & Son	79		47	
J. A. Troxell	4		-	
Charles T. Main Inc.,	119		88	
No. Electric Mfg. Co.,	3		3	
J. Gordon Turnbull	14		13	
McCorkle Const. Co.,	22		15	
Bergman & Lampson	34		46	
Consolidated Western Steel	21		1	
Flour Corp.	17		17	
Booz, Allen & Hamilton	2		2	
E. F. Hauserman	8		-	
Singmaster & Breyer	2		-	
R. A. Pringle	3		1	
Roof Service Inc.,	6		-	
Chicago Bridge & Iron Co.	1		25	
Rust Engr. Co.,	13		12	
Fisher - Puget Sound	-		1	
Edmond P. Erwin	-		11	
Total		4024		4460
General Electric Personnel		7646		7679
GRAND TOTAL		13558		14025

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