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HANFORD WORKS MONTHLY REPORT

for

AUGUST 1950

Compiled by

Division Managers

September 18, 1950

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RICHLAND, WASHINGTON

Operated for the Atomic Energy Commission
by the
General Electric Company
under
Contract # W-31-109-eng-52

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GENERAL SUMMARY

AUGUST 1950

MANUFACTURING DIVISIONS

Production Divisions

A total of 80 tons of metal was discharged at the goal concentration. The operating efficiency of B, F, and H piles was 88.5 percent, and of D pile 57.8 percent as a result of the nozzle replacement program at that pile. The pile operating levels at month end were 335 MW at B pile, 320 MW at D pile, 305 MW at F pile and 400 MW at H pile. The nominal CO_2 concentration in the pile circulating gas at month end was 100 percent, with an equilibrium amount of CO being present.

The H-10 loading at the H pile was approximately 70 percent complete at month end. The nozzle replacement program was 83 percent complete at D pile at month end.

Two tubes at F pile, 2194 and 3592, could not be discharged by normal means and extraordinary methods were required to empty the tubes.

A total of 60 tons of acceptable slugs was canned at a yield of 91.6 percent. The machining yield was 79.2 percent. The melt plant produced 18 tons of billets at a new record yield of 85.6 percent.

A total of 120 batches was started in the Canyon Buildings, 120 were processed through the Concentration Buildings, and 124 through the Isolation Building. All these represent new records. It was necessary to reduce the cooling time to a minimum of 67 days. The average purity of completed batches was 98.5 percent.

Plant Utilities and Maintenance Divisions

The title of the Mechanical Divisions was changed to Plant Utilities and Maintenance Divisions, effective August 1, 1950. Coincidentally, the Power Division was transferred from the Production Divisions to the Plant Utilities and Maintenance Divisions.

The 100-D pile was shut down on August 21 for the nozzle replacement program and inspection of van stone flanges.

A revised procedure for the 700-300 Area Motor Pools was put into effect. Vehicles are designated for division by total number rather than specific units and vehicles. Costs will be distributed on the basis of hours used and mileage.

The inspection of Plant railroad trackage using Milwaukee Rail Detector Car 802 was completed. A total of 90.3 miles of track was inspected and 34 defective rails were detected.

The electrical peak demands for the month were: Process -- 55,500 KW; Village -- 11,700 KW.

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General Summary

The annual inspection of all Power Division boilers by a certified boiler inspector was completed.

To effect improvement in working efficiency, 127 men were transferred from Project Engineering to the Plant Utilities and Maintenance Divisions, being returned to their original divisions as follows:

Maintenance Division	61
Electrical Division	19
Transportation Division	47
	127

TECHNICAL DIVISIONS

Pile Technology Division

The 600 tube H-10 loading in the H pile was completed during the month. Resulting equalization of temperature distribution permitted a return to 400 MW operation.

Critical mass measurements using cylindrical geometry were completed and preparations for measurements in spherical geometry were started. Ten critical mass determinations were made during the month.

The program of exponential pile measurements has been resumed. At month-end the first exponential pile had been erected but aluminum tubes had not been installed.

Measurements in the A test hole of D pile were repeated for the first time since early 1948. Comparison of results indicates that process tube blocks in the central zone have contracted but process tube blocks in the fringe zones have continued to expand.

Data were obtained from filler block graphite samples cut from the D pile. A maximum crystal expansion (C_0-spacing) of 5 percent was encountered in a region where the neutron flux was only 20 percent of the central flux. The thermal conductivity ratio (original: present) was about 25 in the fringe zones and about 12 in the central zone of the pile.

Equipment for the Navy Test Channel (ANL-140) was successfully proof-tested, and installation of the pressure tube was scheduled for the first week in September.

Additional data indicate that the G. E. Metals Comparator is less reliable than dilatometric methods for checking the degree of transformation of production slugs.

Investigation of possible causes for the significant decline in reactivity of canned uranium slugs is in progress.

Examination of the ruptured slugs encountered last June shows that the slug had been autoclaved but that the autoclaving failed to detect a small hole in the weld bead in an area where there was poor brazing between the can and the end cap.

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P-10 billet casting, slug machining, and extraction operations continued ten shifts per week. A record high total of 308 slugs was extracted. Mandatory showering of personnel leaving the exclusion area was inaugurated during the month.

Development of revisions to the glass production lines continued and testing of a recently fabricated furnace for the metal extraction line was commenced. Installation of a mass spectrometer was completed and construction of a 300 foot stack was started.

Separations Technology Division

Production testing of methods of shortening time cycles in the Separation Plants have reduced the lanthanum fluoride product precipitation step time cycle to the desired nine hours with only a 0.1 percent increase in waste losses. The lanthanum fluoride by-product step has also been reduced to less than nine hours by production testing, but possible adverse effects on decontamination are still being investigated. Process testing directed toward total elimination of plutonium solution evaporation between Isolation and Purification is under way. A two-fold reduction in outgassing time of the plutonium metal Casting operation appears to be performing satisfactorily in test.

The 16-inch diameter pulse column studies for the TBP process were completed with good results during the month, permitting the issuance of firm specifications for pulse column design for the TBP Plant. Previously reported anomalies of TBP column behavior were completely eliminated by replacing the solvent and metal feed solutions used for many months with fresh materials. Testing of prototype pumps, rotameter controllers, and waste evaporators for the Redox and TBP Production Plants is continuing satisfactorily. Laboratory scale equipment for studying continuous conversion of UNH to UO_3 has been 95 percent completed in installation and testing.

In the research laboratory, manganese dioxide scavenging of zirconium and niobium for Redox head-end treatment, excluding clarification, has been demonstrating improved performance over Filtrol scavenging. Although perhaps not now needed for TBP Plant design, a simple method of chemically removing the corrosive chloride by oxidation has shown promise. The rate of hydrolysis of monobutyl phosphate in the TBP process has been measures as has been the temperature coefficient of TBP extraction. "Electroless" plating of plutonium metal has produced favorable appearing coatings which fail, however, under accelerated weathering tests. A method of recovering macro amounts of Am^{241} from a special batch of plutonium for the California Radiation Laboratory has been worked out. Iodine removal from dissolver solution by air sparging has shown promising but erratic results in the laboratory.

In the 234-5 process development laboratory, direct conversion of plutonium (III) oxalate to fluoride has been successfully carried out, paving the way for production testing of elimination of the oxidation step in the process. Plutonium (III) oxalate precipitations with high yields and good direct hydrofluorinations have also been carried out, predicting the possible elimination of the Wet Chemistry reduction step. Investigation of potential methods of recovery of plutonium from skulls, slag, and crucible fragments is being accelerated.

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General Summary

Further stack gas treatment life-testing with Fiberglas has shown that air velocities of 50 ft./min. result in filter life expectancies for one fourth to one-half those used at velocities of 25 ft./min. The first dissolver off-gas Fiberglas filter and silver reactor to be installed at B Plant have been packed and nearly assembled for installation.

Technical Services Division

Consistent with its recent assumption of responsibility for the development of P-10 analytical methods, the Analytical Section established a special temporary group to expedite this work. The mass spectrometer was received and installed in Bldg. 108-B, and analytical personnel are being trained in its use in order that P-10 by-product analyses may be started soon. An analytical chemist is spending considerable time in Schenectady in connection with the KAPL investigation of an emission spectrometric P-10 assay procedure. The routine determination of hydrogen in P-10 alloy slugs also was undertaken by the Analytical Section.

Adaptation of the x-ray photometer to the determination of uranium in oxide samples was completed by the Analytical Section. This rapid instrumental procedure can complete in 1½ hours the work which normally requires 8 hours by wet chemical methods. Research is continuing on the application of this technique to highly radioactive samples.

On August 1 the Engineering Section assumed responsibility for all glass blowing services in the Technical Divisions, and the glass blowers employed by the Pile Technology Division in P-10 work were transferred to this Section. These transfers brought the Glass Shop force to a total of nine, including four trainees. Four glass blowers (in addition to the two KAPL loanees at Building 108-B) spent full time on P-10 work.

Project Proposal C-187-E-R-2, covering construction of the Redox Plant Laboratory and associated waste disposal facilities, was approved by the A.E.C. for expenditures up to $4,926,000. Approval for the approximate $300,000 additional cost shown in this proposal was withheld pending G. E. submission of a cost-to-complete estimate later in the fall. A revised plot plan for the aqueous waste disposal facilities at this new laboratory was adopted which offers substantial savings through shortened stainless steel lines and utilizes a crib site having superior soil percolation characteristics.

The preliminary plans and specifications for the Radiochemistry Building were received from the Architect-Engineer on August 29 and are in process of intensive review. The A and B Committee approved the Plot Plan and Utilities Project Proposal C-394, Part II, covering preliminary construction work on grading, fences, roadways, burial ground removal, etc., for the Hanford Works Laboratory site, and this proposal was forwarded to the A.E.C. D & C negotiations with the L. S. Rosener Co. for a lump-sum bid on the design of the Radiometallurgy Building were not successful and consideration now is being given to another engineering firm. Pressing other projects in D & C has necessitated their suspension of work on the Pile Technology Building, and they are negotiating for the subcontracting of the engineering design work remaining on the Plot Plan and Utilities for the Works Laboratory Area.

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General Summary

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The Statistics Group is giving special consideration to the application of the IBM automatic computing equipment which has been ordered for installation at Building 101. It appears that many of the routine reports now processed can be adapted, in part or completely, to machine computation, with the elimination of much desk calculation of a routine nature. In addition, techniques for the solution of non-routine problems, which have been impractical because of the extended computations involved, will now be available.

HEALTH INSTRUMENT DIVISIONS

The total number of employees on the roll remained the same as last month. Five Class I Special Hazard Incidents were reported.

Surveys by the Operational Division, with minor exceptions, showed satisfactory control of radiation hazards in the operating areas.

There was no notable deviation from the established pattern of activity deposition detected in routine surveys by the control groups of the Development Division. In biological monitoring an increase in the I^{131} activity in the thyroid gland of domestic and wild fowl was observed.

PLANT SECURITY AND SERVICES DIVISIONS

There were no lost time injuries during the month. The accident frequency rate for the year to date has been further reduced to 0.20.

On August 30, 1950, the General Electric employees of Hanford Works were awarded the Nucleonics Safety Council Award for the outstanding safety performance of having worked 134 consecutive days, or 5,519,086 man hours, without a lost time or disabling injury.

There were ten fire alarms in the industrial areas with a total loss of $28.61.

Volume of work in both the 700 and 200-West Area Laundries increased noticeably. The 200-West increase was due primarily to an extended shutdown in the 100-D Area.

Volume of work in all of the Clerical Services sections increased during the month.

Two new posts were established in the 200-West Area on August 23. These posts will control construction personnel entering or leaving the operation construction area. One similar post was established in the 234-5 Area on August 1.

EMPLOYEE AND COMMUNITY RELATIONS DIVISIONS

The number of applicants interviewed decreased from 1,287 during July to 1,229 during August. Of these applicants 295 were individuals who applied for employment with the Company for the first time. In addition, 204 new applications were received through the mail. Open nonexempt, nontechnical requisitions increased from 154 at the beginning of the month to 247 at the month end. Total plant roll increased from 7,813 to 7,839. Turn-over rate increased

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from 1.45% during July to 1.57% during August. During August, 63 new requests for transfers to other type of work were received in the Employment Office. Forty-four employees who had filed requests were transferred during the month. Continued shortages in the following job classifications: instrument mechanics and trainees, stenographers, designers, draftsmen, health instrument inspectors and glass blowers--resulted in continued newspaper advertising and recruiting trips being planned to Spokane, Washington for stenographers, and Denver, Colorado for stenographers, designers, and draftsmen on August 31, and September 1 and 2.

During August, instructions for rating and rating forms for non-exempt employees were distributed to all Superintendents and Division Heads in order that the regular ratings of these employees could be completed in September. The final tabulation of the questionnaire forwarded to all employees on the Employee Services Fund was made during August, with the majority of the employees indicating that they did not wish such a fund at this time. Six employees retired during August, and one employee death occurred. Seventy-four visits were made by a representative of the Employee Services Group to employees confined either at home or at Kadlec Hospital during the month. In addition 67 salary checks were delivered to employees confined either at the Hospital or at home because of illness. At the end of August, 605 employees are members of the military reserve and 914 employees are registered under the Selective Service Act of 1948 with 134 being classified as 1-A. Thirty-three suggestion awards, totaling $355, were made during August. These suggestions resulted in an estimated savings of $3,355.66. Eighty-two compensation claims were reported to the Department of Labor and Industries, and six property damage and one bodily injury claim were reported to the Travelers Insurance Company during the month.

The second four groups of supervisors began "Principles and Methods of Supervision" on August 21 with a total of 80 supervisors enrolled. This second group of supervisors attended two meetings during the month, while the first group attended five meetings. Two issues of the Hanford Works SAGE were distributed during August. The second meetings, in a series of four, were held for the Medical Division presenting the special program they had requested. A total of 26 supervisors and 180 non-exempt employees attended these meetings. As the result of a request from the S Division for a special program on Labor Relations covering the contract's spirit and intent, and the supervisor's responsibility, were conducted with 27 supervisors participating. During August, a notice was sent to all Divisions outlining the renewal of the 40-Hour Supervisor's Training Program in September.

The Eighth Semi-Annual Report of the AEC contained many pictures of Hanford Works, and most of the pictures were those taken by the Hanford Works Photo House earlier this year. Subsequent articles in various newspapers in the Pacific Northwest quoted at length from this Semi-Annual Report and were accompanied by many of the same photographs which the Hanford Works Photo House supplied.

The General Manager addressed the Pasco Chamber of Commerce on August 7 on the subject "General Electric and Its Community Responsibilities." Good coverage of this talk was given by both newspapers in the Tri-City Area.

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General Summary

The Assistant General Manager accepted an invitation from the local Kiwanis Club to speak when that club visited the Pasco organization's regular luncheon meeting on Thursday, August 31. Declassified items of plant equipment were used to illustrate his talk. The Tri-City Herald representative was present and an excellent story appeared in that paper the following day concerning the talk.

In addition to talks before organizations in the tri-cities, Public Functions and Services has arranged showings of "A Chance to Play", a G-E movie which points out the need for increased recreational facilities in American cities for both children and adults.

The volume of work in the Hanford Works Photo House increased during August. Total prints produced during the month equalled 3,977, negatives exposed equalled 794, and total photographic assignments completed totalled 104.

The News Bureau originated and distributed 68 public information releases during August, 11 of which went to the "general list" of newspapers throughout the Northwest. These were sent out in the form of stories and/or photos.

Pictures of the visit by Harry A. Winne, Vice President of General Electric Company in charge of engineering policy, were released to Pacific Northwest and local newspapers during his visit here which coincided with visits by the Atomic Energy Commission Chairman, a member of the Commission, and members of the Commission's staff from Washington, D. C.

A final tabulation of renewal of subscriptions to "Adventures Ahead" revealed that 783 families of G. E. employees at Hanford Works will receive the magazine during the coming year.

Although Richland has had a very light poliomyelitis season this year, the policy followed last year of informing residents when cases were reported to Kadlec Hospital has been followed during August. One story prepared by Special Programs, which handles Kadlec Hospital public information and public relations work, concerned Richland's first polio case and this story was released during August. Another story prepared by Special Programs, together with photographs, was the means adopted of publicizing the nurses institute on the modern care of polio cases held at Kadlec Hospital during the month.

Among the many individual items produced by Special Programs during the month was included the 12-page community relations booklet produced for the Richland Patrol entitled "Here's Community Patrol."

The policy concerning project housing for families of personnel called into the armed forces was carried in the Works News during August. In addition, the method to be followed in assigning categories to Hanford Works employees who are members of the reserves or the National Guard was published in the Works News.

The Company was still endeavoring to complete negotiations with the Building Service Employees International Union for the execution of a contract affecting certain employees of Kadlec Hospital. A letter was forwarded to all supervisors outlining the Company's responsibility insofar as making wage

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payments to rotating shift workers who work more or less than the normal 40-hour week. The Company received, on August 28, notification from the HAMTC that it wished to reopen the Contract for the purpose of discussing an adjustment in wages, with a tentative opening date of September 27.

Negotiations between A-J and the Office Workers were concluded on August 30. The Federal Mediation and Conciliation Service again intervened at the request of the Davis Committee to assist in the settlement.

The offer of settlement of the DST dispute was withdrawn on August 2, 1950. Efforts to select a fifth man from a panel submitted by the Federal Mediation and Conciliation Service to proceed with arbitration has been unsuccessful. The Union claims settlement was made when their authorized representatives on the Arbitration Committee signed the Agreement. A-J has replied that the failure of the Carpenters and Laborers to sign rendered the Agreement null and void.

Negotiations relative to a Master Agreement for 1950-51 continued during the month. The parties are apparently of the opinion that the present Agreement which has a termination date of August 10 continues in effect so long as the parties are in negotiation. The Unions are holding firm for a Building Trades Agreement. The contractors continue to oppose it.

The NLRB denied the motion for reconsideration of the Decision and Order submitted by A-J and the Operating Engineers relative to the Newes case. Certification election for Operating Engineers Local 370 as bargaining agent is scheduled for September 6 and 7, 1950.

Negotiations between A-J and the Teamsters Local No. 556 were successfully concluded.

The Sheet Metal Workers have requested the State and Federal Conciliation Service to sit in on wage negotiations from the beginning in order to prevent a threatened work stoppage.

Negotiations with the Ironworkers were concluded on August 16 with increases from $2.10 to $2.25 for Reinforcing Ironworkers.

A complaint regarding the Project medical and ambulance service was lodged with the Department of Labor and Industries by V. A. Larish, United Association Business Agent.

Reimbursement Authorization Requests were submitted to the AEC regarding approval of an exempt rate of record for a non-exempt job resulting from the reclassifying of an exempt employee to non-exempt and for the retroactive overtime payment of time and one-half to four Health Instrument employees who were changed from exempt to a non-exempt status. A Reimbursement Authorization Request was also submitted on increases in rates of Steno-Typists and Secretaries. A total of 129 requisitions covering 246 employees was reviewed, 219 reclassifications, 176 interdivisional transfers were reviewed, 297 automatic increases and 9 merit increases were approved, and 133 additions to the weekly roll were approved. Seven employees were transferred from exempt to weekly roll.

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General Summary

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PURCHASING AND STORES DIVISIONS

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

	Total Personnel as of 7-31-50	Total Personnel as of 8-31-50	Net Change
Exempt	56	57	Plus 1
Non-Exempt	307	314	Plus 7
Totals	363	371	Plus 8

The number of purchase requisitions received and the number of purchase orders placed increased during the month as compared with the previous month.

In order to expedite procurement of vessels, the use of tantalum-columbium for the stabilization of stainless steel was authorized so far as the Redox Program was concerned. Vendors were advised to proceed with fabrication of vessels as soon as corrosion samples were taken rather than to wait for results of corrosion tests. Corrosion tests are still a requirement, however.

The Manager of the Purchasing and Stores Divisions, in company with the Chief, Administrative Services, Atomic Energy Commission, contacted General Electric, Schenectady, the Electro-Metallurgical Company, and the Washington, D. C. Office of the Atomic Energy Commission in order to facilitate the voluntary allocation of both stainless and carbon steels. This program was well under way at month end.

A total of 2,475 purchase requisitions was screened against Project inventories with the result that 1,838 items were furnished from Plant sources and thus obviating the necessity for the expenditure of new funds for outside purchase.

Materials valued at $24,854.10 were declared excess from active inventories during the month, and materials valued at $366,751.65 were declared excess from the Construction Material Account.

The Army took over Pasco Warehouse No. 3 and adjacent outside storage space. Warehouses Nos. 1, 2, and 4 are being evacuated on or ahead of schedule.

On August 17, 1950, the General Services Administration discontinued the sale of government property from the Pasco Depot.

Shipping activities at the Pasco Depot continued at an accelerated pace, most of the material being shipped to other Government agencies and to educational institutions.

As a result of efforts exerted by our Traffic Section, rate reductions were obtained from carriers resulting in a savings during the month of August of $14,298.15. The total savings from September 1, 1946 to date amount to $1,332,490.16.

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General Summary

COMMUNITY DIVISIONS

Number of employees on roll:	Beginning of Month	End of Month
Community Administration	5	5
Community Accounting	30	28
Community Public Works	437	440
Community Safety	3	3
Community Commercial Facilities	15	15
Community Housing	43	44
Community Fire	99	96
Community Patrol	71	69
Community Activities	19	18
	722	718

There was a decrease of four employees in the Community Divisions during the month of August, 1950.

MEDICAL DIVISIONS

The roll decreased from 288 to 285.

Industrial
Employee physical examinations increased from 2146 to 2349, while dispensary treatments increased from 6859 to 8493.

Eight major and eleven sub-major injuries were treated. No major injury and only one sub-major injury was sustained by G. E. employees.

The health topic for the month was "Eyes and Vision".

Sickness absenteeism increased from 1.20% to 1.34%, while total absenteeism increased from 1.76% to 2.01%.

Communities
The hospital average daily census increased from 70.8 to 79.4 (68.5 adults and 10.9 infants). The census was 64.3 a year ago.

Nursing hours per patient day for July were 3.61 for the mixed services and 5.40 for obstetrics.

Construction of the new wing to the Medical-Dental Building was started.

In-service training program for nurse aides and orderlies was started.

Public Health
Three cases of infantile paralysis were reported. The incidence of other contagious diseases dropped by about 50%.

Costs (July)
The net cost of operating the Medical Divisions (before assessments to other divisions and Workmen's Compensation Costs) was $92,521, a decrease of $14,516 and $13,211 below the budget figure.

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Major factors causing the improved figures were:

1. There were about $5,000 less assessments from other divisions due to less maintenance work.

2. Weekly payroll for July 1 and 2 amounting to about $5,000 was included in the June costs.

3. Continuity of service was reduced from 14% to 10%, amounting to about $5,000.

4. A decrease in revenue of about $1,500 was offset by a decrease of $1,000 in food purchases.

The net cost of operating Kadlec Hospital was $27,057, a decrease of $2,438.

GENERAL ACCOUNTING DIVISION

A Plant Accounting Statement covering the year ended June 30, 1950 was issued on August 10, 1950. This statement presented in detail changes in both plant and reserve accounts during the year. Procedures were established relative to the accumulation of costs and the accounting treatment in connection with retirement of capital assets. A memorandum outlining these procedures was completed and is ready for distribution.

Information requested by AEC relative to budgeted operating costs segregated by activity and construction costs by project for FY 1951 was furnished on August 23, 1950. Revised construction budget schedules were received from AEC during the month, and respective division managers were accordingly advised of revisions made.

In addition to continuing the audit of Excess Materials records and procedures, Internal Auditors completed a report on Assessments to Manufacturing Divisions from Other Divisions for the period September 1, 1948 to May 31, 1950, began a comprehensive review of the Hanford Works mail distribution systems, and completed sundry other audits.

The Project Report for the six-month period ended June 30, 1950 was issued on August 30, 1950. This report indicates cost of each completed project as of June 30, 1950 and the distribution of costs to Plant Accounts, Major Construction Program Facilities, and Expense. Completed work orders, in total, which were handled through Construction Work in Progress were also included in this report.

In connection with the study of shift schedules in use at the Hanford Works, considerable time and effort was devoted to preparation of drafts of instructions letters setting forth procedures to be followed in assigning employees to regularly schedules work weeks and procedures for reporting time worked. Revised time cards were prepared and instructions to payroll personnel were drafted covering method of calculation of salary payments under the proposed change in payment practices. Several meetings and discussions were held between representatives of Union Relations and Payroll Divisions for the purpose of coordinating the preparation and presentation of the proposed change in assignment of work weeks and change in payment practices.

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General Summary

Although the first draft of Appendix C is not complete, considerable progress was made during August in revising and completing several sections of the proposed Appendix to the Prime Contract.

Hanford Works cash disbursements and cash receipts, excluding advances from the Atomic Energy Commission, for the month of July as compared with August may be summarized as follows:

	July	August
Disbursements		
Material and Freight - GE	$1 433 544	$1 140 394
Payrolls - GE (Net)	1 837 467	1 857 632
Payments to Subcontractors	2 444 095	2 739 002
Other	1 123 565	913 286
Total	6 838 671	6 650 314
Receipts		
Rents	110 131	110 833
Hospital	42 587	35 295
Telephone	14 602	14 318
Bus Fares	8 881	9 192
Other	120 021	19 467
Total	296 222	189 105
Net Disbursements	$6 542 449	$6 461 209

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STAFF

General Manager	G. R. Prout
Manager, Schenectady Office	B. R. Prentice
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
AUGUST 1950

	EXEMPT		NON - EXEMPT		TOTAL	
	7-31-50	8-31-50	7-31-50	8-31-50	7-31-50	8-31-50
GENERAL	18	18	27	24	45	42
LAW	2	2	3	3	5	5
DESIGN & CONST. DIV.						
Construction	2	2	37	37	39	39
Const. Acctg.	10	10	61	58	71	68
Design	210	219	205	211	415	430
No. Richland Realty	18	16	79	83	97	99
MANUFACTURING DIVISIONS						
General	14	16	4	4	18	20
Proj. Engr. Control	24	25	22	22	46	47
Proj. Engr. Design	46	46	70	75	116	121
Proj. Engr. Minor Const.	28	26	159	19	187	45
Mfg. Acctg.	7	7	49	49	56	56
OPERATING DIVISIONS						
"P"	72	72	278	282	350	354
"S"	110	111	356	370	466	481
Power	82	84	480	480	562	564
MECHANICAL DIVISIONS						
Maintenance	51	51	306	359	357	410
Electrical	51	51	244	259	295	310
Instrument	52	51	189	189	241	240
Transportation	58	58	561	603	619	661
TECHNICAL DIVISIONS						
Administrative	4	4	2	2	6	6
Pile Technology	98	102	87	92	185	194
Separations Technology	101	103	56	53	157	156
Technical Services	124	124	344	352	468	476
MEDICAL	48	46	240	239	288	285
H. I. DIVISIONS						
General	5	5	4	4	9	9
Operational	57	57	173	171	230	228
Development	27	31	72	73	99	104
Biology	27	28	37	35	64	63
ACCOUNTING DIVISIONS						
Gen. Acctg. Payroll	9	9	66	62	75	71
Gen. Acctg. Acctg.	18	18	76	80	94	98
EMPLOYEE & COMM. REL.DIV.	30	30	61	63	91	93
PLANT SECURITY & SERVICE DIV.						
Patrol & Security	55	55	527	538	582	593
Safety & Fire	38	38	106	106	144	144
Gen. & Off. Serv.	23	23	207	205	230	228
PURCHASING & STORES DIV.						
Purchasing	40	41	58	64	98	105
Stores	21	21	253	252	274	273
COMMUNITY DIVISIONS	217	209	517	512	734	721
TOTALS	1797	1809	6016	6030	7813	7839

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PERSONNEL DISTRIBUTION AUGUST 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	-	-	-	-	-	-	-	-	-	-	18	18
Total	-	-	-	-	-	-	-	-	-	-	24	24
	-	-	-	-	-	-	-	-	-	-	42	42
LAW												
Clerical	-	-	-	-	-	-	-	-	-	-	2	2
Total	-	-	-	-	-	-	-	-	-	-	3	3
	-	-	-	-	-	-	-	-	-	-	5	5
DESIGN & CONST. DIV'S.												
CONSTRUCTION												
Supervisors	-	-	-	-	-	-	-	-	-	2	-	2
Clerical	-	-	-	-	-	-	-	-	-	37	-	37
Total	-	-	-	-	-	-	-	-	-	39	-	39
CONST. ACCTG.												
Supervisors	-	-	-	-	-	-	-	-	-	10	-	10
Clerical	-	-	-	-	-	-	-	-	-	58	-	58
Total	-	-	-	-	-	-	-	-	-	68	-	68
DESIGN												
Supervisors	-	1	-	-	-	-	1	-	-	14	35	51
Engineers & Inspectors	-	7	-	-	-	-	21	-	-	34	93	155
Other Exempt	-	-	-	-	-	-	-	-	-	11	2	13
Draftsmen	-	-	-	-	-	-	-	-	-	-	72	72
Clerical	-	1	-	-	-	-	4	-	-	24	110	139
Total	-	9	-	-	-	-	26	-	-	83	312	430
NO. RICHLAND REALTY												
Supervisors	-	-	-	-	-	-	-	-	-	16	-	16
Clerical	-	-	-	-	-	-	-	-	-	83	-	83
Total	-	-	-	-	-	-	-	-	-	99	-	99

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HW# 18740

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	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.												
GNERAL												
Supervisors	-	-	-	-	-	-	-	-	-	-	10	10
Engineers	-	-	-	-	-	-	-	-	-	-	6	6
Clerical	-	-	-	-	-	-	-	-	-	-	4	4
Total	-	-	-	-	-	-	-	-	-	-	20	20
PROJ. ENG'R. CONTROL												
Supervisors	-	-	-	-	-	-	-	1	-	-	7	8
Engineers	-	-	2	-	-	-	-	3	-	-	12	17
Clerical	-	-	1	-	-	-	-	-	-	-	15	16
Others	-	-	1	-	-	-	-	-	1	-	4	6
Total	-	-	4	-	-	-	-	4	1	-	38	47
PROJ. ENG'R. DESIGN												
Supervisors	-	-	-	-	-	-	2	-	-	-	19	21
Engineers	-	-	-	-	-	-	1	-	-	5	19	25
Draftsmen	-	-	1	-	-	-	5	-	-	5	45	56
Clerical	-	-	1	-	-	-	-	-	-	-	8	9
Others	-	-	-	-	-	-	-	-	4	-	6	10
Total	-	-	2	-	-	-	8	-	4	10	97	121
PROJ. ENG'R. MINOR CONST.												
Supervisors	-	-	1	-	-	-	1	-	21	-	1	24
Engieers	-	-	1	-	-	-	-	1	-	-	-	2
Craftsmen	-	-	-	-	-	-	-	-	7	-	-	7
Clerical	-	-	-	-	-	-	1	1	7	-	1	10
Tech. Grads.	-	-	-	-	-	-	-	-	2	-	-	2
Total	-	-	2	-	-	-	2	2	37	-	2	45
MFG. ACCTG.												
Supervisors	-	-	-	-	-	-	-	-	-	-	7	7
Clerical	-	-	-	-	-	-	-	-	-	-	49	49
Total	-	-	-	-	-	-	-	-	-	-	56	56

	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.												
OPERATING DIV'S.												
"P"												
Supervisors	9	11	10	10	-	-	-	13	-	-	2	55
Supv. in Training	1	2	1	-	-	-	-	1	-	-	-	5
Engineers	2	-	-	-	-	-	-	-	-	-	10	12
Operators	40	46	40	40	-	-	-	95	-	-	-	261
Clerical	2	2	2	2	-	-	-	5	-	-	3	16
Others	2	1	-	1	-	-	-	1	-	-	-	5
Total	56	62	53	53	-	-	-	115	-	-	15	354
"S"												
Supervisors	-	-	-	-	-	15	35	4	-	-	3	57
Supv. in Training	-	-	-	-	-	10	19	-	-	-	3	32
Engineers	-	-	-	-	-	-	8	-	-	-	14	22
Operators	-	-	-	-	-	120	194	8	-	-	-	322
Clerical	-	-	-	-	-	7	17	-	-	-	4	28
Others	-	-	-	-	-	6	14	-	-	-	-	20
Total	-	-	-	-	-	158	287	12	-	-	24	481
POWER												
Supervisors	12	20	12	11	-	4	8	5	1	-	2	75
Engineers	-	1	-	-	-	-	1	-	7	-	-	9
Operators	79	107	78	80	5	21	51	11	10	-	-	442
Clerical	1	1	1	1	-	-	1	-	4	-	2	11
Others	4	6	4	5	-	-	5	1	2	-	-	27
Total	96	135	95	97	5	25	66	17	24	-	4	564
MECHANICAL DIV'S.												
MAINTENANCE												
Supervisors	1	8	5	3	-	4	12	5	5	-	2	45
Engineers	-	-	2	-	-	-	2	1	-	-	1	6
Craftsmen	20	69	33	23	-	33	77	44	36	-	-	335
Clerical	-	1	3	1	-	1	5	3	2	-	1	17
Others	-	-	2	1	-	1	1	1	1	-	-	7
Total	21	78	45	28	-	39	97	54	44	-	4	410

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	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	Totals
ELECTRICAL												
Supervisors	2	1	1	5	-	1	5	2	17	-	9	43
Engineers	-	-	-	1	-	-	1	1	2	-	3	8
Craftsmen	20	18	14	14	2	12	13	11	65	-	23	192
Clerical	1	-	1	1	-	-	1	1	4	-	26	35
Operation	4	4	4	4	-	-	-	-	13	-	-	29
Others	-	-	-	1	-	-	-	-	2	-	-	3
Total	27	23	20	26	2	13	20	15	103	-	61	310
INSTRUMENT												
Supervisors	2	4	2	3	-	2	6	8	-	-	3	30
Engineers	-	1	-	-	-	-	3	11	-	-	6	21
Craftsmen	11	25	14	12	-	14	29	49	-	-	10	164
Clerical	-	1	1	1	-	1	2	6	2	-	3	17
Others	-	-	-	-	-	-	1	7	-	-	-	8
Total	13	31	17	16	-	17	41	81	2	-	22	240
TRANSPORTATION												
Supervisors	3	4	1	1	-	2	2	1	9	-	31	54
Engineers	-	-	-	-	-	-	-	-	-	-	4	4
Bus Drivers	-	-	-	-	-	-	-	-	-	-	162	162
Journeyman	7	12	3	6	-	2	5	-	16	-	70	121
Trainmen	-	-	-	-	-	-	-	-	25	-	-	25
Serviceman	4	14	2	2	-	3	5	3	19	-	18	70
Clerical	1	1	1	1	-	1	1	1	1	-	21	29
Equipment Operators	8	17	3	4	-	3	9	4	23	-	31	102
Others	10	14	2	2	-	12	4	2	10	-	38	94
Total	33	62	12	16	-	23	26	11	103	-	375	661
TECHNICAL DIVISIONS												
ADMINISTRATIVE												
Supervisors	-	-	-	-	-	-	-	-	-	-	4	4
Clerical	-	-	-	-	-	-	-	-	-	-	2	2
Total	-	-	-	-	-	-	-	-	-	-	6	6

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	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 DIVISIONS												
PILE TECHNOLOGY												
Supervisors	2	1	1	1	1	-	-	13	-	-	-	19
Metallurgist & Engr.	18	3	2	7	-	-	-	33	-	-	1	64
Physicists	1	1	-	3	2	-	-	10	-	-	2	19
Tech Grads & Engr.Assts.	9	-	1	4	-	-	-	8	-	-	-	22
Technologists	5	-	-	-	-	-	-	-	-	-	-	5
Laboratory Assts.	30	5	1	7	3	-	-	10	-	-	-	56
Clerical	-	1	-	2	-	-	-	6	-	-	-	9
Others	-	-	-	-	-	-	-	-	-	-	-	-
Total	65	11	5	24	6	-	-	80	-	-	3	194
SEPARATIONS TECHNOLOGY												
Supervisors	-	-	-	-	-	1	4	15	-	-	1	21
Chemists & Chem. Engr.	-	-	-	-	-	5	10	66	-	-	1	82
Tech. Grad	-	-	-	-	-	1	1	4	-	-	-	6
Clerical	-	-	-	-	-	-	3	7	-	-	1	11
Chem. Operators	-	-	-	-	-	-	1	22	-	-	-	23
Others	-	-	-	-	-	-	1	12	-	-	-	13
Total	-	-	-	-	-	7	20	126	-	-	3	156
TECHNICAL SERVICES												
Supervisors	-	-	-	2	3	7	14	25	-	-	3	54
Chemists & Eng'rs.	2	1	1	-	7	-	14	40	-	-	5	70
Technologists,Tech.Grad.	2	-	-	2	-	9	27	19	-	-	-	59
Lab. Assts.	3	-	-	5	-	33	65	41	-	-	-	147
Clerical	-	-	-	1	3	2	3	42	-	-	42	93
Others	-	-	-	-	34	-	-	16	-	-	3	53
Total	7	1	1	10	47	51	123	183	-	-	53	476

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	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	28	29
Physicians	-	-	1	-	-	-	1	-	-	2	7	11
Others Exempt	-	-	-	-	-	-	-	-	-	-	6	6
Technicians	-	-	-	1	-	1	1	1	-	4	10	18
Nurses	4	6	4	2	-	3	6	-	-	1	59	85
Clerical	-	1	-	1	-	-	1	-	-	9	52	64
Others	-	-	-	-	-	-	-	-	-	1	71	72
Total	4	7	5	4	-	4	9	1	-	18	233	285
H. I. DIVISIONS												
GENERAL												
Supervisors	-	-	-	-	-	-	-	-	-	-	5	5
Clerical	-	-	-	-	-	-	-	-	-	-	4	4
Total	-	-	-	-	-	-	-	-	-	-	9	9
OPERATIONAL												
Supervisors	1	1	1	2	-	1	8	8	-	-	2	24
Engineers	4	4	4	5	-	4	8	3	-	-	1	33
Clerical	-	-	-	1	-	-	1	1	-	-	-	3
Others	13	16	16	13	-	25	34	43	8	-	-	168
Total	18	21	21	21	-	30	51	55	8	-	3	228
DEVELOPMENT												
Supervisors	-	-	-	-	-	1	5	3	-	-	-	9
Engineers	-	-	-	-	-	5	7	9	-	-	1	22
Clerical	-	-	-	-	-	1	1	2	-	-	-	4
Others	-	-	-	-	-	13	30	13	-	-	13	69
Total	-	-	-	-	-	20	43	27	-	-	14	104
BIOLOGY												
Supervisors	-	-	7	-	-	-	-	-	-	-	-	7
Engineers	-	-	21	-	-	-	-	-	-	-	-	21
Clerical	-	-	3	-	-	-	-	-	-	-	-	3
Others	-	-	32	-	-	-	-	-	-	-	-	32
Total	-	-	63	-	-	-	-	-	-	-	-	63

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	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 DIVISIONS												
GEN. ACCTG. PAYROLL												
Supervisors	-	-	-	-	-	-	-	-	-	-	9	9
Clerical	-	-	-	-	-	-	-	-	-	-	62	62
Total	-	-	-	-	-	-	-	-	-	-	71	71
GEN. ACCTG. ACCTG.												
Supervisors	-	-	-	-	-	-	-	-	-	3	9	12
Other Exempt	-	-	-	-	-	-	-	-	-	-	6	6
Clerical	-	-	-	-	-	-	-	-	-	35	45	80
Total	-	-	-	-	-	-	-	-	-	38	60	98
EMPLOYEE & COMM. RELATIONS												
Supervisors	-	-	-	-	-	-	-	-	-	-	22	22
Employee Rel. Counselor	-	-	-	-	-	-	-	-	-	-	1	1
Other Exempt	-	-	-	-	-	-	-	-	-	-	7	7
Clerical	-	-	-	-	-	-	-	-	-	-	49	49
Others	-	-	-	-	-	-	-	-	-	-	14	14
Total	-	-	-	-	-	-	-	-	-	-	93	93
PLANT SECURITY & SERVICE DIV'S.												
PATROL & SECURITY												
Supervisors	5	6	6	5	-	5	9	7	7	-	4	54
Other Exempt	-	-	-	-	-	-	-	-	1	-	-	1
Patrolman	52	66	67	49	-	57	120	71	2	-	34	518
Clerical	-	-	-	-	-	-	-	-	16	-	2	18
Seamstress	-	-	-	-	-	-	-	-	2	-	-	2
Total	57	72	73	54	-	62	129	78	28	-	40	593
SAFETY & FIRE												
Supervisors	8	-	-	-	-	-	4	4	9	-	4	29
Engineers	-	2	-	1	-	2	-	2	-	-	2	9
Fireman	45	-	-	-	8	-	14	15	3	-	14	99
Clerical	-	1	-	1	-	1	-	1	-	-	3	7
Total	53	3	-	2	8	3	18	22	12	-	23	144

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	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
GEN. & OFFICE SERVICE												
Supervisors	-	-	1	-	-	1	2	1	1	-	17	23
Laundry Operators	-	-	-	-	-	-	2	-	-	-	1	3
Janitors & Serviceman	7	5	5	4	1	4	15	11	-	-	36	88
Clerical	-	-	-	-	-	-	-	-	-	-	32	32
Others	-	-	-	-	-	-	30	-	-	-	52	82
Total	7	5	6	4	1	5	49	12	1	-	138	228
PURCHASING & STORES DIVISIONS												
PURCHASING												
Supervisors	-	-	-	-	-	-	-	-	-	-	15	15
Others Exempt	-	-	-	-	-	-	-	-	12	-	14	26
Clerical	-	-	-	-	-	-	-	-	-	2	62	64
Total	-	-	-	-	-	-	-	-	12	2	91	105
STORES												
Supervisors	3	-	-	-	-	-	-	-	-	3	15	21
Clerical	16	-	-	-	-	-	-	-	-	29	47	92
Others	29	-	2	-	-	-	1	-	-	20	108	160
Total	48	-	2	-	-	-	1	-	-	52	170	273
COMMUNITY DIVISIONS												
Supervisors	-	-	-	-	-	-	-	-	-	16	113	129
Other Exempt	-	-	-	-	-	-	-	-	-	-	15	15
Fireman	-	-	-	-	-	-	-	-	-	29	36	65
Patrolman	-	-	-	-	-	-	-	-	-	15	26	41
Journeyman	-	-	-	-	-	-	-	-	-	-	177	177
Serviceman	-	-	-	-	-	-	-	-	-	-	66	66
Truck Drivers	-	-	-	-	-	-	-	-	-	-	47	47
Power Operators	-	-	-	-	-	-	-	-	-	-	41	41
Clerical	-	-	-	-	-	-	-	-	-	-	91	91
Others	-	-	-	-	-	-	-	-	-	-	49	49
Total	-	-	-	-	-	-	-	-	-	60	661	721
GRAND TOTAL	505	520	426	355	69	457	1016	895	379	469	2748	7839

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MANUFACTURING DIVISIONS

AUGUST 1950

SUMMARY

Production Divisions

A total of 80 tons of metal was discharged at the goal concentration. The operating efficiency of B, F, and H piles was 88.5 percent, and of D pile 57.8 percent as a result of the nozzle replacement program at that pile. The pile operating levels at month end were 335 MW at B pile, 320 MW at D pile, 305 MW at F pile and 400 MW at H pile. The nominal CO_2 concentration in the pile circulating gas at month end was 100 percent, with an equilibrium amount of CO being present.

The H-10 loading at the H pile was approximately 70 percent complete at month end. The nozzle replacement program was 83 percent complete at D pile at month end.

Two tubes at F pile, 2194 and 3592, could not be discharged by normal means and extraordinary methods were required to empty the tubes.

A total of 60 tons of acceptable slugs was canned at a yield of 91.6 percent. The machining yield was 79.2 percent. The melt plant produced 18 tons of billets at a new record yield of 85.6 percent.

A total of 120 batches was started in the Canyon Buildings, 120 were processed through the Concentration Buildings and 124 through the Isolation Building. All these represent new records. It was necessary to reduce the cooling time to a minimum of 67 days. The average purity of completed batches was 98.5 percent.

Plant Utilities and Maintenance Divisions

The title of the Mechanical Divisions was changed to Plant Utilities and Maintenance Divisions, effective August 1, 1950. Coincidentally, the Power Division was transferred from the Production Divisions to the Plant Utilities and Maintenance Divisions.

The 100-D pile was shut down on August 21 for the nozzle replacement program and inspection of van stone flanges.

A revised procedure for the 700-300 Area Motor Pools was put into effect. Vehicles are designated for division by total number rather than specific units and vehicles. Costs will be distributed on the basis of hours used and mileage.

The inspection of Plant railroad trackage using Milwaukee Rail Detector Car 802 was completed. A total of 90.3 miles of track was inspected and 34 defective rails were detected.

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Manufacturing Divisions

The electrical peak demands for the month were: Process - 55,500 KW, Village - 11,700 KW.

The annual inspection of all Power Division boilers by a certified boiler inspector was completed.

To effect improvement in working efficiency, 127 men were transferred from Project Engineering to the Plant Utilities and Maintenance Divisions, being returned to their original divisions as follows:

Maintenance Division	61
Electrical Division	19
Transportation Division	47
	127

C. N. GROSS, MANAGER
MANUFACTURING DIVISIONS

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HW-18740

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MANUFACTURING DIVISIONS

PATENT REPORT SUMMARY
FOR
MONTH OF AUGUST 1950

Richland, Washington
September 8, 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
C. T. Groswith (S Division)	Concept of a simplified process for metal fabrication.
A. S. Withrow (S Division)	Detail of a simplified process for metal fabrication.
A. S. Withrow (S Division)	A tool for holding the symmetrical portion of an irregular metal object to accomplish the shaping of all surfaces except one which is perpendicular to the axis of rotation.

C. N. Gross

C. N. GROSS

MANAGER, MANUFACTURING DIVISIONS

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HW-18740

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or process.
Section 10 Approved By: [illegible]
W. K. Woods, Division Head
Pile Technology Division, Technical Divisions

[redacted]

1209202

September 7, 1950

P DIVISION

AUGUST, 1950

I. GENERAL

The B, D, F, and H Piles operated throughout the month except for the outages listed under Area Activities. Power levels were as follows: B Pile - 320 MW until August 21 when the level was increased to 335 MW, D Pile - 305 MW until August 13 when the level was increased to 320 MW, F Pile - 305 MW, H Pile - 400 MW. The piles operated with a "time operated" efficiency of 82.6%.

A new record of 85.6% and 93.9%, respectively, was established for billet and solid yields in the Melt Plant.

The H-10 program, initiated during June (described in document No. HW-18221-A) was continued during the month at H Pile. At month end a total of 582 tubes have been loaded. Level reductions previously reported (document No. HW-18473-A) which resulted from excessive graphite temperatures in that portion of the pile loaded with H-10 material have been eliminated due to a more even temperature distribution resulting from the symmetrical H-10 loading.

Work was continued during the month toward preparing the DR Pile for startup by October 1. The installation of aluminum nozzles on the rear face and galvanized nozzles on the front face, begun during July, was completed, and the tie in of the gas system to the D Pile gas processing building was in progress at month end.

The D Pile was shut down on August 21 for Van Stone flange reconditioning and the installation of aluminum inlet and outlet nozzles. The work was 83% complete at month end.

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P Division

II. ORGANIZATION AND PERSONNEL

Number of employees on payroll - August, 1950

Beginning of month	350
End of month	354
Net increase	4

Eight operators were hired in the 300 Area and three were transferred to the S Division.

Two operators were transferred from the Electrical Division and one operator was transferred from the Purchasing and Stores Division to the 300 Area.

One Technical Graduate was transferred to the Instrument Division and one Technical Graduate was transferred to the Project Engineering Divisions.

One Chief Operator and one Steno.-Typist B terminated voluntarily.

III. AREA ACTIVITIES

Pile Summary	PILE B	PILE D	PILE F	PILE H
Time Operated (%)	94.3	58.8	83.7	93.6
Operating Efficiency (%)	93.0	57.3	81.5	91.0
*Power Level (MW)	335	320	305	400
*Inlet Water Temperature (°C)	20.3	21.4	20.4	20.2
*Outlet Water Temperature (Maximum °C., 10 tubes, 0.240" Zone)	67.3	--	62.4	65.8
Number of Scrams	0	0	2	1
Number of Purges	1	1	1	2
Helium Consumption (cu. ft.)	--	**17,866	8,299	--
CO_2 Consumption (cu. ft.)	53,448	***67,410	86,904	15,301
Metal Discharged (tons)	17.18	7.27	32.19	23.21
Inhours Gained (this month)	+27	+30	-18	-101
*Inhours Poisoned	619	605	561	244
*Inhours in Rods	58	76	69	62
CO_2 Concentration	97	98	98	90

* Month end figures.
** Includes 8,000 cu. ft. for DR.
*** Includes 7,500 cu. ft. for DR.

PILE BUILDING

Outage Breakdown

Date of Outage	Scheduled: Metal Discharged	Scheduled: Maintenance	Unscheduled	Length of Outage (Hrs.)
8-1-50	B			23.4
8-1-50	F			33.7
(1) 8-2-50			F	0.1
(2) 8-3-50	F			2.6

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P Division

Outage Breakdown (Continued)

Date of Outage	Scheduled Metal Discharged	Scheduled Maintenance	Unscheduled	Length of Outage (Hrs.)
8-8-50	H			29.4
(3) 8-9-50			H	1.1
8-9-50	D			26.4
8-15-50	B			22.4
(4) 8-16-50	F			82.2
(5) 8-20-50		D		280.0
(6) 8-20-50			F	2.7
8-23-50	H			17.4

(1) Scram due to failure of #1 Beckman.
(2) Shut down for temporary poison discharge.
(3) Unit scrammed when panellit alarm could not be reset.
(4) Includes time down for temporary poison discharge.
(5) Extended outage for nozzle replacement and Van Stone flange reconditioning.
(6) Shut down to repair process tube thermocouple.

Operating Experience

Production tests having operational significance are reported below:

105-81-P (Probe Test of Top Central Tubes)
The following tubes successfully passed a 1.485" probe:

4574-B
4674-D
4674-F

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

105-168-P (Replacement of Pile Atmosphere with CO_2)
The B and D Piles were maintained at approximately 97% CO_2 throughout the month. Helium addition at F Pile was stopped during July to permit the CO_2 concentration to approach 100%. At the beginning of August the concentration had reached 89% and during the month the concentration had reached equilibrium at approximately 97%. No unexpected operating conditions have been observed.

105-337-P (Power Level Increase, B Pile)
The B Pile power level was increased from 320 MW to 335 MW over a four hour period on August 21. This level was maintained until August 28 when a slight reduction was necessary due to high graphite temperatures.

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105-347-P (Water Flow Stoppage on Cross Headers After Pile Shutdown)
Temperature measurements on four tubes at D Pile indicate that water flow may be stopped on a cross header for a period of eight hours after the pile has been shut down 80 hours and shut off for an indefinite period after the pile has been shut down 180 hours.

105-355-P (Exposure of Boron Steel Balls)
Four types of boron steel balls for use in the proposed ball 3X system were placed in "A" hole of D Pile on August 29 to determine the effect of irradiation on the balls.

105-361-P (Power Level Increase, D Pile)
The D Pile power level was increased from 305 MW to 320 MW over a four hour period on August 12. This level was maintained without difficulty until the extended shutdown, August 20.

A total of 79.85 tons of uranium slugs was discharged during the month at an average concentration of current goal value.

During the outage of August 2, tube 0657-F required forces up to 2,000 pounds for discharge. Examination of the metal pieces revealed a heavy coat of film on all slugs but no significant distortion.

During the outage of August 16, metal charges in tubes 2194-F and 3592-F could not be discharged with forces up to 6,000 pounds. Discharge was completed after washing out all free pieces and milling out tube ribs downstream of the stuck pieces. Subsequent inspection of the metal revealed a severely warped slug from tube 2144-F and several moderately warped slugs from tube 3592-F.

Examination of the ruptured slug from tube 1572-D which caused the June 22 outage at D Pile (document No. HW-18221-A) showed a poor weld and a pinhole in the weld as the cause of the rupture.

Mechanical Experience

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

a. Horizontal Rod #2-F cannot be withdrawn beyond 300 inches. Corrections are planned for the next extended outage of F Pile.

b. Vertical Rod #13-F binds in the guide and is tied out of service. Repairs have been deferred pending the procurement of a special guide.

c. Vertical Rod #27-F is scrammable but does not operate satisfactorily under power. Repairs have been deferred pending the procurement of a special guide.

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d. Vertical Rod #37-F binds in travel and must be jarred to obtain proper operation. Replacement with a flexible rod is planned.

Horizontal Rod #5-F was repaired and returned to service during the month. The removal of aluminum shavings from the thimble, replacement of the first ten feet of the graphite track, and machining of the kick plate were successful in relieving the binding of the rod.

All vertical rod thimbles at B Pile were satisfactorily pressure tested during the month.

On August 21 reconditioning of the Van Stone flanges and replacement of the stainless steel nozzles with aluminum nozzles was begun on D Pile. The program was 83% complete at month end. One percent of the front Van Stone flanges and 0.5% of the rear Van Stone flanges have been found to be less than 0.030" in thickness. It has been necessary to provide additional clearance for gunbarrel motion to 6% of the tubes inspected.

Inspection of the D Pile cushion chamber on August 23 showed the stainless steel lining to be in very poor condition with numerous plates torn loose, others ripped off at the anchor bolts, and six timbers missing. The missing timbers were replaced, all timbers reanchored and the damaged lining removed.

Tube 0657-F was damaged during discharge on August 2 and was replaced and returned to normal service on August 17.

Pile Development

Several new tools for Van Stone flange repair were successfully used at D Pile during the current outage. These included a direct reading dial gauge for measuring Van Stone flange thickness, a flange cutter, and a gunbarrel cutter. Indications are that the use of these tools will materially reduce the required length of the shutdown.

Gas Processing Building

Tie in work on the D-DR gas systems is nearing completion at month end.

Special Hazards

Due to the increase in power level at B Pile, the activity from the near rear riser has resulted in over-tolerance radiation readings along the near stairwell and necessitated the installation of a danger zone at this location. An apparent additional effect of this power level change is an increase in the air-borne contamination of the water sample rooms. Possible corrective measures are being investigated.

The removal of fission product contamination from the 107-D basin

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which resulted from the ruptured slug from tube 1572-D was completed during the month.

The gamma intensity of the beam at the far top side of F Pile reduced about 20% during August. No significant change in neutron intensities was observed.

Project Status

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

C-306 (Front Face Shielding Caps)
The balance of the order was received during the month.

C-330 (Improved Ventilation, Building 313-314)
Partial acceptance of the facilities has been made. Development work is scheduled to begin during September.

C-339 (Rolling Mill)
This project is being terminated in accordance with a directive received from the Atomic Energy Commission on August 3.

C-347 (Nozzle Replacement)
The installation of nozzles has been completed on DR Pile and is in progress on D Pile at month end.

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)
The filter was operated throughout the month.

M-713 (Flexible Vertical Rod)
Work has been deferred due to low shop priority.

M-721 (Repairs to 107-B Basin)
Deferred until B Pile extended shutdown.

C-321 (Effluent Diversionary Outlet)
Preparation of project proposal is in progress.

B-544R (Steel Process Sewer, 105-107-B)
Evaluation of the condition of the present line is in progress to determine the need for repairs or replacement.

B-814 (CO_2 Bulk Handling Facilities)
Preparation of the project proposal continues.

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B-806 (Flexible Horizontal Rod)
Development work for feasibility of design is in progress.

B-1841 (Ball 3X System)
Development work for the feasibility of design is in progress.

C-342 (DR Water Plant)

A. 105-DR

The Groves Flex-Flo valves intended to control the elevated storage tanks during periods of low process water flow were received during the month. Installation will start at the completion of the construction forces work in the 105-DR valve pit.

B. Part II, Modifications to 115-D

Arrangements have been made to install the turbine driven blower from No. 2 cooler blower at 115-B in place of the blower ordered for No. 5 drier room. This was necessary to provide acceptable gas handling facilities for the DR Pile startup since the blowers ordered for the job will not be available in time. The completion of this work and the necessary testing is scheduled for early in September.

Work continued on the installation of the three stage compressor system in the 115-D Building fan room, and is about 95% complete.

The piping alterations in the pipe tunnel were continued during the August 9 shutdown of D Pile and on a 10 hour per day basis during the extended shutdown beginning August 21. At month end, all process and instrument piping alterations in the tunnel are complete. Flushing and leak testing is scheduled to begin immediately and to be completed by September 4, 1950.

The instrumentation ordered for the job was received during the month, and the installation is about 30% complete.

C-388 (P-10X)
Part I of the "Design Features" list was approved with reservations by the Working Committee for preliminary submittal to the Scope Committee. Part I of the document covers all phases of the work except the J slug handling facilities which are currently under study by the Project Engineering Divisions.

The "Key Scope Drawing Schedule" was approved by the Working Committee. Scoping is scheduled to be complete by September 30, 1950.

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"Material Balance Flow Sheet" H-1-2571 and "Bldg. 108-D, General Arrangement First, Second, and Third Floor Plans" H-1-2579 were approved by the Working and Scope Committees during the month. "Plot Plan, General" H-1-2602 was approved by the Working Committee, submitted to the Scope Committee and returned for revision. "Extraction Unit Flow Sketch" (Schematic) H-1-2572 and "Engineering Flow Diagram Extraction Unit" were submitted for informational purposes.

300 AREA METAL FABRICATION

Production Statistics

Production for the month of August was as follows:

Billets Produced	18 Tons
Rods Machined	89 Tons
Bare Pieces Machined	70 Tons
Acceptable Pieces Canned	60 Tons

Melt Plant

The casting yields were as follows:

	July	August	To Date 1950
Billet (Avg. per furnace run)	76.5	85.6	73.2
Billet (Yield from total scrap processed)	86.5	89.0	83.0
Solid Yield	90.8	93.9	89.1

The billet and solid yields for August are the highest yields attained in the Melt Plant to date. The higher yields resulted from the improved quality of the TXB charged, combined with changes in billet capping techniques which increased the billet yield. Details on the change in billet capping procedure are included in the Development Section of this report.

Machining

The machining yields were as follows:

July	August	To Date 1950
79.0	79.2	77.7

The yield for August is equal to the record yield established in May, 1950, for machining alpha rolled rods.

Two rods were machined in conformance with Production Test No. 313-114-M, "Preparation of Slugs from Two Redox Rods".

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Chip Recovery

The chip recovery yield was as follows:

July	August	To Date 1950
90.1	88.6	88.8

The entire chip recovery process was operated three shifts and the press was operated an additional six shifts. A total of 21,757 pounds of TXB was produced.

The decrease in the chip recovery yield resulted from a more thorough pickling of chips to remove oxide and improve the quality of TXB produced. This contributed favorably to the record casting yield established in the Melt Plant.

Oxide Burning

The material burned was as follows:

Weight Out-Pounds		
July	August	To Date 1950
8,183	9,591	135,554

Oxide on Hand at Month End (Metal Content)

To be burned	133
To be analyzed	5,420
To be shipped	2,691
Total	8,244 pounds

Canning Operation

The canning yield was as follows:

July	August	To Date 1950
93.7	91.6	93.5

Canning rejects, by cause, were:

	Percent		
	July	August	To Date 1950
Non Seating	0.8	2.5	1.2
Marred Surface	1.5	1.6	1.8
Al-Si on Outside of Can	1.2	2.1	1.0
Frost Test	0.7	0.3	0.8
Bad Welds	1.0	0.5	0.7
Miscellaneous	1.1	1.4	1.0
Total	6.3	8.4	6.5

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The decrease in canning yield resulted chiefly from an increase in non-seating and Al-Si rejects. A number of non-seating rejects appeared to be resulting from variations in slug expansion and warpage during canning. Al-Si rejects continued to be high during the use of Victor cans. In addition, the training of new operators contributed to an increase in both non-seating and Al-Si rejects. A reduction in frost test and bad weld rejects resulted from continued emphasis on process techniques.

Sixty-five slugs were canned in accordance with Production Test No. 313-114-M, "Preparation of Slugs from Two Redox Rods".

The following special request pieces were canned:

Request No.	Content	No. of Pieces
P-10-A	Lithium Aluminum Alloy	4,707
"J"	Aluminum - U_{235} Alloy	1,565
WAPD 101	Construction Materials	15

In addition, forty-two uranium receptacle slugs were canned.

The J piece canning yield was as follows:

	Percent Yield		
	July	August	To Date 1950
	94.2	90.8	92.3

The J piece canning rejects, by cause, were:

	Percent		
	July	August	To Date 1950
Frost Test	2.5	0.8	2.6
Air Pocket	0.6	1.4	1.2
Marred Surface	0.9	1.4	1.0
Non Seating	1.0	4.8	1.8
Al-Si on Outside of Can	0.7	0.5	0.3
Not Canned	0.1	0.1	0.1
Bad Welds	0.0	0.1	0.5
Penetration	0.0	0.1	0.1
Thin Caps	0.0	0.0	0.1
Total	5.8	9.2	7.7

The lower canning yield was caused by an increased number of non-seating and air pocket rejects which resulted from difficulties experienced in controlling the canning bath temperature. The reduction in the number of frost test rejects was attributed to better control over the preparation of the component parts and improved techniques for removing the oxidized surface of the slugs during canning.

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P Division

A sufficient number of J slugs has been canned to fill the requirements for loading the H Pile. No further fabrication work has been scheduled.

Slug Recovery

	Percent Recovered		Avg. Wt. - Lbs.	
	August	To Date 1950	August	To Date 1950
Z Slugs	80.4	84.0	3.903	3.902
X Slugs	17.5	14.1	3.856	3.859
Rejects	2.1	1.9	--	--
Total	100.0	100.0		

Inspection and Testing

Autoclave results were as follows:

July	August	To Date 1950
.21/M	.26/M	.17/M

Eight autoclave failures occurred during the month. Four were complete failures and four were partial failures.

No slugs were found to be penetrated at 0.010" during the month.

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

	Percent Useable		
	July	August	To Date 1950
Aluminum Caps	99.8	99.7	97.9
Aluminum Cans	88.0	93.4	93.1
Steel Sleeves	*	*	85.3

* No new sleeves were inspected during July and August.

The quality of Scovill cans inspected during the month was exceptionally good and has shown constant improvement.

A total of 39,189 Victor cans has been inspected to date with 13.4% being rejected. The major cause for rejection continues to be a wide variation in wall thickness which exceeds specification tolerances, and 13.2% were rejected for this reason. In all other respects, the quality of Victor cans is equal or superior to the cans supplied by other vendors.

P Division

Material Handling

During the month, 1.5 tons of solid uranium scrap was shipped to Argonne National Laboratory. Five and one-half tons of straightened alpha rolled uranium rods were shipped to Oak Ridge National Laboratory. Twenty-one and one-half tons of uranium oxides were shipped to Mallinckrodt Chemical Works.

Twelve hundred U_{235} alloy slugs were received during the month making a total of 9,813 received to date. A total of 5,962 pieces have been transferred to the 100 Areas for pile loading.

305 Test Pile

The test pile was operated on a one shift six day week basis during the first two weeks of the month. This operating schedule was necessary to expedite the testing phases of the H-10 program.

A total of 937 tests was made on J material, 137 on P-10-A slugs, 117 on regular uranium slugs, 41 on billet eggs, and the following tests on special work requests:

Request No.	Title	No. of Tests
148	To Measure the Cross Section of Zirconium	1
149	To Measure the Reactivity Loss Due to a Tantalum Slug	4
150	To Measure the Reactivity of a Sintered Uranium Slug	4

In addition, twenty-four tests were run on slugs prepared as outlined in Production Test No. 313-114-M, "Preparation of Slugs from Two Redox Rods".

Special Hazards

No unusual conditions developed during the month.

Development

On August 7, the waiting time between pouring and capping billets was increased from one-half minute to two minutes. A statistical analysis of the extended waiting time indicated the average weight of metal cropped per billet was reduced from 6.5% to 3.1%. This reduction in billet cropping will increase the billet yield about 3.4% with an annual savings of approximately $1,370 in 300 Area scrap processing costs and $3,720 in oxide recycling costs off plant. The savings are based on a 60 ton production rate.

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September 6, 1950

S DIVISION

AUGUST, 1950

OPERATING SECTION

I. GENERAL

One hundred twenty charges were started in the Canyon Building, one hundred twenty charges were processed through the Concentration Buildings and one hundred twenty-four charges were completed through the Isolation Building. The average purity for completed charges was 98.5 percent.

	B Plant	T Plant	Combined
Number of charges started in Canyon	60	60	120
Number of charges completed thru 224	60	60	120
Number of charges completed thru 231	62	62	124

In meeting the schedule for August plutonium from metal which had been cooled as little as 67 days was processed. The average overall time cycle for the process in meeting the production schedule and processing an acid flush run from each plant was 12.2 hours.

Canyon and Concentration Building Production Performance Data - (8-1-50 thru 8-31-50, inclusive)

For Completed Charges	B Plant	T Plant	Combined
Percentage of starting product in waste:			
This month	2.9 (a)	2.9 (a)	2.9
Last month	2.9 (b)	3.9 (b)	3.4
Cumulative to date	4.1 (c)	3.9 (c)	4.0
Percentage of starting product recovered:			
This month	95.2	94.8	95.0
Last month	95.2	94.3	94.8
Cumulative to date	96.8	95.6	96.2

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S Division

	B Plant	T Plant	Combined
Percentage of starting product accounted for:			
This month	98.1	97.7	97.9
Last month	98.1	98.2	98.2
Cumulative to date	100.9	99.5	100.2
Gamma decontamination factor (Log.)			
This month	7.17	7.32	7.24
Last month	7.32	7.39	7.36
Cumulative to date	7.36	7.35	7.36

(a), (b), (c): Includes waste from processing recycle. The recycle wastes are estimated as: (a) 0.022% -T Plant; 0.012%-B Plant. (b) 0.007%-T Plant; 0.012%-B Plant. (c) 0.078%-T Plant; 0.009%-B Plant.

Isolation Building Performance Data (8-1-50 to 8-31-50, inclusive)

	Prepared for Shipment	Recycle	Waste	Retained Samples	Material Balance
Average for this month	94.0	6.07	-0.17	-0.015	99.9
Average for last month	94.3	6.12	-0.10	-0.013	100.3
Average to date	95.8	4.69	0.05	0.014	100.5

II. ORGANIZATION AND PERSONNEL

Number of employees on payroll:

Beginning of month	466
End of month	483
Net increase	17

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

2 new hires (monthly roll)
1 transfer from another division (Technical graduate - Weekly roll)
17 transfers from other divisions (weekly roll)
1 resigned (monthly roll)
2 resigned (weekly roll)

K. C. Vint, Chief Supervisor of T Plant, was transferred from the Operations Section to the Expansion Group in charge of the Training and Procedures program on August 1. R. C. Grant was promoted to Chief Supervisor and placed in charge of T Plant Operations.

Bolton Bangs, Shift Supervisor, was transferred from Operations to the Expansion Section on August 2.

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E. A. Roberts, Shift Supervisor, was transferred from Operations to the Expansion Section on August 7.

III. AREA ACTIVITIES

PRODUCTION PERFORMANCE

B and T Plants and 231 Building

Not only was a new production record established for the 200 Areas during the month, but individual plant records were established for B and T Plants as well as 231 Building. The previous high in batches started for a Canyon Building was 51 in B Plant, July, 1950, and 91 for the 231 Building in the same month.

The production records were made with less than one month's notice that an all-out effort was to be made. In adhering to, and theoretically exceeding, the rigid schedules established it was necessary to maintain the closest follow-up and to expedite repairs of an unusual nature. All Servicing, Technical, and Health Instrument Divisions are to be commended for their excellent cooperation.

Extraction Waste Losses - B and T Plants

Significant data on extraction waste losses are tabulated below:

	B Plant		T Plant	
	August	July	August	July
Analyses before rework	1.32	1.36	1.39	2.03
Analyses after rework (throw-away)	1.10	1.08	0.99	1.52
Average MWD/Ton	412	419	408	410

Acid Washes - B and T Plants

Acid wash runs, started through extraction late in July, were completed through one parallel line of the Canyon Building and through the Concentration Buildings in both B and T Plants. The only excessive pick-up experienced in these two flushes was from the 12-7 oxidation tank and the first decontamination cycle in T Plant where a total of 24.82% of standard run was recovered. A study to develop methods of minimizing the retention of product in the Section 12 tanks is in progress. The data below detail the product recovery for the two acid wash runs:

	Product Pick-up (Percent of a Standard Charge)						
Run	Extraction	Sect. 12 & 1st Cycle	2nd Cycle	221 Bldg.	224 Bldg.	Total thru Process	Preflush B & E Cells*
B-10-07-AW-2	5.71	15.53	9.28	30.52	-1.52	29.00	17.29
T-19-07-AW-2	7.62	24.82	6.30	38.74	16.10	54.84	18.33

*The material reported in this column was accumulated by flushes of B, E and F cell equipment prior to processing of the normal acid wash run. This material was returned to the process in the respective Concentration Buildings as recycle. Preflushes are made as standard procedure, but have not been reported previously with data for the acid wash runs.

Coating Waste Losses (Production Test 221-B-8) B Plant

A production test was initiated during the month at B Plant to determine if product losses which occur during uranium slug decoating operations could be reduced by the use of water flushing of the bare slugs, following the removal of coating solutions, instead of the standard 5% nitric flush. Results so far, of a very preliminary nature, indicate that a significant reduction in losses from this step may be accomplished without adverse effects to later steps of the process.

Lanthanum Fluoride By-product Precipitation Time Cycle (Production Test 224-B-5)

Production test 224-B-5 is being carried out to effect reductions in the operating time cycle through the lanthanum fluoride by-product step of the process. During the month the use of the by-product cake from alternate runs as a source of lanthanum for every other run was in effect in both Concentration Buildings most of the month. The only difficulty experienced from this method of processing was that all the recycle from the Isolation Building could not be handled by alternate runs, and it was necessary for short periods to add recycle to all runs in both B and T Plants. A study is in progress to develop more efficient addition of recycle to runs. The required piping changes for direct jetting of the by-product rework from the D-4 solution tank to the centrifuge was completed in B Plant during the month. The first rework processing carried out late in the month using this new arrangement was satisfactory.

Lanthanum Fluoride Product Precipitation Time Cycle (Production Test 224-T-14)

In order to reduce the lanthanum fluoride product precipitation time cycle to nine hours with a minimum increase in product losses, several process variations are being evaluated in the T Plant Concentration Building. During the month the following was determined:

a) Using 25% oxalic and 10% lanthanum nitrate reagents with the lanthanum addition rate accelerated and the centrifugation rate increased to give a nine hour cycle, an increase in losses of approximately 50% (from 0.15% to 0.22%) was experienced.

b) Increasing the nitric normality from 0.9N to 1.1N while maintaining the conditions given in a) gave no additional significant changes in waste losses.

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c) Using 25% oxalic, 10% lanthanum nitrate, rapid addition of the lanthanum and two centrifugations instead of the normal three increased waste losses approximately 100%. This gave a time cycle of approximately 7 hours with a loss of about 0.35% per run.

Since the test has demonstrated that no increase in waste losses results from the increased concentration of reagent solutions (reported last month) these improvements were adopted in the B Plant Concentration Buildings in order to reduce the process volumes and thereby decrease the lanthanum fluoride product time cycle by one hour. Evaluation of other phases of the production test will be continued at T Plant during September.

Thermal Decomposition of Peroxide in Supernatants from Peroxide Precipitations (Production Test 231-11) - Isolation Building

Thermal decompositions of peroxide in Isolation Building supernatants were carried out on fifteen runs by bringing the temperature of the supernatants to 70°C in 100 minutes with no process difficulties being encountered. In progress at the end of the month was the second phase of the test in which the 70°C temperature is being reached within eighty minutes. An insufficient number of runs had been processed at month end using the eighty minute heating cycle to determine the over-all effect on the decomposition rate. The only unusual condition noted to date which may result from the production test is wetting of the CWS - 6 filter in the E position over cell 4. It has not yet been established definitely, however, that the filter difficulty is a direct result of the production test.

Sample Can Drying (Production Test 231-10, Addendum) Isolation Building

In order to relieve the pressure on the sample can drying operation at the Isolation Building, fifty cans designated for the 234 Building were dried to a concentration of 3.03 grams of solution per gram of plutonium (g/g) instead of the normal 2.44 g/g required for off-plant shipments. Since the lower concentration has no adverse effects on subsequent processing in the 234 Building, material designated for delivery to that building will continue to be concentrated to 3.03 g/g.

WASTE DISPOSAL

First Decontamination Cycle Waste Storage - 241-TX

The X-111-TX tank, the third tank in a series of four, became full of first decontamination cycle waste from T Plant on August 24 and started cascading to the X-112-TX tank.

Concentration Building Waste Settling Tanks - 241-T

At month end the level of compact sludge in the X-204-T settling tank for T Plant Concentration Building wastes was within 20 inches of the

overflow line to the X-203-T tank. Preparation for the necessary jumper changes to divert concentration building wastes directly to the X-204-T tank have been made; however, in order to get the maximum amount of sludge in the X-204-T tank, the waste will not be rerouted until it is evident that the overflow line from this tank is in danger of plugging.

Waste Status

The status of the Waste Storage areas as of August 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	46.7	0	0	0	347	347
x101,2,3,4	Metal	-	-	-	-	-	-	-	-	-
x104,5,6	Metal	-	100	100	0.5	-	0	0	647	647
x105,6,7,8	Metal	-	-	-	-	-	-	-	-	-
x201,2,3,4	Metal	-	100	-	-	-	0	-	-	-
x107,8,9	Metal	-	-	-	-	-	-	-	-	-
x111,12	Metal	-	-	-	0	-	-	-	433	433
x104,5,6	1st Cycle	56.1	-	-	-	199	-	-	-	199
x107,8,9	1st Cycle	100	100	66.7	0	0	0	151	650	801
x109,10,11, 12	1st Cycle	-	-	-	-	-	-	-	-	-
x110,111,112	1st Cycle	-	100	66.7	-	-	0	151	-	151
x110	1st Cycle	-	-	-	0	-	-	-	217	217
x115,118	1st Cycle	-	-	-	-	-	-	-	-	-
x104,5,6	2nd Cycle	-	-	-	-	-	-	-	-	-
x110,11,12	2nd Cycle	83.3	-	-	-	92	-	-	-	92
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	-	-
x101,2,3,4	Metal	-	-	61.0	-	-	341	341
x104,5,6	Metal	-	100	-	-	0	-	-
x105,6,7,8	Metal	-	-	0	-	-	866	866
x201,2,3,4	Metal	-	-	-	-	-	-	-
x107,8,9	Metal	-	100	-	-	0	-	-
x111,12	Metal	-	-	-	-	-	-	-

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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	1st Cycle	100	-	-	0	-	-	-
x107,8,9	1st Cycle	100	-	-	0	-	-	-
x109,10,11,12	1st Cycle	-	-	771	-	-	203	203
x110,111,112	1st Cycle	-	100	-	-	0	-	-
x110	1st Cycle	-	-	-	-	-	-	-
x115,118	1st Cycle	-	-	0	-	-	433	433
x104,5,6	2nd Cycle	-	-	-	-	-	-	-
x110,11,12	2nd Cycle	89.4	-	-	58	-	-	58
x113,14,16,17	2nd Cycle	-	-	0	-	-	1046	1046

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 radiation levels made repairs impossible, is given below:

a) In B Plant the trench jumper for transferring first cycle product waste from the Section 14 catch tank to the Section 15 neutralizer was replaced due to a gasket leak.

b) In T Plant the Section 13 "A" jet assembly for transfer of slurry from the precipitator to the centrifuge was replaced upon discovery of a leak at the wall flange of the discharge line from the assembly.

c) In T Plant the jet assembly for transfer of Section 7 extraction product solution from the centrifuge to the dissolver tank was replaced following the discovery of a severe steam leak at the jet.

Other equipment failures which occurred in the Canyon Buildings and auxiliaries are described below:

a) On August 18, plugging of the underground line from the Section 9 metal waste neutralizer to the 101 BX series cascade necessitated rerouting of the waste through a spare line. It is planned to attempt unplugging of the old line early in September by jetting sodium bicarbonate solution to the line from the unused 9-4 tank.

b) In B Plant it was necessary to replace the jet assembly for transfer of second decontamination cycle byproduct waste from Section 18 to Section 15 due to failure of the jet to operate. Inspection of the assembly and repairs as required will be made later.

c) Because the "thermoguard" located on the 18-2 centrifuge motor in T Plant was obviously tripping out the electrical circuit to the motor at safe operating temperatures and unduly delaying the process an external overload device was installed at cubicle and the internal device disconnected from the circuit.

Concentration Building Equipment Failures - B and T Plants

During the month the following equipment failures were experienced in the Concentration Buildings:

a) In B Plant it was found that the left-hand skimmer in the D-2 centrifuge (lanthanum fluoride byproduct) had approximately two inches corroded from the tip with the result that a very large skimming heel was being left in the bowl. Operation of the centrifuge is continuing with the right-hand skimmer being used. Replacement of the defective skimmer will be made some time in the the future when production schedules permit.

b) A leak developed in the D-4 sampler return line in T Plant and was successfully repaired by welding.

c) Serious vibration, which was not eliminated by replacement of the drive head, developed in the F-2 centrifuge at T Plant. A thorough investigation of both the history of this machine and the present performance indicates that it will be necessary to replace the bowl which appears to be out of balance. It is expected that this work will be performed in September.

Concentration Building Preventive Maintenance Program - T Plant

During the month in T Plant the motor-drivehead assemblies for the A-2 and B-2 centrifuges were replaced with reconditioned assemblies as part of a preventive maintenance program. No lost process time was involved. Completion of this program in the building, which involves the two 26 inch bowl centrifuges in F Cell, is held up pending replacement of the bowl in the F-2 centrifuge.

D Cell Alterations - B and T Plant

During the month the necessary piping rearrangement required for chemical additions to the D-4 tank and transfer of lanthanum fluoride byproduct cake rework to the centrifuge from this tank was completed in B Plant and was 40% completed in T Plant. The latter changes will be completed in September.

Filter Replacements - Isolation Building

Due to detection of product in air samples obtained from Cell 4 operating area in the Isolation Building, the CWS-6 filter cartridge in the 4-E position above the cell was replaced. The filter was found to be wet, either from heat decomposition of peroxide under production test 231-11 or due to general high humidity conditions existing in the

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greenhouse when it was sealed for six weeks with cocoon preparatory to a general clean-up and overhaul of the equipment in the hood. The new cartridge will be examined after completion of the next phase of the production test. On the ventilation system for the same cell, the rock wool type filter in the 4-A position was replaced with a CWS-6 filter.

IV. SPECIAL HAZARDS

Effect of Reduced Metal Cooling - General

While processing metal in T Plant from the center of the H Pile, there was a marked increase in the radiation levels experienced from process samples for the extraction wastes. Radiation from the side of doorstop samples for this material increased from 40 mr/hr to 82 mr/hr. Readings from doorstops containing samples of similar wastes from D Pile material, which had been cooled approximately 70 days, gave similar radiation readings. It has been estimated that at fifty day cooling a maximum reading from the doorstop samples will be 150 mr/hr.

With the processing of H pile material in the Isolation Building, it was found that gamma activity of the product solution had increased substantially. Pencil type ionization meters for personnel, which have not been required for Isolation Building personnel in recent months, are again being carried regularly.

The accumulation of "particles" on air sampling devices located in the area is approximately seven times higher than was being experienced recently at 90 days cooling. It is suspected that the increased rate is due to dust particles carrying 8 day iodine rather than being particulate matter similar in nature to that which caused past difficulties; however, this has not been definitely determined at this time.

Canyon Air Contamination - B Plant

Exceptionally high fission product counts were found in several air samples obtained during the month from the B Plant Canyon in the vicinity of Sections 4, 5 and 6. One instance was correlated with the transfer of metal solution from a dissolver to the Section 4 metal solution storage tanks. It is suspected that the offending activity is iodine, and the Health Instrument Operating Division is carrying on a special air sampling program to determine the validity of this suspicion. As a precautionary measure, Chemox masks are being required at any time dissolver cells are open as is already the case when any other active cell is open.

V. PROCESS CONTROL

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

Packing of the first off-gas filter was completed during the month and pressure drop tests were conducted by the Separations Technology Division. The original filter bypass valve was not satisfactory and was replaced

with a newly designed and fabricated valve which operated satisfactorily in tests. The filter was moved to the 200 East Maintenance shop at month's end where it will undergo mock-up test early in September.

Fabrication of all jumpers for the silver reactor was completed during the month. The Berl Saddles were coated with silver nitrate and packed in the reactor. Eighty percent of the work required in the 221-B operating gallery was completed. Mock-up tests of the reactor and filter combination will be performed as soon as all electrical work is completed. Part of the essential electrical equipment, some of which has been shipped, has not been received to date.

Instructions were issued to the Maintenance Division to proceed with fabrication of the other three filter-reactor assemblies. Completion dates for the four filters are scheduled as follows:

Assembly No. 1	9-22-50
Assembly No. 2	10-20-50
Assembly No. 3	11-17-50
Assembly No. 4	12-15-50

Increased Capacity for Canyon and Concentration Buildings (C-384 and C-395)

Following approval during the month for equipping cell 20L with a precipitator tank for parallel operation with the Section 19 precipitator, Maintenance continued with the installation of control equipment in the operating and pipe galleries at both B and T Plants. Painting of the panel boards is in progress at month end. The cell and trench piping fabrication which remains to be done will proceed as rapidly as possible, and installation is expected to be complete by the end of September.

The rearrangement of F Cell equipment in both plants has been essentially completed, and final completion is expected by September 15.

Conductivity Meters for Individual Cells

Approval for installation of conductivity electrodes in the sewers of Cells 7R, 9R, 13R and 17R of B and T Plant Canyons was approved by the AEC at month end.

Special Sampling

The following special samples were handled during the month:

a) A plutonium cow which was received on 7-7-50 from the Argonne National Laboratory was returned at the request of ANL.

b) A two gram sample of plutonium nitrate from the Isolation Building was shipped to ORNL.

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c) The following samples were obtained and delivered to the Chemical Research Division in the 300 Area:

1) 50 ml D-3 solution from 224-T
2) 50 ml 19-4 P solution from 221-T
3) 1000 ml 1st cycle waste from x-104-T
4) 1000 ml 1st cycle waste from x-108-T
5) 500 ml 1st cycle waste from x-109-T
6) 1000 ml 224-T neutralizer waste from x-202-T
7) 100 ml dissolver solution from 221-T

VI. EXPANSION SECTION

TBP Project

General

1. Directive HW-160, Modification No. 3 dated 8-15-50 was received from the A.E.C. which amended the authorized expenditure of $6,925,000 for construction as outlined in Modification No. 2 to include procurement of critical material for any Phase of the C-362 Project.

2. The Project Proposal for Project C-362, Waste Metal Recovery Facilities, has been approved by the A&B Committee and was transmitted to the A.E.C. on 8-31-50. Points of major interest in the Proposal are:

   a) Total Project Cost (less book value of transferred capital property) is $41,800,000.

   b) Construction is scheduled to be essentially completed except for parts of Phase II, in October of 1951. Final Project completion date is April 30, 1952.

Essential Materials

1. The HNO_3 procurement problem is being presently pursued by the Stores and Purchasing Divisions with no firm commitments at month end. An endeavor is being made to interest additional producers to locate in this area.

2. Recent contacts with various interested concerns indicate that no procurement problem will exist for the diluent and tri-butyl phosphate requirements.

Design

A) Phase I - Metal Removal - One Cascade

1. A total of 31 scope prints has been received from Kellex. Five were approved as received; 23 were approved as revised and marked. One print, that of the master diversion box, was returned to be re-drawn in order to eliminate the need for a

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"cross-box" jumper assembly. A total of 6 detailed prints has been received from Kellex. Two were approved for construction; 4 are currently being reviewed by the interested divisions.

2. After a detailed evaluation, it has been agreed by all concerned parties that the Redox type connectors will be used for new installations in the Phase I and II piping. This decision is due to the fact that the Kellex design has advanced to a stage where the selection of the Hanford type connectors would cause considerable delay due to drafting changes.

3. A glass fiber filter has been chosen for the 241-UR ventilation system. The D&C Divisions, in conjunction with the Stack Gas Group of the Separations Technology Division, have drawn up specifications for this filter and have transmitted them to Kellex.

4. Contract negotiations with Atkinson & Jones for the construction of this Phase are awaiting approval at month end.

B) Phase II - Metal Removal - Remaining Cascades

1. Kellex is continuing with the preparation of scope material for this Phase in accordance with Work Authority C-362 (2) Release No. 5. The Completion of this scope material for transmittal to G.E. is scheduled for September 15, 1950.

2. Kellex is proceeding with the detailed design of parts of this Phase namely the Waste Removal Facilities for the remaining 241-U cascades prior to receipt of formal G.E. approval of the scope material in accordance with Work Authority C-362 (2) Release No. 9.

C) Phase III - Design of Underground Pipe Lines

1. The revised scope for this Phase has been approved. Detailed design is continuing in accordance with Work Authority C-362 (2) Release No. 7. No detailed prints have yet been received by the Manufacturing Divisions for review. This design is scheduled for completion by January 1, 1951.

2. A purchase requisition for 150,000 feet of stainless steel piping has been processed. The closing dates for submission of bids was August 30, 1950.

3. The problem of the need for pipe encasement in addition to cathodic protection for the six intra-area underground pipes was submitted to the Standards Committee for review and recommendation. The Committee concurred with the present approved design for pipe encasement of these lines.

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D) Phase IV - Reactivation and Conversion of 200-U for TBP

1. All of the G.E. scope material for this Phase has been approved and transmitted to Kellex on 8-29-50.

2. Four Kellex Design Proposals have been received and are being reviewed by the interested service divisions. These Proposals are:

   a) Heating and Ventilation System
   b) Exhaust Ventilating System
   c) Electrical Testing Procedure
   d) Electrical Construction Specifications

3. The revised specifications for the TBP Plant pulse columns were received from the Separations Technology Division. The RA Column is specified to be 20" in diameter, 21' high and the RC Column is specified to be 30" in diameter, and 17' high.

4. The Detail design is continuing for the 277-U Mock-Up Bldg. Fifteen of the 54 construction prints have been approved up to date. Construction is anticipated to start Sept. 15, 1950.

E) Phase V - Stripping of 221 and 224 Buildings

1. The custody of 200-U Area was transferred from the S Division to the D&C Divisions on August 14, 1950.

2. The CPFF contract has been negotiated with the Atkinson & Jones Construction Co. for the stripping of the 221 and 224-U Buildings and is awaiting legal approval at month end. It is anticipated that the dismantling work will be started September 11, 1950.

F) Phase VI - 200-W Area Utilities Expansion

1. The expansion of the 200-W Area steam and water supply facilities scope was approved by the Scope Committee and was included in the Project Proposal for Project C-362. The details of the expansion facilities are outlined in Documents HDC-1856 and HDC-1857. The total cost of these facilities is estimated to be $1,295,000.

Development

1. After a survey of various manufacturers by the D&C and Separations Technology Division representatives, Proportioneers, Inc. of Providence, R.I. was chosen as the concern to design and fabricate a prototype column pulsing mechanism. A purchase requisition for this work has been processed and approved by the A.E.C. at month end. It is anticipated that six weeks will be required to complete the design of this unit.

2. A purchase requisition for the design and production of a second prototype multi-stage centrifugal pump is being processed. The Johnston Pump Co. of Los Angeles, Calif. will perform this work. The preliminary design as presented by the Johnston Pump Co. appears to be superior to that previously submitted by the Byron Jackson Pump Co. A purchase requisition has been previously issued to the Peerless Pump Co. of Los Angeles for one unit of this type. The delivery of the first unit, from the Peerless Pump Co. is anticipated to be not later than November 1, 1950. Both units will be tested and evaluated by the Chemical Development Section of the Technical Divisions upon arrival.

3. A.E.C. has approved the additional $2,000 request for the completion of the development and fabrication of the canned motor by GE & CL. This unit is scheduled for delivery by October 1, 1950.

4. Kellex has consulted Swenson Co. on the proposed design of the evaporator units in the TBP Process. The Swenson engineers question the continued operability of the proposed unit. Therefore a meeting of Kellex, Swenson and G.E. representatives is scheduled at Hanford during the week of September 12, 1950 to discuss and resolve the design of this unit. In the meantime, the single long tube evaporator unit will continue to be operated in the 321 Bldg. Present data obtained from the operation of this unit have been satisfactory.

UO_3 Project

1. The Project Proposal for Project C-361 Metal Conversion Facilities was approved by the A&B Committee and was transmitted to the A.E.C. on August 11, 1950.

2. Detailed design is proceeding in accordance with Directive HW-158 Work Authority C-361 (5).

3. Project C-361 scope material was transmitted to Dr. W. H. Keller of the Mallinckrodt Chemical Co. Representatives of the Manufacturing Divisions, D&C Divisions, and the A.E.C. are currently visiting Dr. Keller in St. Louis in order to discuss his comments and recommendations based on the study of this scope material and to obtain detailed design and operational data.

Redox

Design

Architect-Engineer (The Kellex Corporation)

1. Because of the probability that startup of the product cycles will be made without the use of a batchwise cross-over oxidation, the purchase order for the spare oxidizer pot and its accompanying

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column (TK 139 and T 140) has been cancelled. This cancellation resulted in a saving of approximately $11,500.

2. Following the receipt of representative drawings of specific types of cell jumpers last month, cell jumper drawings are now being received in quantity on an "Approved for Construction" basis. Of the various types of cell jumpers involved only sump jets assemblies, two piece jet transfer assemblies, and assemblies involving flow control mechanisms (rotameters and control valves) have not been represented in the prints received. No drawings of silo jumpers have been received. "Approved for Construction" drawings of piping in the silo feed tank area, and of the majority of the operating and pipe gallery sections have been received and appropriate comments returned to the Design Division. With the exception of weigh tank inlet valves located in unsatisfactory overhead positions, and a few tank discharge valves located in near inaccessible spots, the arrangements were considered to be reasonably operable although not of a clean design.

3. A construction field change sketch has been issued indicating the method to be used in recessing the upper fire fog nozzles in the cell area. The original location of these nozzles was unsatisfactory from the standpoint of remote maintenance (see last month's report).

4. Drawings indicating the Whiting Company proposals for adopting the 221-C Bldg. crane for 202-S Bldg. use have been received for study by the Design Division. An alteration to the proposed design has been found necessary to permit the 10 ton crane hook to approach within 18" of the near cell wall for jumper maintenance. In the original proposal this distance was 5 feet.

5. Layout drawings of the sand filter and 291-S stack facility received during the past month for study provided the first indications of a jet pit and a jet control house in addition to and some distance from the fan and turbine control house. While such an arrangement cannot be said to be inoperable, it is felt that appreciable economies in construction costs and convenience in operation could be realized by combining the control house functions with one and relocating the jet pit near the stack breeching.

6. As a result of a meeting held between representatives of the S Division, Power Division, Design Division, and the Architect-Engineers New York Office, final revisions to specification HW-4319 covering the ventilation control system have been agreed on, and corrections to the specification are now in progress.

7. The selection of jet sizes as outlined by the Architect-Engineer and as augmented by the successful bidder (Penberthy Injector Co.) based on architect engineer data sheets has resulted in a departure

from the intent of the Engineering Flow Diagrams in that thirteen instead of the intended four standard jet groups will be installed in the plant. Whereas it was intended to utilize four jet sizes for all liquid transfers (3, 10, 25, and 75 gpm) absorbing differences in discharge head, etc. in slight variations of transfer rate, the Architect-Engineer interpretation of the flow diagrams adhered strictly to the transfer rate and varied jet throat sizes, etc. to suit the condition. Further, eight different dimensional groups were established before the jet requisition was released for bid. Because the installation of thirteen different jets cannot be termed "inoperable" it is anticipated that no effort will be made by the Design Division to return to the intended four jet grouping of the Engineering Flow Diagrams.

8. The original planning in the Design program for 202-S Building samplers included the testing of a full scale model of the plant sampler. It was anticipated that the Q. Smith principle, designed into the plant sampler, would offer certain definite advantages over present equipment in the sampling operation. Because compressed construction schedules now will not allow such testing and because the sampler as designed is relatively complex and costly, it has been decided that there would be greater assurance of sampler operability and a more judicious expenditure of funds if the present sampling equipment were installed wherever possible (sampler sizes of 5 cc and below). It is now intended to install some 42 samplers of the present design and some 17 samplers of the new design in the sampling positions of the 202-S Building. This substitution has the further advantages of eliminating the necessity for alterations to the four unapproved sample carrier designs and major alterations in the box shielding of the new samplers.

General Electric Design (Power and Mechanical Division)

1. After consideration of factors of safety, continuity of service, maintenance, etc. it has been concluded that there is no necessity at the present time for looping the high pressure steam supply line from the U Plant to the S Area. Accordingly the east branch of the loop from the S Area to the U Plant has been eliminated from the design and construction schedules, and the S Area will be served by a single steam main (now under construction) from the U Area. A second line will however be required from the power house to the U Plant to supply the demands of both the TBP and Redox areas.

2. The Engineering Flow Diagram of the 203-S Building (Decontaminated UNH pump tanks and the transfer line to 224-U) has been approved for design purposes. In the interest of reducing the pump and line pressure required in the 202-S to 224-U transfer, the line between these operations has been increased in size from 1 1/2" to 2". Consideration is now being given to relocating the pump tanks from the site of the 203-S metal conversion building (as originally planned) to a point adjacent to the 276-S building as a matter of convenience, economy, and good operating practice.

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3. As a means of expediting the approval of P and M drawings of outside facilities, a system of "on the board" print review has been inaugurated and is functioning satisfactorily. Print review during the drafting stages has the advantages of permitting early alteration or elimination of undesirable features and an almost immediate approval as the drawing is completed. The majority of the piping and mechanical details of the 211-S and 276-S Buildings have been handled in this manner during the past month.

4. Because of the impending shortage of type 347 stainless steel, a revision of the specification for the storage and processing tanks of the 211-S and 276-S buildings has included as acceptable substitute materials type 304 ELC (extra low carbon) and type 316 ELC stainless steels. Both steels exhibit acceptable corrosion resistant qualities when welded with the proper rod. No heat treating is necessary.

Development

1. Tests of Teflon impregnated asbestos gaskets for the Redox pipe connectors have indicated that the gaskets are somewhat inferior to pure Teflon in process use but somewhat superior in steam service. Inquiries have been made of the Johns-Manville Company as to the price per unit of various size gaskets in quantities selected to provide a complete change over from Teflon to Teflon impregnated asbestos in the steam connectors. Based on the information obtained, it will be determined whether or not a set of such gaskets will be ordered.

   Flat gaskets of the Teflon impregnated asbestos material have been placed in canyon service in B Plant by the Process Control Group for process testing. The results of these tests may determine the suitability of the gaskets for use in the jet flanges of cell jumpers in the 202-S Bldg.

2. A chart has been prepared by the contact engineer Group indicating batch and stream sample points for the entire process and, in addition, outlining those units which may be considered accountability "blocks" in the operation. This chart will be reviewed with the Accountability Section and will be the basis for establishing the preliminary accounting system for the building.

3. The contract for the purchase of ANN which was signed several weeks ago indicates a price per pound of the delivered material which virtually eliminates for all practical purposes consideration of the recovery of ANN from process wastes. The purchase price, which is scaled somewhat to consumption and the price of raw materials, but which includes material, plant amortization, and delivery to the 200 W Area, calculates at approximately $.05/lb. on an 8,000,000 lb/yr basis.

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4. The Separations Technology Division has recently indicated that the preliminary purchase specifications for solvent which were used in the essential material market survey can now be considered firm. The specifications conform to a commercial grade, unpretreated solvent.

Construction

1. Bldg. 202-S

Kick plate installation is continuing on a two shift basis in the control portion of the canyon. While these plates are being installed, concrete work on fourth and fifth left pours in the east (R.R. tunnel, regulated shop, etc.) and west (silo) ends of the building are continuing. Several viewing window frames in the silo wall have been installed along with the fixed lighting tubes and floor spray system. Forming and steel work in the pipe gallery floor on both sides of the building is now in progress.

2. 277-S Bldg.

The building as a unit is estimated to be 65% completed. The concrete floor has been completed and work is in progress on the piping, wiring, and ventilation facilities. The 10 ton northern crane from the 272-E shop has been installed and rewiring is in progress.

3. 291-S Bldg.

Excavation work for the sand filter has been completed and foundation form work is in progress. The 291-S stack pad has been poured. The air duct from the 202-S Building has been completed to the east wall of the building.

4. Outside Lines

The steam line from the U Area is estimated to be 45% completed. Water lines (including the line from the pump house to the U Area and the high tank line in the 202-S Area) are estimated to be 31% complete. The tile field and septic tank unit is 48% complete.

5. Pipe Bending

Some difficulty has been experienced during the past month with rather deep scoring of the outer periphery of the 1" and 2" pipe bent in the shop. The cause of the difficulty was traced to the use of case hardened bending dies, and a switch to cast iron dies was made with better results. The scored piping is currently being reinspected to determine its suitability for use in the 202-S Building.

Bending, nozzle welding and testing, and kick plates assembly continues at an accellerated rate. Installation of the jig for cell jumper fabrication is practically complete.

6. 241-S Bldg.

Excavation work in the tank farm area is 66% complete. Base form work and reinforcing steel have been completed for tanks 107 and 110 and concrete pouring will be started when the batch plant is repaired. Form work is in progress for the base of tanks #101 and #104.

Training and Procedures

During the month, a group was set up within the Expansion Section for planning the training of operating personnel for new facilities and for preparing the various manuals, procedures, and forms required during construction and initial operation of these facilities.

1. Training

The Redox-TBP training school for S Division personnel, now running at the Chemical Development Section's pilot extraction columns in Bldg. 321, will shut down in early September and be resumed in February, 1951, on an expanded basis. Approximately 80 supervisors and 160 operators will be trained in this school for operation of the Redox and TBP-UO_3 facilities.

Rough drafts of new books for tasks I and VII (432 - Project C-198) have been written by Manufacturing Divisions personnel at Schenectady. Construction check-lists have been prepared for some of the work now underway at the 234-5 Building.

A lecture series to supplement the above training school has been planned, to start in November, 1950. Twenty lectures will be given, by specialists, on features pertinent to the operation of the Redox and TBP-UO_3 facilities. The twenty-lecture series will be repeated twice. A schedule of lectures will be issued in October.

2. Procedures

Planning is underway on the writing of Manuals of Standard Practice, construction checking procedures, and procedures and forms essential to the operation of the new facilities. A distribution of responsibility has been reached with the Chemical Development Section for the writing of calibration procedures on equipment.

First Cycle Waste Evaporation

1. Directive HW-167 Modification No. 1 dated August 18 authorizing the incurring of costs not to exceed $489,000 (including capital property

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to be transferred having an estimated book value of $2,000) was received from the A.E.C. The work comprises the design and construction of one distillation unit in 200 West Area having a capacity of 500 gallons per hour together with suitable facilities for the removal and transfer of waste. The facilities are scheduled to be physically completed not later than September 1, 1951. The work will be performed on a CPFF contract.

2. Design is approximately 72% completed.

3. The detailed prints of the evaporator vessel were approved and a purchase requisition is currently being processed in order to allow maximum time for the procurement of this item.

POWER DIVISION
AUGUST 1950

GENERAL

The annual inspection of all Power Division boilers by a Travelers Insurance Company certified boiler inspector was completed on August 18 when the five remaining boilers, each in a separate area, were inspected.

Water treatment was satisfactory for the month, with raw water turbidities and coagulant feeds following a normal pattern.

PERSONNEL AND ORGANIZATION

No. of Employees on Payroll - August	
Beginning of month	564
End of month	566
Net Increase	2

The retirement of a coal handler, the resignation of a supervisor, and the transfer into the Division of four non-exempt employees resulted in the indicated net increase.

100 AREAS

A pipe joint leak was repaired on the South process water header to the 185 Deaerator Building in the 100-B Area on August 11.

The work of reducing the impeller diamater of the 183 Filter Plant Process water pumps was completed in the 100-F Area on August 28. Two of these units have been completed in the 100-B and 100-D Areas and completion of this work in the 100-H Area was reported previously.

The dismantling of the 185 Building deaerators is in progress in the 100-D and 100-F Areas. Preparations preliminary to this work are continuing in the 100-B Area.

In the 100-D Area, satisfactory progress was made on the removal of Power Division equipment from the 108 Chemical Mixing Building, and the transfer of needed equipment to the 185 Deaerator Building.

On August 20 in the 100-D Area, 190 Process Pump House, process water flow and pressure was reduced for the "P" Division nozzle program. The scheduling of vacations was accelerated during this shutdown, which was estimated to require approximately three weeks.

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Power Division

On August 23, in the 100-D Area, the 10-million gallon side of the 182 Building reservoir was drained for the purpose of cleaning screens and removing accumulated mud and tumbleweeds.

Anthrafilt media was added to filters in the 100-D and F Area 183 Filter Plant to restore the beds to their original thickness.

An accumulation of condensate in the east 225 psi steam loop in the 100-H Area and the resultant water hammer, causing flange leaks and broken drainage lines, required the isolation of this line from 7:40 a.m. until 6:00 p.m. on August 5 while repairs were made. A review of steam trap inspection procedures has been made in all areas to preclude a recurrence of this incident.

The removal of the No. 4 refrigeration unit in the 100-D Area, 189 Refrigeration Building, was completed on August 5.

On August 9 and 10 in the 100-D Area 184 Power House, the normal and auxiliary pump suction lines were extended to accomodate the new boiler feed pump for the 100-DR Project.

200 AREAS

On August 12 in the 200 West Area, a steam and sanitary water outage was arranged for the area in the vicinity of the 2704 Administration Building to permit steam and water connections for the new laundry and shops building.

An emergency shut-down of raw water service to the 231 Isolation Building was necessary from 11:50 a.m. until 12:50 p.m. on August 30. A construction tap under pressure had been approved on the raw water line in the vicinity of the 221-U Canyon Building Area. A chain holding the tapping machine to the line broke just as the line was pierced and it was necessary to isolate a section of the line to install a shut-off valve.

At 10:05 a.m. on August 29, in the 200 East Area, an Electrical Distribution truck struck the 5 psi steam line serving buildings near the 2713 Building, resulting in damage to the line and to six supporting poles. This line was removed from service and repairs are in progress.

Construction work for the new generator installation was started at the 284 Power House in the West Area on August 17.

300 AREA

The recently installed line from the Nos. 3 and 4 wells to the 321-S operations has been entirely successful in reducing the sanitary water load to a demand which can be adequately supplied by the existing system.

101 SHOPS

The replacement of air conditioning filters on the roof of the 101

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Power Division

Technical Shops Building is in progress. An accumulation of dried solids from the spray water carried over into the outlet air duct has caused difficulty on one unit. The removal of accumulated dried solids is in progress on all units.

WHITE BLUFFS

The manufacture of ice was temporarily resumed on August 9 because of the high ice consumption.

100-DR CONSTRUCTION

A cumulative cost report for total construction and design costs has been issued by Design and Construction Divisions showing that, as of July 31, 1950, expenditures, plus commitments amounted to $11,939,780 for this project. This amount represents approximately 57.7 percent of authorized funds; the plant, as of the same date was approximately 69 percent physically completed.

All filters in the 183-DR Filter Plant have been completed and are ready for preliminary service. Normal backwash and make-up water service was established on August 24, the 30-inch backwash line and 16-inch filtered water line having been previously tested and flushed. Water flow and chemical treatment through the Filter Plant was established on August 28.

The run-in of pumps in one-half of the 190-DR Process Pump House was in progress at the months' end. Work continues on the calibration of controls and instruments for the north half of the building.

The installation of tubes in the No. 5 boiler at the 184 Power House has been completed, the tubes checked, and the boiler pressure tested. The installation of fire brick refractory is now in progress.

POWER ENGINEERING SECTION

An investigation of the sewage flow from each building in the 300 Area was made and various methods studied for reducing excessive load on the system.

A feasibility report on the conversion of boilers from coal to fuel oil previously initiated by the Power Division, has been completed by the Project Engineering Division. The report has been thoroughly analyzed.

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POWER DIVISION STATISTICS

From August 1, 1950
Through August 31, 1950

A R E A S

RIVER PUMP HOUSE (Bldg. 181)					
River state Feet above sea level	(max)	399.2	388.9	375.6	381.1
	(min)	391.5	382.9	369.5	375.0
	(avg)	393.8	384.9	371.2	376.7
River temperature	avg. °F.	64.7	64.9	65.1	65.5
Water to Reservoir	gpm avg.rate	40,694	32,639	36,461	53,960
Water to DR	gpm avg. rate		1,313		
RESERVOIR (Bldg. 182)					
Water to Filter Plant	gpm avg.rate	33,791	27,755	32,32	45,120
Water to Condenser System	gpm avg.rate	4,446	2,590	3,388	*8,024
Water to Export System	gpm avg.rate	2,457	2,294	753	816
	gpm nor.rate	6,320	6,320	6,320	6,320
Chlorine added #1 inlet'	pounds	23,534	20,906	22,400	27,000
FILTER PLANT (Bldg. 183)					
Filtered water Power House	gpm avg.rate	227	197	223	208
Filtered water to Process	gpm avg.rate	31,694	22,988	29,025	38,905
Filtered water to construction	gpm avg.rate	--	--	--	--
Filtered water to DR Process	gpm avg.rate	--	823	--	--
Filtered water Fire & San.	gpm avg.rate	284	299	298	125
Chlorine for Water Treatment	pounds	6,466	4,594	2,600	7,000
	ppm avg.	2.06	2.16	1.86	1.76
Lime for Water Treatment	pounds	32,000	39,200	40,050	67,000
	ppm avg.	2.5	3.8	3.3	4.0
Coagulant Water Treatment	pounds	83,020	75,000	89,540	166,[illegible]00
	ppm avg.	6.6	7.2	7.4	9.9
Raw Water pH	pH avg.	7.90	7.90	7.90	7.90
Finished Water pH	pH avg.	7.70	7.72	7.77	7.80
Alkalinity, M.O. - Raw	ppm avg.	55	53	58	64
Finished	ppm avg.	55	50	60	66
Residual Chl. - Settled	ppm avg.	.29	.23	.20	.21
Finished	ppm avg.	.12	.06	.10	.12
Iron - Raw	ppm avg.	.08	.11	.10	.11
North Clearwell	ppm avg.	.014	.014	.011	.010
South Clearwell	ppm avg.	.015	.012	.013	.012
Hardness - Finished	ppm avg.	69	68	66	74
Turbidity - Raw	ppm avg.	4.0	5.0	2.0	3.0
Filtered	ppm avg.	0	0	0	0
*Process Waste Dilution Inc.	gpm avg.rate				3,426

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Power Division Statistics

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From August 1, 1950

Through August 31, 1950

		100-B	100-D	100-F	100-H
POWER HOUSE (Bldg. 184)					
Maximum Steam Generated	lbs./hr.	134,000	139,000	135,000	158,000
Steam Generated - Total	M pounds	86,409	68,436	78,190	76,382
Avg. rate	lbs./hr.	116,141	91,983	105,090	102,660
225 psi Steam Plant (est)	M pounds	73,044	57,803	66,074	64,541
15 psi Steam Plant (est)	M pounds	231	231	231	231
Coal Consumed	Tons	5,388	4,238	5,340	5,100
Coal in Storage (est)	Tons	32,958	35,630	31,602	30,798
DEAERATOR PLANT (Bldg. 185) AND 190-H TANK ROOM					
Water Flow	gpm avg.rate	31,444	22,738	28,775	38,655
Chemicals consumed:					
Dichromate	pounds	23,200	15,500	18,000	31,900
Sodium Silicate	pounds	0	0	0	0
Chemical Analysis:					
pH	pH avg.	7.61	7.63	7.65	7.65
Dichromate	ppm avg.	1.3	1.9	1.8	1.8
Dissolved Iron	ppm avg.	.016	.012	.017	No Anal.
Free Chlorine	ppm avg.	.05	.05	.11	No Anal.
PROCESS PUMP ROOM (Bldg. 190)					
Total water pumped	gpm avg. rate	31,269	22,563	28,600	38,480
	gpm nor.rate	32,252	32,250	31,400	41,200
Water temperature	avg. °F.	67.3	68.0	67.8	67.6
VALVE PIT (Bldg. 105)					
Chemicals consumed:					
Solids	pounds	1,400	1,850	1,300	4,500
Chemical analysis:					
A, B, C, & D Headers					
Standard limits					
pH 7.5-7.8	pH (max)	7.65	7.70	7.65	7.65
	(min)	7.60	7.60	7.60	7.60
	(avg)	7.62	7.63	7.64	7.63
$Na_2Cr_2O_7$ 1.8-2.2	ppm (max)	2.0	2.0	2.1	2.0
	(min)	1.8	1.8	1.8	1.7
	(avg)	1.9	1.9	1.9	1.8
Iron	ppm (max)	.020	.015	.020	.020
	(min)	.010	.005	.005	.005
	(avg)	.013	.010	.012	.014
Chlorides	ppm avg.	1.80	1.90	1.90	1.60

Power Division Statistics

From August 1, 1950

Through August 31, 1950

		200 AREAS	
RESERVOIR (Bldg. 282)		200-E	200-W
Raw Water Pumped	gpm avg. rate	2,863	3,457
FILTER PLANT (Bldg. 283)			
Filtered Water Pumped	gpm avg. rate	378	772
Chlorine Consumed	lb.	235	385
Alum Consumed	lb.	967	3,134
Chlorine Residual - Sanitary Water	ppm	.40	.30
POWER HOUSE (Bldg. 284)			
Maximum Steam Generated	lbs./hr.	34,000	50,000
Steam Generated - Total	M lb.	14,550	25,049
Steam Generated - Ave. Rate	lb./hr.	19,551	33,668
Coal Consumed (est.)	Tons	1,119	1,543
Coal in Storage (est.)	Tons	6,874	19,723

		300 AREA
POWER HOUSE (Bldg. 384)		
Maximum Steam Generated	lbs./hr.	12,000
Steam Generated - Total	M lb.	7,245
Steam Generated - Avg. Rate	lb./hr.	9,737
Coal Consumed - Total (est.)	Tons	549
Coal in Storage (est.)	Tons	1,916
SANITARY AND FIRE SYSTEM		
Sanitary Water from 3000 Area	gal.	29,351,700
Well Water Pumped - Total	gal.	7,704,300
Total Water Per Day	gal/day	37,056,000
Total Water	gpm avg.rate	830
Chlorine Residual	ppm	.45
MISCELLANEOUS AREAS		
WHITE BLUFFS		
Ice Manufactured	lbs.	649,600
101 SHOPS		
Coal Consumed	Tons	20

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INSTRUMENT DIVISION

MONTHLY REPORT-AUGUST, 1950

GENERAL

The employment picture is still somewhat confused. Altho there are some 80 people in process for hiring, not enough clearances have come through to establish a percentage of expected acceptances by both Security and applicants. Only three new employees were added to the rolls during August. At present twelve people have been called to report for work. Of these twelve, four have advised reporting dates. In order to get actual commitments from applicants and establish what rate we may expect to achieve, a group of fifteen applicants for qualified trainee classification are being called to report in anticipation of security clearance.

Two voluntary terminations of instrument-maker machinists and transfer of another to Purchasing Division as an inspector, together with increase in work orders, has adjusted backlog of machine shop in the 300 Area to a reasonable level.

Plans and specifications for construction of the new Instrument Maintenance and Development Building in the 300 Area are out to contractors for bids. It is hoped that construction will begin before October 1, 1950.

100 AREAS

All No. 80 tubes in Control Room Safety Circuit Amplifiers have been replaced with No. 5R4GY tubes. The new tubes have a higher inverse voltage rating than the No. 80's which were suspected of arcing back intermittently. These arcbacks it is assumed were the cause of unexplained past scrams, particularly in the 100-H Area. Since the installation of new tubes there have been no unexplained scrams in any area.

Due to additional work load of 100-DR Area, 108-B and 101 Building, manpower in these areas is extremely critical. It is expected that a 6-day work week will be required at least through the start-up of the DR Area.

100-B Area

308 process tube pressure monitor gauges have been converted from a range of 45-95 psi to a range of 40-115 psi. It appears that a number of still higher range gauges will be required as pressure readings on approximately 50 of the 40-115 psi units are nearing the trip points.

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A Specialist has been assigned full time to the P-10 project at 108-B to aid in solution of many measurement and associated problems which have come up in this area. A Consolidated Engineering Mass Spectrometer, two G. E. Leak Detectors and other complicated and novel equipment is in operation in this building.

100-D Area

Unit was shut down on August 19, 1950 for an extended period to replace nozzles. Thermocouples were installed in tubes 2878, 2883, 1469, and 1477 for purposes of heat study to determine length of time a header could be shut off without reaching excessive temperatures.

Additional Instrument personnel were added to shifts to work in conjunction with Maintenance on the nozzle replacement program to make the pressure monitor connections on front face and temperature element changes on rear face. Temperature monitor thermocouples were checked for proper response and location during this work. Five were found inoperative which were replaces with spares.

100-F Area

A new orifice was installed in pile inlet gas main, calculated to give 2.0" water differential at 2000 cfm flow of CO_2.

Installed new quadrant monitor ionization chambers in tubes 0353 and 0394. Additional chambers will be installed in tubes 4453 and 4494 when available.

One man is assigned full time to Technical Division Experimental Physics Group at 101 Building. Maintenance of Counting Room equipment is expected to constitute the greater part of work assignment.

100-H Area

Installation of isolation valves for the process tube pressure monitor gauges is approximately 40 percent complete.

Process tube temperature monitor thermocouple well No. 1865 developed a leak which allowed water to flow thru saran tubing to the control room.

The control of water softeners at the 184 Building (Boiler House) has been changed to use a Taylor Flexotimer and diaphragm valves to replace the Clayton Multiport Valve which has given a great deal of trouble.

A shutdown for installation of new thimble for P-13 program is scheduled for September 5. All instrument work has been checked and is ready. A recheck will be made when Electrical Division actually makes tie-in to safety circuit.

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100-DR Area

Acceptance testing of instrument equipment is progressing as rapidly as possible. Progress of much of this work is dependent on completion of work by construction millwrights, pipe fitters and electricians. Nine men are assigned to this area for the acceptance testing in the water area as well as preparation of equipmnnt in the 105 Building for start-up.

Shutdown Experience

100-B Area - No shutdowns due to instrument failure

100-D Area - No shutdowns due to instrument failure

100-F Area - Scram at 9:28 P.M. August 2, 1950 when #1 RXG exceeded trip point through failure to follow standard operating practice. Incident reviewed by "P" and Instrument Divisions.

Manual scram at 2:35 P.M. August 20, 1950 to repair broken thermocouple to tube 2060. Insulation on thermocouple lead found in bad shape. Further checks scheduled to determine if condition is prevalent on others.

100-H Area - At 6:37 A.M. August 9, 1950, pressure on tube 2174 dropped to 203 psi. Unit was shut down manually but "P" Division could find no trouble. Test gauge verified the reading. Instrument Division reset gauge 10 psi higher than true pressure, on "P" Division's request to allow alarm to be reset and operations continued.

200 AREAS

T & B Plants Production Instruments

Installation of sealed ball bearings and dashpots on 75-ton crane periscopes is nearing completion.

Alterations were made to ventilation system to feed exhaust air from 271 into operating gallery at Section 11, and increase the supply duct flow by blocking off inlet to canyon.

Project C-384

Instrument work for parallel operation of tanks F2 and 22 is 90% complete in 224-T and 75% complete in 224-B.

Z Plant Production Instruments

The HF system in Bldg. 234-5 continues to be a source of trouble. Leaking valves are now a major problem.

The modification to thermocouple on the punch in Hood 19 has proven very successful. Approximately 40 days of uninterrupted service has been obtained.

High vacuum systems of Hoods 25 and 26 continue to give satisfactory operation.

Ventilation System

Recorders for differential pressure between zones 1 and 2 and zones 2 and 3 are now in service.

300 AREA

MANUFACTURING SECTION

P-2900-58891 - Fabrication of Neutron Spectrometer

Requisitioned materials have been received and shop work is progressing. Instrument Division assignments on the second phase of this project are approximately 50 percent complete.

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

55 Portable Poppies

All units have been received and inspected. An inspection report is being drafted for immediate issue. This project with the exception of this report was complete on August 31, 1950.

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

Fabrication assignments have been completed and delivered. An Ayrton shunt for the fluorophotometer is on order but has not been received to date.

DEVELOPMENT SECTION

The first two skirt-type liquid level contactors for P-11 project were fabricated, assembled and tested. Eight more units are ready for testing.

Authorization was obtained to construct a working model of a remote liquid level contactor also for P-11 project. This device uses inductive detecting coils to position a follow up actuating system in the recorder. Redesign of the electronic system of the laboratory model has reduced initial instability, indicating that adequate sensitivity and stability can be obtained.

A report was issued on the feasibility of conveyor belt monitoring of clothes for the new 200 West Area Laundry. It appears that the conveyor speed would have to be too slow to insure reliable results.

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A shielded microscope was made for examination and photography of the crystal structure of highly radioactive samples. The barrel of the instrument was filled with lead glass plugs to offer proper protection. Tests showed that the efficiency of the unit is not reduced at magnifying powers lower than 400X. Other shielding methods are being investigated.

DESIGN & CONSTRUCTION GROUP - 760 BUILDING

Project C-300 (100-G Area)

Heat Transfer Test, Project 17

First test run of this equipment was made on August 30, 1950. Instrumentation provided appears adequate.

Temperature Mapping

Instrument Development design work is 55% complete. Purchase orders have been placed for approximately 60% of the required items.

Test Project 36 and 37

These projects will use the same gas flow test equipment. Project 36 concerns tests to obtain gas pressure drop across proposed section of graphite stack with rod and ball 3X systems built in. Project 37 covers tests to determine convection heat transfer coefficient for use in design of control rod cooling system. Instrumentation for above tests has been determined and ordered.

Project C-187-D (Redox Production Plant, 202-S Building)

An order has been placed with Fischer and Porter for the special pocketless type rotameter transmitters. Schutte & Koerting resubmitted a sample unit which was tested by Technical. This unit still has some unsatisfactory features. Work will continue with this company to effect required changes so that they also may be considered as a source of supply.

Project C-362 (Tri-Butyl Phosphate Process)

Final approval has been obtained on all instrument engineering flow diagrams. Application sheets covering instruments required have been started and estimated for completion September 22, 1950.

Project C-349 (Hot Semi-Works)

It is estimated that all instrument drawings for this project will be completed early in September. Six day work week has been authorized by Project Engineering to complete this job as early as possible.

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MAINTENANCE DIVISION

August, 1950

The Maintenance Division backlog at the close of the month was 11,671 mandays of work. This represents a 35 crew day backlog. Some increase in available work is apparent and is due to accepting several projects for completion from the Project Engineering Division. Also, 61 craft personnel and supervision were transferred into the division to aid in accomplishing the above work.

100 Areas

100-D

The pile was shutdown on August 21 to permit replacement of the stainless steel process tube nozzles with aluminum nozzles. At the same time process tube van stone flanges were inspected for deterioration due to galvanic action and end gun barrel movement clearance. At the close of the month 1070 sets of nozzles had been replaced and an equal number of nozzles caps had been changed from stainless steel inserts to aluminum. In connection with this 136 process tubes have been re-flanged; 25 due to galvanic pitting and 111 to increase end clearance.

In order to permit the "D" Area gas purification building to serve both the "D" and "DR" piles extensive piping changes are necessary. Since many of these changes occur in areas not accessible when the "D" pile is in operation, the period of shutdown was utilized to make these piping changes.

The program of replacing the stainless steel nozzles on the "DR" pile with galvanized nozzles on the front face and aluminum nozzles on the rear face has been completed.

Cleaning of the contaminated sludge from the "D" effluent water retention basin was completed. To do this it was necessary to install special sumps from which the diluted sludge was pumped to a disposal pit. After cleaning, the expansion joints in the basin were repoured with hot asphalt, and visual cracks in the concrete surfaces repaired with special sealing compound.

100-F

Special methods and equipment were employed to remove stuck processed slugs from tubes #0657, 2194 and 3592 in the "F" pile.

Horizontal safety rod #5 in the "F" pile would not enter its thimble. Therefore it was necessary to take out the support, or track pieces, from the thimble and remove an accumulation of loose carbon dust.

100-B

The 36" process water main just outside of 183 Building developed a major leak at the point of joining steel to cast iron line. It was necessary

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to repour and caulk the joint.

200 Areas

200 West

The program of overhauling the 40" centrifuges in the Concentration Building was finished with the completion of "A" and "B" cell units.

Alterations to increase the capacity of "F" cell in the Concentration Building by paralleling the two 26" centrifuges are in progress and substantially complete. Likewise the paralleling of facilities in Section 19 and 20 in the Canyon Building are progressing and will be completed as operating schedules permit tie-in work.

234-5 Building

A tantalum dip tube in #6 hood vessel broke in service. A replacement was fabricated.

During a specially arranged shutdown of Hood 25, vacuum system elements of the 2nd bell jar assembly were installed and portions of the existing system relocated. As now arranged, the project to install the 2nd bell jar in this hood can be completed without further disturbing the presently operating system.

200 East

Alterations to increase the capacity of the concentration building by paralleling "F" cell centrifuges and modification of "D" cell are in progress and approximately 80% completed at this time.

The process waste line, 10-4, from the "B" Canyon Building to the 241 tank farm became inoperative due to a restriction of some nature. In order to resume operation it was necessary to divert waste through an alternate set of lines. This involved emergency fabrication and installation of three diversion box jumpers, and one canyon trench jumper.

300 Area

A bath and toilet has been installed in the area fire station. To provide sanitary sewer connection the present system was extended 175 feet.

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AUGUST, 1950

GENERAL

The divisional backlog of work at the month end was 10,595 mandays or approximately 42 days per employee. The total backlog increased slightly over the previous month by 212 mandays.

On August 21, a Foreman, 15 Journeyman Electricians, two Trainees and a Helper were transferred to the Electrical Division with a work load of approximately 1000 mandays.

Plans were completed revising the organization of the Telephone Section and made effective September 1, 1950. Levels of supervision were reduced by establishing a staff group in charge of system engineering and planning as per the Electrical Division's Organization Announcement No. 6. The Radio Maintenance Section involving a supervisor and three men was transferred from the Distribution Section to the Telephone Section with its headquarters moved to the Telephone Building.

An Appropriation Request in the amount of $40,000 was submitted for approval covering replacement of approximately 9000 linear feet of substation fence. This request is designed to save $15,000 in the first year by eliminating maintenance on the present wood fences which have reached the end of their useful life.

The normal power requirements of the proposed Hanford Laboratories was reviewed again, giving consideration to the cancellation of the Rolling Mill Project. A separate project proposal has been submitted for funds to construct the power feeders required. A proposed new transformer for the 300 Area was eliminated due to Rolling Mill cancellation.

A proposed installation of remote tripping for the Richland 115 KV oil circuit breakers was approved which expedites the execution of emergency blackout procedures for Richland and North Richland. This installation permits direct and complete blackout by dialing a double series of telephone numbers.

The proposed rehabilitation of Village prefab houses was reviewed considering effect on service entrances and future plans to install metering facilities. Changes were recommended increasing the rehabilitation cost about $5.00 per unit but greatly reducing the future cost of installing meters.

The emergency power requirements for P-10-X in 100-D was reviewed with Project Engineering, Technical and Design and Construction Divisions. Present facilities have been nearly loaded by the DR requirements. Review permitted reducing P-10-X requirements from 200 to 77 KW, this later quantity can be supplied by the existing 750 KW emergency unit. Additional emergency loads cannot be added in the 100-D Area without increasing capacity.

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Electrical Division [redacted]

At the request of the Atomic Energy Commission, a study was made of alternate power supply possibilities in the event the present 3750 KVA transformer failed. Arrangements were worked out whereby temporary service can be rendered in two to three weeks after transformer failure. This has been accepted as satisfactory.

Special tests of Westinghouse 10,000,000 KVA oil circuit breakers were conducted at Grand Coulee on August 20. Special operating arrangements were established permitting continued operation of 100 Area production with substantial savings.

General telephone construction standards were approved covering installations in new buildings.

The power demands for the month were as follows:

	Date	Time	KW Demand
Process Load	August 11	11:00 a.m.	55,500
Village Load	August 11	6:00 p.m.	11,700

Process demand increased slightly by virtue of 190 DR testing; Village demand decreased seasonally a small amount.

TRANSMISSION AND DISTRIBUTION

Metering of the High School Farm was completed.

Work was renewed on Project C-177 to complete the substation and feeders in the 300 Area which will make it possible to supply the area power from the 115 KV line and eliminate the 66 KV service to the area. Work is scheduled for completion about September 15.

A series of six Critical Power Grade W arrangements were made to allow for doing maintenance work on the 230 KV loop. Three of these were during August and the balance will be in September.

A biennial overhaul and adjustment of the 230 KV oil circuit breaker A-342 in the 100-D Area was completed.

In Substation A-4, Building 151-D, cubicles No. 7 and 8 were rewired for use on feeder circuits to 190-DR and both circuits were energized.

TELEPHONE SECTION

The automatic dial foreign exchange lines to Seattle, Portland and Spokane were transferred to the new permanent composite trunks recently installed by the North Electric Company.

A 26 pair cable terminal was installed in Building 722-A to serve the new offices in that building.

The 30 pay stations in Richland were converted from manual to dial operation.

The 200 East Area telephone service was cut over to the new 200 Area exchange on August 21, 1950.

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Five additional trunks were installed to the MJ-1 PBX switchboard to make a total of five outgoing and ten two-way trunks.

The following is a summary of current telephone service being rendered at end of month:

	Lines in Service	Stations in Service	Vacant Lines
Richland	3,638	5,873	362
Project Total	4,973	7,295	1,027

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

ITEM	ENERGY - KW HRS. July	ENERGY - KW HRS. August	MAX. DEMAND - KW July	MAX. DEMAND - KW August	LOAD FACTOR - % July	LOAD FACTOR - % August
230 KV SYSTEM						
A-2 Out (100-B)	7,390	7,550	11,500	11,900	86.4	85.3
A-4 Out (100-D)	7,950	6,280	12,800	13,600	83.5	62.1
A-5 Out (100-H)	8,460	8,784	13,650	14,250	83.3	82.8
A-6 Out (100-F)	6,580	6,370	11,200	11,000	79.0	77.8
A-8 Out (200 Areas)	3,168	3,384	5,040	5,400	84.5	84.2
TOTAL OUT	33,548	32,368	54,190**	56,150**	83.2	77.5
MIDWAY IN	34,047	32,808	50,400*	50,400*	90.8	87.5
Transm. Loss	499	440				
Percent Loss	1.5	1.3				
115 KV SYSTEM						
B1-S4 Out (N. Richland)	1,579	1,694	2,822	3,168	75.2	71.9
B3-S4 Out (300 Area)	355	363	732	732	65.2	66.7
B3-S5 Out "	346	382	1,080	1,080	43.1	47.5
BB1-S1 Out (Richland)	3,200	3,326	7,560**	6,660**	56.9	67.1
BB1-S2 Out "	2,640	2,788	8,730**	6,030**	40.6	62.1
TOTAL OUT	8,120	8,553	20,924**	17,670**	52.2	65.1
Benton In	0	40	0	14,400*	0	0
S. Richland In	7,872	8,184	14,760*	15,120*	71.7	72.8
TOTAL IN	7,872	8,224	14,760**	29,520**	71.7	37.4
Transm. Loss	-248	-329				
Percent Loss	-3.2	-4.0				
66 KV SYSTEM						
B7-S10 Out (W.Bluffs)	270	315	900	900	40.3	47.0
Hanford Out	321	356	600	600	71.8	79.7
TOTAL OUT	591	671	1,500**	1,500**	52.9	60.1
HANFORD IN	591	667	1,500*	1,900*	52.9	47.2
Transm. Loss	0	-4				
Percent Loss	0	-0.6				
PROJECT TOTAL						
230 KV Out	33,548	32,368	54,190**	56,150**	83.2	77.5
115 KV Out	8,120	8,553	20,924**	17,670**	52.2	65.1
66 KV Out	591	671	1,500**	1,500**	52.9	60.1
TOTAL OUT	42,259	41,592	76,614**	75,320**	74.1	74.2
230 KV In	34,047	32,808	50,400*	50,400*	90.8	87.5
115 KV In	7,872	8,224	14,760**	29,520**	71.7	37.4
66 KV In	591	667	1,500*	1,900*	52.9	47.2
TOTAL IN	42,510	41,699				
Transm. Loss	251	107				
Percent Loss	.6	.3				

* Denotes Coincidental Demand
** Non-Coincidental Demand

Average Power Factor - 230 KV System--95.6
Average Power Factor - 115 KV System--88.6
Average Power Factor - [redacted] System--98.2

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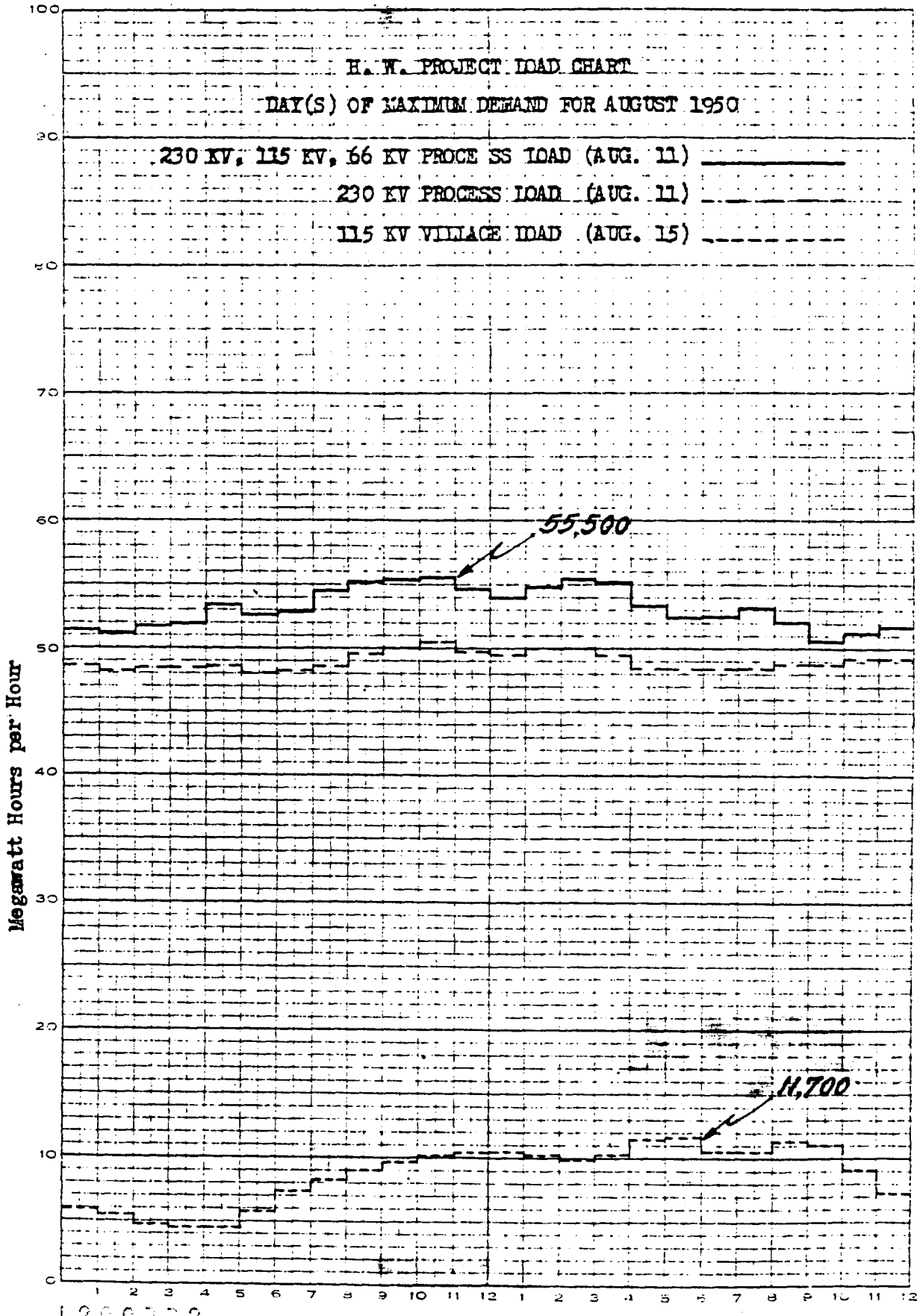
H. W. PROJECT LOAD CHART
DAY(S) OF MAXIMUM DEMAND FOR AUGUST 1950
230 KV, 115 KV, 66 KV PROCESS LOAD (AUG. 11)
230 KV PROCESS LOAD (AUG. 11)
115 KV VILLAGE LOAD (AUG. 15)
55,500
11,700
Megawatt Hours per Hour
100
90
80
70
60
50
40
30
20
10
0
1 2 3 4 5 6 7 8 9 10 11 12 1 2 3 4 5 6 7 8 9 10 11 12

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TRANSPORTATION DIVISION
MONTHLY REPORT
AUGUST 1950

GENERAL [redacted]

A second meeting with the Atomic Energy Commission regarding operational and policy matters in connection with the Village Local and Plant Area Bus Systems scheduled for August was rescheduled tentatively for September 12 to accommodate AEC officials.

Transportation Division personnel forces increased by 41 non-exempt and 3 exempt employees during the month from 622 to 666 by 2 new hires, 49 transfers in, 2 re-activations - personal illness, 4 transfers out, and 8 terminations. Three exempt and 42 non-exempt employees were transferred from the Project Engineering Divisions.

RAILROAD ACTIVITIES

Commercial cars handled during August increased approximately 51% over July with the resumption of normal coal receipts plus an increase in construction and essential materials.

Process service continued at an increased rate with all movements being completed as scheduled. Cars handled in August including process movements totaled 1,615 compared with 1,162 in July; 2,180 in June; 3,164 in May; 3,132 in April; 2,978 in March; 1,443 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
434	38	30	428

Carload Movements - Subcontractors and Others

	Loads In	Empties In	Loads Out	Empties Out
Atkinson & Jones	37	-	-	46
Associated Engineers	1	-	-	2
Combustion Engineers Co.	3	-	-	2
F. J. Early Co.	1	-	-	1
Gladding McBean Co.	1	-	-	1
V. S. Jenkins Co.	2	-	-	1
C. S. Johnson Co.	1	-	-	1
Morrison-Knudsen Co.	1	-	-	1
Richland Fuel & Lumber Co.	2	-	-	1
Rust Engineers Co.	1	-	-	1
Steel Construction Co.	2	-	-	2
United Refractories Co.	7	-	-	7
U.S.A. 519th Anti-Aircraft Btln.	6	-	-	6

Classification [redacted] Changed to [redacted] NON-TECHNICAL DOCUMENT REVIEW BOARD. [redacted]

Date: [redacted]

1209333

[redacted]

[redacted]

Transportation Division [redacted]

Work train service for the spreading of ballast on the new Redox track continued.

Furnished a Conductor-Pilot for Milwaukee Rail Detector Car 802 which inspected 90.3 miles of Plant railroad trackage and detected 34 defective rails. Inspection covered all process tracks, except within exclusion areas, and the "B" line from Riverland Junction to the Richland Junction. This service was performed on a contract basis during the period August 21 through August 26.

Completed overhaul and assembly of No. 1 Diesel engine on 80-ton Diesel electric locomotive 39-3726 which was returned to service on August 31 after being out of operation since August 10.

Railroad track maintenance and rehabilitation work continued on a normal basis throughout the five sections.

Replaced defective ties in the 100-B coal track, wyes and crossover between Susie and Pearl, 221-T turnout, and in 100-F Area expending 2,832 manhours. Surfacing was in progress on the 100-B coal track, "D" line - Susie to Pearl, 200-West coal track, 100-H coal track, 100-D coal track, near Mile Post B-17, between the Yakima River bridge and Highway 410 overpass, Richland Yard and east to the Richland Asphalt Track, expending 4,091 manhours. Sorted and stacked salvage angle bars and other accessories at the Hanford Rail Yard, expending 410 manhours. Loaded switch ties at Villa and distributed to the Areas expending 351 manhours. Distributed and installed tie plates on the 101 lead expending 328 manhours.

AUTOMOTIVE ACTIVITIES

The Area Bus System transported 8.2% more passengers in August than in July. 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
24,957	54,680	52,469	132,106	$6,605.30

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

Passenger busses - 100-B Area	10
Passenger busses - 100-D Area	10
Passenger busses - 100-F Area	11
Passenger busses - 100-H Area	11
Passenger busses - Hanford	5
Passenger busses - 200 East Area	13
Passenger busses - 200 West Area	18
Passenger busses - 300 Area	7
Passenger busses - Riverland	3
Passenger busses - Pistol Range	1
Passenger busses - White Bluffs	2

Classification [redacted] Changed to [redacted]
By [redacted] OFFICE, NON-TECHNICAL DOCUMENT [redacted] VIEW BOARD [redacted]
Date: [redacted]

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Transportation Division

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Classification [redacted]

By [redacted]

Date: [redacted]

Passenger busses - North Richland	3
Passenger busses - Pasco	3
700-300 Area Shuttle	26
Inter-Area Passenger Service	3
Inter-Area Express Service	1
Inter-Area Mail Service	1

Special shuttle bus service within the Pasco Warehousing Area was rendered to prospective buyers at a public sale on August 1, 2, 14, 15, and 16. This service was requested by the Atomic Energy Commission.

Special Area Bus Service from 100-B and 100-D to Richland was rendered for overtime workers during the first and latter portions of the month; other overtime workers were able to utilize the Patrol Shuttle and Area Busses to Richland.

The Village Bus System transported 2.5% more passengers in August than in July. Volume of service rendered is indicated in the following statistics:

Total passengers, including transfers	34,992
Total bus trips	3,563
Total bus miles	19,597
Total Revenue	$ 2,772.70

Off-Plant automobile trips (Company business and/or official visitors) totaled 149.

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

Applicants:	Male	109	Number retested	0
	Female	5	Number rejected	1
		114	Number tests given	114

Permits issued:	Limited to driving with glasses	24
	Unlimited	89
		113
Permits reissued:		48

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

	Gasoline	Diesel Fuel	50 Cetane	Kerosene	White Gas
Stock at start of month	41,628	16,106	17,434	1,928	88
Received during month	98,467	31,273	17,632	1,380	200
Total	140,095	47,379	35,066	3,308	288
Delivered to Area Stations	103,865	31,928	25,804	990	177
Stock at end of month	36,230	15,451	9,262	2,318	111

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[redacted]

Transportation Division

[redacted]

The following tabulation indicates the Plantwide usage of automotive equipment:

Code	Type	No. of Units	Total Mileage
1A	Sedans	426	503,840
1B	Busses	155	224,599
1C	Pick-Ups	453	294,716
1D	Station Wagons	111	71,944
1E	Armored Cars	12	1,425
1G	Weapon Carriers	41	14,465
68 Series	Trucks	320	107,492
		1,518	1,218,481

Removed 14 White 41-passenger busses from the White Bluffs Excess Yard for use by the U.S. Army. These units were serviced and placed in first class operating condition.

Relocated left rear view mirror on 58 GMC coaches to improve driving vision.

All equipment used for Atomic Frontier Days has been returned to storage.

Completed servicing and assignment of all new automotive equipment received on a replacement basis. Forty-six Ford pick-ups are being procured from Excess on an exchange basis to replace International units. The number of available Ford units has been reduced to 46 from the reported 75 in July.

A revised procedure has been placed into effect, August 28, for the 700-300 Area Motor Pools whereby vehicles are designated for the use of Divisions by total number rather than specific units, and distribution of cost for each vehicle will be on the basis of hours used and total miles driven.

Atomic Energy Commission officials from Washington, D.C. made a detailed survey of the utilization of general purpose vehicles and motor pool operation.

LABOR ACTIVITIES

Completed seal coating of an additional 34 miles of Plant Area roads during the month which required 5,947 cubic yards of 5/8" crushed rock, 1,156 cubic yards of 1/4" crushed rock, 126,375 gallons of MC 5 oil, and 3,514 manhours. Project P-389 is now approximately 70% complete.

Expended 445 manhours in producing and stockpiling 515 cubic yards of 5/8" crushed rock and 270 cubic yards of 1/4" crushed rock.

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

	MC 1	MC 3	MC 4	MC 5
Stock at start of month	0	18,870	0	12,638
Received during month	0	0	0	120,204
Dispensed during month	0	0	0	117,625
Stock at end of month	0	18,870	0	15,217

Classification [redacted] anged to [redacted]D
By Authority of ~~HANFORD OPERATIONS OFFICE~~ NON-TECHNICAL DOCUMENT REVIEW BOARD. ~~H. J. Newton~~, Chairman
Date: 12-18-57

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Transportation Division

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

	100 B	100 D	100 F	100 H	200 W	200 E	300	Total
Cars coal unloaded	41	64	61	48	16	7	0	237
Cars other material	3	6	1	4	3	6	1	24
Cars loaded out	0	2	0	0	0	0	0	2

Expended 4,368 manhours in handling 6 carloads of equipment, 8 carloads of rail, 5 carloads of scrap, 4 carloads of ballast, 5 truckloads of lead, 4 truckloads of steel, 14 truckloads of pipe, 30 truck loads of ballast, 92 truckloads of equipment, 3 truckloads lumber, and 63 truckloads of miscellaneous material.

Expended 1,553 manhours in handling excess and salvage materials for the Stores Division at the Pasco Warehousing Area which included the handling of 194 truck loads, 2 carloads and general clean-up.

Expended 1,627 manhours in handling miscellaneous materials for the Stores Division at White Bluffs.

Expended 924 manhours in unloading and warehousing 165 truckloads of incoming material at Warehouse #6 in Richland for the Stores Division.

Expended 1,315 manhours in handling Area deliveries, 251 manhours for Stores deliveries, and 935 manhours for moving office furniture.

Expended 570 manhours in weed spraying operations throughout the Plant areas.

Routine area maintenance was performed in all operating areas with labor and transportation equipment being furnished for Projects P-172, P-177, P-276, P-289, P-291, P-330, P-342, P-347, P-378, P-379, P-382, P-389, P-392, P-396, M-749, M-761 and M-804.

Classification Cancelled or Changed to
[redacted]
By Authority [redacted] OPERATIONS OFFICE, NON-[redacted]RE-VIEW BOARD. H. J. Newton, Chairman
Date: 12-18-57

DECLASSIFIED

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PROJECT ENGINEERING DIVISIONS
MID-MONTH / STATUS REPORT

($000,000) HIGH SPOT ESTIMATE ONLY

WORK PROGRESS DURING PERIOD

WORK PREVIOUSLY DONE

DATE AUGUST 15, 19 50

100 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
A1034	5-29	185BDF	DISMANTLING OF EQUIPMENT IN THE DEMINERALIZING AND DEAERATING PLANTS	POWER	C-172	360,200		7-11-47	-	-	7-11	8-31-48	4-4	4-7		SUBCONTRACT WORK PROGRESSING
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	PILE TECH.	C-290	17,400		9-5-48	9-9	9-14	9-14	10-4	10-11	10-11		EXTENSION OF TIME GRANTED
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	6-17-49		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					PROJECT BEING REVISED WORK BUDGETED FOR 1952
A1093	3-17	TRACT HOUSE	P-11 PROJECT	PILE TECH.	C-340	328,000		5-23-49	5-20	6-1	6-1	6-28	7-1	7-12		BREMERTON PARTS COMPLETED
A1097	4-27	101	P-12 PROJECT	PILE TECH.	C-346	391,000		8-1-49	8-16	8-17	8-17	10-31	11-3	11-11		LETTER TO A.E.C. REQUESTING CANCELLATION
A1100	5-27	105BDF	NOZZLE GALVANIZING AND REPLACEMENT	P	C-347	775,000		8-15-49	8-15	10-12	10-12	12-28	1-4-50	1-13		DELIVERY SLOW BECAUSE OF FABRICATION 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	1-18-50	1-19	2-8		WORK SCHEDULED IN B AREA SHUTDOWN
A1129	2-2	108B	P-10-B (COLD FACILITIES)	PILE TECH.	C-368	95,000		3-1-50	3-21	3-21	3-22	4-24	5-1	5-23		FIELD WORK IN PROGRESS
A1125	11-23	105H	P-13 - FIRST HANFORD PILOT CHANNEL TEST RIG (ANL #140)	PILE TECH.	C-379	105,000		3-31-50	3-31	4-11	4-12	5-23	5-25	6-12		WORK PROGRESSING
A1130	2-3	108B	P-10-A EXPANSION	PILE TECH.	C-383	300,000		4-12-50	4-13	4-20	4-20	5-29	6-1	6-9		IN PARTIAL USE
A1141	6-25	108D	P-10-X — AUTHORIZED / EST. ENTIRE COST	P	C-388	100,000 / 6,500,000								S.C. 5-22		$100,000 AUTH. ON SUSPENSE CODE
-	-	108D	REMOVAL OF EQUIPMENT FROM BLDG. 108-D		C-396	109,000		7-13-50	7-14	7-14	7-14	7-18	7-18	7-20		WORK PROGRESSING
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		MOCK-UP ROD MANUFACTURE IN PROGRESS
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		AWAITING SHUTDOWN
A1135	3-13	108B	P-10-C & P-10-D HOT DEVELOPMENT FACILITIES — AUTHORIZED / EST. ENTIRE COST	PILE TECH.	M-761	200,000 / (1,200,000)								M-761 5-10		DESIGNS PROGRESSING. $50,000 OF ESTIMATED TOTAL COST IS SUB-CONTRACT. FIELD WORK IN PROGRESS
A1116	9-30	111B	HEALTH MONITORING AND STORAGE FACILITIES	PILE TECH.	M-769	16,100		3-20-50	3-20	4-28	4-28	5-23	5-23	8-7		WORK PROGRESSING
A575	5-1	105DR	PILE TECHNOLOGY STORAGE & TEST BUILDING	PILE TECH.		(95,000)										AWAITING INFORMATION FROM TECH. DIVISION
A1059	6-29	100B	INSTALL STEEL PROCESS SEWER 105B - 107B	P		(550,000)										LEAKAGE STUDIES CONTINUING
A1086	2-4	100BDF	HIGH TANK CONTROL VALVES	P		40,000										PROJECT PREPARATION DELAYED FOR LACK OF MANPOWER
A1118	10-14	105F	DOWNCOMER REPLACEMENT	P		(100,000)										HELD UP FOR HIGHER PRIORITY WORK
A1119	10-17	100 300	COAL METERING FACILITIES	POWER		31,400										TEMPORARILY HELD IN ABEYANCE
A1122	11-9	100	DEVELOPMENT OF FLEXIBLE HORIZONTAL CONTROL RODS	P		(50,000)										WORK TO BE RESUMED
A588	7-31	105F	HOT MAINTENANCE MACHINE SHOP	MAINT.		(21,000)										DESIGN IN PROGRESS

COMBINED TOTAL OF AUTHORIZED AND PENDING 100 AREA WORK $12,523,300

PROJECT ENGINEERING DIVISIONS
MID-MONTHLY STATUS REPORT
200 AREA PROJECTS

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

DATE AUGUST 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
E436	2-14	251 & 200EW	ENLARGING 251 SUBSTATION AND ADDITIONAL 13.8 KV FEEDERS 200EW	ELECT.	C-295	1,280,000		8-25-48	10-5	10-12	10-6	10-15	10-13	11-19		TRANSFERRED TO D & C DIVS. 8-2-50
2469	12-30	200	UNDERGROUND GEOLOGICAL & HYDROLOGICAL INVESTIGATION PROGRAM INCLUDING TEST WELLS & OTHER FACILITIES	H.I.	C-326 REV.2	36,800		5-25-50	5-25	6-13	6-14	7-5	7-10	7-13		WORK PROGRESSING
2460	12-23	221TB	EQUIPMENT FOR DISSOLVER OFF-GAS FILTRATION PART II	S	C-337 REV.	158,000		12-14-49	12-13	12-20	12-23	1-30-50	2-9	2-16		WORK PROGRESSING
A546	7-19	200E	HOT SEMIWORKS COMPLETE PLANS & SPECS. PARTS I & II	SEP. TECH.	C-349	150,000		2-1-50	2-8	2-8	2-15	3-9	3-16	3-24		DESIGNS PROGRESSING
			HOT SEMIWORKS PART III	SEP. TECH.	C-349	2,540,000		5-31-50	5-31	6-13	6-14					PROJECT AWAITING AUTHORIZATION
2513	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 ENCLOSURE BEING PERFORMED BY OUTSIDE VENDOR
2491	5-13	200W	EVAPORATION FACILITIES FOR WASTE SOLUTIONS (200W) DESIGN / ENTIRE COST	S	C-369 / C-369A	25,000 / 489,000		6-23-50	6-23	7-11	7-12					$25,000 FOR DESIGN AUTH. 4-25-50 NEW PROJ. PROPOSAL SUBMITTED FOR WEST AREA ONLY
2490	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	5-23		WORK PROGRESSING
2501	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	6-9	6-15	6-20		WORK PROGRESSING
2540	5-11	234-5	ADDITIONAL UNIT TO SUPPLEMENT THE OPERATION OF HOOD #25, BLDG. 235	S	C-392	25,500		6-1-50	6-1	6-17	6-28	7-14	7-19	7-25		WORK BEING SCHEDULED
2501	9-2	221TB	PARALLEL OPERATION, SECTIONS 19 & 20, BLDGS. 221 T & B	S	C-395	91,165		6-26-50	6-26	7-20	7-20	8-4	8-8	8-15		PROJECT APPROVED BY A.E.C.
2544	6-2	221TB	CONDUCTIVITY METERS FOR CELL DRAINS, BLDGS. 221 T & B	S	C-397	21,700		7-12-50	7-12	8-9	8-10					PROJECT AWAITING AUTHORIZATION
2543	6-1	231	EXPERIMENTAL COATING HOOD, BLDG. 231, 200W AREA	SEP. TECH.	C-398	53,000		8-8-50	8-8	8-9	8-10					PROJECT AWAITING AUTHORIZATION PROJ. PROP. ROUTED FOR APPROVAL
A554	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	2-21-50		SUBCONTRACT AWARDED 7-3-50 WORK PROGRESSING
2504	7-22	271TB	INSTALLATION OF LABORATORY FURNITURE IN BLDGS. 271 T & B	TECH. SERV.	M-766	13,600		4-25-50	4-25	5-9	5-10	5-31	6-2	6-14		WORK PROGRESSING
2520	1-16	234-5	LOADING FACILITIES FOR RECYCLED MATERIAL BLDG. 234	S	M-802	19,000		4-24-50	4-24	5-9	5-10	6-5	6-5	7-14		WORK BEING SCHEDULED
A570	3-15	200W	CONSOLIDATED MAINT. SHOPS	MAINT.		(310,000)										PROJECT IN PREPARATION
A571	4-7	200W	ANIMAL EXPOSURE CHAMBER	H.I.		(45,000)										DESIGN HELD UP BY H.I. DIV.
2503	7-22	234-5	DUCT LEVEL FLOOR COVERING AND SAFETY SHOWERS	S		(150,000)										DESIGNS POSTPONED BY S-DIVISION
2533	4-11	234-5	PROCESS WASTE DISPOSAL SYSTEM	S		(50,000)										PROJECT PROPOSAL TO BE SUBMITTED AT A LATER DATE
2546	7-28	221TB	EQUIPMENT FOR SETTLING AND CRIBBING OF SECT. 5 WASTES	S		(25,000)										AWAITING COMPLETION OF C-395 DESIGN
																COMBINED TOTAL OF AUTHORIZED AND PENDING 200 AREA WORK $4,215,465

1209339

PROJECT EI NEERING DIVISIONS
MID-MONTHL. STATUS REPORT

DATE AUGUST 15, 19 50

($000,000) HIGH SPOT ESTIMATE ONLY

WORK PROGRESS DURING PERIOD

WORK PREVIOUSLY DONE

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
A3061	8-14	313-314	IMPROVED VENTILATION - BLDGS. 313-314	P	C-330	200,000		12-8-49	12-8	12-28	12-18	2-1-50	2-3	2-10		INVESTIGATIONAL WORK ON BAG FILTER DELAYED FOR LACK OF MAN-POWER
A3062	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 IN PROCESS OF BEING TERMINATED
A550	9-15	300	ADDITION TO BLDG. 3745	H.I.	C-354	20,300		11-8-49	11-8	12-1	12-1	12-19	12-23	3-2-50		SUBCONTRACT AWARDED 7-3-50 CONTRACTOR PROGRESSING
A528	11-14	300	INSTRUMENT MAINTENANCE AND DEVELOPMENT BLDG. 3717-B	INST.	C-377-R	111,000		4-26-50	3-25	4-28	5-10	6-6	6-8	6-19		DESIGN COMPLETE WORK TO BE SUBCONTRACT
			300 AREA BADGE HOUSE — PREVIOUSLY AUTH. INF. REQ. / PRESENT EST. TOTAL COST			14,500 / 34,000										REV. PROJECT IN PREPARATION
A510R	10-10	3701	ADDITION	SERV.												AWAITING INFORMATION TECH. DIV.
A574	4-28	300	ADDITION TO BLDG. 3702	TECH.		(58,000)										AWAITING INFORMATION TECH. DIV.
A548	8-29	300	SOLVENT STORAGE FACILITIES - BLDG. 3706	TECH. SERV.		(60,000)										PROJECT IN PREPARATION
A582	6-9	300	MFG. DIVISION ADMINISTRATION BLDG.	ALL MFG.		(70,000)										REVISED DESIGNS STARTED
E432	1-11	300	ELECT. POWER SERVICE TO HANF. LAB.	ELECT.		(36,000)										CANCELLED 8-15-50
E433	1-17	300	TELEPHONE SERVICE TO TECH. CENTER	ELECT.		(5,000)										DESIGNS PROGRESSING
E434	1-13	300	EXPERIMENTAL INDUCTION HEATING FACILITIES BLDG. 3732	PILE TECH.		(50,000)										DESIGNS HELD PENDING FURTHER DECISIONS ON WORK TO BE DONE
A3083	7-21	313	SEGREGATION OF FLUORIDE SLUDGE	P		(40,000)										PROJECT PROPOSAL PREPARED
A3085	6-28	RIVER.	HIGH TANK RIVERLAND	TRAN.		50,000										

COMBINED TOTAL OF AUTHORIZED AND PENDING 300 AREA WORK $729,300

1209540

PROJECT ENGINEERING DIVISIONS
MID-MONTHLY STATUS REPORT

($000,000) HIGH SPOT ESTIMATE ONLY

WORK PROGRESS DURING PERIOD

WORK PREVIOUSLY DONE

DATE AUGUST 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
828	11-22	702	CONVERSION OF RICHLAND EXCHANGE TO AUTOMATIC DIAL OPERATION	ELECT.	C-138	470,500		3-7-47	-	-	3-10	5-12	5-21	5-13		EXTENSION OF TIME GRANTED BY MOD. NO. 4 TO 9-1-50
962	7-10	ALL	115 KV POWER LINE TO RICHLAND PLUS SUBSTATION FACILITIES	ELECT.	C-177	1,483,000		7-17-47	-	-	7-21	8-14	8-26	8-29		PART IV-R AUTHORIZED 7-26-50 WORK RESUMED
A452	2-17	ALL	INSTALLATION OF OVERALL PLANT TELEPHONE FACILITIES	ELECT.	C-276	1,548,600		9-8-48	7-13	9-8	9-9	10-3	10-6	10-6		SUBCONTRACTOR PROGRESSING ON REMAINING WORK AS AUTHORIZED COMPLETION DATE REV. TO 2-1-51
990	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
2480	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 PROGRESSING COMPLETION DATE REV. TO 9-1-50
E406	5-16	1100	ADDITIONS TO RICHLAND ELECTRICAL DISTRIBUTION SYSTEM	ELECT.	C-341	155,000		5-29-49	5-29	6-6	6-16	9-2	9-13	9-2		REVISED PROJECT SUBMITTED TO A.E.C. 8-11-50
A543	7-14	HANF.	ARSENAL BLDG., FIRE PROTECTION & SANITARY FACILITIES - PATROL PISTOL RANGE	SERV.	C-360	54,000		12-19-49	12-23	2-14-50	2-15					ACTION TEMP. DEFERRED A.E.C. LETTER 3-31-50 SUBCONTRACT AWARDED 7-3-50
A542	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		WORK PROGRESSING
A563	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	5-23		DESIGN COMPLETION AWAITING VENDOR INFORMATION
A568	2-27	ALL	1950 AREA ROAD MAINTENANCE PROGRAM	TRAN.	C-389	94,000		5-6-50	5-6	6-13	6-14	6-22	6-27	7-3		WORK PROGRESSING
E435	2-10	1100	ELECTRICITY METERING - COMMUNITY OF RICHLAND — INFORMAL REQUEST / EST. TOTAL COST	ELECT.	M-733 / C-380-R	12,400 / 331,000		6-15-50	6-15	6-26	6-27					PROJECT AWAITING AUTHORIZATION
A480R	5-25	3000	CONSOLIDATION OF TRANSPORTATION FACILITIES — PRELIM. ENGRG. / EST. ENTIRE COST	TRAN.	M- / C-284-R	19,000 / 2,300,000		8-8-50	8-8	8-8	8-8					INFORMAL REQUEST AWAITING AUTHORIZATION
A562	11-1	3000	CENTRAL STORES WAREHOUSE IN 3000 AREA — PRELIM. ENGRG. / EST. ENTIRE COST	STORES	M-770 / C-390	17,000 / (1,800,000)		7-11-50	7-11	7-11	7-11	8-1	8-1	M-770 8-16		DESIGNS PROGRESSING
A558	11-11	500	TRANSFORMER & CIRCUIT BREAKER OIL REPROCESSING FACILITIES	ELECT.	M-805	13,300		6-13-50	6-13	6-13	6-14	7-11	7-11	8-14		WORK PROGRESSING
A534	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
A552	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			SPECIFICATIONS REVISED. JOB TRANSM. TO COMM. PUB. WORKS
A557	11-11	ALL	PERMANENT FENCING 230 KV AND DISTRIBUTION SUBSTATIONS	ELECT.		(170,000)										PROJECT IN PREPARATION
A560	11-11	1100	RELOCATION OF RICHLAND LINE CREW HEADQUARTERS	ELECT.		(30,000)										AWAITING INFORMATION FROM ELECTRICAL DIVISION
A565	1-16	1100	NEW BIO-ASSAY LABORATORY	H.I.		(100,000)										INFORMAL REQUEST AWAITING APPROVAL
A577	5-19	ALL	ASBESTOS SHINGLES FOR AREA BADGE HOUSE, PATROL HEADQUARTERS, & FIRE STATION	SEC. SERV.		(45,000)										PROJECT IN PREPARATION
E426	11-11	ALL	SALVAGE AND RECOVERY OF TELEPHONE CABLE AND EXCHANGE EQUIPMENT	ELECT.		(32,600)										PROJ. PROPOSAL READY FOR ROUTING

1209341

COMBINED TOTAL OF AUTHORIZED AND PENDING GENERAL PLANT AREA WORK $9,215,800

PROJECT ENGINEERING DIVISIONS
ENGINEERING DESIGN
100 AREAS

DATE AUGUST 15, 1950

E. R. NO.	DATE REC'D.	DIV. RESP.	BLDG. OR AREA	DESCRIPTION	PERCENT ENGINEERING COMPLETE		EST. COMPL. DATE	REMARKS
					LAST MO.	THIS MO.		
A-1001	9-1-49		100	"AS-BUILT" DWGS. SINCE 9-1-46	30	30		WORK PROGRESSING
A-1002	2-1-50	TECH. & P	105	G.E.C. STUDY	30	30		EXTENDED STUDY BY STANDING COMMITTEE
A-1074	11-2-49	P	115BDF	DESIGN MOISTURE EXTRACTION EQUIPMENT FOR GAS SYSTEM	0	0		NOT STARTED
A-1128	2-1-50	P	100H	DESIGN GRAPHITE MONITORING PUSH RODS	40	50	9-15-50	ADDITIONAL FUNDS REQUESTED TO COMPLETE WORK
A-1132	2-8-50	P	105	ROTARY TUBE CUTTER	85	85	8-30-50	TRIAL UNIT TO BE MADE
A-1139	5-25-50	P	105	INCLINED VSR GUIDE	10	100		DESIGN ISSUED 7-20-50
A-1140	6-1-50	P	107B	INVESTIGATE SEWER LEAKS	10	15	9-30-50	IN PROGRESS

1209342

PROJECT ENGINEERING DIVISIONS

ENGINEERING DESIGN

200 AREAS

DATE AUGUST 15, 1950

E. R. NO.	DATE REC'D.	DIV. RESP.	BLDG. OR AREA	DESCRIPTION	PERCENT ENGINEERING COMPLETE		EST. COMPL. DATE	REMARKS
					LAST MO.	THIS MO.		
2266	10-28-49	-	200EW	"AS-BUILT" DWGS. SINCE SEPT. 1, 1946	45	45	12-31-50	ONLY URGENT CORRECTIONS BEING MADE TO DWGS. AT PRESENT
2532	4-6-50	S	221T	CHANGE DWGS. FOR CONNECTORS IN SECT. 6-R	10	10		DESIGN WAITING ON MANPOWER
2534	4-17-50	S	234-5	DESIGN NEW SHAFT FOR WASTE SUMP TANK AGITATORS	20	20		DESIGN WAITING ON MANPOWER
2535	4-17-50	S	222TB	DESIGN HOOD FOR LIQUID WASTE ASPIRATOR	25	25		DESIGN WAITING ON MANPOWER
2539	5-11-50	S	234-5	REVISE SANITARY WATER SYSTEM	40	100	8-15-50	DESIGN COMPLETE
2541	5-15-50	S	234	DESIGN VACUUM BREAKER FOR EVAPORATOR BLDG. 234	80	80		DESIGN BEING REVIEWED BY S-DIV.
2542	5-29-50	-	222TB	DESIGN AIR COND. EQUIP. FOR ROOM 19	0	0		NOT STARTED
2545	6-13-50	M	2704E	DESIGN PIPING FOR TWO FIRE HOSE STATIONS	0	0		NOT STARTED

1209346

PROJECT ENGINEERING DIVISIONS

ENGINEERING DESIGN

300 AREA

DATE AUGUST 15, 1950

E. R. NO.	DATE REC'D.	DIV. RESP.	BLDG. OR AREA	DESCRIPTION	PERCENT ENGINEERING COMPLETE LAST MO.	PERCENT ENGINEERING COMPLETE THIS MO.	EST. COMPL. DATE	REMARKS
A-3002	9-1-49		300	"AS-BUILT" DRAWINGS SINCE 9-1-46	0	0		ONLY URGENT CORRECTIONS BEING MADE AT PRESENT
A-3070	10-28-49	TECH. SERV.	3706	STUDY VENTIL. REQUIREMENTS TO PROVIDE 40% HUMIDITY AND 2 MINUTE AIR CHANGE	30	30	9-1-50	WORK POSTPONED UNTIL ALL HOODS HAVE BEEN INSTALLED
A-3088	2-13-50	P	314	STUDY GATE TYPE CRUCIBLE, MELT PLANT	80	80	9-1-50	WORK POSTPONED UNTIL TEST OF SIDE POUR CRUCIBLE IS COMPLETED
A-3090	3-7-50	P	314	HOOD FOR OUTGASSING FURNACE	70	70	9-1-50	STUDY PROGRESSING ON HEAT BALANCE
A-3092	4-28-50	P	314	STOKES PUMP EXHAUST GAS TEST	90	90	9-1-50	AWAITING SCHEDULING OF TEST BY P-DIV.

1209344

PROJECT ENGINEERING DIVISIONS
ENGINEERING DESIGN
PLANT GENERAL

DATE AUGUST 15, 1950

E. R. NO.	DATE REC'D.	DIV. RESP.	BLDG. OR AREA	DESCRIPTION	PERCENT ENGINEERING COMPLETE		EST. COMPL. DATE	REMARKS
					LAST MO.	THIS MO.		
A-537	4-8-49	TRAN.	ALL	SURVEY FOR MAINTENANCE OF ALL RAILROADS INSIDE RESTRICTED AREAS	50	56	9-1-50	WORK PROGRESSING AS REQUIRED
A-553	9-7-49	-	ALL	ARCHITECTURAL STANDARDS	15	15		WORK PROGRESSING AS REQUIRED
A-569	3-2-50	TECH. & MFG.	300	ENGRG. REPORT ON 300 AREA DEVELOPMENT STUDY	35	35	9-1-50	WORK PROGRESSING AS REQUIRED
A-578	5-22-50	D.& C.	200	200E-W WASTE TIE-LINE (LAYOUT ONLY)	50	76	9-1-50	WORK PROGRESSING
A-581	6-9-50	TRAN.	-	DESIGN BUS HEATING SYSTEM	40	85	9-1-50	WORK PROGRESSING
A-583	6-13-50	TRAN.	100H	PAINT SPRAY BOOTH INSTALLATION	10	25	9-15-50	WORK PROGRESSING
A-585	6-29-50	S	ALL	STRESS ANALYSIS PROCESS CASK CAR	10	40	9-1-50	WORK PROGRESSING
A-587	7-21-50	TRAN.	-	ROAD STRIPPING - 300 AREA BARRICADE	-	60		WORK PROGRESSING
E-439L	1-12-50	-	ALL	ELECTRICAL AS-BUILTS (LAYOUT WORK ONLY)	35	36		AS REQUIRED
E-406L	8-1-49	ELECT.	1100	ADDITIONS TO VILLAGE DIST. - LAYOUT ONLY FOR PROJECT C-341	93	98		WORK PROGRESSING AS REQUIRED
A-1001L	5-26-49	-	100	AS-BUILTS - 100 AREAS - LAYOUT ONLY	80	80		WORK PROGRESSING AS REQUIRED
2266L	1-13-50	-	200EW	AS-BUILTS (LAYOUT WORK ONLY)	80	80		WORK PROGRESSING AS REQUIRED
A-3002L	12-7-49	-	300	AS-BUILTS - 300 AREA - LAYOUT ONLY	70	70		WORK PROGRESSING AS REQUIRED
4365D	12-2-49	P	-	PROCESS CHARTS - 300 AREA (FOR IND. ENGRG. GROUP)	70	70		WORK PROGRESSING AS REQUIRED

1209345

PROJECT ENGINEERING DIVISIONS
ELECTRICAL DESIGN
PLANT GENERAL

DATE AUGUST 15, 1950

E. R. NO.	DATE REC'D.	DIV. RESP.	BLDG. OR AREA	DESCRIPTION	PERCENT ENGINEERING COMPLETE LAST MO.	PERCENT ENGINEERING COMPLETE THIS MO.	EST. COMPL. DATE	REMARKS
A-480RE	8-11-50			CONSOLIDATION OF TRANSPORTATION FACILITIES	-	0	5-1-51	
A-505E	8-19-49	-	ALL	ELECTRICAL STANDARDS - DESIGN & DRAFTING STAFF WORK				CURRENTLY 125 MAN DAYS PER MO. 30 MAN DAYS PER MONTH
A-528E	1-16-50	INST.	300	300 AREA INSTRUMENT SHOP	40	100	8-8-50	COMPLETED
A-532E	3-4-50	H.I.	108F	BIOLOGICAL BLDG.	95	100	8-1-50	COMPLETED
A-546E	8-19-49	TECH.	200E	HOT SEMIWORKS	30	55	10-1-50	WORK PROGRESSING
A-562SE	2-27-50	STORES	ALL	CENTRAL STORES WAREHOUSE	12	12	12-1-50	WORK HELD UP
A-565E	3-23-50	H.I.	700	BIO ASSAY LABORATORY	10	10	10-15-50	WORK PROGRESSING
A-570E	7-20-50		200W	CONSOLIDATED MACHINE SHOP	-	5	1-1-51	
A-582E	8-11-50		300	ADMINISTRATION BLDG.	-	0	2-1-51	
A-588E	8-11-50		105F	MAINTENANCE SHOP	-	0	1-1-50	
E-413	6-21-50	ELECT.	ALL	SUPERVISORY CONTROL ON 115KV LINES	15	15	10-1-50	WORK PROGRESSING
E-428	11-1-49	ELECT.	HANF.	DISMANTLE DISTRIBUTION LINES AND TELEPHONE CABLE - HANFORD	10	10		PRELIMINARY WORK STARTED
E-432	1-11-50	ELECT.	300	ELECTRICAL POWER - HANFORD LAB.	15	15	10-1-50	WORK PROGRESSING
E-435	2-10-50	ELECT.	RICH.	ELECTRICITY METERING - RICHLAND	25	25	6-1-51	HELD UP
E-439	7-14-50		100	"AS-BUILT" - 100 AREA				WORK PROGRESSING
E-441	7-14-50		200	"AS-BUILT" - 200 AREA				WORK PROGRESSING
E-442	7-14-50		300	"AS-BUILT" - 300 AREA				WORK PROGRESSING
E-443	7-14-50		700-1100	"AS-BUILT" - 700-1100 AREA				WORK PROGRESSING
E-444	7-14-50		ALL	"AS-BUILT" - POWER LINES				WORK PROGRESSING
E-445	7-14-50		ALL	"AS-BUILT" - TELEPHONE				WORK PROGRESSING
A-1130E	2-16-50	TECH.	100B	P-10-A EXPANSION	90	95	9-1-50	WORK PROGRESSING

1209346

CONTD. ON PAGE 2

PROJECT ENGI..ERING DIVISIONS

ELECTRICAL DESIGN

PLANT GENERAL

DATE AUGUST 15, 1950

E. R. NO.	DATE REC'D.	DIV. RESP.	BLDG. OR AREA	DESCRIPTION	PERCENT ENGINEERING COMPLETE		EST. COMPL. DATE	REMARKS
					LAST MO.	THIS MO.		
A-1135E	4-2-50	TECH.	100B	P-10-D ADDITIONAL HOT FACILITIES	15	45	10-1-50	WORK PROGRESSING
2490E	2-15-50	P	200EW	IODINE REMOVAL FACILITIES	95	100	7-17-50	WORK PROGRESSING (DESIGN COMPLETE, FIELD WORK TO DO)
2491E	9-14-49	S	200EW	FIRST CYCLE EVAP. FAC. - 241 T-X, ELECTRICAL DESIGNS	10	10	9-15-50	WORK PROGRESSING
2501E	2-17-50	S	200EW	F CELLS - BLDG. 221 T & B	65	90	9-1-50	WORK PROGRESSING
2540E	7-22-50		200W	COATING UNIT - HOOD 25, BLDG. 234-5	-	0	11-1-50	
2543E	7-22-50		200W	EXPERIMENTAL COATING HOOD - BLDG. 231	-	5	12-1-50	
2544E	6-12-50	S	200EW	CONDUCTIVITY METERS 221 T-B	5	5	9-1-50	WORK PROGRESSING
A-3061E	12-10-49	TECH.	314	INCREASED VENTIL. - ELECT. DESIGNS ONLY	45	45	9-1-50	WORK PROGRESSING

1209347

PROJECT ENGINEERING DIVISIONS
INDUSTRIAL ENGINEERING
ALL AREAS

DATE AUGUST 15, 1950

E. R. NO.	DATE REC'D.	DIV. RESP.	BLDG. OR AREA	DESCRIPTION	PERCENT ENGINEERING COMPLETE LAST MO.	PERCENT ENGINEERING COMPLETE THIS MO.	EST. COMPL. DATE	REMARKS
1141	6-16-50	DESIGN	100	P-10-X FEED SLUG HANDLING	30	95		WORK PROGRESSING
				P-10-X FUEL SLUG HANDLING	-	75		WORK PROGRESSING
				P-10-X FUEL SLUG SHIPPING	-	25		WORK PROGRESSING
				P-10 EXTRUSION	-	5		
4363	3-21-50	P.E.D.	ALL	PROJECT ENGRG. DIV. PERSONNEL ANALYSIS	90	90		WORK DEFERRED
4365	4-15-49		300	INDUSTRIAL ENGINEERING - P-DIVISION				
		P		OPTIMUM BILLET DIMENSION DETERMINATION	70	70		
		P		REDUCED CUT-OFF TOOL WIDTH	80	90		WORK PROGRESSING
		P		MELT PLANT MATERIAL HANDLING	20	20		
		P		AMORTIZATION PERIODS	30	30		
		P		303 PROCESS & ESSENTIAL MATERIALS	0	0		AWTG. PERSONNEL ASSIGNMENT
		P		CHIP RECOVERY EXPOSURE STUDY	20	30		WORK PROGRESSING
		P		"LONG ROD" MACHINING & STRAIGHTENING	-	10		
		P		MATERIAL HANDLING CREW METHODS	-	0		
4370	11-1-49		100	INDUSTRIAL ENGINEERING - P-DIVISION				
		P		CHARGE-DISCHARGE METHODS	50	60		WORK PROGRESSING
		P		SUGGESTION EVALUATION FOR P.C. GROUP	50	55		WORK PROGRESSING
		P		NOZZLE REPLACEMENT STUDY	5	5	10-1-50	WORK DEFERRED
		P		CREW REQUIREMENTS, 105 AREA	20	20		
		P		S.W.P. STUDIES	5	5		
4374	12-20-49		200	INDUSTRIAL ENGINEERING - S-DIVISION				
		S		CREW REQUIREMENTS 234-5 BLDGS.	0	0	12-20-50	AWTG. PERSONNEL ASSIGNMENT
4378	2-5-50	S	202S	LUBRICATION SPECIFICATIONS - REDOX	0	0	4-1-51	(THESE JOBS CANCELLED. WILL BE REACTIVATED IN EARLY PART OF 1951.)
4379	2-3-50	S	234-5	LUBRICATION SPECIFICATIONS - M.R.	0	0	8-1-51	
4381	2-3-50	S	221U	LUBRICATION SPECIFICATIONS - T.B.P.	0	0	8-1-51	
4382	3-2-50	S	200	LUBRICATION SPECIFICATIONS - UO_3	0	0	6-1-51	
4383	3-6-50	POWER	ALL	FUEL OIL STUDY	95	98	8-18-50	REVIEWING FINAL REPORT
4386	3-13-50	MFG.	ALL	STUDY DEVELOPMENT AND ROUTINE	0	0	3-13-51	SERVICE AND SURVEY
4388	11-15-49	CONTROL	ALL	ANALYSIS OF HEAVY DUTY LACQUERS	70	80	9-1-50	WORK PROGRESSING
4389	5-5-50	CONTROL	700	CONTROL - P. & S. DIVISIONS PROCEDURE	80	100		REPORT COMPLETE 8-11-50
4390	5-9-50	CONTROL	100	LUBRICATION SPECIFICATIONS 105H	60	75	8-30-50	WORK PROGRESSING
4391	5-12-50	CONTROL	ALL	INDUSTRIAL LUBRICATION PROGRAM	30	35	11-10-50	WORK PROGRESSING

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PROJECT ENGINEERING DIVISIONS
INDUSTRIAL ENGINEERING
ALL AREAS

DATE AUGUST 15, 1950

E. R. NO.	DATE REC'D.	DIV. RESP.	BLDG. OR AREA	DESCRIPTION	PERCENT ENGINEERING COMPLETE		EST. COMPL. DATE	REMARKS
					LAST MO.	THIS MO.		
4392	5-17-50	MAINT.	ALL	METALLIZING J.I.	15	75	9-1-50	WORK PROGRESSING
4393	5-19-50	POWER	100	LUBRICATION SPECIFICATIONS - 100DR	5	75	8-15-50	WORK PROGRESSING
4394	6-6-50	P.E.D.	100	GRAPHITE STORAGE FACILITIES	25	25		WORK DEFERRED
4395	6-28-50	MFG.	ALL	MANUFACTURING DIVISIONS PROCEDURES	5	10	12-1-50	WORK PROGRESSING
4396	6-19-50	S	200EW	AREA PLANNING STUDIES	30	100	8-15-50	WORK COMPLETED
4398	6-25-50	S	ALL	CORROSION TESTS - STAINLESS STEEL	0	15	9-1-50	WORK INITIATED
4399	7-13-50	CONTROL	ALL	CONTROL DIVISION PROCEDURES	-	5	2-1-51	WORK INITIATED
4400	6-28-50	MFG.	ALL	MANUFACTURING DIVISIONS REPORTS	-	0	2-1-51	WORK DEFERRED

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PROJECT ENGINEE...NG DIVISIONS
COST ESTIMATING WORK SCHEDULE
WORK RECEIVED AND COMPLETED
ALL AREAS

DATE AUGUST 15, 1950

JOB NO.	BLDG. OR AREA	DESCRIPTION	PERCENT ESTIMATING COMPLETE		DATE REC'D.	DATE REQ'D.	DATE COMPL.	AMOUNT	REMARKS
			LAST MO.	THIS MO.					
C-198	234-5	ROOM #161 COST TO COMPLETE	-	100	7-26-50	7-30-50	8-2-50	2,200	EST. TO GEO. THAYER
C-322	ALL	OSMOSE TREATMENT - ELEC. POLES - FINAL EST.	20	20	5-20-50	5-23-50			
C-388	108D	P-10-X	-	100	7-14-50	7-18-50	7-18-50	5,200,000	EST. TO F.A. BOWMAN
A-510	3701	REVISIONS TO GATE HOUSE	-	100	8-2-50	8-7-50	8-7-50	19,400	EST. TO D.M. BROWN
A-557	ALL	FENCES - 230KV & DISTR. SUBSTATIONS	40	40	4-6-50	7-31-50	7-24-50	40,000	EST. TO H.F. PETERSON
A-570	200W	CONSOLIDATED MAINTENANCE SHOP	-	50	7-20-50				HELD-UP
A-583	ALL	BUS HEATING MODIFICATION	-	100	7-27-50	7-28-50	7-31-50	1,945	EST. TO H.E. HYLBAK
E-432	300	ELEC. SERVICE FOR HANFORD LAB (REV.)	-	90	8-10-50	8-16-50			
A-1086	105	HIGH TANK CONTROL VALVES	-	100	7-21-50	7-25-50	7-31-50	76,500	EST. TO H.P. SHAW
A-1138	115	DRY ICE CONVERTER AND STORAGE	0	100	7-10-50	7-13-50	7-13-50	32,000	EST. TO F.A. BOWMAN
A-1141	108D	SQUARE OFF TOP FOR 4TH FLOOR	-	0	8-7-50	8-11-50			
2543	231	EXPERIMENTAL COATING HOOD	-	100	7-28-50	8-2-50	8-2-50	50,500	EST. TO E.M. JOHNSTON
A-3085		RIVERLAND HIGH TANK	-	100	8-8-50	8-10-50	8-9-50	46,000	EST. TO H.P. SHAW
4396	200	200 AREA PRODUCTION STUDY	20	100	7-10-50	7-22-50	7-13-50	VARIOUS	EST. TO J.P. COOKE
H37931	200E	BURIAL GROUND EXTENSION	90	100	7-10-50	7-14-50	7-20-50	19,400	EST. TO S-DIVISION
H59264	3000	TELEPHONE EXCHANGE FENCE	-	0	8-15-50	8-16-50			
	762	PARKING LOT FOR 762 BLDG.	-	100	7-27-50	7-27-50	7-27-50	2,200	EST. TO J.W. BRANDS
M-761	108B	P-10-C, P-10-D - REV. #2	90	100	7-6-50	7-12-50	7-18-50	1,216,000	EST. TO H.P. SHAW

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AUGUST 15, 1950

RECAP - ALL AREAS

PROJECT COSTS

	100	200	300	GENERAL	TOTAL
AUTHORIZED	$4,082,900	$ 756,765	$ 345,800	$4,263,600	$ 9,449,065
AWAITING APPROVAL		2,928,700		2,293,600	5,222,300
WORK IN PREPARATION	8,440,400	530,000	383,500	2,658,600	12,012,500
TOTALS	$12,523,300	$4,215,465	$ 729,300	$9,215,800	$26,683,865
LAST MONTH'S TOTALS	$ 9,893,300	$5,839,298	$3,611,800	$9,298,300	$28,642,698

REMARKS CONCERNING PROJECTS:

			EST. COST
C-295	-	ENLARGING SUBSTATION (TRANSFERRED TO D & C DIVS. 8-2-50)	$1,280,000
C-339	-	ROLLING MILL (BEING TERMINATED)	60,000
C-357	-	RICHLAND SEWAGE LIFT STATION (TRANSFERRED TO COMM. PUB. WORKS)	47,500
E.R. E-433	-	TELEPHONE SERVICE TO TECH. CENTER (CANCELLED OUT 8-15-50)	5,000
E.R. 2533	-	PROCESS WASTE DISPOSAL (INDEFINITELY POSTPONED)	50,000

SUBCONTRACTS IN FORCE: $416,204

SUBCONTRACTS PREPARING: $971,679

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TECHNICAL DIVISIONS 9/11/50

August 1950

SUMMARY

Pile Technology Division

The 600 tube H-10 loading in the H Pile was completed during the month. Resulting equalization of temperature distribution permitted a return to 400 MW operation.

Critical mass measurements using cylindrical geometry were completed and preparations for measurements in spherical geometry were started. Ten critical mass determinations were made during the month.

The program of exponential pile measurements has been resumed. At month-end the first exponential pile had been erected but aluminum tubes had not been installed.

Measurements in the A test hole of D Pile were repeated for the first time since early 1948. Comparison of results indicates that process tube blocks in the central zone have contracted but process tube blocks in the fringe zones have continued to expand.

Data were obtained from filler block graphite samples cut from the D Pile. A maximum crystal expansion (C_o-spacing) of 5% was encountered in a region where the neutron flux was only 20% of the central flux. The thermal conductivity ratio (original: present) was about 25 in the fringe zones and about 12 in the central zone of the pile.

Equipment for the Navy Test Channel (ANL-140) was successfully proof-tested, and installation of the pressure tube was scheduled for the first week in September.

Additional data indicate that the G.E. Metals Comparator is less reliable than dilatometric methods for checking the degree of transformation of production slugs.

Investigation of possible causes for the significant decline in reactivity of canned uranium slugs in in progress.

Examination of the ruptured slug encountered last June shows that the slug had been autoclaved, but that the autoclaving failed to detect a small hole in the weld bead in an area where there was poor brazing between the can and the end cap.

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Technical Divisions

P-10 billet casting, slug machining, and extraction operations continued ten shifts per week. A record high total of 308 slugs were extracted. Mandatory showering of personnel leaving the exclusion area was inaugurated during the month.

Development of revisions to the glass production lines continued and testing of a recently fabricated furnace for the metal extraction line was commenced. Installation of a mass spectrometer was completed and construction of a 300 foot stack was started.

Separations Technology Division

Production testing of methods of shortening time cycles in the Separation Plants have reduced the lanthanum fluoride product precipitation step time cycle to the desired nine hours with only a 0.1% increase in waste losses. The lanthanum fluoride by-product step has also been reduced to less than nine hours by production testing, but possible adverse effects on decontamination are still being investigated. Process testing directed toward total elimination of plutonium solution evaporation between Isolation and Purification is under way. A two-fold reduction in outgassing time of the plutonium metal Casting operation appears to be performing satisfactorily in test.

The 16-inch diameter pulse column studies for the TBP process were completed with good results during the month, permitting the issuance of firm specifications for pulse column design for the TBP Plant. Previously reported anomalies of TBP column behavior were completely eliminated by replacing the solvent and metal feed solutions used for many months with fresh materials. Testing of prototype pumps, rotameter controllers, and waste evaporators for the Redox and TBP Production Plants is continuing satisfactorily. Laboratory-scale equipment for studying continuous conversion of UNH to UO_3 has been 95% completed in installation and testing.

In the research laboratory, manganese dioxide scavenging of zirconium and niobium for Redox head-end treatment, excluding clarification, has been demonstrating improved performance over Filtrol scavenging. Although perhaps not now needed for TBP Plant design, a simple method of chemically removing the corrosive chloride by oxidation has shown promise. The rate of hydrolysis of monobutyl phosphate in the TBP process has been measured, as has been the temperature coefficient of TBP extraction. "Electroless" plating of plutonium metal has produced favorable appearing coatings which fail, however, under accelerated weathering tests. A method of recovering macro amounts of Am^{241} from a special batch of plutonium for the California Radiation Laboratory has been worked out. Iodine removal from dissolver solution by air sparging has shown promising but erratic results in the laboratory.

In the 234-5 process development laboratory, direct conversion of plutonium (III) oxalate to fluoride has been successfully carried out, paving the way for production testing of elimination of the oxidation step in the process. Plutonium (III) oxalate precipitations with high yields and good direct hydrofluorinations have also been carried out, predicting the possible elimination of the Wet Chemistry reduction step. Investigation of potential methods of recovery of plutonium from skulls, slag, and crucible fragments is being accelerated.

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Further stack gas treatment life-testing with Fiberglas has shown that air velocities of 50 ft./min. result in filter life expectancies of one-fourth to one-half those used at velocities of 25 ft./min. The first dissolver off-gas Fiberglas filter and silver reactor to be installed at B Plant have been packed and nearly assembled for installation.

Technical Services Division

Consistent with its recent assumption of responsibility for the development of P-10 analytical methods, the Analytical Section established a special temporary group to expedite this work. The mass spectrometer was received and installed in Bldg. 108-B, and analytical personnel are being trained in its use in order that P-10 by-product analyses may be started soon. An analytical chemist is spending considerable time in Schenectady in connection with the KAPL investigation of an emission spectrometric P-10 assay procedure. The routine determination of hydrogen in P-10 alloy slugs also was undertaken by the Analytical Section.

Adaptation of the x-ray photometer to the determination of uranium in oxide samples was completed by the Analytical Section. This rapid instrumental procedure can complete in 1-1/2 hours the work which normally requires 8 hours by wet chemical methods. Research is continuing on the application of this technique to highly radioactive samples.

On August 1 the Engineering Section assumed responsibility for all glass blowing services in the Technical Divisions, and the glass blowers employed by the Pile Technology Division in P-10 work were transferred to this Section. These transfers brought the Glass Shop force to a total of nine, including four trainees. Four glass blowers (in addition to the two KAPL loanees at Bldg. 108-B) spent full time on P-10 work.

Project Proposal C-187-E-R-2, covering construction of the Redox Plant Laboratory and associated waste disposal facilities, was approved by the A.E.C. for expenditures up to $4,926,000. Approval for the approximate $300,000 additional cost shown in this proposal was withheld pending G.E. submission of a cost-to-complete estimate later in the Fall. A revised plot plan for the aqueous waste disposal facilities at this new laboratory was adopted which offers substantial savings through shortened stainless steel lines, and utilizes a crib site having superior soil percolation characteristics.

The preliminary plans and specifications for the Radiochemistry Bldg. were received from the Architect-Engineer on August 29 and are in process of intensive review. The A and B Committee approved the Plot Plan and Utilities Project Proposal C-394, Part II, covering preliminary construction work on grading, fences, roadways, burial ground removal, etc., for the Hanford Works Laboratory site, and this proposal was forwarded to the A.E.C. D & C negotiations with the L. S. Rosener Co. for a lump-sum bid on the design of the Radiometallurgy Bldg. were not successful, and consideration now is being given to another engineering firm. Pressing other projects in D & C has necessitated their suspension of work on the Pile Technology Bldg., and they are negotiating for the subcontracting of the engineering design work remaining on the Plot Plan and Utilities for the Works Laboratory Area.

The Statistics Group is giving special consideration to the application of the IBM automatic computing equipment which has been ordered for installation at Bldg. 101. It appears that many of the routine reports now processed can be

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adapted, in part or completely, to machine computation, with the elimination of much desk calculation of a routine nature. In addition, techniques for the solution of non-routine problems, which have been impractical because of the extended computations involved, will now be available.

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September 10, 1950

PILE TECHNOLOGY DIVISION

AUGUST, 1950

VISITORS AND BUSINESS TRIPS

D. H. Ahmann, Knolls Atomic Power Laboratory, was here July 31 through August 4 for P-10 Consultation.

H. A. Bethe, Consultant for General Electric Company, Cornell University, was here August 7 and 8 for general consultation and orientation.

J. R. Low, Knolls Atomic Power Laboratory, was here on July 16 to discuss in-pile experiments.

A. U. Seybolt, Knolls Atomic Power Laboratory, was here August 14 through August 18 to work on Hanford Assistance regarding the P-10 Program.

J. A. Piggott and A. W. Bedford, Knolls Atomic Power Laboratory, Engineering Division, were here August 21 and 22 to discuss control problems.

J. A. Cox, Oak Ridge National Laboratory was here August 16 and 17 for consultation of special requests.

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Pile Technology Division

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

G. P. Kerr visited the Argonne National Laboratory, Chicago, Illinois, August 14 - 15 for consultation on the Xenon generator.

D. H. Curtiss visited North American Aviation, Inc., August 17 - 18 for consultation on graphite.

E. A. Eschbach visited General Engineering Consulting Laboratory and Knolls Atomic Power Laboratory, August 21 - 25 for P-10 Consultation.

T. W. Gore visited Knolls Atomic Power Laboratory and General Engineering Consulting Laboratory, August 21 - 25 for P-10 Consultation.

H. F. Zuhr visited Knolls Atomic Power Laboratory and General Engineering Consulting Laboratory, August 21 - 25 for P-10 Consultation. He also visited Los Alamos National Laboratory, August 4 - 7.

A. R. Matheson visited Knolls Atomic Power Laboratory, August 15 - 18 for P-10 Consultation.

W. M. Haussler visited Argonne National Laboratory, July 31; Oak Ridge National Laboratory, August 1 - 2; and Knolls Atomic Power Laboratory, August 3 - 4 regarding the Material Testing Program.

C. E. Lacy visited Oak Ridge National Laboratory on July 31 - August 2; Battelle Memorial Institute, August 3; Joslyn Manufacturing Co., Fort Wayne, Indiana, August 4; Vanadium Alloys Steel Company, Latrobe, Pennsylvania, August 7; AEC, New York City and Sylvania Electric Products Company, August 8 and Knolls Atomic Power Laboratory, August 9 - 11 for discussion of Assistance to Hanford program and Metallurgical Consultations.

J. B. Lambert visited Argonne National Laboratory, July 31; Oak Ridge National Laboratory, August 1 - 2; Knolls Atomic Power Laboratory, August 3 - 4, and Westinghouse Electric, August 7 for discussions on Material Testing Program.

W. W. Koenig visited ARMCO, Middletown, Ohio, August 30 and Carnegie-Illinois Steel Corp., August 31 for Technical investigation of substitutes for T-347 Stainless Steel.

ORGANIZATION AND PERSONNEL

	July	August
Physics Section	43	42
Engineering Section	57	58
Metallurgy Section	32	33
P-10 Project	52	59
Administration	3	3
	187	195

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Pile Technology Division

One Secretary B in Administration terminated and was replaced by a Steno-Typist in the Physics Section. One physicist terminated and one Steno-Typist transferred from Office Services Division to the Physics Section.

One Chemical Engineer and one Mechanical Engineer were hired for the Engineering Section and one Steno-Typist was transferred to the P-10 Project.

One Technical Graduate was transferred from the Health Instrument Division to the Metallurgy Section.

Two glass blowers and one Technologist were transferred from the P-10 Project to Technical Services, and one Laboratory Assistant on the P-10 Project terminated. One Steno-Typist was hired for the P-10 Project. One Chemical Engineer, two chemists, and five Laboratory Assistants were transferred from Technical Services to the P-10 Project.

PILE PHYSICS

Increased P-10 Production

The 600 tube H-10 loading was completed during the month. Completion of this symmetrical load has eliminated the severely unbalanced neutron flux distribution reported last month and it has been possible to maintain a 400 MW level during subsequent operation.

Some evidence has been obtained that the overall reactivity coefficient of the H-10 loading is smaller than that of a natural uranium load. The data are not yet such as to establish the numerical value of the coefficient.

Long term reactivity losses of the H-10 load observed to date have been smaller than expected and present indications are that the changes can be easily handled by appropriate loading of the 32 blank tubes distributed through the H-10 region during initial charging.

Nuclear safety specifications were forwarded to the P Division for the design of a shipping cask for exposed P-10 fuel slugs.

The Atomic Energy Commission has indicated that it is their desire that the DR-Pile be started up with no loading of the H-10 type. Planning for this loading has therefore been discontinued.

Plutonium Critical Mass Experiments

Ten critical assemblies were made during the month to complete the measurements in cylindrical geometry. Five of these were made with a cylinder of nine inch diameter which is the smallest cylinder in which criticality has been obtained. The remaining experiments were carried out in the eleven inch diameter cylinder to determine the effect of the stainless steel walls and the presence of nitrate in the solution. Results of these experiments, when applied to the minimum critical mass reported last month, give a minimum critical mass of 609 ± 20 grams for a suspension of plutonium in pure water and fully water tamped with a non-perturbing container separating the core and tamper.

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Pile Technology Division

Following completion of the experiments with cylinders, modification of the equipment for experiments with spherical reactors was begun. All plutonium was removed from the area to permit relaxation of security procedures during this work. Five stainless steel spheres ranging in diameter from eleven to fifteen inches are now on hand.

Pile Physics Work

Improved flattening of the power distribution in the D Pile permitted the power level to be raised from 305 MW to 320 MW.

A new method of determining the graphite thermal relaxation period was tried at B Pile. This involved throttling the water supply to one row of tubes as soon as possible after shutdown, and taking temperature traverses on that row every half hour during the shutdown. Correction for long term fission product heat yielded relaxation periods for the graphite along that row. Evidence of greater damage around flattening tubes and at the edge of the active zone is to be studied further by this method.

Special Request Program

A total of 89 P-10-A pieces and 15 other special requests were charged during the month, while 288 P-10-A pieces and 16 other special requests were discharged from the piles. There are 20 special requests on hand awaiting charging.

Five radium samples were loaded during the month without incident by methods and equipment previously developed for this operation. In addition the same techniques were used to load 25 previously irradiated U-Zr samples. Permission had to be obtained for eight hours additional shutdown time to perform this operation. No undue personnel exposures were encountered in either case.

The receptacle casing of ANL-164 which was reported missing last month on a shipment to ANL was found in the bottom of the shipping cask when returned to this site.

Test Pile

During August test pile measurements of regular uranium slugs have shown a definite downward trend in reactivity. The exact cause has not been found as yet although the following causes are being investigated; impurities in the uranium metal, dimensional changes, and impurities in the canning process.

Five special work requests have been completed and are listed in the following table.

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Pile Technology Division

SWR No.	Material	Purpose	Result
130	cobalt slug (ORNL-111)	find blackness	40.9% of Pb-Cd slug
149	Tantalum slug (special request program)	" "	84.1% of Pb-Cd slug
150	sintered uranium slug	comparison with normal uranium	no difference
151	soap powder (313 bldg.)	neutron absorber	0.19 ih/gm
154	aquadag	suitability for 105 use	satisfactory (.010 ih/gm)

Exponential Experiments

Work on these experiments has been resumed. Preliminary measurement of the diffusion length of the sigma pile graphite have been made. Erection of the first exponential pile is in progress; the graphite has been laid but the aluminum tubes have not been inserted.

Shielding

Development of foils for detecting thermal neutrons over an intensity range of 10^{10} is in progress. This program will include the use of gold, silver and copper detectors, data from which can be integrated by suitable overlapping of the foils in certain intensity ranges.

Suitable fast flux detectors are also being investigated.

Instrument Development

A semi-portable magnetic spectrometer has been developed which will measure gamma ray energies by Compton recoil electrons and fast neutron energies by recoil protons. The fabrication of this instrument has begun.

The neutron crystal spectrometer will be installed at the DR-Pile to avoid the high radiation levels now experienced on the experimental face of the H Pile as a result of ANL-140 equipment. The spectrometer itself is complete. The special shielding plug for taking the neutron beam out of the pile is being fabricated.

Development is proceeding on the dynamic pulse counter whose invention was reported previously. An experimental working model is being constructed. The disk, bearings, and driving circuits are being fabricated here while the Specialty Transformer Division of the Apparatus Department is constructing the driving armatures.

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Pile Technology Division

Reactivity

At month end the reactivity status of the four operating piles was as follows:

	B Pile	D Pile	F Pile	H Pile
In rods	58 ih	75 ih	69 ih	62 ih
In xenon poison	500	492	541	635
In Special Requests				
Other	27	67	12	0
In plant assistance	0	34	7	5
In dummy columns	0	29	31	177
In over-all coefficient	-279	-310	-281	-180
Total cold, clean reactivity	878	862	890	761

The B Pile gained 2 inhours and the D Pile 20 inhours while the F Pile lost 18 inhours during the month. The H Pile loss of 102 inhours was due to the The large amount in dummy columns at H is due to the blank tubes being held in reserve for adjustment of the H-10 reactivity.

PILE ENGINEERING

Pile Power Level

The B Pile power level was increased from 305 to 320 MW on 7/29/50 and from 320 to 335 MW on 8/21/50 under P. T. 105 - 337P Supplement A. The 335 MW level was held until 8-29 when a cutback to 328 MW was necessary to prevent exceeding the 48°C. Δ T limit in the .240 zone. The power level of the D Pile was increased from 305 to 320 MW on August 12 in accordance with P. T. 105 - 361-P. This level was held until the extended shutdown for nozzle replacement which began on August 20. No unusual thermal effects were observed at either the B or D Piles.

Graphite thermocouple readings in the H Pile indicate that there are significant differences in graphite temperature at various points in the pile when operating at the same heat generation in surrounding process tubes. Two thermocouples, #14G and #30G, indicate temperatures 10 to 20% higher than the average of other thermocouples. The reason has not been fully explained.

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Metal Exposure

Induction annealed slugs exposed under P. T. 105 - 277-P were discharged from B Pile at about 400 MWD/ton on August 15 after it had been found that one slug from the previous discharge had elongated about one-half inch.

"A" Hole Measurements

Measurements of the vertical clearance between the graphite blocks above and below the A test hole of the D Pile indicate that the process tube blocks fabricated from KC graphite are expanded about twice as much as CS graphite blocks in approximately the same neutron flux. Comparison of these measurements with similar ones made early in 1948 show that the KC process tube blocks which are all located in the flat zone of the pile have contracted appreciably while the CS blocks located from the flattened zone outward, in general, have expanded regardless of position in the pile. Poor correlation was obtained between apparent block expansion and crystal expansion measurements made on core samples drilled from two of the blocks.

Thimble Removal Program

Fabrication and testing of the fluted stepped plug has been completed. Flow rates of 7,700 balls/sec. were obtained which will entirely fill the VSR holes in 13 seconds. This will provide control strength equal to 80% of the total rod strength within 1.75 seconds after trip. Installation of this test plug is scheduled for September 4 in #20 position in the D Pile.

Tests were run at the White Bluffs test tower to evaluate the possibility of a rod becoming bound when the balls are dropped with the rod all the way in. It was found that the rod winch, which has a lifting capacity of 1,400# could not lift the rod but by applying a pull of 3,000# using a chain hoist removal was possible.

Materials Testing

The P-13 equipment was successfully proof-run on August 23rd. Installation of the tube in the H Pile has been scheduled for the first week in September.

The irradiation of a beta slug containing Uranium wire in contact with Sodium was completed.

The NEPA creep experiment is being adapted for measurement of creep of Aluminum during pile irradiation for plant assistance studies.

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Pile Technology Division

Graphite Studies

Additional data have been obtained which show that the critical expansion regions lie in the cooler fringe zones of the piles. The gradient of X-ray expansion was determined along the lengths of three 4-foot sections of the filler layer keyway bars cut from the front side of the A test hole at the D pile by the Mechanical Development Group. The samples correspond to locations in the filler layer opposite vertical tube rows 96 to 80 and should be representative of the state of graphite in the filler layers from the inside edge of the reflector to a point 14 feet inside the packing.

A C_0-spacing expansion of three per cent was measured at the edge of the reflector; a maximum of five per cent was measured opposite tube row 95, with a gradual drop to about two per cent at tube column 89. From 89 to 80, the Co-spacing expansion was uniform at two per cent. The maximum crystal expansion thus exists in a region in which the flux is about 20 per cent that at the center of the pile. Both these data and tube mining data show that the maximum graphite crystal damage exists in the low flux, but low temperature, regions.

The gradient of thermal conductivity along these filler layer samples has not been completed, but initial spot checks agree qualitatively with the X-ray spacing gradient. The lowest thermal conductivity, measured at the location opposite tube column 95, gave a value of 0.0125 cal/cm sec deg, which represents a decrease in conductivity by a factor of about 25. The conductivity of the KC graphite from the flattened zone was about twice this value.

These data, when compared with previous values of the C_0-spacing and thermal conductivity determined on several core samples, show that a relatively large differential of damage exists between the filler block and the outer edge of the tube block. This indicates that the temperature drop between the filler blocks and tube blocks may be relatively large.

Equipment has been ordered for studies of the adsorption isotherms of nitrogen gas on graphite to obtain measurements of surface areas. These studies are planned to obtain information on the nature of the surface of artificial graphite, as a function of irradiation, and will be important in the study of gas reactions of graphite.

A furnace designed to permit the determination of stored energy spectra to 1000°C is nearly finished and should be assembled and tested during the next month.

The "in-pile" controlled gas atmosphere experiment is progressing through the design and procurement stages. A graphite sample slug has been designed and several will be fabricated for preliminary testing. The heater tube facility, scheduled for the C test hole at the DR pile, has been designed by the Design Division.

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Pile Technology Division [redacted]

METALLURGY

Uranium Billet Casting

Effort is continuing to determine the causes of and remedial measures for the apparent decline in quality of Hanford cast material during the past several months. These trends in canned slug reactivity were given in Document HW-18534 issued during the month. Most of the recommendations advanced in this Document have been adopted and, in addition, the use of a refractory slip coating for crucibles and molds is being tried in an effort to reduce the pickup of carbon (with consequent lowering of density) during the casting operation.

Uranium Rolling

Although Hanford Works interest in a rolling mill has been suspended, the Technical Divisions will continue to investigate procedures for fabricating uranium since it will be Technical's responsibility to decide whether any fabricating procedure, which may be contemplated in the future, will provide metal satisfactory for the Hanford Piles. In this connection, an AEC experimental rolling run at Joslyn in Fort Wayne was observed during the month. In this test, standard billets preheated at temperatures from 600 to 1100°F (315 to 593°C) were rolled to Hanford size rod without rest periods. Only the initial portion of the reduction of each billet was done at the preheat temperature since self heating soon raised the temperatures into the high alpha range, but with preheats as low as 700°F (370°C) no serious defects were noted during the initial reduction of the cast billets. In rolling the first billet with a 600°F preheat, one of the 18" diameter by 63" long rolls broke as the billet was entering the fifth or center groove.

Uranium Slug Canning

A downward trend in canned slug reactivity extending through June, July, and August, applying to both virgin and recast uranium has occasioned an investigation into the causes of and remedial measures for the condition. An attempt is being made to correlate dimensions, weights, reactivity, and dimension changes during canning. The results of studies so far completed show that some standard slugs are not undergoing the anticipated dimensional changes during canning, which may conceivably account for part of the lowered reactivity.

Steps are being taken to set up an inspection station to eliminate poorly brazed slugs during the welding operation, as recommended in Document HW-18439. A group of bad weld rejects has been collected for examination and the selection of samples representing the type of weld bead resulting from the attempted welding of poorly brazed caps. These are to be used in training welding operators to reject slugs with poor brazes.

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Pile Technology Division

Uranium Metallurgy

Attempts to obtain a fine, equiaxed grain structure in slug size pieces by alpha annealing after a beta quench have led to a trial of a double dip beta treatment prior to quenching. A sample which was heated in lead 3 minutes at 700°C, transferred to a second lead bath at 664°C for 2 minutes, water quenched, and annealed at 640°C for 4 hours had a grain size, on the average, somewhat smaller than was observed in samples quenched directly from 700°C. A second sample given a similar treatment except that the temperature of the second lead bath was 652°C had a grain size equivalent to that of pieces quenched from 700°C. Evidently in the latter case, the beta to alpha transformation occurred while the piece was in the second lead bath.

X-ray orientation studies on the experimental uranium rods rolled various amounts of temperatures of 300 to 600°C show that a beta heat treatment randomizes the orientation regardless of prior rolling conditions. It was previously stated that the degree of orientation in the "as rolled" condition increased with a decrease in the rolling temperature and an increase in the amount of reduction at a given temperature. An orientation with the (020) poles parallel to the rolling direction is predominant throughout, but at higher temperatures an orientation with the (110) poles along the rod axis is also observed.

The uranium rods rolled slightly above and below (approximately 1150 and 950°F) normal rolling temperature and canned by the lead dip process as a supplement to PT 313-110-M were examined for metallographic structure and orientation. The rods finish rolled at 950°F had a cold worked grain structure and a rather high degree of preferred orientation with the (020) poles along the rod axis. Those finish rolled at 1150°F had a small, recrystallized grain structure and a rather low degree of orientation with both the (110) and (020) poles parallel to the rod axis.

Dilatometry

The obtaining of data required to establish the dilatometric method as a production test is continuing. Dilatometric data on 118 slugs obtained with the unit installed in Building 313 were remarkably consistent, the average expansion being 120.5×10^{-4} inches and the standard deviation 3.1×10^{-4} inches. Laboratory tests to establish the limits for acceptable, or completely transformed, slugs are in progress.

KAPL Assistance to Hanford

Recent data indicate that the metals comparator and ultrasonic transmission methods are less reliable for determining the degree of transformation in canned slugs than is the dilatometer; hence the dilatometric test still appears to be best for this purpose.

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Pile Technology Division

Radio Metallurgy

Examination of the ruptured slug removed from the 100-D pile has been completed and a detailed report is in progress. Examination of the canning data showed that the slug had been canned on March 2, 1950, and had successfully passed the autoclave test.

A general purpose, pneumatic manipulator has been received and the preliminary functional tests in the 111-B mock-up cell have indicated that an improvement to the air control valve is necessary to provide a smoother operation of the tongs.

The metallurgical examination of eight selected process tubes for the Pile Engineering Section has been completed and a report will be issued shortly discussing the appearance, the extent of the corrosion and galling, the relation of the gamma activity with R_H hardness, and the thickness of the 72-S aluminum layer.

The design and drafting for the project for modifying the storage and radiation monitoring in the 111-B Building has been completed. Construction and installation should start soon.

The 111-B transfer area has been improved by the laying of a concrete floor. Some equipment now in the work area will be moved to this new space to permit better utilization of the crowded building.

A report discussing the radiation studies on metals used in tests to determine the effect of pile irradiation on the creep of beryllium and hardness of aluminum - 10% magnesium alloy was issued as Document HW-18571.

The scoping design of the projected radio-metallurgy facilities in the proposed technical center has been completed in anticipation of obtaining the services of an Architect Engineer. Contractural arrangements with one Architect-Engineer has failed which may extend the period required for completing the building.

P-10 Alloys

In an attempt to determine whether inhomogeneous distribution of the alloy phase was responsible for the variance in hydrogen analyses on duplicate P-10-A slugs, three "as extruded" slugs from a billet containing 1.25% of the alloying element were run on the gas analysis line. This billet was sufficiently low in alloy content to be a solid solution material free of second phase. Although the total hydrogen content was low, 0.61 to 1.79%, there was considerable variance among the three analyses; however, because of coring, there was some second phase present in two of the slugs. Three more slugs will be run in the heat treated condition for comparison with the above data.

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Recent chemical analyses for the amount of added element in P-10-A alloys differ considerably from prior analyses because a new analytical instrument is now being used. If the new procedure proves to be accurate, a recheck of previous analytical data on the homogeneity of P-10-A billets and rods may be in order.

During August, 2165 "J" slugs were canned with a yield of 91.7%. Most of the rejects were due to "non-seats" presumably resulting from inability to control the canning bath temperature sufficiently closely. The irregular temperature control is thought to result from the practice of handling the slugs in batches of 54 with only one container open at once, so that each time a batch is completed, there is a break in the flow of material through the bath with consequent disturbance of the heat input-output ratio. The "J" slug testing and canning program was halted on August 15, with 1200 bare "J" pieces on hand. A summary of the work to that date was issued August 21 as Document HW-18644.

Corrosion

Corrosion tests on TBP Streams are approximately 2/3rds complete. Tests on Cl^- contaminated RAW and RAF have been completed and a report is pending, and tests on Cl^- contaminated, neutralized RAW and RAF are currently in progress.

A report on the corrosion resistance of materials of construction in Redox Waste Streams has been written and will be issued shortly as Document HW-18595.

Work on the effect of the tin content on Al-Si corrosion in 100 Area process water is continuing. Current indications are that the allowable tin content of 0.2% max. may be increased.

Tests with T-420 stainless and various Redox streams indicate that it is satisfactorily resistant at room temperatures for use only under specified conditions.

Special Requests

The following Special Request pieces have been processed during the month:

ANL 157	2 receptacle samples	ORNL 119	2 special process tube pieces.
ANL 173	4 process tube pieces	ORNL 117	1 test hole piece
UCRL 111	12 test hole pieces	ORNL 101	10 test hole pieces
ORNL 111	7 process tube pieces	WAPD 101	15 process tube pieces
ORNL 119	20 process tube pieces	ANL 171	3 test hole pieces

Receptacle slugs of the new design, employing a lead-gasketed screw type closure have successfully passed preliminary tests and this design has been adopted as standard for receptacle slugs.

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Pile Technology Division

Miscellaneous

Initial data from Battelle on the creep of 2S-0 aluminum at 500°C indicate that 2S is more resistant to creep at 500°C than at 450°C; however, ductility is significantly reduced at 500°C. Battelle, in addition to obtaining creep data, plans to investigate the cause of this anomalous behavior.

A uranium - 0.3 atomic per cent chromium rod rolled from a 25-pound billet was received from Battelle. This rod will be examined for homogeneity and structure prior to preparing a large melt of this alloy for pile tests.

P-10 OPERATIONS

The improved can opening machine was "cold" tested extensively during August and returned to the shops for additional slight modification.

Two shipments of special samples of P-10 Product and By-Product fractions were made during the month, one to the Knolls Atomic Power Laboratory and one to Los Alamos.

The Extraction staff is presently composed of the following.

In training	2 exempt	4 non-exempt
Newly trained	1 exempt	4 non-exempt
Balance	1 exempt	5 non-exempt
	4 exempt	13 non-exempt

It is expected that operations presently scheduled for 10 shifts per week on 8-4 and 4-12 shifts will be transferred to the 4-12 and 12-8 shifts on September 11, 1950 because of stack construction. The Pile Technology Division has been requested by the Health Instruments Division to discontinue extraction operations at the time the stack construction reaches 25 feet elevation above ground.

In P-10-A slug manufacture, 5571 slugs were machined and sent to the 300 Area for further processing. The status of P-10-A slugs is as follows:

Required for H-10 load 7425
Tested, verified for H-10 use 7425
In Process, not yet verified for Pile charging 4071

In view of the fact that the H Pile load has been prepared, and a second similar pile load has been potentially 55% prepared, the slug manufacturing rate has been reduced. The revised production goal has been tentatively set at 1250 slugs per month. Since the expected charge of P-10-A material in the DR pile has been reduced to no more than token quantity it is not felt necessary to continue the past high production rate.

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Extraction Health Hazards

Two contamination control procedures added during August, 1950 may have assisted materially in reducing personnel hazard. These procedures are the use of no personal outer clothing for "Hot" work, and mandatory showering of personnel prior to leaving the exclusion area for any purpose other than that of product handling.

P-10 DEVELOPMENT

Experimental Extraction Line

During the month, the experimental extraction line was operated to evaluate various instruments which could indicate the concentration of P-10 in by-product gases. Using P-10 mixtures of estimated concentrations of 5%, 2.5%, 1.0%, 0.5%, and 0.2%, the following instruments were calibrated:

(a) Ion gauges.
(b) Palladium window - thermocouple gauges.

Operation continues to indicate that these methods still are qualitative.

Production Assistance

Development has continued on the revisions to the glass production lines to guarantee projected production in 1951 from existing equipment. Starting in September, each of five lines will be modified one per month to incorporate the best existing techniques. It is felt that all development on this work will not be completed before November such that the line installed in November will be better than that installed in October, in turn better than that installed in September. Revisions contemplated include:

(a) Simplification of equipment layout.
(b) Increased accessibility of equipment for maintenance and replacement
(c) Minimization of glass equipment stresses and resulting fractures using flexible metal bellows between large component parts.
(d) Minimization of stopcocks using U mercury seals, metal valves, and other means to reduce air in-leakage and stopcock grease contamination.

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(e) Installation of two furnaces to reduce furnace cycle times.

(g) Elimination of glass separating the product and by-product systems to prevent diffusion of helium isotopes through the glass.
(h) Elimination of arcing of Toepler controls substituting an external level sensing coil.

Analytical Developments

During the month, the temporary mass spectrometer installlation was completed. Initial run-in and calibration are in progress.

A series of by-product samples was sent to Los Alamos for analysis using the mass spectrometer. Preliminary results, unconfirmed, on one series of samples

The inability of the existing Los Alamos technique and mass spectrometer to indicate T_2O and HTO concentrations will require additional development work to establish these values. The mass spectrometer indicated the presence of various tritiated hydrocarbons; their effect on health hazard tolerances requires further study. The effects of T_2O, HTO, and tritiated hydrocarbons on the stripping processes being developed at KAPL must be studied also.

Two series of by-product samples were dispatched to KAPL for analysis. KAPL will analyze these samples by three methods; emission spectroscopy, uranium adsorption, and diffusion through a palladium window and measurement of diffused product with a thermocouple gage.

Project P-10-D

During the month, the Project Proposal for P-10-D, "Hot Development Facilities" was submitted to the Atomic Energy Commission. This Project Proposal also includes the construction of P-10-C, the Metal Prototype Unit. The Project Proposal was issued as document HW-18459, S. F. Schure to File, August 7, 1950, and calls for an expenditure of $1,216,000.

Construction has started on the erection of the 300 foot concrete stack, ventilation revisions, and on the partitions enclosing the two new process cells. Construction is completed on the furnace outgassing facilities and the temporary mass spectrometer room and is essentially completed on the new analytical development room.

Project P-10-X

The scoping of Project P-10-X continues. Project P-10-X will provide manufacturing facilities for P-10 of a permanent nature and will be exclusive of development facilities in Building 108-B. To date scoping has consisted of preparation of:

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Pile Technology Division

(a) A Material Balance Flowsheet
(b) Health Physics Requirements
(c) The Floor Plans of Building 108-D
(d) The Design Basis.

The major change in design from developmental to production facilities will be the incorporation of strict contamination control features.

Scoping will continue through September with the Pile Technology Division providing technical assistance.

P-10-C Metal Line

The design, procurement, and construction of the P-10-C metal line by the General Engineering and Consulting Laboratory continues on schedule (December 1, 1950, delivery) and within the cost estimate ($236,250).

Essentially all processing equipment is on order with various vendors or is in the General Engineering and Consulting Laboratory shops. Some equipment has been received and assemblage and testing have started.

During the month, successful operation of a test metal Toepler pump was achieved. Fabrication of a production model is in progress.

Several minor revisions in the design basis were made during the month. These include:

(a) A liquid nitrogen trap was added to remove water from the extraction gases as they leave the furnace.
(b) A by-pass line from the shipping container manifold back to the measuring system was added to minimize the quantity of P-10 which would otherwise be transferred to the by-product container before the shipping container is detached from the line.

A number of drawings of the metal line has been received and detailed checking has started.

KAPL Developments

Research evaluating the alternate stripping processes for removal of P-10 from by-product gases continued during the month. The alternate processes Sufficient information has been obtained to indicate that a logical selection can be made about the middle of September as to which process to develop in detail to the point of engineering.

Development of the buoyancy balance and the emission spectrometer have continued successfully and both instruments should be installed at Hanford during September, 1950.

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File Technology Division

Late in the month, KAPL received its first shipment of P-10 for use in "hot" work which will start in September.

Liaison with Los Alamos

A revised metal shipping container design is now acceptable to interested groups at both Los Alamos and Hanford. A copy of the revised print has been forwarded to the Hanford Operations Office of the Atomic Energy Commission for approval. The revised design will be used to procure six containers for testing purposes.

INVENTIONS

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
J. B. Burnham & J. H. Bach	Diffraction Camera Lineup Device

Signed W. K. Woods
W. K. Woods
Division Head

WK Woods:wjk

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September 11, 1950

SEPARATIONS TECHNOLOGY DIVISION

MONTHLY REPORT
AUGUST, 1950

VISITORS AND BUSINESS TRIPS

E. L. Zebroski of the Knolls Atomic Power Laboratory visited the Hanford Works for a Redox consultation from August 7 through 10.

G. W. Watt, G. E. Consultant from the University of Texas, visited this site from August 14 through 18 for research and development consultations.

B. V. Coplan, Knolls Atomic Power Laboratory, visited here for a SPRU consultation from August 21 through 24.

J. L. Schwennesen visited Proportioneer's, Inc., Providence, R.I., on August 7, the Ingersoll Rand Co., New York City, on August 8, and the Milton Roy Co., Philadelphia, Pa., on August 9 for consultations on TBP equipment.

B. Weidenbaum visited the Owens-Corning Fiberglas Corp., Santa Clara, Calif., on August 14 for an air filtration consultation and the Los Alamos Scientific Laboratory from August 16 through 19 for a consultation on the 234-5 Project.

R. P. Smith was at the General Engineering & Consulting Laboratory from August 21 through Sept. 1 for testing of the 432 Project. He also consulted at the Knolls Atomic Power Laboratory from August 23 through Sept. 1 on the 234-5 Project.

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Separations Technology Division [redacted]

ORGANIZATION AND PERSONNEL

Personnel totals are as follows:

	July	August
Administration	2	2
Special Assignment	1	1
Research Section	35	37
Development Section	91	90
Process Section	26	27
	155	157

Research Section: Two Chemists were added to the Section as new hires. One Tech. Grad. was transferred from the Technical Services Division as a Chemist. One General Clerk B was transferred to the Community Fire Division. A Laboratory Assistant A was granted a leave of absence and a Laboratory Assistant B was transferred from the Technical Services Division.

Development Section: A Chemical Process Operator was transferred to the "S" Division.

Process Section: A Rotational Tech. Grad. was transferred to the "S" Division and one was added as a new hire. A Technologist C was transferred from the H.I. Division.

200 AREAS PLANT ASSISTANCE

Canyon Buildings

Production Test 221-B-8, designed to lower product and uranium losses in the coating removal waste, through elimination of the acid rinse which removes the compound bonding layer sludge, is in progress. First dissolvings under this test indicate no adverse effects on dissolver cycles or on process waste losses. An insufficient number of runs have been processed, however, to permit evaluation of the test procedures.

Concentration Buildings

Conditions for a nine-hour lanthanum fluoride product precipitation cycle have been established under Production Test 224-T-14. Testing revealed that losses were lowest with a minimum necessary centrifugation rate for three centrifugations with volumes reduced by approximately 20% and an attendent increased nitric acid concentration. The increase in waste loss was less than 0.1%. A two centrifugation process demonstrated a seven-hour cycle with a further increase of approximately 0.1% in waste loss.

Production Test 224-B-5, designed to shorten the lanthanum fluoride by-product time cycle, has resulted in somewhat erratic decontamination. Since the time

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cycle under the test procedures is shorter than the desired nine hours, test items leading to poor decontamination are being investigated further.

Isolation Building

The first item of Production Test 231-11, testing the destruction of peroxide in supernatant solutions at elevated temperatures, has been completed. The second item is testing a more rapid increase in temperature.

Product scheduled for further processing in the 234 Building is being dried to a lesser degree under the recommendation of Production Test 231-10. This has relieved a potential bottleneck in the drying units.

Purification and Fabrication Building

An interim report, HW-18617, has been issued covering the work done to date on Production Test 231-10. The recommendations of this report were:

1. That the load factor controlling the degree of evaporation of AT solutions in the Sample Cans in the 231 Building be increased to 3.03± 0.15;

2. That all agitators used in the Cutting operation in Hood 4 in the 234 Building be changed to the larger paddles tested during this Production Test;

3. That a program be initiated which will lead to a higher load factor for the 231 Building evaporation or the elimination of evaporation entirely in the 231 Building; and

4. That phase 2 of Production Test 231-10 be postponed until the completion of Item 3 above.

All four recommendations have been adopted and the first 50 Sample Cans dried in the 231 Building in accordance with recommendation #1 above have been processed under Supplement A of Production Test 231-10.

Water from the process air lines entered the slurry for batch X-10-8-1 during transfer from the Reactor to the Transfer Flask. A DC-2 sample indicated that iron was the chief contaminant. The batch was processed normally through Dry Chemistry and Reduction. The button analysis showed 1000ppm iron. This is considerably higher than normal but the button could still be released for fabrication.

Beginning with charge Z-10-8-11 and with run Y-10-8-28 segregation of turnings was discontinued. B-1 and MC analyses will be watched closely to determine the effect, if any, of this change in process. The average c/q summation for light element impurities exclusive of carbon and oxygen for the month of July was 0.48 as compared to 0.48 in June and 0.38 in May.

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Skull densities were taken on 18 skulls produced during the month of August. Using these densities and a figure for the density of the oxide found in the literature, the percentage of oxide in metal was determined for the skulls. No correlation could be found between the size of the skull and the percentage of metal or oxide present in the skull by this procedure. Complete data will be reported in this month's Process Section Monthly Report.

REDOX AND METAL WASTE RECOVERY DEVELOPMENT

Solvent Extraction Studies: General

Studies in the 16-in. diameter pulse column were completed during August, operating as both an RA Column (dual purpose) and an RC Column, under simulated TBP Metal Waste Recovery plant conditions using "cold" uranium. A total of 108 solvent extraction studies was completed during the month on the TBP process in 3-in., 8-in., and 16-in. diameter pulse columns. It is expected that the remaining experimental work on the above contactor development study will be completed in 3-in. and 8-in. diameter pulse columns during September.

Due to suspected contamination of feed solutions for the 16-in. and 8-in. pulse columns with organic decomposition products (as reported last month), the organic solvent was replaced with new TBP and Shell Deodorized Spray Base, and the aqueous feed was replaced with fresh uranium dissolver solution prior to the studies reported below. Using these fresh solutions, RC Column extraction performance has been improved (waste losses reduced approximately 5-fold) and RA performance has been more consistant. This return to "normal" performance of the 16-in. and 8-in. columns has facilitated final firming-up of pulse column specifications for the TBP Metal Waste Recovery plant.

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Separations Technology Division

16-in. and 8-in. Pulse Columns

A 16-in. Diameter column was operated as an RC Column, a simple RA extraction section, and a dual-purpose RA Column (both scrub and extraction sections). The RA extraction section (which was also the RC Column) was equipped with 71 plates spaced 2 in. apart (12-ft. "effective" packed height) and pierced with 1/8-in. diameter holes to give approximately 23% perforated area over a 15.25-in. circular area of the plate. The scrub section (used only for dual-purpose runs) was equipped with 22 plates spaced 2 in. apart (3.7-ft. "effective" packed height) and pierced with 1/8-in. holes to give 23% free area.

Both RA simple extraction section and RC Column studies were conducted in an 8-in. diameter pulse column using 50 plates similar to those described for the 16-in. column above, except that the "effective" packed height for the 8-in. column was 8.54 ft. Comparable runs were carried out in the 16-in., 8-in., and 3-in. diameter pulse columns in order to evaluate the increase in H.T.U. (i.e., the scale-up factor) as column diameter increased. These studies are believed to provide a reasonable basis for extrapolating to the 20-in. diameter RA Columns and 30-in. diameter RC Columns specified for the TBP Plant. Based on the above 16-in. column studies (now completed) and the 8-in. and 3-in. column studies (nearly completed), highlights of this TBP contactor development study are summarized below:

1. Within the accuracy of the data, H.T.U.'s for both the RA and RC Columns increase linearly with column diameter from 3-in. to 16-in. diameter.

2. Based on a linear extrapolation to a 20-in. diameter plant RA extraction section, H.T.U.'s for the 20-in. column are expected to be approximately 100% greater than for a 3-in. diameter column.

3. Based on a linear extrapolation to a 30-in. diameter plant RC Column, H T.U.'s for the 30-in. plant column are expected to be up to 30% greater than for the 3-in. diameter column.

4. Approximate predicted performance of the plant TBP pulse columns (as specified in HW-18574) is summarized in the following table for operation at 5 tons per day instantaneous rates in each column ((gal./(hr.)(sq.ft.), sum of both phases = approximately 1400 for the RA extraction section, and 800 for the RC Column):

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Column	Column I.D., In.	Pulse Amplitude, In.	Pulse Frequency Cycles/Min.	H.T.U. Ft.	% U Loss In Waste
RA (Extn. Sect.)	20	0.5 0.7 1.0	100 to 120) 85 to 90) 70 to 80)	2.0 or less	0.5 or less
RC	30	0.5 0.75*	90) 65)	1.5	0.1

*Note: 1.0-in. amplitude (at either 45 or 56 cycles/minute frequency) does not look as attractive as 0.5-in. or 0.75-in. for the RC Column, because the scale-up factor appears to be higher at the higher amplitude.

5. There was no significant difference in the waste loss or column performance between one 16-in. RA simple extraction run and comparable 16-in. RA dual-purpose runs, both conducted at approximately 1500 gal./(hr.)(sq.ft.), sum of both phases.

6. During one 16-in. dual-purpose RA study for which the RAF contained 1.3 g. Cl^-/l., all the Cl^- emerged in the RAW stream, within the accuracy of the analyses for Cl^-. The concentration of Cl^- in the RAU was below the limit of detection of the analytical procedure (estimated at less than approximately 0.01 g. Cl^-/l.).

7. Relocating the 8-in. column pulsing piston from its previous position (level with the top-column organic overflow connection) to the bottom of the column has eliminated the loss of pulse to this column mentioned last month.

3-in. Diameter Glass Pulse Column

A 3-in. glass pulse column has been operated at conditions comparable to the above 16-in. and 8-in. pulse column studies using RAFS feed prepared by going through simulated conditions by which the $BiPO_4$ process metal-extraction waste is produced. The column has also been used for further scouting studies with new types of perforated plates arranged in cartridges, as indicated below:

a. "Standard" plates: 54 plates spaced 2 in. apart, 9.1-ft. "effective" packed height, 1/8-in. holes, 23% perforated area.

b. 10% Free Area: 54 plates spaced 2 in. apart, 9.1-ft. "effective" packed height, 1/8-in. holes, 10% perforated area.

c. 40% Free Area: 54 plates spaced 2 in. apart, 9.1-ft. "effective" packed height, 1/8-in. holes, 40% perforated area.

d. 3-in. Plate Spacing: 36 plates spaced 3 in. apart, 9.1-ft. "effective" packed height, 1/8-in. holes, 23% free area.

e. "Nested" plates: 90 plates spaced 0.25 in. apart in 18 nests of 5 plates per nest, with 5-in. spacing between nests, 9.2-ft. "effective" packed height, 1/8-in. holes, 23% free area.

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Separations Technology Division

The above new types of plates have been tested in attempts to develop new pulse column geometries giving either substantially improved uranium extraction or increased capacity relative to the above "standard" plates. New information is summarized below:

1. Both RA and RC Column performance starting with the simulated $BiPO_4$ process RAFS feed were comparable to previous studies (waste losses 0.2% and less-than-0.1%, H.T.U.'s 1.3 ft. and 1.2 ft., for RA and RC, respectively).

2. Using plates with 3-in. spacing, the extraction performance in both RA and RC was approximately the same as for the standard 2-in. spacing, and the RC flooding capacity was increased approximately 15%. Further tests are planned with 4-in. plate spacing.

3. No significant improvements resulted from studies of 10% free area, 40% free area, or the nested plates. Uranium extraction was comparable to that for the standard cartridge in all cases. The RA flooding capacity was increased approximately 15% using the 40% free-area plates (no increase for RC operation). Both RA and RC flooding capacities were decreased approximately 30% using the 10% free-area plates. The flooding capacity of the nested plates was comparable to that of the standard cartridge for RA performance, but approximately half that of the flooding capacity of the standard RC cartridge.

Equipment Development

Submerged Pump No. 2 was modified for resumption of testing employing RAX as the test fluid. The upper process fluid-lubricated bearing was omitted, since the short shaft (27 inches) is believed to be adequately supported by the lower process fluid-lubricated 60% carbon-filled Fluorothene "B" bearing and the upper external grease-lubricated ball bearing. The process lubricated-bearing, which was replaced at the conclusion of test operation in aqueous solutions, was provided with a diametrical clearance of 4 mils to compensate for anticipated swelling of the bearing bush.

Submerged Pump No. 4, a Roth Model 147 turbine pump suspended from a 10-foot torque tube containing two water-lubricated Graphitar No. 2 bearings with Graphitar No. 30A (stantionary)-to-Stellite (rotating) upper and lower seals to isolate the water-filled torque tube from the process fluid, has operated 52 days pumping a solution of 0.37 grams of Rhodamine "B" dye per gallon of water. The initial performance characteristics flow rate of 2.25 gal./min., head of 198 feet and shut-off head of 237 feet have gradually decreased to a flow rate of 2.25 gal./min. with a head of 193 feet and a shut-off head of 210 feet. The unit will be dismantled to learn the cause of this decline. The seal leakage rate over the last 38 days has been less than 2 ml./hour.

Roth D-93 Prototype Turbine Pump, driven by a 10-foot vertical shaft supported on two process fluid-lubricated 40 per cent graphite-filled Fluorothene "A" bearings has undergone the following revisions subsequent to the failure of the lower process fluid-lubricated bearing during a test with hexone. The upper bearing was replaced with Graphitar No. 2. The lower bearing was replaced by

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two boron carbide bearings separated by a 3/8-inch gap through which the process fluid will enter and flow axial from the center outward. These bearings were extras from the Peerless 4" LA pump and do not have lubrication grooves. The journal surface in contact with the lower bearing has been Stellite-coated.

Peerless TD Prototype Turbine Pump, driven by a 10-foot drive shaft supported on Graphitar process fluid-lubricated guide bearings, completed 11 days operation with water during the month. The primary purpose of this operation was to check the functioning of the Peerless double seal employing boron carbide-to boron carbide faces subsequent to polishing in the 300 Area Optical Shop. The seal faces were previously damaged and retained in the stainless steel holding member by gasket cement which is not hexone-resistant. This restriction prohibited testing in hexone. The measured seal leakage rate over the 8 day period was 13 ml./hr. The unit will be tested with hexone until the production model is received.

Peerless 4" LA, a deep-well-type turbine pump, was operated for 7.5 days with water as the circulating fluid, when testing was terminated due to seal failure. This seal was a Peerless double seal in which Stellite #12-faced rings had been substituted for the usual boron carbide rings in hopes of procuring operating test data on neutralized-concentrated RAW (per TBP-HW #4 Flowsheet) prior to receipt of the replacement boron carbide rings during September. The Stellited rings wore at the rate of 0.005 to 0.01 inches/day, compared to essentially zero wear on the boron carbide rings originally tested. A second alternative seal composed of Stellite No. 12 and Graphitar No. 30 is to be checked in this installation.

G.E. & C.L. Motor Pump Unit, a 1/4 H.P. submerged "canned" electric motor and a G.E. & C.L. turbine pump employing Graphitar guide and thrust bearings, was dismantled at the completion of 121 days of operation in RAF per TBP-HW #3 Flowsheet. Dimensional measurements did not reveal any wear. The guide bearings had apparently increased 0.4 mil. at the inside diameter. The unit was equipped with necessary safety devices, a pressure-activated and temperature-activated power disconnect system, and testing resumed with RAX (12.5 per cent TBP in Shell Spray Base). Life-testing has proceeded satisfactorily for 5 days at a discharge head of 2.0 lbs./sq.in. ga. and a flow rate of 1.12 gal./min.

Schutte & Koerting Prototype Transmitting Rotameter was tested for accuracy, reliability, and mechanical strength. On repeated calibration it was found to give results within a deviation of ±2.0 percent from 20 to 90 percent of full chart. Following the prescribed impact wrench installation and crane drop tests in the 200 Area Mock-Up Shop, it was again calibrated and found to give results within deviations of ±2.0 per cent. The reliability of the instrument was unsatisfactory, due to the design of the float which, because of its flat lower face, occasionally held up on the upper edge of the range tube. The sensitivity of the matching Foxboro Dynalog recorder-controller had been reduced by S & K and caused sluggish performance.

Foxboro D/P Cell Orifice Meter was calibrated with water as the circulating fluid over the range 8.5 to 97 per cent of full chart, employing 12 repetitive measurements over a period of a week. An average deviation of 2.07 per cent was obtained. The unit was then subjected to impact wrench installation and crane drop tests in the 200 Area Mock-Up Shop. On reinstallation in the test-stand, the deviation from the calibration curve was 148 per cent at 10 per cent of

chart and decreased in an essentially linear manner to 27 per cent at 90 per cent of full chart. Inspection revealed that the range adjustment nut had vibrated loose. An interim non-standard impact test consisting 10 cycles of 10 seconds duration with a small air hammer was applied to the meter mounted in the 321 Building hydraulic test stand following bonding of the range adjustment nut to the force rod. This resulted in a deviation of 106 per cent at 10 per cent of chart. The cause of this shift cannot be stated, since there are so many adjustments which might be disturbed by vibration. It was determined, however, that the range adjustment nut was not the cause of the deviation in this second test. The fact that sixteen different screwed or bolted connections may possibly cause trouble makes it doubtful that the exact cause will be ascertained. The program will be repeated on a new D/P Cell, following a thorough examination and adjustment by the Instrument Department.

The long tube evaporator for TBP, operating on neutralized-concentrated RAW per TBP HW #4 Flowsheet, has completed 6 days of continuous operation on the life-test program. The over-all heat transfer coefficient has remained constant at 300 BTu/(hr.)(°F)(sq.ft.) with a steam pressure of 34-35 lbs./sq.in.ga., Δt of 48-50°F., vapor temperature of 108-110°C. (227-231°F.), tube submergence of 50 per cent. The unit has been charged once a day with fresh material, replacing about half the charge each time. The recirculation rate determined by three methods has been 1) 25-29 gal./hr. based on a sodium balance, 2) 30-37 gal./hr. based on a nitrate balance, 3) 44-50 gal./hr. based on weir-head readings. The volume evaporated per pass according to the foregoing methods has been 18.7-19.4, 15.3-16.7, and 11.8-11.9 per cent, respectively. Vapor temperatures above 111-112°C indicate super-heating and are accompanied by rapid scale decomposition. The addition of water or fresh feed results in rapid dissolution of the scale. It is apparent that removal of concentrated solution from the downcomer lines, rather than from the concentrator body, will assist in prevention of high concentrations in the tubes and scale formation.

It has been observed that with a feed at pH 9-10 that the concentrate decreases to pH 5.5 to 6.5 and the overhead distillate increases to pH-10. This indicates that the unconcentrated material will have to be carried beyond pH-10 to minimize corrosion, particularly in the underground storage tanks.

Corrosion tests on stainless steels exposed to boiling neutralized-concentrated RAW solution per TBP HW #4 Flowsheet have indicated negligible attack after one week of exposure.

A sample of American Pipe and Concrete Co. Amerclad T-Loc polythene free of filler was immersed for 14 days in hexone, RAX and RAW with no change detected in any of the tests. A sample of the material was contaminated with 49,000 counts/min. of beta activity associated with metal extraction waste. A single water rinse reduced activity to 1200 counts/min. and a second water rinse reduced it to 600 counts/min. It is accordingly concluded that the previous unsatisfactory results obtained with the white T-Loc were due to adsorption by the filler pigment.

Duralon 36, a furane type thermosetting resin, applied to concrete test blocks, has been tested for resistance at room temperature to IAX, hexone, 20% nitric acid and composite Redox aqueous waste. No change was noted in any of the tests after one day immersion. After four days, blistering and loss of bond occurred in all tests except the composite waste, which was unaffected.

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Specimens of flame-sprayed polyethylene applied to massive sections of concrete (321 Building walls) produced greatly improved coatings as compared to the results obtained on small test blocks. It was possible to fill in the pin holes by fusion with a soldering iron at 450°F. The principal requirement now appears to be a means for rapid preheating of the concrete wall prior to application of the polyethylene.

Process Chemistry

Installation of equipment for studying the UNH-UO_3 conversion was 95% completed. The drive motor has overheated on preliminary tests and may necessitate the the installation of a speed reduction unit in addition to the variable speed drive.

Completion of tests on the comparative behavior of synthetic incubated metal waste and metal waste from Tank-101-U confirm the preliminary indications of greatly reduced settling rates for the 101-U material following extensive mixing as well as a two-fold increase in viscosity following mixing. The initial settling rates for synthetic material and the "hot" material were 26 inches/hour for a slurry 8:1::supernate:sludge. After 17 hours of intensive agitation with a turbine-type agitator, the synthetic material had a settling rate of 13.5 inches/hour, while the "hot" material diminished to 1.0 inch/hour.

The viscosity of the synthetic material remained essentially constant at 15 centipoises for the 17-hour period, while the "hot" material increased from 13 to 35 centipoises. Analysis of the dissolved slurries at the completion of the physical testing period does not show any differences in composition to which the deviations in physical behavior can be attributed.

Building 321 Construction and Maintenance

The remaining items of ventilation on Project C-331, which included the separate blower system to the pipe gallery and the motor operated louvers on the roof exhaust fans, have been completed. Although the new equipment was designed to maintain the temperature of the pipe gallery at 78-80°F, tabulated data indicate that this is not being accomplished, but the improvement in working conditions is so great that the installation will be accepted as is.

Because of a leak that developed in the line while jetting neutralized waste from 321 Bldg. to the underground storage tank, W-14, it was necessary to excavate the waste lines for a distance of approximately 25 ft. from the building. The dirt removed was hauled to the 300 Area burial grounds and was estimated to contain 100 lbs. of uranium. Repair of the line was accomplished by replacing 15 ft. of 2 in. black iron pipe, after which the two black iron and the two stainless steel lines were hydrostatically tested and found satisfactory. While the repairs to the black iron line were in progress, an alternate connection to W-14 was made by using the W-12 line and a jumper.

Revisions were completed converting the 16 in. column from a simple column to a compound column by the addition of a scrub section and the installation of the line for the third feed stream. Upon completion of the RA-type runs, the 16 in. column was removed to allow for the erection of a 5-in. (extraction section)-8-in. (scrub section) IB column in its place. Completion date for this column installation will be such as to permit several Redox runs prior to the shutdown of the solvent extraction operations in September.

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Operation of the 8-in. column prototype pulse generator continued during the month. By operating both during and between runs, the generator has accumulated 1286 hours of operation to date, distributed as follows:

Piston at top of column pulsing organic phase	142-1/2	hours
Piston at top of column pulsing aqueous phase	395	hours
Piston at bottom of column pulsing aqueous phase	748-1/2	hours
Total operating time	1286	hours

Mechanical performance of the unit has been satisfactory during the entire period of the life test with the maintenance required being negligible. However, within the past month the flexible drive coupling was replaced with a Falk coupling, thus eliminating the slap and knock which had developed during the test.

Building 321 Operations

The program of training the "S" Division personnel continued throughout the month without incident. Operation of alternate units has been very successful in that rapid exchange of personnel has been possible, thus resulting in very little time when neither unit is running. This ability to maintain a unit operating almost continually has not only aided the training program but has added materially to the amount of solvent extraction data obtained.

Demonstration Unit operations have continued in the 3.0-in. pulsed column under various operating conditions and using a variety of plate arrangements. Miscellaneous Demonstration Unit operations during the month consisted of (1) dissolving of ten cuts in A-5, (2) Concentration of RCU in B-1, (3) hydrocarbon washing of all RCU before concentration with subsequent recovery of the hydrocarbon by distillation, and (4) make-up of RA Column feed by following through the $BiPO_4$ process.

Increasingly poor uranium distribution ratios in the Scale-Up Unit resulted in purging the tank farm of all process solutions. The RCU was concentrated, neutralized, and stored in W-14; the TBP-Spray Base solvent mixture and hydrocarbon wash were dumped to the 300 Area burial ground. New uranium solution was obtained by dissolving 1035 lbs. of scrap in the Demonstration Unit dissolver while the new spray base and hydrocarbon wash were received from off-site.

Scale-Up solvent extraction studies were conducted over a wide range of variables in both the 8.0-in. and 16-in. diameter pulsed columns. Operation of the equipment was satisfactory throughout the month. The washing of the RCU with a hydrocarbon both before and after concentration, coupled with the disposal of all RAW solutions, has eliminated the "red oil" problem in Scale-Up, as had previously been reported for Demonstration Unit. Consequently, since the receipt of the new process solutions, no further difficulty with uranium distribution ratios has been experienced.

The major portion of Scale-Up operating time continues to be consumed in feed make-up and solvent treatment. Fifteen trailer loads of waste were sent to 300N for cribbing during the month. The H.I. Geology section reports that although considerable waste has been dumped into the 300N well recently, there has been no detectable increase in the radioactivity of the ground water in that vicinity.

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SEPARATIONS PROCESS RESEARCH

Manganese Dioxide Scavenging

The rate of formation of MnO_2 on adding a 5% excess of Cr^{+3} to dissolver solution containing MnO_4^- can be governed by appropriate temperature control. Instantaneous precipitation of 10 g/l MnO_2 scavenged 96.5% and 97.5% of the zirconium and niobium activities, respectively, while the same amount of MnO_2 formed slowly removed essentially the same amount, viz., 97.4% and 98.3% of these same activities.

The cumulative removal of zirconium and niobium following two passes with 6.5 g/l MnO_2 (same centrifuge cake volume as 20 g/l Filtrol) was 99.94% and 99.97%, respectively, while a single scavenging adsorbed only 97.8% and 98.0% zirconium and niobium, respectively. (A digestion for one-half hour at 100°C immediately followed each precipitation.)

Filtrol Scavenging

Essentially no variation in the adsorption of zirconium and niobium by 20 g/l Filtrol was observed after oxidation times ranging from 0 to 6 hours when scavenging followed within 24 hours after oxidation with 0.1 M $Cr_2O_7^=$. An appreciable decrease in zirconium and niobium removal was observed with dissolver solution (DS-16) upon adjustment of its acidity from +0.33 M to -0.15 M HNO_3; 95% versus 85% for zirconium and 71% versus 65% for niobium.

Post-Scavenging Solvent Extraction Behavior

Since decontamination factors for zirconium and niobium obtained in extraction-scrub experiments employing dissolver solution scavenged by either Filtrol or MnO_2 agreed with the non-scavenged control within a factor of three, head-end scavenging should produce little effect on the column behavior of these elements. Slightly larger decontamination factors for zirconium were obtained when pretreated hexone was used instead of distilled hexone.

TBP Decontamination Studies

The effect of H_3PO_4, H_2SO_4 and $(NH_4)_2SiF_6$ as complexing agents on decontamination was followed (through one extraction and three scrubs) using 12 1/2% TBP-CCl_4 as extractant and dissolver solution as the source of activity. The over-all gross beta decontamination factor of 3×10^5 was not affected by the presence of 0.1 M H_3PO_4 or H_2SO_4 in feed and scrub while 0.01 M fluosilicate increased this factor but three-fold. Although zirconium decontamination in the extraction step was markedly improved (100-fold) by 0.1 M H_3PO_4 and moderately so (5-10-fold) by 0.1 M H_2SO_4 or 0.01 M fluosilicate, this improvement appeared to be lost during the scrubs, such that over-all zirconium decontamination was about the same (3×10^5) with or without the three complexing agents studied. Ruthenium decontamination was unaffected by these agents.

Similar extraction and scrub studies were made in the absence of complexing agents to determine the effect of various TBP diluents on decontamination. For the four diluents studied, CCl_4, Shell Spray Base, Gulf BT and Stoddard Solvent, (chosen to cover a wide range of flash points and chemical purity) the over-all gross beta decontamination factors were the same within a factor of three.

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Chloride Removal from RAW

The RAW waste stream from the TBP metal recovery process contains ca. 0.6 g/l chloride which would cause excessive corrosion of stainless steel in a nitric acid recovery system. A simple method of chemically removing the chloride from RAW by oxidation has shown some promise. Treatment of RAW at the boiling point for four hours with 0.04 or 0.08 M permanganate, dichromate, chlorate, iodate, ozone, persulfate and bismuthate showed good chloride removal (<0.05 g/l remaining) in the case of persulfate and ozone, while the other oxidants were only partially effective. Additional experiments with persulfate indicated chloride removal to <0.05 g/l in 15 minutes at 100°C with 0.06 M persulfate, while two hours were needed at 55°C with 0.04 M persulfate and air sparging. In all cases the liberated chlorine was quantitatively recovered in a caustic scrubber and any remaining in the RAW shown to be in the chloride state and not as chlorate. Oxidant consumption was doubled in these solutions by the presence of an amount of ferrous iron (0.016 M) equivalent to the chloride. After two hours at 50°C persulfate decomposition by water amounted to 20-30% of the original persulfate as evidenced by the analysis of residual persulfate.

Butyl Acid Phosphate

The rate of hydrolysis of monobutyl phosphate (MBP) to H_3PO_4 in 3 M HNO_3 at 25°C over a 10-day period was so slow as to be well within the uncertainty of the analysis for $PO_4^{\equiv}$. Although this negligible rate may be partly attributed to an induction period, it is consistent with the slow rate at 47°C previously reported with a half-life of 22 days. The rate of hydrolysis of MBP in 3 M NaOH at 76°C was found to be comparable to that in 3 M HNO_3 at 25°C and definitely slower than for 3 M HNO_3 at 76°C.

To study means of removing dibutyl phosphate (DBP) from solvent, an RAX (15% TBP in AMSCO 125-90W) spiked with 1 g/l DBP was scrubbed with equal volumes of various aqueous solutions and the resulting "washed" RAW then equilibrated with a 1 g/l aqueous UNH solution. This spiking with 1 g/l DBP increases the E_a° for UNH from 0.002 to 21. The E_a°'s for UNH were reduced to 0.0001, 0.0008, 0.28, 0.55 and 4.5 after scrubbing with 10% NaOH, 10% Na_2CO_3, 10% Na_2SO_4, water and 10% H_3PO_4, respectively. Thus NaOH and Na_2CO_3 appear to be adequate scrubbing agents for DBP in a single-contact process.

Aqueous 10 g/l DBP was contacted with (1) 100% CCl_4 (2) 15% TBP in Deo Base to give an E_a° for DBP of 2.6 and 1.21, respectively. Aqueous 10 g/l DBP- 3 M HNO_3 was contacted with 100% CCl_4 to give an E_a° for DBP of 5.1.

The solubility of DBP was measured from 0 to 100°C in water, 1 M HNO_3, 3 M HNO_3 and 4 M HNO_3.

Temperature Coefficient of TBP Extraction

The effect of temperature on the distribution of $UO_2(NO_3)_2$ and HNO_3 between aqueous and TBP systems is being studied to facilitate an understanding of the extraction mechanism and to furnish equilibrium data for pulse column operation at various temperatures.

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Using the accepted reaction for uranium transfer,

$$UO_2^{++}\ (aq) + 2NO_3^-\ (aq) + 2TBP\ (org) = UO_2(NO_3)_2(TBP)_2\ (org),$$

the $\Delta H_{25°C}$ was calculated to be about -6 kcal/mole for the RC system and about -1 kcal/mole for the RA system. The ΔH in the stripping column is very similar to that observed with hexone in Redox while the low value for the extraction column is attributed to complexing of UO_2^{++} by $SO_4^=$ and $PO_4^{\equiv}$.

"Electroless" Plating of Plutonium

Seven nickel-coated uranium pieces (three known to be defective and four presumably sound) have been subjected to a weatherometer test intended to simulate one year's outdoor exposure. Observation of the appearance and weight of the uranium pieces after exposure indicated that the four "sound" pieces were unchanged while the defective pieces showed an appreciable increase in weight. Upon immersing these same pieces in boiling water the three defective pieces failed in seven hours while the "sound" pieces failed in fifteen hours, as indicated by cracking and the formation of UO_2.

Preliminary metallographic studies of the nickel plate indicated interlocking of the nickel and uranium surfaces consistent with the observed mechanically strong bond. However, the plate itself showed definite layering. Microscopic examination of nickel-coated uranium pieces which had been annealed at 300°C and 400°C in an argon atmosphere revealed no changes in the plate characteristics. One experiment using a wetting agent (Nacconal NRSF) resulted in no improvement in the uniformity of the nickel coat.

Plutonium Recovery from Slag and Crucible Material

A plutonium yield of 93-99% has been demonstrated when slag and crucible material is leached with three successive passes of 4 M HNO_3 at 80-90°C. Iodine is removed prior to nitric acid leaching with a sodium thiosulfate wash.

Plutonium is quickly and nearly quantitatively removed from the slag but is dissolved from the crucible more slowly. Plutonium hydroxide precipitated from the solution after buffering (to maintain the bulk of calcium, magnesium and fluoride in solution) and then dissolved in nitric acid, might be returned to the 224 Building for recycle.

Metal Reduction Studies

Since the precipitation of plutonium (IV) arsenate from synthetic P-1 solutions has semi-quantitatively indicated a good Pu-La separation, a metal reduction run employing a P-1 solution was attempted on the six-gram scale. The precipitation of plutonium arsenate was carried out at arsenic and nitric acid concentrations lower than those used to test the Pu-La separation in an effort to reduce the plutonium loss in the precipitation step. Unfortunately, with these modified conditions the Pu-La separation was found to be poor. Further, the flocculent precipitate which always forms first converted only slowly to the crystalline modification at the lower arsenic acid concentration. Another metal reduction run using P-1 material is planned for the near future.

Separations Technology Division

Americium Recovery from Aged Sample Can Material

The americium contained in the supernatant solution from a plutonium peroxide precipitation using aged Sample Can material may be concentrated the required 10-fold by direct evaporation or by precipitating the hydroxides of metal impurities in solution (La, Pu, Fe and Mn) to achieve a 3-fold volume reduction followed by nitric acid dissolution and evaporation. Americium is recovered essentially quantitatively by either volume reduction procedure. In both methods a precipitate forms (mainly SiO_2) which does not retain americium and which can be removed by filtering. The customer has indicated no objection to such a precipitate.

I^{131} Removal from Dissolver Solution

Several experiments on a 230-ml scale have been carried out involving sparging of simulated dissolver solution in contact with solid uranium. With inert iodine, added as iodide, and active iodine as received from ORNL (presumably iodide), sparging with nitrogen at 25°C and 176 CFM/480 gal. removed about 90% of the iodine in 100 minutes and 98% in three hours. Sparging at 50°C with air at 115 CFM/480 gal. removed 80% in 90 minutes and 90% in four hours.

More recent experiments involving active iodine chemically treated to insure its addition as iodide showed less promising iodine removal, viz., 20% removal after sparging at 50°C with air for three hours. With inert and tracer iodine added as iodate only 30% of the iodine was removed after three hours.

Bismuth Phosphate Concentration Process Studies

Laboratory studies have been started relative to a proposal to recycle the solution resulting from acid extraction of the LaF_3 by-product cake to the bismuth phosphate by-product precipitation step rather than to the LaF_3 product precipitation step as currently done. Using synthetic solutions at plutonium concentrations about 25% Hanford scale, runs have been made simulating the concentration process to the metathesis step with and without the recycle solution added previous to the bismuth phosphate by-product precipitation. Although plutonium losses were consistently higher than obtained in the plant (not unexpected on a laboratory scale), losses in the $BiPO_4$ and LaF_3 by-product precipitations have been about the same with and without rework solution. Appropriate plant solutions have been obtained and will be used in future studies.

Waste Treatment Studies

Samples of first cycle supernatant have been obtained from tanks 108T, 104T and 109TX for plutonium and fission product analyses. Further samples will be obtained if necessary to complete the picture of the supernatant radioactive content as a function of age.

A sample of concentration waste supernatant recently taken from the 202 Tank (last of the three-tank cascade) was found to contain ca. 0.01 μg of plutonium and 0.5 μc gross beta activity per liter. At these concentrations and current flow rates, 0.1 g of plutonium and 5 c of gross beta would be cribbed per year from both 224E and W.

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234-5 PROCESS DEVELOPMENT

Plutonium (III) oxalate precipitates have been converted directly in the laboratory to tetrafluoride by hydrofluorination instead of the present plant procedure of thermally converting the oxalate to oxide and then hydrofluorinating the oxide to obtain the tetrafluoride. Uniformly good yields of the tetrafluoride were obtained in the series of nine runs made with varying hydrofluorination cycles designed to obtain limiting process conditions. Conversion yields of 100% were obtained in four runs; the lowest yield in the series, 97%, was obtained when too short a hydrofluorination time was used. Yields were calculated on the basis of the plutonium in the starting solution; proper allowance was made for the plutonium in the supernatant solution and washes of the oxalate precipitate.

Although the mechanism of the direct hydrofluorination of plutonium (III) oxalate has not been studied in detail, the following observations have been made. The conversion of the oxalate to trifluoride is virtually complete in one hour at 130°C, as is evident by the color change from green (plutonium III oxalate) to purple (plutonium III fluoride). An appreciable crop of anhydrous oxalic acid crystals is formed by this reaction. Verification of the identity of the crystals was made by a permanganate titration, after an initial qualitative identification by precipitation with calcium ion. The color of the fluoride changes from purple to blue as the temperature is raised. At a temperature between 300° and 400°C, a color change from blue to pink was observed; this change indicates that the trifluoride is being oxidized and hydrofluorinated to the tetrafluoride. The presence of bluish material in the final product can be used as a criterion of incomplete conversion.

Precipitates of plutonium (IV) oxalate with excellent settling characteristics were obtained by striking the solution very slowly at a temperature from 80° to 90°C. The precipitates had about the same bulk density as plutonium (III) oxalate. The starting solution contained 86.3 grams Pu per liter, and 96.4% of the plutonium was in the (IV) oxidation state. This solution was obtained by dissolving a button in 6N HCl and precipitating the peroxide after adding sulphuric acid. The peroxide was then dissolved with 16M nitric at 60°C and diluted for oxalate precipitation. At 4.3M acid high losses to the supernatant solution were found. The plutonium (IV) oxalate was converted directly to the tetrafluoride with the same cycle used for the conversion of the (III) oxalate. The fluoride obtained in this way was reduced to metal with excellent yields.

The feasibility of using 231 Building AT solution as a starting material for the 234 Building was investigated. In the absence of plutonium, it was found that 5.5M HI could be added to nitric acid whose concentration was as high as 6M without appreciable reaction. When 5.5M HI was added to a plutonium nitrate solution, iodine precipitation from the rapid reaction with nitric acid occurred in 4M nitric acid at a temperature of 30°C. If the solution is kept at a temperature of 20°C during the reduction with HI, little or no iodine is precipitated. Likewise, if the starting solution is 3M in nitric acid, there is very little precipitation of iodine at 30°C. It would appear necessary to increase the plutonium concentration in the AT solution to 350 grams per liter so that the volume of the starting solution after dilution in 234 Building is not excessive for the reaction vessel. The solubility of the (III) oxalate increases as the nitric acid concentration is increased.

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A test program has been started to obtain information about the corrosion rate of plutonium metal stored in air under different conditions of constant relative humidity. Three buttons of approximately equal weight are being stored over saturated solutions whose relative humidities are 10, 20 and 35%; a fourth button is being kept over phosphorous pentoxide. The series will be extended to higher relative humidities. After storage for a month none of the samples showed any increase in weight, although green spots of oxide were evident on the buttons.

Considerable variation has been found in the rate of dissolution of skulls produced in the remelting and casting operation in the 235 Building. The rate appears to depend on the condition of the skull with respect to layering, thickness of metal and amount of oxide present. A skull relatively free of oxide and layering of the metal only dissolved to the extent of 30% when refluxed for four hours in a mixture of 16M HNO_3-0.04M HF. Other skulls, apparently badly oxidized, dissolved to the extent of 96-98% under the same conditions. Four buttons produced in the laboratory were refluxed for four hours with this acid mixture and only dissolved to the extent of 25%.

Work in the dissolution of slag and crucible residues from laboratory-scale reductions indicates that complete dissolution of the plutonium, and practically complete dissolution of the slag and crucible fragments, can be obtained by treating these materials with boiling 8M HNO_3 for three hours. Less concentrated acid can be used, but a longer time is required to dissolve completely all the material. There was no apparent benefit in using aluminum nitrate in the nitric acid to complex the fluoride present in the flux.

The machine shop work has been completed on a new scintillation chamber to determine the integrated alpha count on the pieces produced in the 235 Building. This chamber matches the surface of the piece being examined and is expected to count alpha particles originating on surfaces that cannot be reached with a PeeWee counter. This scintillation device will be evaluated as soon as the Instrument Division completes its adjustments on the electronic part of the counter.

Work has been started on the fabrication of an ion chamber similar to that used at Los Alamos to determine the integrated alpha count of the piece. In this device the piece itself acts as one electrode and is envoloped by a shell which serves as the other electrode. A pin from the outer shell projects into the center of the piece to insure ionization in this space. The pre-amplifier and scaler from the neutron counter will be used for the ion chamber until an experimental ion chamber unit is received from Los Alamos.

STACK GAS DISPOSAL

The third filter life-test has been continued. During the month's operation the pressure drop across several of the test filters increased to the point where it was necessary to remove the units from the system. The filters containing 115-K Fiberglas at packing densities of 1.5, 3.0, 6.0 and 9.0 lbs/cu.ft. and operated at 50 ft./min. were all loaded to their useful limit. The data indicate that the life expectancy of these filter beds at a superficial velocity of 50 ft./min. is about one-half to one-fourth that obtained with a linear velocity of 25 ft./min. The test unit, comprised of the phenol formaldehyde-bound No. 55 Fiberglas (18 inches at 1.5 lbs/cu.ft. preceding 8 inches at 3.0 lbs/cu.ft.), required 750 grains per square foot of filter area for an increase of 4.0 inches of water.

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The packing media were placed in the Fiberglas filter and silver reactor to be installed in the dissolver cell at B-Plant. The filter formulation is listed below:

Filter Bed Strata	Type Fiberglas	Bed Depth	Packing Density
Clean-up Layer	AA	1 inch	1.2 lbs./cu.ft.
Fourth Layer	B	2 inches	1.0 lbs./cu.ft.
Third Layer	115-K	9 inches	9.0 lbs./cu.ft.
Second Layer	115-K	6 inches	6.0 lbs./cu.ft.
Bottom or First Layer	115-K	3 inches	3.0 lbs./cu.ft.

The silver reactor was packed with one-half inch Berl saddles. The saddles were coated with 24M silver nitrate solution and dried before being placed in the reactor shell.

KAPL ASSISTANCE TO HANFORD

KAPL-1 - SPRU Redox Studies

During the month, two additional Redox scouting runs were carried out and one additional run started. The first of these runs, studying the KAPL Hybrid Flowsheet, resulted in first-cycle plutonium losses as high as 20%. Mechanical reasons are believed to be the cause of those high losses but have not been identified as yet. The second run, testing the ANL Flowsheet with "head-end" ozonization, gave plutonium and uranium losses under 0.5%, but ozonization had to be carried out for a total of 33 hours in order to remove ca. 84% of the ruthenium. The last run, now in progress, is also the last of the five-run scouting series agreed to by Hanford and KAPL (see HW-18177); Hanford-KAPL meetings are to be held early in September to firm up the details of the runs to follow this scouting series.

KAPL-2 - ANN Recovery Studies at SPRU

During the month, five hot runs were made with the one-gallon scale ANN Recovery Unit. One of these was a tracer level run, and the last four runs were high level runs. Of the high level runs, one was lost because of a cracked filter. Yields on the high level runs ranged from 94-104%, beta decontamination factors from 12 to 430, and gamma decontamination factors up to 100.

KAPL-3 - Separations Chemistry - Redox

Item A-1 - Head End Studies

KAPL Chemistry Division head end studies during the month consisted of direct assistance to the ozonization problems in the SPRU runs. Laboratory tests were made on the SPRU metal feed solution which slowed the long induction period before ruthenium volatilization. These tests showed that additional ozonization would be effective, with or without permanganate catalyst. Methods of removing excess permanganate catalyst are presently under study.

Separations Technology Division

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.

No inventions or discoveries for this period.

R. H. Beaton
Separations Technology Division
Date: September 1, 1950

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TECHNICAL SERVICES DIVISION

AUGUST 1950

VISITORS & BUSINESS TRIPS

George Fuson, of the Consolidated Engineering Corp., Pasadena, Calif., spent August 16-29 with the Analytical Section, installing the new mass spectrometer in Bldg. 108-B which is to be used in P-10 studies.

C. F. Metz, of the Los Alamos Scientific Laboratory, visited the Analytical Section on August 17-18 to discuss analytical procedures, and details of the Hanford-Los Alamos sample exchange program.

Business trips of Technical Services Division personnel were as follows:

R. J. Brouns attended the Instruments Section of the Gordon Research Conference of the A.A.A.S. at New London, N. H., during the period August 1-6.

R. J. Hale spent August 6-7 at the Knolls Atomic Power Laboratory discussing laboratory design with H. H. Race. On August 9 he inspected new laboratories at the du Pont Experimental Station, Wilmington, Del., under the guidance of D. M. Smith. On August 10 he discussed the use of Lucoflex plastic in industrial gas exhaust systems with R.C.A. representatives at Camden, N. J.

J. A. Parodi spent August 14 through 31 at the Knolls Atomic Power Laboratory in connection with the spectrochemical analysis of P-10 product. On August 18 he visited the Leeds and Northrup Co. at Philadelphia, Pa., to discuss the application of emission spectrometry to Hanford problems. August 28 was spent with the Bausch and Lomb Co. at Rochester, N. Y., for this same purpose.

J. M. Fouts spent August 16-18 at the Leland S. Rosener Co., San Francisco, discussing details of heating, ventilating and electrical facilities design for the Radiochemistry Bldg.

F. B. Quinlan visited the Diebold Safe Company, Canton, Ohio, on August 16-18, to discuss construction of the thick steel "hot" cells planned for the Radiometallurgy Bldg., and to obtain cost estimates.

W. W. Marshall spent August 28 and 29 at Trail, British Columbia, participating in a discussion on the analysis of heavy water.

C. G. Stevenson attended the Conference of the Pacific Northwest Library Association at Portland, Oreg., on August 30 and 31.

ORGANIZATION AND PERSONNEL

Personnel totals in the several subdivisions are summarized below:

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	July 31	August 31
Analytical Section	313	307
Engineering Section*	68	70
Information Group	70	75
Statistics Group	15	17
Administrative	3	3
Division Totals*	469	472

* Not included are two Fluor Copr. engineers on loan to the Equipment Design Unit.

The Analytical Section employed one exempt chemist, four non-exempt Technical Graduates, and four laboratory assistants; one laboratory assistant returned from leave of absence. Transfers from Analytical to other divisions included: One supervisor, one exempt chemist, and six laboratory assistants to Pile Technology; and one Technical Graduate and one laboratory assistant to Separations Technology. One technologist and two laboratory assistants resigned, and two went on leaves of absence.

The Engineering Section received one P-10 operator (technologist) for training in glass blowing, and two glass blowers, by transfer from the Pile Technology Division. One machinist was transferred to the Maintenance Division. The Information Group employed six general clerks and one went on leave. The Assistant Chief Statistician and one technologist returned to the Statistics Group from leaves of absence.

There were no additional rotational trainees assigned to the division. One of the six Technical Graduates previously assigned to the Analytical Section was transferred to the Health Instrument Divisions.

ANALYTICAL CONTROL

Work Volume Statistics

The following tabulation shows the source and volume statistics for samples on which analyses were completed:

	July		August	
	Samples	Determinations	Samples	Determinations
Process Control - 200	3,802	12,118	4,933	15,392
Process Control - 300	172	378	528	888
Water Control - 100, 700	702	2,883	715	2,730
Redox & TBP Programs	3,[illegible]9	4,369	4,931	6,527
Process Reagents	1,618	1,947	2,028	2,448
Essential Materials	324	907	185	846
Special Samples	1,307	9,375	2,413	12,943
Stack Gas Filters	0	0	15	39
Totals	11,334	31,977	15,748	41,813

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100 Areas Water Control

The Versene Procedure was adopted in place of the more time consuming Soap Test Method for the determination of total water hardness. Using versene as the titrant and Erichrome Black T as the indicator, quantitative measurement of the calcium and magnesium content is possible with an accuracy of ± 1 ppm expressed as total hardness. On the basis of the present work load, the new procedure will result in savings of four and 22 hours/month for Analytical Section and Power Division personnel, respectively.

200 Areas Control

As indicated in the Work Volume Statistics tabulation above, the analytical work load in the 200 Area process control laboratories increased substantially for the second consecutive month to meet the demands of higher production schedules.

The precision of the results of the analysis of the Canyon Bldg. 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	July Average	August Average
6-3-MR	1.58	2.26	1.55
P-1	2.39	4.20	1.52
AT	1.98	1.77	1.67
P-4	2.51	2.31	2.39

Routine sampling of the Concentration Bldg. starting solution (C-4-P) was discontinued on August 15 in both T and B Plants. It is estimated that a total of 120 man hours/month was expended in analyzing this sample on a routine basis. The routine turbidity determination on final product solution (F-10-P) samples from these same buildings was discontinued on August 25, with an estimated analytical time saving of 10 man hours/month.

The routine counting reproducibility check on the operation of the counting instruments, normally made twice each shift, was discontinued in all 200 Area control laboratories for the 8-4 shift. The determination of instrument geometry, normally made on the 8-4 shift, will serve as the control. It is estimated that a total of 64 man hours/month will be saved by this step.

On August 7, the Isolation Bldg. Laboratory adopted the direct evaporation procedure (PSA-2a) for the analysis of waste samples from the sump, abandoning the lengthy precipitation procedure (PSA-7a). This change was made possible by the prevailing low solids content of the samples. It is estimated that a total of 4 man hours/month will be saved by this change in procedure.

Continuing the efforts to cross-check the accuracy of the plutonium measurement methods employed at Hanford and Los Alamos, another sample exchange was arranged. Fourteen special samples were received from Los Alamos on August 17, ten of material which had shown significant differences between

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Hanford shipping and Los Alamos receiving weights, and four of material currently in process at Los Alamos. The specific gravity, iron, and plutonium content were determined in duplicate on each sample by the Isolation Bldg. Laboratory; duplicates of these samples were also analyzed at Los Alamos. The analytical results of this sample exchange will be given in a separate report to be issued by the Analytical Research Group. Report HW-14191, Hanford - Los Alamos Sample Exchange, dated August 19, 1949, summarizes the results of the preceding sample exchange between the two sites.

A total of 840 retained AT samples were processed during August, and the recovered plutonium returned to the plant process.

300 Area Control

Canning operations in the 300 Area were resumed on a normal operating schedule, after a one-week shut down for inventory during July. This is reflected in an increase in the number of analyses listed for Process Control - 300, in the Work Volume Statistics tabulation above.

A revised specification for carbon dioxide gas was added to the Manual for Receiving Essential Materials, document HW-8183, as well as a new specification for hydrogen fluoride.

For several months canned uranium slugs have shown low reactivity in the 305 Test Pile. Spectrochemical analyses have indicated that the only contaminant present in higher than normal concentration was titanium in the aluminum-silicon canning bath.

Chemical Research Service Laboratory

The increased work load reflected in the Work Volume Statistics for Redox & TBP Program analyses was, in part, a result of a large number of short radio-assays performed by this group. Also, a general increase in work load resulted as chemical research personnel returned from vacations.

In the study of the removal of chloride ion from RAW streams, the Volhard method of analysis was used satisfactorily over the range of 0.05-0.60 g/l. In some instances, the determination of total chloride, including perchlorate, was requested; accordingly, SO_2 reduction was employed prior to application of the Volhard method.

Several samples containing radio-active iodine as iodates and iodides were received for analysis. Iodides were determined by using silver chloride carrier, and iodates were determined by using barium sulfate carrier.

Chemical Development Service Laboratory

The analytical work in this laboratory continued on a routine basis.

Counting Standards

A study was made to compare the amount of side scattering of alpha particles in the old style glass vacuum chamber with that in the brass and stainless steel chamber now in use. Following a control count, the inside of a

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chamber was coated with lacquer to eliminate or reduce to a very low level the number of alpha particles deflected off the chamber wall at an angle which would allow them to pass through the mica window and be counted. For the glass chamber, there was a reduction of 0.11% ± 0.1%, indicating very little side scattering in the unlacquered chamber. For one brass chamber tested the loss was 0.42% ± 0.18%, and for the second the loss was 2.65% ± 0.18%. The stainless steel chamber showed a loss of 0.40% ± 0.18%. The inside diameters of the brass and steel chambers are less than that of the glass chamber, thereby increasing the possibility of side scattering. The specifications on the inside diameter state only that the chamber wall shall not interfere with the calculated counting area inside the tube. These data indicate that the amount of side scattering varies with the diameter of the chamber. It is planned to obtain data comparing the effect of brass vs. steel chambers of the same diameter.

Nuclear Development Laboratory tube Type BIBK No. 393, for use in the standard Beta-Gamma Offner Counters, has been tested and found to be unsatisfactory for use because of a reverse type and unstable plateau. Tracer Laboratory tube TGC-1 #1AA66 is currently undergoing similar tests.

Miscellaneous Service Analyses

One of the unusual studies made by this group concerned the corrosion of 2S aluminum by water-saturated CO_2 gas, a problem presented by the Pile Technology Division. Tests were run for one week intervals at temperatures of 100, 200, 300, 400 and 500° C. The specimen appeared shriveled after the 400° test. In an attempt to obtain additional data, it is planned to test individual samples and determine the corrosion trend by visual observation as well as by weight loss. Currently, plans are being formulated to test the corrosion of metallic nickel in a H_2O-CO_2-CO mixture.

Methods Adaptation

The procedure for determining nitric acid in process bismuthyl nitrate solutions has been modified to eliminate weighing of the sample and removing the bismuth as bismuthyl chloride by filtration. The sample is now measured with a 2 ml. micropipet using saturated sodium chloride solution for rinsing and, in the presence of bismuthyl chloride, titrated with sodium hydroxide using phenolphthalein as the indicator. This modification decreases the analytical time for this determination by approximately 1½ hours. Tests have shown that the accuracy of the two methods are comparable.

The determination of total hardness using versene as a titrant and Erichrome Black T as the indicator was studied by analyzing 11 synthetic hard water samples of varying composition. Results showed that copper in the amount of 10 ppm did not interfere with the method. The presence of Fe, however, tended to give low results. For solutions containing 5 ppm Fe, the interference was not serious. With 50 ppm total hardness (as $CaCO_3$), 10 ppm Fe gave results ca. 2 ppm low and 20 ppm Fe gave results ca. 4 ppm low. Since the iron content of the water is normally determined by the 100 Area laboratories, corrections could be applied so that the expected accuracy of the method would be within ± 1 ppm total hardness. The detailed analytical procedure was issued as method WH-2a. The primary advantage of this method is an easily recognizable endpoint which enables rapid analysis.

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A new type of magnetic stirrer has been developed and tested. With a single rotating four-pole permanent Alnico-2 magnet mounted directly on the motor shaft, simultaneous, efficient stirring was possible in twelve 10 ml. beakers or forty 3 ml. test tubes. The contents of volumetric flasks up to 25 ml. in volume, test tubes up to 250 ml. in volume, and other similar vessels may also be stirred. The stirrer has readily interchangeable tops to support and position the various types and sizes of vessels. The tops may be rotated for easy access to individual vessels.

The determination of percent D_2O by density measurement was completed on a large number of drums of this material. A small number of the D_2O samples will be used to produce D_2 standards for calibration of the mass spectrograph for P-10. The equipment necessary for the production of pure D_2 from D_2O by electrolysis has been completed and is ready for assembly on a "flexa-frame."

An unclassified report, "The Acidimetric Determination of Aluminum with Fluoride at pH 10-11," was issued as document HW-18178.

Special Hazards Control

An enclosed shed has been constructed near the outside door of Room 11 of the T Plant Control Laboratory (Bldg. 222-T) for temporary storage of large cartons containing contaminated waste pending removal to the burial grounds. A similar shed is planned for the laboratory at B Plant.

Additional tests with Duponol C-Sodium bicarbonate mixture indicate that this mixture is not as efficient as dichromate cleaning solution and nitric acid for decontaminating floor spots and sampling equipment.

The processing of material from H Pile, and the shortened cooling time for all metal, has increased the activity of doorstop-type samples in both the T and B Plants. Beckman Meter radiation readings between 100 and 150 mr/hr are common, and some samples have been received in excess of 150 mr/hr. Personnel exposure is being carefully checked, and no changes in operating procedures appear necessary.

ANALYTICAL RESEARCH

P-10 Analytical Studies

Work continued on the development of mass spectrometric procedures for P-10 assays, and the installation of a mass spectrometer at Bldg. 108-B was completed. This new instrument was assembled with the aid of a Consolidated Engineering Corporation representative. It passed all acceptance tests and is presently being calibrated. A "hot" gas manifold was constructed and a hood for its housing was installed. One analyst from the Analytical Research Groups and one from the Control Groups have received training in the operation of the instrument, in order that sample analyses can be started during September.

Technical development and guidance of the method for determining hydrogen in P-10 alloy slugs are being carried out under an analytical research chemist.

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Technical Services Division

One new analyst and three additional ones from the Control Groups have been trained in the conduct of this method, and are currently making the analyses with the assistance of one analyst from the Pile Technology Division.

The research chemist who is handling the technical aspects of the emission spectrometer procedure for P-10 assays for the Analytical Research Groups, has extended his visit at KAPL where he is working on development of the method with KAPL personnel.

Radiochemical Methods (RDA #TC-1)

The previously reported method for the determination of americium plus curium in uranium metal waste solution has been adapted to the determination of these elements in dissolver solution. For this method Ce (IV) is used to oxidize all the plutonium to the plutonyl state; hydrofluoric acid is then added, and the americium and curium are carried with the cerium (III) (IV) fluoride precipitate which is then separated and measured by counting. The determination of americium and curium in dissolver solution allows calculation of the true plutonium material balance in the 200 Areas, rather than the combined material balance of plutonium plus americium and curium as is presently done.

Spectrochemical Methods (RDA #TC-2)

Research on the adaptation of the x-ray photometer to the determination of uranium in oxide samples has been completed. The samples which are routinely submitted by the P Division from Buildings 313 and 314 include floor sweepings, billet ends, crucible linings, insulating mica, bronze flux, pickling sludge, chips, and melt plant oxide. These samples are being analyzed for uranium content by comparatively long and tedious wet methods. The x-ray photometer method consists of dissolving the sample in nitric acid, filtering out the undissolved residue, diluting the sample to a predetermined volume, and reading the amount of x-ray absorption by an x-ray photometer. If interfering materials are present, such as in the samples of the floor sweepings, pickling sludge, and bronze flux, the uranium is extracted into TBP after the dissolution step. The procedure is then carried out on the organic phase. The residue which remains after the nitric acid dissolution step is free of uranium and is discarded.

The precision of this determination for 20 ml. of solution in the absorption cell was found to vary from ± 1.9% at 7.5 g UNH/l to ± 0.9% at 50 g/l. For 50 ml. samples the precision was found to be ± 2.4% at 2.5 g/l, and ± 1.3% at 7.5 g/l. The new x-ray photometer method can complete in 1½ hours the work which normally requires 8 hours by wet chemical methods.

In order to use small samples, small cells that hold 1.3 and 3 ml. of solution have been designed and fabricated, and are presently being tested. The hope is that these cells can be adapted for use with highly radioactive samples, such as the IAF Redox sample. It is estimated that 30 microliters of original solution would be needed for the determination. Radiation from this volume is higher than desired.

The amount of original solution necessary for this determination can be decreased either by using smaller sample cells or by increasing the sensitivity

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of the instrument. Sample cells which contain 0.5 ml. of solution have been designed but they are extremely hard to fill and empty. Modifications of the collimating system for the light which enters the photomultiplier tube are being investigated instead. It is expected that the precision obtained by the use of small sample sizes will be comparable to that obtained with macro samples.

Electrochemical Methods (RDA #TC-3)

Very little work was done under this RDA during August.

Conventional Chemical Methods (RDA #TC-4)

In a continuation of the effort to resolve the slight discrepancy between the reported quantity of plutonium shipped from the Isolation Bldg. and that reportedly received by Los Alamos, C. F. Metz of the latter site brought fourteen plutonium solution samples to Hanford on August 17. As previously agreed, ten of these samples had been collected and preserved at Los Alamos as representative portions of shipments on which shipping and receiving data were not in agreement. The other four samples were included as being representative of current material.

All of these samples had been carefully analyzed at Los Alamos, and were then analyzed in the Isolation Bldg. control laboratory. A preliminary examination of the results showed that specific gravity determinations at both sites were in close agreement in twelve of the fourteen cases. The iron determinations recorded by Los Alamos were somewhat higher than those obtained locally (analysis for iron is necessary for correction of the volumetric assay for plutonium). The plutonium assays at the two sites agreed closely in nine cases. Efforts are underway to find the factors responsible for the disagreement in the other five cases. It is noted that a high degree of precision is obtained between duplicate plutonium determinations made here at Hanford.

Testing was completed on the apparatus and method for the determination of carbon in plutonium metal, and forty-odd production samples were analyzed prior to transfer of this analysis to the Control Laboratory in Bldg. 234-5.

Information regarding the standards submitted to the control laboratories, and the results obtained during August, are included in the following table:

Constituent	Conc.	Method	No. of Determ.	Found
U_3C_8 Sample				
U	84.40%	Volumetric	20	84.22 ± 1.18%
19-3-WS	c/m/ml			
Pu	2.918×10^4	Radioassay	29	(222-B) $2.164 \pm 0.572 \times 10^4$ c/m/ml
Pu	2.918×10^4	Radioassay	25	(222-T) $2.263 \pm 0.635 \times 10^4$ "

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RAFS Sample (TBP Process)

UNH	90.0 g./l.	Volumetric	In progress	
UNH	90.0 "	X-ray	"	"
SO_4	15.0 "	Iodometric	"	"
PO_4	15.0 "	Volumetric	"	"
Na	66.0 "	Photometric	"	"
NO_3	305.3 "	Dist.	"	"
HNO_3	157.5 "	Potentiometric	"	"

RCW Sample

UNH	1.05 g./l.	X-ray fluorimetric	"	"

Miscellaneous

A sample of the film deposit from the inside surface of a 100 Area pile process tube was obtained, and a qualitative analysis for the elements was made spectrographically. The major constituents were then determined and found to be Fe 15.4%, Al 43.7%, Cr 3.3%, Pb 3.9%, insoluble residue 6.4%. The value for Al is high since the film was scraped from an aluminum tube. An x-ray diffraction pattern of the film then was made to identify the chemical compounds by their crystal structure. The compounds whose patterns compare most favorably with that of the sample were the various oxides of the major constituents and mixed oxides, such as $Cr_2O_3.Fe_2O_3$. This information confirms previous work on this problem. A radiochemical analysis of the film also was made. However, because of the time delay in obtaining a sample, elements with a half-life less than 20 hours could not be determined. The identification of radio-isotopes has not yet been possible, except that Fe-59 comprising 18% of the total has been identified. The activity, ten days after removal of the sample from the pile, has been broken down into the following several groups: Rare earths comprise about 1/3 of the activity; chromium or chromium-like elements comprise about 1/3 of the activity; the Fe-59 about 1/5; and the remaining activity is due to small percentages of many other elements.

Former shop Rooms 38 and 40 in Bldg. 3706 were remodeled and are being occupied by the members of the Physicochemical Laboratory of the Analytical Research Groups. Room 95, previously occupied by this Laboratory Unit, has been released to the Chemical Research Section. The new arrangement provides complementary laboratory space for the conduct of physicochemical work, and furnishes an efficient combination of instrument and supporting laboratory facilities.

ENGINEERING SERVICES

Technical Shops

Bldg. 101 Shops

The work volume statistics for the Bldg. 101 Shops (including the one-man machine shop in Bldg. 3706) are summarized as follows:

	July		August	
	No. of Job	Man-Hours	No. of Jobs	Man-Hours
Work done on jobs completed	113	1,569	142	1,773
Work done on jobs not completed	44	538	27	717
Total work done		2,107		2,490

Work Backlog:		Man-Hours to Complete
Jobs started (incl. P-12, the exponential pile program)	27	5,916
Jobs not yet started	34	919
Preliminary estimate on new jobs	12	626
Total work backlog		7,461

The following work was done for the Equipment Design Unit:

A radiochemical laboratory hood of the constant air volume, down-draft type was fabricated of Lucoflex plastic. This fabrication consisted of cutting the plastic to shape, and then assembling with a hot air "torch" using Lucoflex rod as the filler material.

Filter boxes for laboratory hoods were completed. Work also was finished on gear-operated manipulator tongs, a pulse pump, revisions to cable tilt tongs, and on a number of small jobs requiring one to six hours of shop time.

Work was in progress on the fabrication of a wood mock-up of a service panel for the Bldg. 222-S cubicle. This mock-up is to be used for demonstrating methods of adapting services for use with equipment in the cubicle.

The following work was done for the Pile Technology Division:

Erection work on the first exponential pile for the P-10 Program was completed. Special graphite plate foil holders were completed for use in connection with this work.

An electrolytic polisher for uranium specimens, a slug breaker fabricated of 5" boiler plate, and a cooling unit of copper coated with silver solder (to make the surfaces non-porous) were completed for the Metallurgy Section. Suggestions were made on design changes and alternate materials of construction for the "slice and dice box."

A graphite file tool was machined and fabricated for the Pile Physics Section. In addition, two aluminum cans were machined and filled with graphite powder for this Section.

Machining of special nozzles for the front face of a production pile was in progress for the Pile Engineering Section.

A magnetic particle analyzer, also referred to as a beta spectrometer, is in process of fabrication for the Pile Physics Section. This unit is a device to measure beta radiation energy under actual pile operating conditions. The unit will be the first of a test series of different size but otherwise similar units. Securing the materials for fabrication of this unit required extensive special expediting and handling by the 101 Shops.

The shop program in support of the P-10 project was intensified. Seventy-two stainless steel taper transitions for metal-to-glass unions were fabricated in order to meet schedules on the P-10 lines. Vendor bids on these tapers were 22 times greater than the actual costs of the work completed in the Bldg. 101 Shop. In addition, vacuum fittings were completed, as well as a radiant heated furnace, two graphite crucibles, and a lucite box. A number of additional small miscellaneous items were completed for P-10, taking the full time of one machinist. Fabrication work also is in progress on additional glass racks and furnaces.

The Bldg. 3706 Shop is retooling one of the hoods used for hot work for the Analytical Section. It has been necessary to machine various items of remote control equipment to handle hot samples, as well as remote control equipment for the removal of frozen stoppers from 2 ml. volumetric flasks.

The machine shop work done for the Separations Technology Division included the following:

A lead sample carrier, lamp brackets, internal recorder, flow control apparatus, stainless steel vessel, and a set of 30" mechanical fingers. In addition, pumps and motors were mounted on four panels, and a number of other small jobs were completed.

Glass Shop

The Glass Shop completed 119 jobs in addition to a continuing large volume of work for the P-10 project. These jobs were as follows:

	July	August
Jobs Completed:		
New	31	73
Repairs	18	27
Revisions	11	19
Total	60	119
Job Backlog	80	40

Shop services continued to be restricted to emergency jobs because of vacations and the assignment of men to P-10 work. The backlog was reduced

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by utilizing some of the trainees for the performance of the simpler jobs of fabrication, revision and repair.

On August 1, the responsibility for administration of all glass blowing personnel in the Technical Divisions was assigned to the Glass Shop. This brought its force at month-end to a total of nine, including four trainees (but excluding the two KAPL glass blowers who are on loan to Hanford for P-10 work at Bldg. 108-B). Two glass blowers from Bldg. 3706 were assigned full time to Bldg. 108-B in P-10 development work, and two others were engaged full time in the fabrication of P-10 parts in the Bldg. 3706 shop.

Equipment Design

Laboratory Equipment Development (RDA # TC-5)

The catalog of special laboratory apparatus was prepared and made ready for issue to the various Sections of the Technical Divisions, and to the H. I. Biology Division.

One all-welded Lucoflex plastic down-draft hood was completed. It is to be installed in a laboratory in Bldg. 3706 for evaluation in radiochemistry service, and is under consideration for application in future laboratories.

Many air-flow tests were made on fiberglas filters intended as substitutes for CWS filters in laboratories. Filters were made from "AA" and "B" fiberglas, A filter was also being made of "A" type material.

Development of gloved box components continued, as well as various gadgets useful in either junior cave or multicurie cell operations. Particular items in process were a manipulator ball for a one-inch thick steel shield, an automatic limit stop screw lift, positive closing tilting jaw tongs, and a remote coupling for flexible shafts.

A model utility panel was designed for fabrication for the Bldg. 222-S multicurie cell mock-up. Requisitions were placed for portable lifting equipment for use in the Multicure Wing of this new laboratory building.

Design Service

Outfitting of the three junior caves for the Chemical Research Section in Bldg. 3706 continued. Extensive radiation-shielding tests were made on the head-end cave in Room 17.

Many other services were performed for the Chemical Research Section, such as revising a valve operating cycle timer, planning special large gloved boxes for Room 4A, and scoping a lead-shielded cave for Room 55.

Service to the Analytical Section included designs for decontamination bench canopy-type enclosures for Bldgs. 222-B and 222-T, and miscellaneous small items.

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Service to the Metallurgy Section, Pile Technology Division, included preparation of scope designs and specifications for special laboratory equipment planned for the Radiometallurgy Bldg., and design of remote handling tools for use in Bldg. 111-B.

Service to the other sections of Pile Technology Division included design work on a "hot" slug weighing device, the "core borer," a beta spectrometer, and a cut-off device for hot test-hole tubes.

New Laboratory Planning

Redox Analytical & Plant Assistance Laboratory (Bldg. 222-S)

The supplemental project proposal (C-187-E-R-2) covering the construction of this building and the associated waste disposal system was approved by the A.E.C. for expenditures up to $4,926,000. Approval of the additional $300,000 (±) in the estimated total project cost was withheld, pending G. E. Submission of a cost-to complete estimate later this Fall.

The plot plan of the aqueous waste disposal system was revised. This revision, which relocated the Bldg. 219-S, the retention basin and the cribs, resulted in considerable savings because of shorther distances to the points of disposal which permitted shorter stainless steel lines, and reduced the length of trench construction. Also, soil permeability is better at the new crib site.

Radiochemistry Bldg. (Project C-381)

Preliminary plans and specifications for this building were received from the Leland S. Rosener Co. on August 29. Their detailed review was in progress at month-end.

Plot Plan and Utilities (Project C-394)

The expected quantity of retention basin waste from the Works Laboratory Area buildings was decided upon, and the basic criteria for the design of these facilities, plus a flow sketch, was submitted to the Design & Construction Divisions. S Division agreement was obtained for the use of one of the 200-Series storage tanks in the 241-U farm for the storage of the hot liquid wastes from the Works Laboratory Area.

Project Proposal C-394, Part II, covering preliminary Works Laboratory Area construction, such as fence relocation, rough grading of the entire area, relocation of an old contaminated waste burial ground, water and gas lines, construction of access roads, a 150-foot extension of a railroad track, and temporary water and power lines, was approved by the A & B Committee and transmitted to the A.E.C.

Pressing other project work within D & C has necessitated their consideration of subcontracting all of the considerable design work which remains to be done on Project C-394.

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A $38,500 project proposal covering the "Primary Electric Power Lines for the Hanford Works Laboratory" (prepared by the Electrical and Project Engineering Divisions) was submitted to the A & B Committee for approval. As these new 2300-volt feeder lines will lie entirely within the existing 300 Area, it was decided that their design and construction should be under the direction of the Manufacturing Divisions.

Radiometallurgy Bldg. (Project C-385)

Design criteria for this building were reviewed in detail, and preliminary design criteria for the special equipment to be used in it were written. D & C negotiations with the L. S. Rosener Company for a lump-sum bid for the design of this building were terminated. Negotiations were then begun by D & C with the Bechtel Company, including review of the scope drawings and design criteria with Technical and the A.E.C.

Pile Technology Bldg. (GET-17)

A rough draft of the project proposal covering this facility was received from D & C, and was reviewed. The reason-sheet, which will appear as a supplement in this proposal, is being prepared by the contact engineer in cooperation with Pile Technology personnel.

D & C has found it necessary to postpone further work on this building for about four months, but all possible design planning for it will continue within the Technical Divisions.

Mechanical Development Bldg. (GET-18)

No specific design consideration was given to this facility by Technical in this period. D & C still plans to provide the shell of this building for subcontractor use during construction of the new laboratories.

300 Area Services

Normal Bldg. 3706 services continued routinely. Stockroom and work order activity is summarized as follows:

	July	August
Purchase Requisitions:		
Total Number Processed	51	77
Number requiring special expediting	8	6
Number requiring emergency handling	1	0
Stores Stock Requests Processed	0	0
Store Orders:		
Total Number Processed	1,110	1,106
Number requiring emergency pick-ups and deliveries	9	9
Work Orders Processed	44	35

Conversion of former shop space (Rooms 38 and 40) of Bldg. 3706 to laboratories was completed, and they are now being occupied by the Analytical Section. Installation of instruments in Room 40 will take additional time to complete. This phase of the work is being followed by Analytical.

The Chemical Research Section revised its plans for the use of Room 95 (liberated by Analytical in moving to 38 and 40), and decided on radiochemical operations that can be performed in gloved boxes. This eliminated the necessity for assembling and installing the Leach stainless steel hoods, which would have cost approximately $6,000 for the three units required by the original plans. The revised work order was approved and forwarded to the 300 Area Maintenance Division.

Replacement steam coils, exhaust fans and the new louvres for exhaust fans were received for use in Bldg. 3706, and the Maintenance Division has scheduled their installation before cold weather.

STATISTICAL STUDIES

300 Area Operations

The frequency of sampling canned uranium slugs made from Hanford recast metal, for reactivity evaluation in the Bldg. 305 Test Pile, was reviewed. This study was requested because of a significant decrease in reactivity results during June and July. It was found that as long as the slugs are sampled individually at random, it is to be expected that 47% of all billets and 72% of all heats will be represented in the Test Pile results by one or more slugs. This representation appears to be excellent, considering that less than 1.5% of the total slugs fabricated are tested. Accordingly, the recent downward reactivity trend does not appear to be due to non-representative sampling (Doc. HW-18747).

A test to determine the effect of extending from 30 seconds to two minutes the waiting time between the pouring and capping of uranium billets in the Bldg. 314 Melt Plant was completed by the P Division, and the resultant data were analyzed by the Statistics Group. The average weight of metal cropping per billet using a 30-second waiting period was 6.5%, as compared to 3.1% for a two-minute waiting period. This significant reduction in billet cropping can be expected to increase the billet yield by about 3.4% (Doc. HW-18599). Accordingly, the P Division has adopted the two-minute waiting period as standard practice.

Correlation studies between autoclave failures of canned uranium slugs and canning rejects revealed no significant relationships. The inclusion of July data did not interrupt the statistically significant upward trend of autoclave failures occurring over the past eleven months.

Curve-fitting studies relating to the coefficients of thermal expansion of uranium were continued for the Metallurgy Section.

The average expansion and range of results for 118 canned uranium slugs put through the dilatometric test (check on degree of transformation) in Bldg. 313 were 120.5×10^{-4} inches and 17.0×10^{-4} inches, respectively. The correlation between slug length and expansion of these 118 slugs was not signi-

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ficant. The statistically designed experiment to evaluate the effects of oil bath temperature, slug length, slug immersion time in the oil bath, and structural transformation is nearing completion by the Metallurgy Section.

Studies of revision of the statistical sampling plans for reactivity testing of bare and canned P-10 fuel slugs (Al, U-235 alloy) revealed a significant correlation between bare slug weights and reactivity results. Due to revision of the program status in the 300 Area, further work is being discontinued at this time.

Daily, weekly, and monthly statistical controls were reported on P Division operational results at Machining, Pickling, Canning, Test Pile, Autoclave, and Melt Plant. (For monthly report see Doc. HW-18452).

200 Area Operations

The study, for the Chemical Research Section, to establish the most efficient mathematical relationship between the distribution coefficient of Pu (IV) and solution variables, resulted in a satisfactory equation for solutions containing no uranium. Further work is in progress to find a suitable expression for solutions containing uranium.

The experiment designed last month for the Analytical Section study of variables in the determination of carbon in plutonium metal was completed. Results showed a significant effect due to crucible temperature, and suggested effects due to oxygen pressure, ignition time, and nitrogen trap pressure. Experiments designed for Analytical during August were (1) a study of variables possibly affecting the AT plutonium determination, and (2) a preliminary investigation of variables in a method for determining lithium.

Data from an extended alpha counter study using electroplated pie-plate segments were received from the Analytical Section and are undergoing analysis.

A study of the precision and accuracy of the infrared determination of TBP indicated both to be satisfactory. However, subsequent data in 40 routine determinations showed that significantly different results were obtained with the two different wave lengths used.

Analytical results of a recent sample exchange between Hanford and Los Alamos were received for examination. These samples had been saved by Los Alamos from sample cans which originally showed discrepancies in shipping and receiving figures between the two sites.

Range limits for the checking of radioassays on Canyon Building samples, and for checking the chemical determinations of plutonium in P-1, AT, and P-4 samples, were forwarded to the Analytical Section. These limits represent revisions of existing limits or checking procedures.

The regular semi-monthly reports of certain Kr-85 computations for the A.E.C. were completed and forwarded.

Weekly and monthly statistical controls were reported on the precision and accuracy of analyses made on uranium solutions, plutonium solutions, and process wastes by the control laboratories in Buildings 222-B, 222-T, 231,

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and 234-5. The monthly report (Doc. HW-18746) also includes AT and P-4 Specific Gravity Relationships; 231-234 plutonium assay differences; and Hanford-Los Alamos plutonium assay differences.

100 Area Operations

Work continued on the analysis of pile data concerning graphite expansion, flux, graphite and water temperatures, exposure, and thermal conductivity of graphite.

Work was done on the calculation of coincidence losses of counters as a function of scaling factor, counting rate, and dead time.

At the request of the Pile Physics Section, frequency graphs were made of dih (differential inhour) values from the Test Pile evaluation of P-10 fuel slugs and P-10 alloy slugs. Normal curves were fitted to these data.

General

At the request of the H. I. Biology Division, a study is being made of preliminary results from an extensive experiment on the effect of internal consumption of radioactive iodine on sheep. Further data on the radioactivity of fish caught in the Columbia River were studied and summarized for this H. I. Division.

Computing

Calculations of the power in the P-10 portion, and of the total power of H pile, were made for the Pile Physics Section using data from the Brown-IBM punching unit in use at that pile.

A special steam table in the mixture region was prepared for the Pile Engineering Section. It gives specific volume, enthalpy, entropy, and internal energy for values of moisture from 0 to 100%, in 1% steps for the following pressures (all in lb./sq.in.): 20(1)100; 102(2) 200; 205(5) 300; and 305(10) 390. Copies of this table are vailable upon request.

A table of factorials up to factorial 10,000 was prepared. Twenty significant figures were used. Copies of this table also are available upon request.

The shipping date for the IBM Card Programmed Electronic Calculator, and auxiliary equipment, has been advanced from October 15 to September 8. Expedited security clearance is being requested for the four IBM men who will assist with its installation in Bldg. 101.

LIBRARY AND FILES

Plant Library

Library work volume and book statistics were as follows:

	July	August
Number of books on order received	188	102

Number of books fully cataloged	124	54
Number of bound periodicals processed but not fully cataloged	14	9
Pamphlets added to the pamphlet file	6	15
Miscellaneous material received, processed, and routed (Including maps, photostats, patents, etc.)	19	23
Books and periodicals circulated	2,216	2,922
Unclassified reports processed	72	160
Unclassified reports circulated	200	299
Reference services rendered	1,163	1,323

	Main Library	W-10 Branch	Total
Number of books	6,219	2,452	8,671
Number of bound periodicals	4,282	100	4,382

For the third consecutive month, the library statistics reflect the steady increase in the use of these reference facilities. New highs were again reported in the circulation of books and periodicals, and in the volume of references handled. Following is a representative sampling of the many literature searches made:

Lumber inspection and grading.
Testing results of industrial training programs.
Machinery for driving small bore tunnels.
Manufacture of calcium carbide.
Formula for Freon 11.
Equipment for automatic titration.
Addition agents for concrete.
Effect of explosions on concrete walls.
Use of the Magna-gage.
Production of ductile zirconium.
Use of ultrasonics in electroplating.
Austenitic, weldable stainless steels that do not contain Nb.
Reaction when CO, CO_2, and water vapor pass through polished nickel tube at temperatures from 45° to 450° C.
Products of reaction $I^- + HNO_3$, and effect of temperature on reaction.
How to measure streaming potentials.

The technical abstracting staff also carried out a number of lengthy searches in the classified literature; these included:

An attempt to develop the background research from which the present procedures for pile shut-down were developed.
Corrosion problems in the operation of a heavy water pile.
Reaction between carbon dioxide and graphite at various temperatures.
Early research on the use of dyes to study circulation of water through the Hanford pile tubes.

In connection with the Health Instrument Divisions program for radiological defense, a large selection of study material based on a selected reading list, "Civilian Defense Against Atomic Warfare," prepared for the National Security

Resources Board by the Atomic Energy Commission, is being accumulated.

Classified Files

Work volume statistics for the Classified Files and the Central Report Publications Unit were as follows:

	July	August
Documents routed	14,467	13,386
Documents issued	6,280	7,185
Reference services rendered	3,899	3,676
Reports abstracted	267	338
Registered packages prepared for offsite	290	407
Inter-area mail sent via transmittal	26,149	33,773
Holders of classified documents whose files were inventoried:		
(a) Because of normal perpetual inventory procedure.	33	81
(b) Because of transfer of work assignment.	3	1
(c) Because of termination	2	1
Inventory reductions:		
Copies of documents destroyed	2,645	842
Copies of documents downgraded	6	110
Copies of reports declassified	0	46
Classified documents located which were unaccounted for in previous inventory.	0	13
Volume of unclassified mail handled by 300 Area Mail Room	26,700	30,725

Central Report Publications Unit

Ditto masters run	678	870
Mimeograph stencils run	1,256	1,171
Ditto master copies prepared	18,662	27,334
Mimeograph copies prepared	74,530	66,238
Formal Research and Development Reports issued	12	13

Two meetings were held during the month with representatives of the Nucleonics Department in Schenectady, the Design and Construction Classified Files, and the Operations Classified Files, to review the problems involved in Hanford's acceptance of accountability for classified Kellex documents and blueprints on the Job 11 program. Earlier discussions of this matter are reported in the monthly reports for September and November 1949. Agreement was finally reached that Hanford would accept responsibility for Kellex classified documents listed in KLX-181-N (Tabulation of Job 11 Documents), and for the classified prints listed in Kellex OFFICIAL USE ONLY document entitled "A Tabulation of Classified Drawings and Prints relative to the above contract...," but that Hanford would not accept responsibility for Kellex classified document holdings listed in KLX-197-N which it was felt were quite separate from the Job 11 records. It was further agreed to solicit from the A.E.C. a formal request for this transfer of accountability, together with the necessary receipts. It was also

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agreed that, on receipt of this request, the Audit and Inventory Unit would inventory the Job 11 Kellex documents before acceptance of accountability by Hanford.

Carrying out an arrangement agreed upon with the Patent Group, Chicago (see monthly report for May 1950) plans were completed to expand the "Bi-weekly List of Additions to the 300 and 700 Area Classified Files" to include documents received and issued by the Design and Construction Classified Files. As pointed out in the May report, the "Bi-weekly List" is used as a check list by the Patent Group in Chicago, and the addition of Design and Construction documents will complete the coverage they feel essential.

The work of the Audit and Inventory Unit continued to show steady progress. A total of 83 files were inventoried during the month, for a new high of more than double any previous month.

A number of files procedures came under review and were altered during the month, as follows: (1) The use of receipts for the transmittal offsite of UNCLASSIFIED and OFFICIAL USE ONLY documents was discontinued. This is in line with the practice of the A.E.C. Technical Information Branch at Oak Ridge and, because of the recent marked increase in the number of such reports being issued, will substantially reduce the number of receipts prepared in the classified files. (2) The use of a standardized form developed by the Technical Information Branch of the A.E.C. for off-site document requests was instituted, and a further reduction in clerical detail is expected. (3) Destruction procedures for both documents and reproduction masters were studied in detail. A basic procedure, spelling out the material to be destroyed and the quantities of each, was developed. This procedure should expedite reduction of the classified document inventory, since destruction of surplus copies of documents presents a more direct and rapid approach to this problem than processing documents for declassification.

A new report category entitled "Tritium Production Process" was received from the A.E.C. and, after review by the related technical personnel, certain additions and alterations in the definitions were suggested. Similar information was received regarding the next revision of A.E.C. report guide M-3679, and suggestions are being solicited for any recommended changes in the present categories and category definitions.

A project proposal requesting a frame addition to Bldg. 3702, in order to relieve the critical space shortage in the 300 Area Classified Files, was submitted to the Appropriation and Budget Sub-committee for consideration, but was not approved. The Sub-committee admitted to the need for more files space, but believed that somehow it can be made available without the proposed new construction. This possibility is being reconsidered.

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 August 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.

[redacted] T. W. Hoff, Division Head

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MEDICAL DIVISIONS

AUGUST 1950

General

Personnel Changes

The roll decreased from 288 to 285.

Visits

Miss Jean Hoodwin, consultant in medical-social work, and Mrs. Judith Killeen, chief clerk of Washington State Health Department, visited the public health division.

Miss Mary Miller, P. H. Nurse Consultant with the Hospital Planning and Development Section of the State Department of Health, spent some time with us at our request, studying such problems as nursing hours per patient day and other nursing problems in an effort to decrease our nursing costs.

Industrial

Employee physical examinations increased from 2146 to 2349, while dispensary treatments increased from 6859 to 8393.

Eight major and eleven sub-major injuries were treated. No major injury and only one sub-major injury was sustained by G. E. employees.

The health topic for the month was "Eyes and Vision".

Sickness absenteeism increased from 1.20% to 1.34%, while total absenteeism increased from 1.76% to 2.01%.

Communities

The hospital average daily census increased from 74.2 to 82.0 (71.1 adults, 10.9 infants). The census was 64.3 a year ago.

Nursing hours per patient day for July were 3.61 for the mixed services and 5.40 for obstetrics.

Construction of the new wing to the Medical-Dental Clinic was started.

In-service training program for nurse aides and orderlies was started.

Renovation of central supply was completed.

Public Health

Three cases of infantile paralysis were reported. The incidence of other contagious diseases dropped by about 50%.

Bacterial examination of consumer milk revealed coliform organisms. Corrective measures have resulted in improvement.

MEDICAL DIVISIONS

AUGUST 1950

Costs (July)
Medical Division operating costs, before assessments to other divisions and Workmen's Compensation costs:

	June	July	July Budget
Industrial Medical (Oper. Div.)	$54,324	$41,649	$39,630
Public Health (Oper.)	10,382	10,376	12,420
Kadlec Hospital (net)	29,495	27,057	29,252
Hosp. assessments to other div. and workmen's compensation	1,388	1,918	2,800
Sub-total - Oper. Medical Divisions	95,589	81,000	84,102
Construction Medical (Ind. and P.H.)	11,448	11,521	21,630
Total (Operations and Construction)	$107,037	$92,521	$105,732

The net cost of operating the Medical Divisions (before assessments to other divisions and Workmen's Compensation costs) was $92,521., a decrease of $14,516., and $13,211. below the budget figure.

Major factors causing the improved figures were:
(1) There were about $5,000. less assessments from other divisions due to less maintenance work.
(2) Weekly payroll for July 1 and 2 amounting to about $5,000. was included in the June costs.
(3) Continuity of service was reduced from 14% to 10%, amounting to about $5,000.
(4) A decrease in revenue of about $1,500. was offset by a decrease of $1,000. in food purchases.

The net cost of operating Kadlec Hospital was $27,057., a decrease of $2,438. The excellent improvement in overall costs was not reflected in the hospital because of accounting changes. Proposals made by the hospital consultants regarding certain changes in pro-rating Medical Division costs were made effective in July. Hospital salaries of approximately $6,000. previously charged to industrial medicine, as they were considered catastrophe stand-by costs, were retained in Kadlec Hospital costs in July. Industrial medical and public health were charged a pro-rata share of the cost of the laboratory and x-ray sections based on service rendered rather than on the fee schedule basis as was done in the past. As a result, the hospital will no longer profit from laboratory and x-ray service to other medical divisions by selling these services at fee schedule at a profit of approximately $6,000. monthly.

The clinic cost dropped from $1,071. to $639. with a reduction of one employee.

Public health operating costs remained about constant.

Industrial medicine showed an improvement of $12,675. due to the accounting changes explained above.

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MEDICAL DIVISIONS

AUGUST 1950

Industrial Medical Division

General

The number of examinations increased from 2146 in July to 2349 in August. The number of dispensary treatments also increased from 6859 to 8393. General Electric employees sustained only one sub-major injury and no major injuries. Sub-contractor employees sustained eight major injuries and ten sub-major injuries. There were 406 new G. E. occupational cases treated and 742 new sub-contractor occupational cases treated. The mobile first aid unit began operation on August 18th at 241-S Area.

The industrial physicians' scientific meeting dealt with the medical hazards included in the P-10 program.

A formal complaint regarding the medical and ambulance service at Hanford Works was received from the Business Manager of the Plumbers & Steamfitters Local No. 598. A copy of the complaint also went to A. M. Johnson, Director of the Washington State Department of Labor & Industries. The accusations dealt with the handling of three different cases. Investigation has shown that the accusations were not borne out by facts. A meeting was held with Dept. of Labor representatives, and another meeting will be held with them and with labor representatives present in the near future.

The Health Activities Committee met on August 24th, and the health topic on "Eyes and Vision" was presented. Material on this subject was prepared for distribution to all employees.

The Industrial Medical Division received official formal approval by the American College of Surgeons during the month, as a result of a detailed survey several months ago. The survey report concluded as follows: "The medical service provided by this industrial establishment more than adequately complies with the minimum standards as set forth by the American College of Surgeons. It is unqualifiedly recommended that it be granted certified approval." Approval then was granted and certificate issued, which has been received.

There were no findings attributable to radiation exposure by any employee during the month.

The absentee report is as follows:

	Male	Female	Total	Percent Absenteeism	Comparison with Previous Month
No. days absent due to all causes	1880	1138	3018	2.01%	.25% Increase
No. days absent due to sickness only	1219	794	2013	1.34%	.14% Increase

Avg. days absent due to sickness by each male employee	.27 day or 270 days/1,000 employees
Avg. days absent due to sickness by each female employee	.55 day or 550 days/1,000 employees
Avg. days absent due to sickness by all employees	.34 day or 340 days/1,000 employees

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MEDICAL DIVISIONS

AUGUST 1950

Absenteeism due to all causes - by Divisions:

Community	1.27%
Manufacturing	1.79%
Health Instrument	1.82%
Security & Services	1.89%
Employee & Community Relations	2.22%
Purchasing & Stores	2.35%
Design & Construction	2.65%
General Accounting	2.83%
Medical	2.84%
Technical	2.84%

Physical Examinations	July	August	Year to date
Operations			
Pre-employment	150	125	1013
Rehire	38	38	415
Annual	413	470	3313
Interval	346	440	3634
A. E. C.	7	15	90
Recheck	120	152	1054
Termination	86	106	581
Sub-total	1160	1346	10100
Sub-contractors			
Pre-employment	593	548	3454
Rehire	0	0	1821
Recheck	88	117	826
Termination	305	338	1454
Transfers	0	0	0
Sub-total	986	1003	7555
Total Physical Examinations	2146	2349	17655
Laboratory Examinations			
Clinical Laboratory			
Government	417	76	911
Pre-employment, termination, transfer	4569	4759	41808
Annual	2157	2450	17261
Rechecks (Area)	1778	2311	18977
First Aid	1	13	126
Clinic	2007	2607	21969
Hospital	2692	2697	23107
Public Health	58	82	441
Total	13679	14995	124600
X-Ray			
Government	74	13	154
Pre-employment, termination, transfer	739	720	6923
Annual	419	492	3414
First Aid	161	167	996
Clinic	178	227	1687
Hospital	146	135	1385
Public Health	7	0	44
Total	1724	1754	14603

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MEDICAL DIVISIONS

AUGUST 1950

Electrocardiographs	July	August	Year to date
Industrial	18	29	243
Clinic	3	4	34
Hospital	17	15	173
Total	38	48	450
Allergy			
Skin Tests	10	6	182
First Aid Treatments			
Operations			
New occupational cases	364	406	2891
Occupational case retreatments	1028	1204	9729
Non-occupational treatments	2628	2790	25114
Sub-total	4020	4400	37734
Construction			
New occupational cases	638	742	3093
Occupational case retreatments	1810	2714	9496
Non-occupational treatments	391	537	2065
Sub-total	2839	3993	14654
Total First Aid Treatments	6859	8393	52388
Major Injuries			
General Electric	0	0	2
Sub-contractors	9	8	43
Total	9	8	45
Sub-major Injuries			
General Electric	4	1	18
Sub-contractors	6	10	52
Total	10	11	70
Absenteeism Investigation			
Total number calls requested	9	2	120
Total number calls made	9	2	120
Number absent due to illness in family	0	0	2
Number not at home when call was made	3	0	14

Community Medical Division

General

Medical Divisions' roll decreased during the month from 288 to 285 employees.

The average daily hospital census increased from 63.9 to 71.1 as compared to 51.6 adults a year ago. The average daily infant census increased from 10.3 to 10.9, as compared to 12.8 a year ago.

Nursing hours per patient day for July:

Medical, Surgical, Pediatrics	3.61
Obstetrical	5.40

Ratio of hospital employees to patients (excluding newborn) for the month of July was 2.40. When newborn infants are included, the ratio is 2.05. This is an increase over the respective 2.19 and 1.86 ratios for June due to decreased patient census.

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MEDICAL DIVISIONS

AUGUST 1950

General (continued)
An in-service training program was begun to review and give additional instructions on patient care to nurse aides and orderlies.

Central supply was completed during the month, and the consolidation of all supplies is near completion.

Construction work was begun on the addition to the Medical-Dental building.

The net expense of the Richland community medical program for July, 1950 was $27,057. as compared to $29,495. for June. Breakdown is as follows:

Kadlec Hospital net expense $ 26,418.
This is a decrease of $2006. as compared to June.
Primary factors in this decrease were -
(1) Salary costs for July 1st and 2nd charged to June.
(2) Payments for purchases of food in July were approximately $1,000. less than in June.

Clinic net expense $ 639.
This is a decrease of $432. due to reduction in salary costs.

Kadlec Hospital

Census	July	August	Year to date
Admissions: Adults	364	401	3350
Patient Days: Adults	1980	2206	17474
Infants	320	337	2661
Total	2300	2543	20135
Average Stay: Adults	5.4	5.5	5.2
Infants	5.3	5.3	5.1
Average Daily Census: Adults	63.9	71.1	71.8
Infants	10.3	10.9	10.9
Total	74.2	82.0	82.7
Discharged against advice	1	1	12
One-day cases	46	65	532
Occupancy Percentage: Adults	70.5%	80.0%	80.6%
Infants	129.0%	136.3%	133.3%
Admission Source: Richland	74.1%	78.3%	81.4%
North Richland	9.3%	8.5%	7.4%
Other	16.6%	13.2%	11.2%
Admissions by employment: General Electric	71.4%	74.3%	
Government	2.4%	1.2%	
Facility	4.4%	3.7%	
Sub-contractor	13.2%	11.5%	
Schools	0.3%	0.5%	
Military	1.7%	3.0%	
Others	6.6%	5.8%	
Surgery			
Majors	53	54	510
Minors	79	86	587
Eye, Ear, Nose, Throat	3	45	397
Transfusions	44	56	414
Dental	0	0	14

MEDICAL DIVISIONS

AUGUST 1950

Vital Statistics	July	August	Year to date
Deaths	0	5	24
Live Births	61	63	506
Still Births	0	2	7
Physiotherapy Treatments			
Clinic	30	56	607
Hospital	33	48	466
Industrial: Plant	195	164	1374
Personal	10	12	141
Total	268	280	2588
Pharmacy			
Number of prescriptions filled	2181	2537	20797
Patient Meals			
Regulars	3197	3392	25107
Specials	926	1156	7945
Lights	139	223	1199
Softs	1203	1335	12399
Tonsils & Adenoids	0	100	906
Liquids	190	242	1629
Surgical Liquids	60	49	538
Total	5715	6497	49723
Cafeteria Meals			
Noon	1256	1269	11493
Night	183	167	1913
Total	1439	1436	13406

Public Health Division

General

Poliomyelitis was the significant communicable disease, three cases being reported. This is one case less than the number reported at the same time last year. Other communicable diseases were approximately 50% less.

Miss Jean Hoodwin, medical-social worker consultant, and Mrs. Judith Killeen, chief clerk of the State of Washington Health Department, visited the division.

Bacteriological examination of milk revealed coliform organisms, for which corrective action was taken. The most recent examination shows improvement.

Education	July	August	Year to date
Pamphlets distributed	11199	11291	46687
News releases	5	6	44
Classes	0	0	31
Attendance	0	0	995
Staff meetings	2	3	34
Lectures & Talks	3	2	54
Attendance	69	48	1991
Conferences (among section members)	41	72	398
Films shown	0	11	26
Attendance	0	227	770
Radio broadcasts	0	1	1

1209418

MEDICAL DIVISIONS

AUGUST 1950

Immunizations	July	August	Year to date
Diphtheria	19	48	1919
Influenza	0	0	1
Rocky Mt. Spotted Fever	0	0	13
Smallpox	5	14	1467
Tetanus	24	50	147
Typhoid	8	4	19
Whooping Cough	14	48	65
Tuberculin Test	0	2	18
Total	70	166	3649
Social Service			
Cases carried over	81	83	710
Cases admitted	12	10	123
Total	93	93	833
Cases closed	10	4	122
Remaining case load	83	89	711
Sources of referral:			
Public Health	2	5	24
Doctors	0	3	46
Interested person	1	0	12
School	0	0	6
Personnel office	1	1	2
Personal application	4	0	16
Other agency	4	1	9
Miscellaneous	0	0	8
Total	12	10	123
Sanitation			
Inspections made	116	144	1270
Bacteriological Laboratory			
Treated water samples	210	222	1541
Milk samples, inc. cream and ice cream	15	35	470
Other bacteriological tests	227	197	1796
Total	452	454	3807
Communicable Diseases			
Amoebic dysentery	0	0	1
Chickenpox	0	2	147
Erysipelas	0	0	1
German measles	12	2	154
Gonorrhea	1	0	2
Impetigo	0	1	2
Influenza	0	0	6
Measles	2	0	12
Meningitis	0	0	1
Mumps	4	1	8
Pinkeye	0	0	13
Poliomyelitis	0	3	3

1209419

MEDICAL DIVISIONS

AUGUST 1950

Communicable Diseases (continued)	July	August	Year to date
Ringworm	2	0	9
Rosecla	0	0	3
Scabies	0	0	8
Scarlet Fever	0	0	49
Syphilis	1	4	24
Tuberculosis	1	0	4
Whooping Cough	3	3	16
Pharyngeal Infection	3	0	6
Total	29	16	469
Total No. Nursing Field Visits	623	534	7522

1209420

MEDICAL DIVISIONS

PERSONNEL SUMMARY

August 31, 1950

	1100 Area				3000 Area		
	Division Administration	Industrial	Hospital	Public Health	Industrial	Public Health	Sub-total
Physicians	2	4.6		1	2		9.6
Nurses	2	8	53	10	1	1	75.
Anesthetists			3				3.
Nurse Aides		1	24	1			26.
Orderlies & Amb. Dr.			6				6.
Tech. - Clin. Lab.			7.4		2		9.4
Tech. - X-Ray Lab.			3		2		5.
Tech. - Bact. Lab.			1				1.
Tech. - Phys. Ther.			1				1.
Secretary	2						2.
Cler. Work. Leader	1						1.
Steno. & Typist	2	1	2	2	1		8.
Off. Mach. Oper.	2	1					3.
Telephone Oper.	4						4.
Gen'l Clerk	13	10	* 9	2	8		42.
Pharmacist			3				3.
Dietitian			2				2.
Cook			5				5.
Kitchen Worker			10				10.
Soc. Serv. Couns.				2			2.
Sanitarian				1			1.
Health Educator				1			1.
Janitor		4.6	8.8	.6	.7	.3	15.
Records Supv.	2						2.
Accounting Supv.	3						3.
Admin. & Asst.	2						2.
Others			8				8.
Total	35	30.2	146.2	20.6	16.7	1.3	250

Personnel in outlying areas shown on following page.

* (1) General Clerk in Clinic Record Room.

1209921

MEDICAL DIVISIONS

PERSONNEL SUMMARY

August 31, 1950

	Sub-total	Outlying Areas											TOTAL
		100-DR	100-B	100-D	100-F	100-H	241-S	200-E	200-W	300	MJ-1	White Bluffs	
Physicians	9.6		.2	.2	.3	.1		.1	.2	.3			11
Nurses	75	2	1	4	4	1	1	4	5	2	1	1	101
Anesthetists	3												3
Nurse Aides	26												26
Orderlies & Amb. Dr.	6												6
Tech. - Clin. Lab.	9.4		.4	.4	.4	.4		.4	.8	.8			13
Tech. - X-Ray Lab.	5												5
Tech. - Bact. Lab.	1												1
Tech. - Phys. Ther.	1												1
Secretary	2												2
Cler. Work. Leader	1												1
Steno. & Typist	8												8
Office Mach. Oper.	3												3
Telephone Oper.	4												4
Gen'l Clerk	42	.6	.3	.3	.5	.5	1	.2	.2	.4			46
Pharmacist	3												3
Dietitian	2												2
Cook	5												5
Kitchen Worker	10												10
Soc. Serv. Couns.	2												2
Sanitarian	1												1
Health Educator	1												1
Janitor	15												15
Records Supv.	2												2
Accounting Supv.	3												3
Admin. & Asst.	2												2
Others	8												8
TOTAL	250	2.6	1.9	4.9	5.2	2	2	4.7	6.2	3.5	1	1	285

Number of employees on payroll:

Beginning of month	288
End of month	285
Net decrease	3

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HEALTH INSTRUMENT DIVISIONS

AUGUST, 1950

Summary

The total number of employees on roll remained the same as last month. Five Class I Special Hazard Incidents were reported.

Surveys by the Operational Division, with minor exceptions, showed satisfactory control of radiation hazards in the operating areas.

There was no notable deviation from the established pattern of activity deposition detected in routine surveys by the control groups of the Development Division. In biological monitoring an increase in the I^{131} activity in the thyroid gland of domestic and wild fowl was observed.

[redacted]

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HEALTH INSTRUMENT DIVISIONS

AUGUST, 1950

Organization

The composition and distribution of the force as of 8/31/50 was as follows:

	100-B	100-D	100-F	100-H	200-E	200-W	300	700	P.G.	Total
Supervisors	1	1	8	2	3	10	12	6	0	43
Engineers*	4	4	25	5	9	16	12	3	0	78
Clerical	0	0	3	1	1	2	3	4	0	14
Others	13	16	49	13	32	64	56	13	8	264
Total	18	21	85	21	45	92	83	26	8	399

* includes chemists, biologists, etc.

Number of Employees on Payroll	August 1950
Beginning of month	399
End of month	399

Additions to the roll included four engineers, three technical graduates, three inspectors and one laboratory assistant.

Removed from the roll were one engineer, two technical graduates, two technologists, one inspector, two laboratory assistants, two badge workers and one personnel meters clerk.

General

Five Class I Special Hazard Incident Investigations were reported. Two concerned accidental release of tritium, two involved improper inter-area transfer of contaminated equipment, and one concerned contamination of personnel and equipment in the 241-U tank farm area. Although potentially dangerous misadventures, no personnel over-exposures occurred.

The following trips were reported:

C. C. Gamertsfelder - July 29-August 6 - to KAPL and ANL.
W. Singlevich - August 7-10 - to Arco, Idaho.
M. L. Barad - August 9 - to University of Washington.

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Health Instrument Divisions

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
None	None

[redacted]

Health Instrument Divisions

OPERATIONAL DIVISION

100 Areas

General Statistics

	July					August					1950
	B	D	F	H	Total	B	D	F	H	Total	To Date
Special Work Permits	424	903	420	593	2340	571	634	496	863	2564	20,731
Routine & Special Surveys	376	633	405	486	1900	405	510	522	447	1884	14,310
Retention Basin	79	73	96	182	430	88	76	87	193	444	3,443
Air Monitoring Samples	66	118	94	194	472	111	99	82	146	438	3,916

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)	320-335	305-320	305	400
Average beta dosage-rate (mrep/hr)	1.1	1.2	1.3	1.0
Average gamma dosage-rate (mr/hr)	2.6	2.7	2.6	2.6
Average total dosage-rate (mrep/hr)	3.7	3.9	3.9	3.6
Average integrated dose in 24 hrs. (mrep)	89	94	94	86
Maximum integrated dose in 24 hrs. (mrep)	91	103	118	113
Maximum integrated dose in 24 hrs. (mrep) 1950	120	139	154	194

100-B Area

Pile and Associated Buildings

Failure to follow S.W.P. instructions resulted in one instance of personnel contamination.

P-10 Operations - 108 Building

General Statistics

	July	August
Special Work Permits	40	60
Routine & Special Surveys	19	69
Air Monitoring Samples	93	256

Three incidents involving release of P-10 to the exhaust system occurred. A 10^4 increase on the exhaust duct Kanne chamber reading was noted in one case. No appreciable personnel exposure was found in any case. Urine sample results

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for the period were all below 10 uc P-10 oxide/liter. Contamination of the de-canning hood again occurred as a result of a black material adhering to the outside of the bare slug.

Metallurgical Laboratory - 111-B Building

	July	August
Special Work Permits	34	48
Routine & Special Surveys	44	20
Air Monitoring Samples	2	1

Work on the ruptured slug was completed. Dose rates up to 4 roentgens per hour were reported. Transfer area floor contamination was reduced by removal of dirt. Improper removal of an assault mask led to hair contamination.

100-D Area

Clean-up of the D retention basin was completed. Evidence of leaks in the DR basin was indicated by the monitoring wells. Process tube nozzle changes proceeded without incident.

100-F Area

Pile and Associated Buildings

An exposure rate of 6 r/hr at 12 feet was encountered during work of freeing a stuck charge. Seven of eight cases of personnel contamination occurred during work in the discharge area.

A further reduction of about 20% was observed in the gamma intensity of the beam at the top far edge. The neutron flux was unchanged.

P-11 Operations

General Statistics

	July	August	1950 To Date
Special Work Permits	0	0	5
Routine & Special Surveys	41	55	174
Air Monitoring Samples	37	52	177

Air samples were low with a maximum of 1.5×10^{-10} ug Pu/cc obtained during equipment changes. Equipment modifications were made preparatory to another series of tests, without contamination spread.

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Health Instrument Divisions

100-H Area

Air samples were normal with four above 3.5 x 10^{-5} μc/liter obtained in the near sample room. Contaminated water in the control room was traced to a leaking thermocouple tube. Special sample irradiations were conducted at the D hole without incident.

A neutron beam of about 40 mrem per hour was reported at the #2 horizontal seam inside the safety rod enclosure. Evidence of a neutron flux at the #1 seam was also noted.

200 Areas T and B Plants

General Statistics

	July			August			1950
	T	B	Total	T	B	Total	To Date
Special Work Permits	271	259	530	307	295	602	5,710
Air Monitoring Samples	562	686	1,248	855	911	1,766	11,408
Routine & Special Surveys	471	469	940	581	543	1,124	8,424
Thyroid Checks	26	63	89	74	57	131	1,224

Canyon Buildings

In the T Plant, conditions were normal except for expected increased activity in process samples and several unexplained high air samples. Of 515 air samples, 134 showed results above 10^{-12} μg Pu/cc with a maximum of 3.8 x 10^{-8} μg Pu/cc; 259 showed results above 10^{-10} μc f.p./cc, with a maximum of 5.3 x 10^{-8} μc/cc.

In the B Plant, an upward trend in activity in process samples was noted. Repeated high air samples (f.p.) during charging led to revision of canyon entry procedures. Of 492 air samples, 80 showed Pu contamination above 10^{-12} μg/cc, with a maximum of 2 x 10^{-9} μg/cc; 156 showed above 10^{-10} μc f.p./cc with a maximum of 1.3 x 10^{-6} μc/cc.

Concentration Buildings

In the T Plant, discharge of Pu from cell vents was as high as 106 μg/24 hrs. at C cell; in the B Plant, D cell showed 45 μg Pu discharged/24 hrs.

Stack Areas

Dose rate at the base of the B stack increased to 6.4 rep/hr.

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Waste Disposal Areas

A dosage-rate of 15 rep per hour was encountered in the T Plant during work on the 101-U riser. In the B Plant, the metal waste line was abandoned when it became impossible to jet waste to the farm. It was necessary to open three diversion boxes to make jumper changes; 5 rep per hour was the maximum dose rate encountered. Surveys over the old line detected no leak.

Plant Laundry

Twenty-four of 75 air samples showed positive results--maximum 1.7×10^{-6} μg U/cc during washing of 300 Area clothes.

General

All thyroid checks were below the warning level.

The Isolation Building

General Statistics

	July	August	1950 To Date
Special Work Permits	24	42	228
Routine & Special Surveys	290	419	2,390
Air Monitoring Samples	398	520	3,066

Air Sample Results

Seventy-nine of 520 samples were above 10^{-12} μg Pu/cc; the maximum was 9.3×10^{-10} μg/cc in cell 4.

Operating Cells

Sixty-nine unregulated items, five floor locations and three persons were reported contaminated. Forty-seven of the 61 positive air samples were obtained in cell 4 where assault masks were worn for about a week. Replacement of A and E filters appeared to correct the condition. Gamma radiation levels increased reflecting the shorter cooling period.

Purification Building

General Statistics

	July	August	1950 To Date
Special Work Permits	171	240	1,551
Routine & Special Surveys	714	835	4,771
Air Monitoring Samples	1,273	1,691	10,923

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Air Sample Results

Two-hundred twenty-five of the 1,691 samples showed concentrations above 10^{-12} µg Pu/cc. High result was 3.4×10^{-9} µg/cc obtained in the hood 7 duct after primary filtering. Other high results were 6.5×10^{-10} µg/cc in 234 operation, and 6.5×10^{-10} µg/cc in 235 operation.

234 Building - Operating Section

The contamination status of room 228 was unchanged; the average room air concentration was 3.4×10^{-11} µg Pu/cc. Contamination spread occurred during removal of concentrate from hoods 31 and 32.

235 Building - Operating Section

A serious potential hazard was recognized when the cork from a stored bottle of Pu waste solution was blown through the lid of the ice cream carton containing it.

General Building

Possible damage of the large filters was postulated when air sample filters were decomposed by acid fumes from hood 8. Normal results were obtained on the 26-inch vacuum discharge air.

200 Area Control Laboratories

	T	B	231	234-5
Items contaminated - not regulated	129	100	224	519
Skin contamination - alpha	2	3	3	2
Skin contamination - beta	2	1	--	--
Contaminated floor locations	15	48	16	91

Increased radioactivity in process samples may require revision of the number run per shift per analyst.

Particle contamination continued high. Concentrations in particles per 1,000 cubic meters were:

	Location	July	August
222B	Outside	5.7	23
	Hallway	23.6	66.2
	Room 7	210	313
222T	Outside	8.5	24.5
	Hallway	20.1	28.1
	Room 7	176	281

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The 300 Area

General Statistics

	July	August	1950 To Date
Special Work Permits	78	155	1,062
Routine & Special Surveys	162	172	1,415
Air Samples	122	194	1,241

Metal Fabrication Plant

Twelve of 58 air samples taken were above the maximum permissible limit of 5×10^{-5} µg U/cc; maximum was 4.6×10^{-3} µg/cc near the outgassing furnace while in use for crucible burnout.

Technical Building

Laboratory procedures and shielding were revised due to increased radioactivity in samples from the 200 Areas. The bed of a pick-up truck and a laboratory room were contaminated by spills. Thirteen of 99 air samples showed contamination above 10^{-11} µg Pu/cc with a maximum of 1.3×10^{-11} µg/cc.

Cold Semi-Works Building

A leak in an underground waste line caused contamination of a large ground volume. Liquid waste was safely removed from the "hot" laboratory showing dosage-rates up to 25 rep per hour. Thirty air samples from the canyon were all below 5×10^{-5} µg U/cc. Two air samples from the "hot" laboratory showed 2.5×10^{-11} µg Pu/cc.

Hand Score Summary

There were 43,352 alpha and 42,517 beta hand scores recorded. About 0.08% of the alpha and about 0.09% of the beta checks were high. No attempt at reduction was recorded for 3 scores in the 100 Areas, all other high results were reduced.

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Health Instrument Divisions

PERSONNEL METERS

Pencils

	100-B	100-D	100-F	100-H	E&N 200	200-W	300	Total	1950 To Date
Pencils Read	15,743	15,297	13,906	9,985	18,588	29,035	36,021	138,575	1,026,929
Single Readings (100 to 280 mr)	25	20	12	11	12	34	33	147	1,500
Paired Readings (100 to 280 mr)	0	0	1	0	1	0	1	3	19
Single Readings (Over 280 mr)	28	57	29	25	32	92	58	321	1,911
Paired Readings (Over 280 mr)	0	0	0	0	0	1	2	3	18
Lost Readings	1	1	0	0	1	1	0	4	34

Of the six paired pencil readings above 100 mr, one was confirmed by film badge results. (Pencil results -- 120-120 mr - Badge 95 mr.) This occurred on a planned exposure of 100 mr, weekly exposure was below 0.3 rep.

Investigation of lost readings revealed 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	2411	2363	2662	1891	3456	627	5525	6000	24,935	174,398
Number Readings (100 to 300 mrep)	10	45	29	5	17	6	57	86	255	1,994
Number Readings (Over 300 mrep)	1	3	1	0	1	0	8	2	16	129
Lost Readings	2	1	1	0	2	0	2	2	10	66

Lost readings were accounted for as follows:

Badges lost in Area	5
Contaminated badges	2
Lost in processing	1
OW exposed to X-ray	1
Badge dropped in liquid	1
Total	10

Investigation of the above lost readings indicated no possibility of an overexposure. All the readings over 300 mrep, except 300 Area, are for a two-week period and do not constitute overexposure. Investigation of the 2 results in 300 Area showed one was due to a contaminated badge and the other due to defective film.

Health Instrument Divisions

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Badge Resume, Construction Areas

	200-W	100-DR	Total	1950 To Date
Badges Processed	560	2173	2733	19,198
Number Readings (100 to 300 mrep)	1	1	2	49
Number Readings (Over 300 mrep)	0	0	0	6
Lost Readings	0	0	0	9

Total badges processed 1950,	Operations	174,398
	Construction	19,198
	Total	193,596

In addition to the badge program, a total of 1,599 items of non-routine nature was processed during the month.

Slow Neutron Pencil Summary

	100-B	100-D	100-F	100-H	Total	1950 To Date
Number of pairs issued	79	64	21	482	646	6,388
Number of significant readings	0	9	0	56	65	428
Number of significant readings (Above 50 mrem)	0	0	0	1	1	6

Investigation of the result above 50 mrem showed the pencils were used in the Danger Zone for 1 hour and taken home over a week-end. No overexposure is indicated.

Neutron Film

Badges Processed	100-B	100-D	100-F	100-H	200-W	Total	1950 To Date
Personnel	62	72	51	187	19	391	1,683
Special	8	8	8	0	13	37	157

Of the badges showing tracks the maximum exposure was about 60 mrem for one week.

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Health Instrument Divisions

CONTROL AND DEVELOPMENT DIVISION

Site Survey

Samples of drinking water, sanitary water, and test wells indicated levels of activity similar to those obtained in previous months from the routine sampling locations. A sampling program at Clover Island, the new filtering basin for the Kennewick Sanitary Water System, was instituted this month. Readings obtained to date are comparable to those obtained on the other systems using the Columbia River as a source. A slight increase in the activity of the Columbia River has occurred at all locatiins below the 100-F Area due to a decreased flow rate of the Columbia River. A maximum average activity of 3×10^{-6} μc/cc was detected at Hanford.

The air contamination levels showed an increase during the month as measured by detachable chambers, by air filters, and by I^{131} scrubbers. The highest weekly average on the air filters was from a station in the 200 East Area which indicated an average concentratiim of 1.4×10^{-11} μc/cc. The highest overnight iodine concentration as shown by the scrubbers was 1.3×10^{-10} μc/cc from the same station. This increase is attributed to the increase by about a factor of 10 in the amount of iodine contained in the metal dissolved during the month. The I^{131} concentrations at Richland and Benton City also showed an increase by factors of 6 to 10 with an average of $3\text{-}4 \times 10^{-13}$ μc/cc at these locations. Spot samples with small portable scrubbers taken near the stacks at the time of dissolving gave a maximum reading of 5×10^{-10} μc/cc.

Significant increases were also noticed in the activity density of the I^{131} on the vegetation at nearly all locations on and off the project. Most of this increase occurred during the latter part of August due to the decreased cooling time during this period. The maximum activity appears to be at the 200 West Gate where an average concentration of 8.4×10^{-4} μc/gram was measured. Richland, Pasco, Benton City area were about 4 to 5×10^{-6} μc/gram.

Slight decreases in the activity density of the water from the 107 basins were noted. These values ranged between 3 and 5×10^{-4} μc/cc. A survey of the dry wells around the 107-DR basin was made in the early part of August to determine whether the basin was leaking. These surveys were made by lowering Geiger Counters down the well and measuring the counting rates. Wells on the northwest and southwest sides of the basin were found to be at background level, the well on the east side showed about a 6-fold increase over background, and the dry well on the southeast side of the basin was about 8 to 10 times background.

Geology

The activity in the 361-B Area wells continued to decrease on the previously established trend. The activity in well 361-B-9 was also normal, following the unexplained low results obtained for the previous two months. Activity in the 241-T-361 and 361-T-12 wells continued to decrease at a rate which suggests slow

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movement of the ground water. Additional exploration here has been retarded because of the necessity of drilling wells for the Redox and TBP programs.

The continued fall of the Columbia River resulted in a reversal of the flow of the ground water under the 300 Area so that it is now moving toward the river thus lowering the activity in the wells farthest from the waste ponds and increasing it in the nearer ones. Temperature surveys of the wells indicated a temperature stratification in one well near the new waste pond. Additional samples will be analyzed to determine whether there is stratification of the activity also.

A sediment sample taken from the number 1 test hole in the 200 East Area 5-6 tile field had 0.16 μc/gm. This is the highest activity level recorded to date. The beta activity in sediments taken 20 feet below the 241-T second cycle crib increased to 8×10^{-4} μc/gm which is twice the value reported for the month of May.

Seven of the fifteen water stage recorders indicated sudden fluctuations up to 0.08 of a foot on the morning of August 15. These were due to the Assam earthquake and were approximately equal to the disturbances caused by the earthquake in Seattle in 1948.

Meteorology

Routine

Forecasts	Number Made	Percent Reliability
Production	93	86.6
24-hour	62	88.1
Special	12	79.0

Temperatures during the past month averaged 76.4. This was a higher average than was attained in July, and was somewhat above normal for August. It is notable that during all previous months of the current year, temperatures have averaged below normal.

There was no measurable amount of precipitation during August although this was the first such month since records began at the station. Records kept at Hanford prior to 1945 indicate that it is not unusual for a complete month to go by without any measurable precipitation occurring. This has happened at sometime during the period of record (1912-1944) in every month except December and January. In 35 years of August observations, prior to 1950, 12 have been without a measurable amount of precipitation.

There was considerable auroral activity during August, with a particularly brilliant display observed on the nights of the 19th and 20th.

/4 There were no severe storms and there was no unusual weather during the past month.

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Experimental Meteorology

The use of freon 12 as a test effluent with the General Electric Type H leak detector as a freon sampler is being investigated. In the first test, conducted at about 9:00 a.m. the winds were light and variable in direction so that the detector responded only infrequently. Readings on the middle range were obtained at distance of 20 yards. In the second test taken at about 6:30 p.m. the winds were less variable and had speeds of about 8 mph. Readings on the middle range of the detector were obtained at distances of 70 yards.

A wind direction variation indicator has been designed for use on the particle pick up problem. Air sampling in conjunction with this problem will be supervised by the Industrial Hygiene Group.

Bioassay

Six hundred and fifty-four urine samples were analyzed for plutonium. The samples and blank samples both averaged 0.04 d/m. The yield for spike samples was 94%. Only one sample appeared slightly above the resample limit of 0.33 d/m and is now in process of being resampled. Results of 5 resamples from previous periods were all less than 0.33 d/m.

Six hundred and seventy-four urine samples were analyzed for fission products with no samples exceeding the arbitrary resample limit of 10 c/m on the mica window counters. Five samples from previous high values all fell below our resampling limit.

One hundred and twenty-two urine samples from the 300 Area production were analyzed for uranium on the flurorphotometer. The maximum individual result was 66 ug/liter from an individual in the melt plant.

A total of four hundred and twenty-three urine samples were analyzed for tritium oxide in the Control Laboratory. Eighty-five of these samples were greater than 1.6 μc/liter, 33 of which were from July samples and showed a maximum result of 13 μc/liter. Thirty of the high values were obtained from three people.

Methods Development

Attempts to ozonize plutonium solutions individually for future electroplating of individual samples by use of a manifold on the present ozonizer have given erratic and inconclusive results. This is believed to be due to nonuniform flow through the various branches of the manifold used. A new ozonizer is being built and efforts are being made to devise a method of measuring the very slow flow rates used in the ozonolysis. Studies on yield versus size of disc on which the plutonium is deposited have indicated that under the conditions now employed, the limiting area is about 20 to 25 square millimeters. Yields from spiked urine samples processed and electrodeposited in the Bioassay Building

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by the routine personnel have been very low this month. New reagents are being obtained and investigation made to see if the reason for this low yield can be found. Experiments on the ease with which plutonium is removed from stainless steel discs after electrodeposition were made for evaluation of the use of stainless steel for standards for survey instruments. In general, the plutonium is quite tightly bound and requires rather drastic treatment to remove from the surface.

The procedure for potassium analysis has been adapted to both tissue analyses and soil analyses and a number of samples of both types run for the Arco survey currently being carried out. In general results are consistent with those expected from values quoted in the literature.

Testing of the current procedure for determining the total alpha activity in the asbestos filter papers has indicated that about 93 to 95% of the plutonium will be contained in the supernate after the nitric acid-hydrogen peroxide digestion. This method, will not be entirely applicable to routine samples, but will be useful for a few samples requiring high efficiency in recoveries. Two new filter papers, obtained from Tracerlab, are now being tested in the 231 Building for efficiency as compared to the asbestos paper. One of these filters is a polystyrene mat which may be dissolved in organic solvents, while the other is a mat of pure cellulose fibers which may be easily digested leaving little or no residue in the analysis. The pressure drops through these papers range up to 20 cm of water for a linear flow rate of 110 feet per minute of air whereas the present C.W.S. type #6 filter paper indicates a pressure drop of 60 cm of water at a linear flow rate of 75 feet per minute.

Control Laboratory

A study of the control charts on the mica window counters indicates that the first control point taken during the day appears to be more erratic than subsequent points. This phenonemon is being investigated to determine both the cause and the correction. A low background proportional alpha counter from the Nuclear Measurements Corporation was obtained for test during this month. The change in geometry across the diameter of the chamber was high (about 60% decrease at the edge of chamber) but the backgrounds are reasonably constant and low and quite consistent results are obtained on counting of samples.

Recent studies on the ratio of the alpha emitters to the beta emitters in well samples known to contain uranium, have indicated that there is a buildup in beta activity when it is allowed to stand. A quantitative check with the equilibrium daughters of uranium has not yet been obtained. Further work on possible absorption phenonena occuring in the soil is being carried out. The work on the analysis on the 107 effluent water is progressing with group separations having been carried out on six samples. Reasonably consistent results indicating that the amount of activity with half-lives longer than several days is $<1\%$ of the total activity at the time of discharge from the pond were obtained. A complete analysis of this data cannot be made until decay curves are

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finished. Future analyses for specific materials is planned upon evaluation of the breakdown according to chemical grouping. Preliminary studies on the application of ion exchange procedures to the analysis of this 107 water have been started. The proportional counter for measuring tritium oxide in samples has been turned over to the control group for operation. Upon installation of the cathode follower and "debugging" quite consistent values of 168 counts per minute per uc/liter of the original solution were obtained. This unit is now in use for measuring the concentration of tritium oxide in air samples sent from the 100-B Area.

A summation of the work performed is given below:

Laboratory	Number of Analyses
Vegetation	1,869
Water	1,919
Solids	623
Fluorophotometer	528
P-10 (other than urine)	74
Miscellaneous	84
TOTAL	5,097

Counting Room	Number of Analyses
Beta measurements	4,982
Alpha measurements	4,122
Control points	2,722
Decay curves (points)	1,928
Absorption curves (points)	341
TOTAL	14,095

Physics

Fogging of film immersed in water containing tritium was reduced by exposing the film at temperatures just above the freezing point. Even with this reduced background no darkening due to tritium could be detected with a sample containing three times the maximum permissible concentration. Work has been stopped on this line of investigation.

Another possibility of counting tritium in water vapor in air has been tried. Measurements with a Geiger counter containing air at a reduced pressure were made, however, negative results were obtained when water vapor was used with the air. A special three tube quench circuit is being built to continue these tests.

Industrial Hygiene

17 Dr. Harold C. Hodge brought a model of an oscillating thermal precipitator with him on his recent visit. This instrument and the thermal precipitator

designed here were exposed simultaneously in the 314 Building where uranium dusts and fumes were known to exist. Screens from these tests were shipped to Rochester for micrographing.

Special non-radioactive studies were made of carbon monoxide concentrations in the 100-F and 100-H Areas. Values up to 460 ppm were found at the base plate of one of the rods in the 105-F Building. Another study of Xylol exposures is being made in the Personnel Meters Building.

Instrument Development

Work toward developing a tritium-sensitive hand counter continued without much success. The principal difficulties were in obtaining a sufficiently sensitive current meter and a source of adequate intensity. Considerable work was done with two Brown electrometers (advertised sensitivity 10^{-13} ampere full scale) to eliminate their temperature dependence. Improvement was obtained by thermostatic control of electrometer temperature, but the instruments are not yet satisfactory for either laboratory or field use. A Beckmann RXG fitted with a 10^{12} ohm input resistor gave satisfactory laboratory performance. The third approach to increased sensitivity was to use a proportional counter. This has not given satisfactory results when used to count ions formed outside the counting volume. Better sources are needed to investigate further.

For tritium air monitoring, a new Kanne chamber system was designed. The sensitivity of the system should permit detecting about one third of the permissible concentration.

Development of a tritium leak detector showed some promise. It was found possible to operate a methane flow proportional counter with 20-30% air. Apparent plateau increased but results were not statistically reliable. The system can probably be used qualitatively by a skilled operator.

Characteristics of a point counter for tritium are being studied. It was found that the effective sensitive area of such a probe is about 0.05 square inches; counting is reliable, but plateau slope is about 25%/100 volts at 2600 operating volts. A cylindrical counter having a loop of wire as the high voltage electrode was studied briefly.

Voltage sensitivity of Victoreen and El-Tronics portable GM survey meters were investigated and found impractical to improve without major re-design. This means that portable mica window GM counters will require instrument design work if reasonable tube life is to be obtained.

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Health Instrument Divisions

Calibrations

RADIUM CALIBRATIONS	Number of Routine Calibrations July	August	1950 to Date
Fixed Instruments			
Gamma	343	366	2,977
Portable Instruments			
Alpha	270	314	2,275
Beta	611	699	4,730
Gamma (Radium)	995	1,152	7,657
X-ray Scanning	--	3	16
Neutron	450	450	1,470
Total	2,326	2,618	16,148
Personnel Meters			
Beta	581	763	5,381
Gamma (Radium)	6,636	5,519	56,539
X-ray	6,835	6,094	50,051
Neutron	30	28	100
Total	14,082	12,404	112,071
GRAND TOTAL	16,751	15,388	131,196

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Health Instrument Divisions [redacted] DECLASSIFIED

BIOLOGY DIVISION

Analyses Group

1. Radioactivity in Carcasses

No progress.

2. Alpha and Beta Analyses of Organic Material

Methods of analyzing organic material for P^{32} were tested for efficiency of both yield and separation from other radioelements. It was found that precipitation with stannic acid gave the best results.

Work continued on the development of an analytical method for the determination of total I^{131} in large amounts of organic material of low activity density. Current results indicate digestion in dilute NaOH, removal of organic material by filtration, followed by a silver iodide precipitation gives the best results. Methods of analyzing bone samples for total beta emitters are being investigated. Standard procedures for vegetation analyses of total beta emitters were written and applied to the Control Group.

3. Radioelements in Organisms in Pile Effluent

A one month old algae sample from the 100-F effluent basin was analyzed for radioelements. Thirty per cent of the total beta activity was due to P^{32}. The remaining activity was due to elements in the iron-zinc group (includes rare earths). Work is continuing on the further separation of this group to determine which elements are radioactive.

4. Physical Processes Affecting Methods for Isotope Use

Work continued on the development of a procedure for the standardization of I^{131} solution by gamma counting.

An investigation as to the feasibility of separating radioisotopes by ion exchange column techniques started this month. Currently the separation of Zr, Co, Cd, Ni, Fe, Al, Mg, Sn, Cr, Ca, Na, K, Sr and Zn is being investigated.

5. Waste Disposal Methods for Biological Specimens

No. progress.

Analytical Services

Analytical services to other groups consisted of calibrating and preparing for use shipments of isotopes received, the analyses of more than one thousand samples submitted during the month (including samples from Arco), and the preparation of standard beta sources for the H.I. Operational Division.

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Health Instrument Divisions

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Aquatic Biology Group

1. Effect of Pile Effluent Water on Aquatic Organisms

Monitoring of the pile effluent has been continued during the month with young trout. Slight toxicity is suggested at a concentration of 5% area effluent but is not yet clearly evident. Slightly increased temperatures at the 2% and 5% levels have favored disease organisms with a resulting noticeable increase in mortality from bacterial infection in these lots. Prophylactic measures are being used to prevent an epidemic.

2. Biological Chains

The activity density of yearling trout being held in 5% pile effluent and fed a diet containing algae from the 107 Basin increased slightly over last month (from 4 to 5.5 x 10^{-3} μc/g of scales). The activity density of these fish is about five times that of fish held in similar water but not being fed the contaminated algae. Both of these lots held in the 5% pile effluent were seriously affected by bacterial and ectoparasitic protozoan infections during the later part of the month which resulted in the loss of 5% of the fish on control diet and 15% of the fish on the contaminated diet. These infections have been difficult to control and experimental conditions have been temporarily upset in order to stop the epidemic. Control fish held in straight river water have not been similarly affected.

3. Radiobiological - Ecological Survey of the Columbia River

The level of the river receded enough to permit resumption of routine collection of organisms. Between August 1 and August 16 a precursory survey was conducted for the purpose of selecting the most desirable permanent collecting sites. A limited number of samples was collected at a total of 35 possible locations between Priest Rapids and Bonneville Dam. Each site was considered for location in relation to plant outfalls, hydrographic conditions and accessibility. From this survey a total of 13 sites were selected which will be sampled every second week. At five of these sites quantitative collections of bottom organisms will be made. Routine collecting on an established schedule was begun on August 21. Analyses of organisms for activity density is now being carried out by the Analyses Group.

With the receding level of the river, the effluent from the 100-H Area ceased flowing through the emergency overflow and the small side channel of the river immediately below this area was eliminated. Activity densities of some forms found in this section of the river have declined to levels ordinarily encountered (10^{-4} μc/g of algae) while in others the level is still unusually high (average for small fish is 4 x 10^{-3} μc/g with a maximum value of 3 x 10^{-2} μc/g). The continued high activity in some of the small fish may be due to P^{32} accumulated during the "hot" period and not yet completely decayed.

The activity density of small fish collected at Hanford was similar to that found last month (1.4 x 10^{-3} μc/g) while the activity density of the plankton

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showed an increase from 2×10^{-3} to 3.5×10^{-3} μc/g. Average activity densities at Hanford amounted to 5×10^{-4} μc/g for algae and 1.6×10^{-3} μc/g for caddis fly larvae. For large fish a maximum activity density of 2.7×10^{-3} μc/g was found in the scales of a chiselmouth captured at Hanford.

The number of planktonic organisms present in the river at the 100-F Area increased from about 4,000 to about 81,000 organisms per liter, approaching the summer maximum.

Biochemistry Group

1. Relative Biological Effects via Biochemical Systems

No progress.

2. Absorption of Pu from the G.I. Tract

A shipment of 50 microcuries of Pu^{238} has been received from Dr. Seaborg and suitable dilutions will be made for use in the long-term absorption experiment. The rats have been ordered and work on this project will begin as soon as they arrive.

3. P-10 Hazards Biological Investigations

The thirty rats which had been maintained in the process hoods in 108-B have been moved to 108-F. Three were immediately sacrificed and the initial level of rat body water was found to contain from 3800 to 5800 microcuries of P-10 per liter. Two additional rats were sacrificed a week later, but analyses of body water have not been completed yet. The remainder of these rats will be sacrificed at various intervals of time in order to estimate the biological half-life of P-10 in the rat.

In order to determine the absorption of P-10 oxide through the skin, several young swine have been ordered and special glassware has been fabricated.

An experiment designed to determine the biological half-time of P-10 oxide and the extent to which P-10 oxide is incorporated into the tissues of the mouse will be started shortly.

4. Possible Therapeutic Agents for Radiation Damage

No progress.

5. Percutaneous Absorption of Radioelements

No progress.

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Services

In the Clinical Laboratory, a total of 857 chemical determinations, 952 hema-

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tological investigations and 40 bacteriological experiments were carried out during the past month. This is a substantial increase over the amount of work performed during July. The data are being charted and graphed as usual, and will be analyzed for deviation from normal values.

Botany Group

1. Separations Area Control Plot

Samples of alfalfa taken from the R-3 Danger Zone during the month showed a slight increase. Maximum activity for leaves was 2.2×10^{-3} μc/g. Russian thistle plants growing in the area had maximum activity densities of 3.0 μc/g of leaves and 2.3 μc/g of stem.

In the 200 East Experimental Plot cultivated grains were found to average an activity density of about 2×10^{-5} μc/g of dry matter.

2. Agricultural Field Station

Samples of produce collected from the experimental plot were about 50% higher in specific activity than that collected from the control plot, in the range of 10^{-5} μc/g of dry matter. This is probably an artifact, however, and better data must await the installation of an operating well.

3. Translocation of Radioelements in Plants

In a scouting experiment with substandard Sr^{89}, tomato, corn, oxalis, alfalfa, Russian thistle and beans were found to translocate the material which represented a mixture containing some rare earth elements. Activity densities observed after the growing period were in decreasing order for the plants as listed.

4. P-10 Botanical Investigation

Samples of plants were checked for P-10. Counting results are not yet available.

5. Effects of Radiation of Plant Life

Work not started.

Physiology Group

1. Biological Effects of Active Particles

Work not started.

2. Bone Metabolism of Radioelements

Experimental work not started.

3. Techniques in Autoradiography

Experimental work not started.

4. Services

In service to other groups and other divisions special photographs, autoradiographs, and photomicrographs were taken. Histological preparations were made from specimens of sheep sacrificed at the Experimental Animal Farm.

Zoology Group

1. Biological Monitoring

a. Waterfowl

Activity density in tissues of Pekin ducks from the 100-F colony showed an increase over July. Maximum values found were 9×10^{-3} μc/g of bone and 8×10^{-3} μc/g of thyroid glands. These values exceed the MPC for P^{32} and I^{131} by factors of 7.5 and 2.0, respectively. Liver and pancreas samples also exceeded the MPC level.

Wild waterfowl also exhibited greater activity densities than was found during July. Maximum value found in the thyroid gland closely approached the MPC for I^{131}.

b. Upland Wildlife

A Norway rat taken near the 1705-F Building had a thyroid activity which exceeded the MPC for I^{131} by a factor of 80. A second rat taken in the same area did not exceed the MPC level.

A wood rat which had been damaging experimental plants in the Botany greenhouse at 1705-F was sampled. The maximum value found was 0.015 μc/g in bone. Activity of stomach contents was 0.01 μc/g, which was due principally to Sr^{89}.

An English sparrow taken at the 100-F Animal Farm exhibited thyroid activity of 0.14 μc/g, approximately 35 times the MPC for I^{131}.

Findings indicate that these pests must be carefully controlled to avoid interference in controlled biological experiments.

The thyroid gland of a coyote taken at 200 East showed activity density exceeding the MPC for I^{131} by a factor of 3.5 and the thyroid of a wood rat from Coyote Rapids by a factor of 2.

Specimens taken in the vicinity of 100-D, 100-H and Rattlesnake Springs showed all organs to be below the MPC, but demonstrated an upward trend in thyroid activity.

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2. Toxicology of I^{131} in Stock Animals

With regard to thyroid counts, the ewes in Groups 0 (1800 μc/day) and IA (240 μc/day) registered a decline in activity density in the gland. The lambs too have shown a marked reduction in thyroid activity ascribable to reduced milk supply in the ewes. Lambs are being trained to eat pelleted food in preparation for administration of I^{131} spiked food to those being retained in the experiment

The ewes in the lower feeding level groups registered no change in thyroid activity. Considerable concern is felt over the problem of probable critical interference by airborne waste gases from the separations stacks. Vegetation levels in the area serve to warn of possible contamination of feed approaching that being administered to the lower feeding level group. Several preventive measures are being practiced to lessen the chances of serious interference.

After consultation with the Statistics Group plans were formulated for best utilization of available lambs and plant facilities. A number of lambs will be sacrificed as they reach weaning age (120 days). One lot of ram lambs from each of Groups IA (240 μc/day), IB (5 μc/day) and IV (Control) will be maintained on the experiment for semen studies. In addition the majority of ewe lambs will be kept in all groups for continuation of toxicity studies.

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GENERAL ACCOUNTING DIVISION

August 1950

GENERAL

A Plant Accounting Statement covering the year ended June 30, 1950 was issued on August 10, 1950. This Statement presented in detail changes in both plant and reserve accounts during the year. Procedures were established relative to the accumulation of costs and the accounting treatment in connection with retirement of capital assets. A memorandum outlining these procedures was completed and is ready for distribution.

Information requested by AEC relative to budgeted operating costs segregated by activity and construction costs by project for FY 1951 was furnished on August 23, 1950. Revised construction budget schedules were received from AEC during the month, and respective division managers were accordingly advised of revisions made.

In addition to continuing the audit of Excess Materials records and procedures, Internal Auditors completed a report on Assessments to Manufacturing Divisions from Other Divisions for the period September 1, 1948 to May 31, 1950, began a comprehensive review of the Hanford Works mail distribution systems, and completed sundry other audits.

The Project Report for the six-month period ended June 30, 1950 was issued on August 30, 1950. This report indicates cost of each completed project as of June 30, 1950 and the distribution of costs to Plant Accounts, Major Construction Program Facilities, and Expense. Completed Work Orders, in total, which were handled through Construction Work in Progress were also included in this report.

In connection with the study of shift schedules in use at the Hanford Works, considerable time and effort was devoted to preparation of drafts of instructions letters setting forth procedures to be followed in assigning employees to regularly scheduled work weeks and procedures for reporting time worked. Revised time cards were prepared and instructions to payroll personnel were drafted covering method of calculation of salary payments under the proposed change in payment practices. Several meetings and discussions were held between representatives of Union Relations and Payroll Divisions for the purpose of coordinating the preparation and presentation of the proposed change in assignment of work weeks and change in payment practices.

Although the first draft of Appendix C is not complete, considerable progress was made during August in revising and completing several sections of the proposed Appendix to the Prime Contract.

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General Accounting Division

Hanford Works cash disbursements and cash receipts, excluding advances from Atomic Energy Commission for the month of July as compared with August, may be summarized as follows:

	July	August
Disbursements		
Material and Freight - GE	$1 433 544	$1 140 394
Payrolls - GE (Net)	1 837 467	1 857 632
Payments to Subcontractors	2 444 095	2 739 002
Other	1 123 565	913 286
Total	6 838 671	6 650 314
Receipts		
Rents	110 131	110 833
Hospital	42 587	35 295
Telephone	14 602	14 318
Bus Fares	8 881	9 192
Other	120 021	19 467
Total	296 222	189 105
Net Disbursements	$6 542 449	$6 461 209

General Accounting Division

STATISTICS

Employees and Payroll	Total	Monthly Payroll	Weekly Payroll
Employees on Payroll at beginning of month	7 806	1 801	6 005
Additions and transfers in	151	18	133
Removals and transfers out	(128)	(16)	(112)
Transfers from Weekly to Monthly Payroll	---	8	(8)
Transfers from Monthly to Weekly Payroll	---	(7)	7
Employees on Payroll at end of month	7 829	1 804	6 025

Employees on Payroll at end of month	July	August
Manufacturing	3 313	3 313
Design and Construction	618	629
Community	732	717
Others	3 143	3 170
Total	7 806	7 829

Overtime Payments		
Weekly Paid Employees	$ 33 261	$ 46 068
Monthly Paid Employees	10 054(1)	9 381(2)
Total	$ 43 315	$ 55 449

Number of Changes in Salary Rates and Job Classifications	890	844

Gross Amount of Payroll		
Manufacturing	$1 177 394	$1 198 869
Design and Construction	212 698	221 289
Community	230 801	229 357
Others	986 395	1 000 443
Total	$2 607 288 (3)	2 650 458 (4)

Annual Going Rate of Payrolls		
Manufacturing	$15 271 435	$15 442 524
Design and Construction	2 728 106	2 781 311
Community	2 926 381	2 875 231
Others	12 688 017	12 748 334
Total	$33 613 939	$33 847 400

Average Salary Rate Per Hour(5)	July			August		
	Weekly	Monthly	Total	Weekly	Monthly	Total
Manufacturing	$2.062	$2.735	$2.183	$2.063	$2.733	$2.182
Design and Construction	1.575	2.812	2.055	1.580	2.811	2.051
Community	1.766	2.233	1.902	1.778	2.247	1.914
Others	1.668	2.563	1.874	1.674	2.560	1.879
Total	$1.847	$2.614	$2.021	$1.852	$2.616	$2.024

(1) Payments cover period from 16th of previous month to 15th of current month except that in the case of Design and Construction Divisions, payments cover period June 1, 1950 to June 30, 1950.

(2) Payments cover period from 16th of previous month to 15th of Current month, except that in the case of Design amd Construction Divisions, payments cover period July 1, 1950 to July 31, 1950.

(3) Includes payment for the four (4) week period ended July 25 in the case of weekly paid employees.

(4) Includes payments for the four (4) week period ended August 20 in the case of weekly paid employees.

(5) Includes shift differential and isolation pay. Excludes overtime premiums, commissions, suggestion awards, etc.

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General Accounting Division

Employee Benefit Plans

Pension Plan	July	August
Number participating at beginning of month	6 549	6 528
New participants and transfers in	46	74
Removals and transfers out	(67)	(78)
Number participating at end of month	6 528	6 524
% of eligible employees participating	94.6%	94.7%

Employees Retired	August	Total to Date
Number	6	144 (1)
Aggregate Annual Pensions Including Supplemental Payments	$1 899	$35 259 (2)
Amount contributed by employees retired	$1 205	$19 865

(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*	July	August
Number participating at beginning of month	5 717	5 710
New participants and transfers in	66	93
Cancellations	(18)	(5)
Removals and transfers out	(55)	(52)
Number participating at end of month	5 710	5 746
% of eligible employees participating	76.9%	77.8%

*Statistics exclude 44 pensioners as of the end of July and 45 pensioners as of the end of August who were granted lump sum pension settlement and who are paying premiums at Hanford Works

Group Life Insurance Claims	August	Total to Date
Number of claims	1	43
Amount of insurance	$5 900	$220 447

Group Disability Insurance (1)	July	August
Personal Coverage		
Number participating at beginning of month	3	3
New participants and transfers in	-0-	-0-
Cancellations	-0-	-0-
Removals and transfers out	-0-	-0-
Number participating at end of month	3	3
Dependent Coverage		
Number participating at beginning of month	2	2
Additions and transfers in	-0-	-0-
Cancellations	-0-	-0-
Removals and transfers out	-0-	-0-
Number participating at end of month	2	2

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General Accounting Division

Employee Benefit Plans (continued)

Group Disability Insurance (1) (continued)	July	August
Claims (2)		
Number of claims paid by insurance company:		
Employee Benefits		
Weekly Sickness and Accident	-0-	1
Daily Hospital Expense Benefits	10	8
Special Hospital Services	9	8
Surgical Operations Benefits	9	10
Dependent Benefits Paid		
Daily Hospital Expense Benefits	-0-	-0-
Special Hospital Services	-0-	-0-
Amount of claims paid by insurance company:		
Employee Benefits	$1 021	$ 952
Dependent Benefits	-0-	-0-
Total	$1 021	$ 952
Premiums		
Personal - Employee Portion	$ 5	$ 5
- Company Portion	3	3
- Total	$ 8	$ 8
Dependent- Employee Portion	$ 2	$ 2
- Company Portion	-0-	-0-
- Total	$ 2	$ 2
Grand Total	$ 10	$ 10

(1) Group Disability Insurance Plan was discontinued November 30, 1949. July and August 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)	July	August
Personal Coverage		
Number participating at beginning of month	6 965	7 005
New participants and transfers in	113	140
Cancellations	(2)	(3)
Removals and transfers out	(71)	(92)
Number participating at end of month	7 005	7 050
% of eligible employees participating	94.5%	94.7%
Dependent Coverage		
Number participating at beginning of month	4 639	4 665
Additions and transfers in	70	72
Cancellations	(6)	(3)
Removals and transfers out	(38)	(48)
Number participating at end of month	4 665	4 686

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General Accounting Division

Employee Benefit Plans (continued)

Group Health Insurance (1) (continued)	July	August
Claims (2)		
Number of claims paid by insurance company:		
Employee Benefits		
Weekly Sickness and Accident	45	66
Daily Hospital Expense Benefits	109	85
Special Hospital Services	114	86
Surgical Operations Benefits	91	61
Dependent Benefits Paid		
Daily Hospital Expense Benefits	171	140
Special Hospital Services	194	163
Surgical Operations Benefits	149	110
Amount of claims paid by insurance company:		
Employee Benefits	$15 197	$13 295
Dependent Benefits	18 380	15 929
Total	$33 577	$29 224
Premiums		
Personal - Employee Portion	$15 061	$15 162
- Company Portion	7 257 (3)	7 305 (3)
- Total	$22 318	$22 467
Dependent- Employee Portion	$13 059	$13 121
- Company Portion	10 401 (3)	10 450 (3)
- Total	$23 460	$23 571
Grand Total	$45 778	$46 038

(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

	August			Total to Date		
	Weekly	Monthly	Total	Weekly	Monthly	Total
Manufacturing	9	9	18	138	53	191-a)
Design and Construction	3	5	8	15	21	36
Community	3	3	6	25	19	44-b)
Technical	2	5	7	26	33	59-a)
Health Instrument	0	0	0	3	3	6-b)
Employee & Community Relations	1	0	1	4	4	8
Plant Security & Services	0	0	0	86	24	110
Purchasing & Stores	3	0	3	17	5	22
Medical	0	0	0	6	1	7-b)
General Accounting	0	1	1	5	2	7
General Administrative	0	0	0	0	1	1
Total	21	23	44	325	166	491

(a- Total to date reduced by 2 cancellations
(b- Total to date reduced by 1 cancellation

Annuity Certificates (For duPont Service)	August	Total to Date
Number issued	-0-	71

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General Accounting Division

Employee Benefit Plans (continued)

U. S. Savings Bonds	Mfg.	D&C	Comm'y	Other	Total
Number participating at beginning of month	1 698	255	311	1 439	3 703
New authorizations	20	9	6	28	63
Voluntary cancellations	(22)	(6)	(4)	(31)	(63)
Removals and transfers out	(8)	(2)	(3)	(15)	(28)
Transfers in	3	2	4	1	10
Number participating at month end	1 691	258	314	1 422	3 685
% Participating	51.0%	41.0%	43.8%	44.9%	47.1%
Bonds issued					
Maturity Value	$76 050	$11 200	$13 575	$62 825	$163 650
Number	1 551	216	272	1 254	3 293
Refunds issued	25	6	3	31	65
Revisions in authorizations	19	9	11	27	66
Annual going rate of deductions					
G.E. Employees Savings & Stock Bonus Plan	$700 105	$101 063	$118 092	$562 732	$1 481 992
General Electric Savings Plan	$206 383	$ 29 885	$ 35 319	$143 679	$ 415 266
Total	$906 488	$130 948	$153 411	$706 411	$1 897 258

Suggestion Awards	August	Total to Date
Number of awards	-0-	681
Total amount of awards	-0-	$11 235

Employees Sales Plan	August		
	Major Appliances	Traffic Appliances	Total
Certificates Issued	101	391	492
Certificates Voided	1	9	10

Salary Checks Deposited	July		August	
	Weekly	Monthly	Weekly	Monthly
Richland Branch - Seattle First National Bank	831	823	733	837
North Richland Area Office - Seattle First National Bank	9	7	11	7
Richland Branch - National Bank of Commerce	161	113	157	118
Out of state banks (Schenectady Staff)	--	2	--	2
Total	1 001*	945	901**	964

*Week ended 7-23-50
**Week ended 8-27-50

Special Absence Allowance Requests	July	August
Number submitted to Pension Board	5	6

Absenteeism (Weekly Paid Employees)	1949	1950
January 1 to August 20	2.29%	2.36%

1209453

General Accounting Division

PERSONNEL AND ORGANIZATION - GENERAL ACCOUNTING

Number of Employees	July	August
On Payroll at beginning of month	169	169
Removals and transfers out	(5)	(4)
Additions and transfers in	5	6
Number at end of month	169	171
Net increase (or decrease) during month	-0-	2
% of terminations and transfers out	2.9%	2.4%
% of absenteeism	2.62%	2.97%

Changes by division in number of Accounting Division employees during August were as follows:

General: Increase of one employee

One transfer from General Accounts

Accounts Payable: No Change

Two new hires
One transfer to Plant Accounting
One termination

Cost: Increase of one employee

One new hire

General Accounts: No Change

One new hire
One transfer to General

Plant Accounting: Increase of two employees

One transfer from Accounts Payable
One transfer from Plant Security and Services Division

Weekly Payroll: Decrease of four employees

One illness removal
One transfer to Monthly Payroll
One transfer to Special Assignments
One termination

Monthly Payroll: No Change

One transfer from Weekly Payroll
One termination

Special Assignments: Increase of two employees

One new hire
One transfer from Weekly Payroll

Budgets: No Change

1209454

Internal Audit: No Change

General Accounting Division

PERSONNEL AND ORGANIZATION - GENERAL ACCOUNTING (CONT.)

Injuries	July	August
Major	-0-	-0-
Sub-major	-0-	-0-
Minor	-0-	3

Number of Accounting Division employees as of August 31, 1950 were as follows:

	Number of Employees		
	Non-Exempt	Exempt	Total
General	3	4	7
Accounts Payable	14	1	15
Cost	13	1	14
General Accounts	15	1	16
Plant Accounting	22	4	26
Weekly Payroll	57	5	62
Monthly Payroll	15	2	17
Special Assignments	2	2	4
Budgets	3	1	4
Internal Audit	-0-	6	6
Total	144	27	171

Non-exempt employees may be summarized as follows:

	Number as of	
Classification	7-31-50	8-31-50
Accounting A	1	1
Accounting C	3	5
Accounting D	5	4
Business Graduate	9	14
Clerical Working Leader	5	5
Cost Clerk A	2	2
Cost Clerk B	1	1
Cost Clerk C	1	1
Cost Clerk D	2	2
Field Clerk C	1	1
General Clerk A	22	21
General Clerk B	36	35
General Clerk C	20	19
General Clerk D	7	6
General Clerk E	1	1
Office Machine Operator A	7	7
Office Machine Operator B	5	5
Secretary B	1	1
Steno-Typist A	2	2
Steno-Typist B	6	6
Steno-Typist C	2	3
Steno-Typist D	3	2
Total	142	144

Open employment requests as of August 31, 1950 were as follows:

Accounting C	1
Accounting D	1
Business Graduate	7
Steno-Typist C	3
Total	12

1209455

General Accounting Division

	July	Aug.
Accounts Payable*		
Balance at Beginning of Month	$ 75 637	$ 53 713
June accrual reversed during July	2 240	--
Vouchers Entered	1 036 971	952 312
Cash Disbursements	1 085 327 Dr.	937 585 Dr.
Cash Receipts	1 672	511
Balance at end of month	$ 53 713	$ 68 951
Number of Vouchers Entered	1 609	1 918
Number of Checks Issued	1 112	1 243
Number of Freight Bills Paid	217	268
Amount of Freight Bills Paid	$ 3 903	$ 4 364
Number of Purchase Orders Received	1 074	1 066
Value of Purchase Orders Received	$ 182 557	$ 214 201
Cash Disbursements		
Community	$ 55 726	$ 49 972
Design & Construction	3 133 785	3 231 124
General	3 097 820	2 944 340
Manufacturing	551 340	424 878
Total	$6 838 671	$6 650 314
Material and Freight	$1 433 544	$1 140 394
Lump Sum and Unit Price Subcontracts	92 703	202 124
CPFF Subcontracts		
Labor	1 651 673	2 056 683
Others	699 719	480 195
Payrolls (Net)	1 837 467	1 857 632
Payroll Taxes	303 119	330 002
U. S. Savings Bonds	175 026	149 124
General & Administrative Expenses	200 000	200 000
Miscellaneous	445 420	234 160
Total	$6 838 671	$6 650 314
Cash Receipts		
Community	$ 139 357	$ 99 378
Design & Construction	37 703	30 484
General	6 041 310	6 077 306
Manufacturing	9 740	12 708
Total	$6 228 110	$6 219 876

* General Divisions Only.

1209456

General Accounting Division

	July	August
Detail of Cash Receipts		
Advances from AEC	$5 931 888	$6 030 771
Rents	110 131	110 833
Hospital	42 587	35 295
Telephone	14 602	14 318
Scrap Sales	54 986	7 956
Bus Fares	8 881	9 192
Miscellaneous Accounts Receivable	57 689	4 218
Refunds from Vendors	3 628	3 460
Employee Sales	449	751
Educational Program	-0-	2
All Other	3 269	3 080
	$6 228 110	$6 219 876
Number of Checks Written		
Community	189	194
Design & Construction	381	381
General	1 112	1 243
Manufacturing	622	661
Total	2 304	2 479
Bank Balances at End of Month		
Chemical Bank & Trust Company - New York		
Contract Account	$2 610 521	$1 760 177
Seattle First National Bank - Richland		
Contract Account	2 038 096	2 525 785
U. S. Savings Bond Account	208 795	196 665
Salary Account No. 1	20 000	20 000
Salary Account No. 2	30 000	30 000
Travel Advance Account	28 803	25 740
Seattle First National Bank - Seattle		
Escrow Account	57 496	57 496
National Bank of Commerce - Richland		
Contract Account - Manufacturing	348 660	275 122
Contract Account - Community	44 274	50 028
	$5 386 645	$4 941 014
Travel Advances and Expense Accounts		
Cash Advance balance at end of month*	$ 17 662	$ 20 336
Cash Advance balance outstanding over one month*	850	1 016
Traveling and Living Expenses:		
Paid Employees	19 106	19 338
Billed to Government	17 358	17 291
Balance in Variation Account at end of month	1 748 Dr.	3 795 Dr.

* General Divisions Only.

1209457

General Accounting Division

	July	August
Hospital Accounting		
Accounts Receivable		
Balance at Beginning of Month	$ 128 044	$ 113 630
Invoices Issued	39 642	46 309
Refunds	1 070	783
Cash Receipts	42 587 Cr.	35 295 Cr.
Payroll Deductions	12 621 Cr.	8 860 Cr.
Bad Debts Written Off Adjustments	-0-	45 Cr.
Bad Debts Reinstated	82	-0-
Balance at End of Month	$ 113 630	$ 116 522

	Total to Date	August
Scrap Sales		
(a) Number of Sales	230	11
(b) Revenue (Not Including Sales Tax)		
Revenue to G. E.	$241 732	$7 956
Revenue to A.E.C. (Sale of Tract Houses)	32 723	-0-
Total Revenue	$274 455	$7 956

1209458

General Accounting Division

ACCOUNTS PAYABLE

The number of vouchers booked in August increased 19% over July. However, the dollar amount of disbursements decreased. In August there were 1 918 vouchers booked amounting to $952 313 as compared with 1 609 vouchers amounting to $1 063 972 in July.

The number of checks issued also increased over July as indicated below:

	August	July
Chemical Bank & Trust Company	414	339
Seattle First National Bank	829	773
Total	1 243	1 112

A total of 1 889 vouchers were paid during August, averaging 1.52 vouchers per check, the same average as in July.

At the end of August there were 1 014 vouchers on hand requiring additional supporting data before they could be forwarded to AEC for final audit. This represents a decrease of 136 from July, which is particularly significant considering the fact that there were 309 more vouchers processed in August than in July. Details are as follows:

	August	July
Number on Hand - Paid	181	175
" " " - Unpaid	833	975
Total	1 014	1 150

Included in the above total of 181 paid vouchers on hand, only 12 were over 90 days old.

The number of freight bills paid in August increased from July. Total was 268, amounting to $4 364 compared with 217 in July, amounting to $3 903.

The general ledger Accounts Payable balance as of August 31, 1950 was $68 951.24, a considerable increase over July's balance. Details of this balance by months compared with July are as follows:

	August	July
March	$ --	$ 34.10 Dr.
May	400.34 Dr.	784.05 Dr.
June	411.34 Dr.	4 793.04
July	791.88 Dr.	49 737.97
August	70 554.80	--
	$68 951.24	$53 712.86

1209459

General Accounting Division

ACCOUNTS PAYABLE (CONT.)

New purchase orders issued in August pertaining to General Divisions decreased slightly in number from July but increased in amount. Details are as follows:

	August		July	
	No.	Amount	No.	Amount
New Purchase Orders	1 066	$214 201	1 074	$182 557
Alterations	86		53	

During August a change was made by Traffic Section of Purchasing Division involving the payment of freight bills to truck carriers. Heretofore, checks issued by Accounts Payable in payment of truck freight bills were issued to each individual truck company. Effective August 1, truck bills are paid to Transport Clearings who, in turn, credit the various truck lines for amounts due them. This new procedure results in fewer freight statements forwarded to us by Traffic Section for payment and fewer checks written in payment of truck bills. There are 34 truck lines co-operating in this new arrangement.

BUDGETARY CONTROL

On August 10, 1950 a request was received from AEC for a quarterly breakdown of operating costs by activities and construction costs by projects for FY 1951.

The quarterly breakdown of operating costs was readily available from data furnished by each division in their submission of FY 1951 budget estimates in April, 1950. Schedules furnished by AEC showing the quarterly breakdown of operating costs for FY 1951 by activities was accordingly completed and forwarded to the AEC budget office on August 18, 1950.

In connection with the quarterly breakdown of construction costs by projects for FY 1951, it was necessary to contact the sponsoring divisions and have them furnish the information desired relative to each project in order to complete the schedules. A letter requesting the required information together with necessary instructions was prepared and forwarded to each division on August 14, 1950.

Information was obtained from the sponsoring divisions, and data was transcribed to the AEC schedules and submitted to AEC on August 23, 1950.

During the middle of the month, revised AEC construction budgets were received which reflected revisions of estimated total costs of certain construction projects sponsored by the General Divisions. Letters were prepared and forwarded to respective division managers advising them of the revisions and reasons therefor.

COST

Operating reports for the month of July were issued on August 15, 1950. Detailed reports of Research and Development costs for the month of July were issued on August 21, 1950. Due to delayed closing dates for the month of June, letters to division managers analyzing June costs were issued on August 10, 1950, and the Summary of Costs report for month of June was issued on August 7, 1950.

General Accounting Division

COST (CONT.)

Effective July 1, 1950, Research and Development costs were segregated and recorded by Research and Development Authorization. This involved major revisions in the detail ledgers and required a complete revision of Health Instrument Research Program codes. Since Health Instrument Divisions requested a report of costs by each section within a division regardless of R.D.A., a supplemental report was prepared detailing costs by section.

Work in connection with the detailed analysis of charges to other divisions for the month of May was completed and the reports were issued to Manufacturing on August 7, and to Community and Medical on August 18.

The write-up of current liquidation procedures for General Divisions is practically completed and it is expected that issuance to all interested parties will be made early in September.

Due to revisions occurring in both divisional and Research and Development accounts in FY 1951, it was difficult to accurately estimate assessments from Manufacturing Divisions; therefore, actual Manufacturing Assessments, rather than estimated, were booked in July. It is felt that actual assessments can be booked in subsequent months instead of booking assessments one month in arrears as has been done in the past without delaying the issuance of Operating Reports.

Arrangements were made with Stores personnel to charge inventories directly for the cost of printing forms for stores stock. To avoid duplication of costs on consolidated statements, this charge to inventory is carried as an "expense credit" in Printing costs rather than being treated as an assessment.

Letters to division managers analyzing July costs were issued on August 24, 1950. Letters relative to Technical and Health Instrument Divisions included a detailed summary of Research and Development Costs.

GENERAL ACCOUNTS

The General Accounting Division issued 1 243 contract checks during August totaling $2 944 340, and representing a decrease of $153 480 in expenditures as compared with July.

Advances from A.E.C. remained $5 500 000 and are accounted for as follows:

	August	July
Cash in Bank - Contract Accounts	$ 4 611 113	$ 5 041 550
Cash in Transit	460 208	30 771
Expenditures Disallowed by A.E.C.	18 679	17 679
Cash in Bank - Salary Accounts	50 000	50 000
Travel Advance Funds	60 000	60 000
Advances to Subcontractors	300 000	300 000
Total	$ 5 500 000	$ 5 500 000

1209461

General Accounting Division

GENERAL ACCOUNTS (CONT.)

An additional $1 000 was deducted from net disbursements to be applied against advances from the Atomic Energy Commission, increasing Expenditures Disallowed by the Atomic Energy Commission to $18 679. Of the total disallowed to date, $8 000 represents disallowed expenditures in connection with payments to straight day workers - GAO Informal Inquiry No. GE-37. The balance, $10 679, is in connection with GAO Informal Inquiry No. GE-36 covering payments for expenses in connection with transferred employees.

The major cause for the decrease in Accounts Receivable Miscellaneous from $25 303 to $2 566 was the receipt from the Atomic Energy Commission of credit for May and June billings for facilities furnished the Army at the North Richland Camp. The present balance in this account primarily represents claims against carriers which are being followed by the Traffic Section of the Purchasing Division.

This section processed 87 Travel Expense Reports during August amounting to $10 699. Of this total, the Atomic Energy Commission reimbursed $10 203 and the balance of $496 was charged to the Travel and Living Expense Variation Account. Open Travel Advances to Employees was $20 366 compared with $17 662 as of July 31.

Fiscal Year to Date the Travel and Living Expense Variation Account has been charged $3 795 (all Divisions). Of this total, $2 047 represents current month's charges; $ 47 representing entertainment expenses and $2 000 representing the difference between expenses incurred by employees and reimbursements received for the Atomic Energy Commission. The major portion of the $2 000 represents expenses of employees who attended Association Island Conference which the Atomic Energy Commission did not reimburse.

Memorandum Billings were received from Knolls Atomic Power Laboratory covering Engineering and Consulting Laboratory Assistance to Hanford in the amount of $164 209, KAPL Assistance to Hanford of $1 279, and Research Laboratory Assistance of $2 020.

General Ledger Trial Balances were received from all Accounting Divisions by August 17, 1950. Hanford Works Financial Statements were completed August 22 and Consolidated Financial Statements on August 30, 1950.

The Project Report as of June 30, 1950 was completed during August. This report shows the cost of each project completed as of June 30, 1950 and the distribution as to Property In Service, Costs, and Major Construction Program Facilities. Each of the above captions was divided between Prior Years and Current Year Transfers from Construction Work in Progress. Current Year - Property In Service was reconciled with the records of the Plant Accounting Section. A detail of completed work orders that were run through Construction Work in Progress was also included in the report. These work orders were segregated between those capitalized and those charged to costs.

1209402

The balance in Government Cost Transfers decreased $2 028 336 this month. This decrease is principally due to the transferring of excess material to the Atomic Energy Commission.

Government copies of all Accounts Payable Vouchers prior to June have been transmitted to the Atomic Energy Commission with the exception of 12 vouchers from General Division, and 6 from the Design and Construction Division which require additional supporting details.

General Accounting Division

INTERNAL AUDITING

Review of Charges to Manufacturing Divisions from other Divisions for the period from September, 1948 through May, 1950 was completed and report was submitted.

Investigation of costs and procedures was made in connection with the use of the Armored Car provided for the Seattle First National Bank used in transferring funds between Pasco, Richland, and North Richland. Also investigated in this study were costs of janitor service for the Seattle First National Bank at North Richland and the Post Offices at Richland and North Richland.

Review of the mail distribution system at Hanford Works was begun in August. The study will cover mail distribution to and from all areas, and will include regular, classified and D & C mail. The purpose of this review is to determine if service can be expedited in certain areas and to centralize, if possible, the responsibility for handling mail. At present, seven divisions are involved in mail distribution.

During the month, audit verification was received by mail of the following deposits and advances to subcontractors.

1. Deposit - Washington State Industrial Insurance
2. Deposit - Washington State Medical Aid Account
3. Advances to Subcontractors (The Kellex Corp.)
4. Deposit - Postage Due
5. Deposit - Air Travel Plan
6. Deposit - Library of Congress

MEDICAL ACCOUNTING

The accounts receivable balance increased this month from $113 630 to $116 522. This increase results both from increased sales and a decrease in collections and payroll deductions.

Out-patient invoices numbered 1 736 and amounted to $9 780 as compared with July invoices which numbered 1 572 and amounted to $7 694. Of this months' total, cash invoices numbered 1 004 and amounted to $2 623; charge invoices numbered 732 and amounted to $7 156.

In-patient revenue increased $4 582 due to increased adult patient day census, from 60.5 to 68.5.

During the month, 23 claims were submitted to the Washington Hospital Service under the Blue Cross Insurance Plan.

A total of 54 claims in the amount of $1 703.80 have been submitted to Fort Lewis for services rendered military personnel, of which payment has been received for 9, totaling $424.75.

We received $63.97 from the Yakima Adjustment Service as our portion of collections made by them during the month. We submitted a check in the amount of $27.41 to them as their portion of recalled accounts collected by Kadlec Hospital.

Beginning September 1st, laboratory and x-ray services to out-patients will no longer be billed to the doctors at regular fee schedule less 25%, but will be considered as regular hospital charges and billed to the patient as such. This change in procedure will enable patients to receive refund through their group insurance for these charges which was not the case when billings were made by the doctors.

1209443

General Accounting Division

PLANT ACCOUNTING

The first annual Plant Accounting Statement for fiscal year ended June 30, 1950 was issued in August. This statement presented in detail, changes in both plant and reserve accounts during the year.

At the request of the Atomic Energy Commission, a Retirement Work in Progress Ledger was established which will record all retirements of Plant accounts, will accumulate all salvage credits, and record all removal costs in connection with Retirement projects or incidental to Construction projects. In this connection, all credits for salvage with respect to Plant equipment dismantled will be accumulated as Retirement Work in Progress until such time as the Retirement project is complete. A memorandum outlining Retirement Procedures was prepared and discussed with the Atomic Energy Commission and also circulated to Division Accountants for comment. The memorandum has now been prepared for presentation to interested parties.

A tentative distribution of the $34 479 000 accumulated as Undistributed Depreciation Expense for fiscal year 1950 was prepared and issued in report form. The allocation as arrived at (stated in thousands of dollars) is as follows: Production, $30 589; Research and Development, $357; Community, $3 345; Medical, $79; and Construction, $109.

1209464

General Accounting Division

PAYROLLS

During the month of August there were 128 removals from Payroll of which one was a removal due to lack of work. There were no transfers to other units of the Company. There were 151 additions to the Payroll, including five transfers from other units of the Company. The result is a net increase of 23 employees on the Payroll.

* * * * * * * *

Under the General Electric Employees Savings and Stock Bonus Plan, 148 participating employees withdrew from the Plan 1,110 U. S. Savings Bonds having a maturity value of $52,175. U. S. Savings Bonds and Custody Receipts covering purchases by employees through payroll deductions in July were delivered to employees on August 25, 1950. There were 711 U. S. Savings Bonds and 3,132 Custody Receipts delivered to employees.

As of August 31, 1950, percentage of Hanford Works employees participating in the G. E. Employees Savings and Stock Bonus Plan and General Electric Savings Plan, and the annual going rate of payroll deductions was as follows:

	Manufacturing	D & C	Community	Other	Total
G. E. Employees Savings and Stock Bonus Plan	46.3%	36.6%	38.8%	40.4%	42.5%
General Electric Savings Plan	12.2%	7.9%	9.9%	8.7%	10.2%
Both Plans	51.0%	41.0%	43.8%	44.9%	47.1%

Annual Going Rate of Deductions

	Mfg.	D & C	Comm'y	Other	Total
G. E. Employees Savings and Stock Bonus Plan	$700 105	$101 063	$118 092	$562 732	$1 481 992
General Electric Savings Plan	206 383	29 885	35 319	143 679	415 266
Total	$906 488	$130 948	$153 411	$706 411	$1 897 258

* * * * * * * *

Under the Group Health Insurance Plan, 433 claims for benefits by employees were forwarded to Metropolitan Life Insurance Company during August, and 637 checks amounting to $ 29,224 were received from the Insurance Company covering payment of 431 claims submitted by employees for benefits under the Plan.

* * * * * * * *

During August, 42 new authorization cards for check-off of Union Dues were received by Weekly Payroll Division for members of seven unions affiliated with Hanford Atomic Metal Trades Council, as follows:

General Accounting Division

PAYROLLS (CONT.)

Union	Number
International Union of Operating Engineers, Stationary Local 280	6
International Chemical Workers Union, Local 369	13
United Association of Journeymen and Apprentices of the Plumbing and Pipe Fitting Industry of the United States and Canada, Local 598	2
International Brotherhood of Teamsters, Warehousemen, Garage Employees and Helpers, Local 839	3
Building Service Employees' Union No. 201	2
Instrument Craftsmen's Guild, Hanford Industrial Firemen #37	14
Laundry Workers International Union, Local 197	2
Total	42

Authorizations for check-off of Union Dues in effect at August 31, 1950, cover 580 employee members of 14 Unions.

* * * * * * * *

Permission to defer one week of their 1950 vacations until 1951 was granted by Division Managers in August to 21 Weekly Paid employees and 23 Monthly Paid employees. To date, permission to defer 1950 vacations until 1951 has been granted to 325 Weekly Paid employees and 166 Monthly Paid employees.

* * * * * * * *

There were 24 time cards received late in Weekly Payroll during the month of August as follows:

Week Ended	Number
7-30-50	7
8-6-50	4
8-13-50	3
8-20-50	4
8-27-50	6
Total	24

* * * * * * * *

During the month of August, 230 authorizations for deductions from payroll for the purchase of safety shoes were received in Payroll Divisions.

* * * * * * * *

Approximately 116,796 items were addressographed in Weekly Payroll Division during August in addition to regular routine addressograph work. At the request of Union Relations Division, an addressograph file of 110 Stewards of Hanford Atomic Metal Trades Council was prepared for use in mailing bulletins issued by Union Relations Division.

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General Accounting Division

PAYROLLS (CONT.)

In connection with Patent Application Bonus Payments, the first such payment to a Weekly Paid employee at Hanford Works was made during the month of August to an employee in the Instrument Division.

* * * * * * * *

On request of supervision, during the month of August Weekly Payroll Division issued vacation payment checks to forty employees prior to normal pay day.

* * * * * * * *

For the purpose of comparing overtime forecast with actual overtime paid, a report was prepared for Management covering overtime hours worked and amount of overtime paid for the month of July. The report shows the following information segregated according to Divisions:

1. Actual Overtime Hours Worked, segregated as to weekly paid and monthly paid employees.

2. Total Overtime Paid, segregated as to weekly paid and monthly paid employees.

3. Total Payroll for the month.

4. Percent of Overtime Paid to Total Payroll.

* * * * * * * *

In connection with the administration of the Annuity Plan for former duPont employees, reports were prepared and forwarded to Connecticut General Life Insurance Company covering current status of eligible employees at Hanford Works. As of June 30, 1950, there were 2,926 male employees and 368 female employees on the Annuity list. At August 31, 1950, Annuity Certificates had been issued to 71 participating employees. One employee will begin receiving annuity payments under the Plan on September 1, 1950. This is the first employee to become eligible for payments under the Plan.

* * * * * * * *

Considerable time was devoted during the month to the preparation of procedures and instructions letters relative to revised method of reporting time and shifts worked by Weekly Paid employees.

* * * * * * * *

The first draft of the Appendix C to the Prime Contract is not completed. However, several sections of the Appendix were revised and completed in August.

* * * * * * * *

At the end of August, Bank Recomciliations were complete as follows:

1. Weekly Payroll through Payroll No. 205 for the week ended July 30, 1950.
2. Weekly Salary Vacation Payroll through Payroll No. 205 for the week ended July 30, 1950

* * * * * * * *

1209461

PLANT SECURITY AND SERVICES DIVISIONS

MONTHLY REPORT - AUGUST 1950

SUMMARY

There were no lost time injuries during the month. The accident frequency rate for the year to date has been further reduced to 0.20.

On August 30, 1950, the General Electric Employees of Hanford Works were awarded the Nucleonics Safety Council Award for the outstanding safety performance of having worked 134 consecutive days, or 5,519,086 man hours, without a lost time or disabling injury.

There were ten fire alarms in the industrial areas with a total loss of $28.61.

Volume of work in both the 700 and 200-West Area Laundries increased noticeably. The 200-West increase was due primarily to an extended shutdown in the 100-D Area.

Volume of work in all of the Clerical Services sections increased during the month.

Two new posts were established in the 200-West Area on August 23. These posts will control construction personnel entering or leaving the operation construction area. One similar post was established in the 234-5 Area on August 1.

1209468

PLANT SECURITY AND SERVICES DIVISIONS

MONTHLY REPORT - AUGUST 1950

ORGANIZATION AND PERSONNEL

Number of employees on payroll:

	Beginning of Month	End of Month	Increase	Decrease
Staff	3	3		
Patrol and Security	593	595	2 (a)	
Safety & Fire Protection	144	144		
Office Services (General Services, Clerical Services, Records Control and Office Methods)	228	230	2 (b)	
TOTALS	968	972	4	

NET INCREASE: 4

(a) - Patrol and Security

1 - New Hire (Security)
2 - Returned from Leave of Absence (Patrol)
2 - Transferred from Community Division (Patrol)
3 - Terminations

(b) - General Services

1 - Termination

Clerical Services

9 - New Hires
5 - Transferred to other Divisions
2 - Terminations

Records Control

1 - New Hire

1209969

Plant Security and Services Divisions

SAFETY AND FIRE PROTECTION

On August 30, 1950, the General Electric Company employees of the Hanford Works were awarded the Nucleonics Safety Council's Award for the outstanding safety performance of working 134 days, or 5,519,086 manhours, without one lost time or disabling injury.

In recognition of this achievement, all General Electric Company employees on the payroll as of August 30, 1950 at Hanford Works will be presented with individual awards for their part in accomplishing this outstanding safety performance. Selection of these awards will be individual and a variety of gifts will be available. Publicity on the selection and method of distribution of the gifts by areas is being covered in the WORKS NEWS.

Injury Statistics

Days since last Major Injury	135
Accumulated Exposure Hours since last Major Injury	5,561,086*
Major Injury Frequency Rate (start-up to date)	0.81

* Includes corrected July 1950 reported exposure hours.

	July	August	Year to Date
Major Injuries	0	0	2
Sub-Major Injuries	4	1	18
Minor Injuries	301	359	2,539
Exposure Hours	1,226,625	1,320,408	9,963,055
Major Injury Frequency Rate	0.0	0.0	0.20
Major Injury Severity Rate	0.0	0.0	0.002
Minor Injury Frequency Rate	2.45	2.72	2.55

Sub-Major Injury No. 183

On August 23, at approximately 2:30 P.M., an employee of the Project Engineering Design Division assigned to the 700 Area but working in the 108-B Building, 100-B Area, sustained a compound fracture to the right little finger when his finger entered an opening in the bell housing of a small variable speed motor and was struck by the cooling fan blade.

Safety Activities

Tabulation of results on the Safety Sense-Us has been completed.

Tests are being made on protective hood and apron equipment for the purpose of granting or withholding approval for purchase.

An unusual health and explosive problem involving Amercote existed in the 105-DR Area and was resolved with assistance of the Fire Protection Engineer, 105 P Division supervision and the Maintenance Division.

A light level survey (light metered) was conducted of the Power House in the 100-F Area. It was found that the light level was very low in certain work locations, creating a safety hazard. These conditions are being corrected.

1200410

Plant Security and Services Divisions

Safety Activities (Contin.)

In conducting an air sample test in the valve pit of the 1707 Building, it was found that couplings on vertical drive shafts from motors to pumps created a hazard to a person entering the pit with a life line attached. This condition was brought to the attention of the Division involved.

Information was gathered for the 700 Area Safety film and is to be turned over to the Employee Relations Division for writing of the script.

A bad dust condition in the coal crusher unit was resolved at the power house in the 300 Area.

An evacuation of the 3706 Building brought to light the fact that two exit doors, not used except during emergencies, had been caulked shut. Maintenance uncaulked the doors.

The 321 Building is making plans for a complete shut down of operations for an extended period.

Fire Protection Activities

Patrol was given training in the use of first aid fire extinguisher equipment and in the operation of the fire alarm system in their training school. This training will be continued through the month of September at which time Patrol will have been completely covered.

The 300 Area Fire Department was given training in the operation of automatic fire detecting devices and sprinkler systems.

Steam lines being installed by a sub-contractor were being placed too close to combustible material. This condition was brought to the attention of the proper authorities and is being corrected.

Fire hose line was installed onto the roof of the 185 Building in the 100-D Area to be used in connection with the Morrison-Knudsen job of dismantling deareators on this building.

A fire extinguisher demonstration was presented to employees of the Morrison-Knudsen sub-contractor group who are working at the 185 Building in the 100-F Area.

Industrial Fires

Division	Area	No. of Fires	Cause	Loss
Transportation	Outer	1	Spark from Railroad	None
Transportation	100-F	1	Spontaneous Ignition	$28.61
Transportation	Outer	1	Motor Vehicle	None
Electrical	Outer	1	Cigarette	None
	Outer	2	Cigarette	None
TOTALS		6		$28.61

1209471

Plant Security and Services Divisions

Industrial Investigations

Division	Area	No. of Fires	Cause	Loss
Minor Construction	100-B	1	Spark from Welding	None
Power	100-D	1	Welding Slag	None
Maintenance	200-W	1	Welding	None
Maintenance	200-E	1	Heating flammable liquids	None
TOTALS		4		None
TOTAL INDUSTRIAL FIRES		10	TOTAL LOSS	$ 28.61

OFFICE SERVICES DIVISION

General Services

Plant Laundry (Building 2723)

	July	August
Coveralls - Pieces	22,405	30,083
Towels - Pieces	7,457	9,432
Miscellaneous - Pieces	57,490	76,432
Total Pieces	87,352	115,947
Total Dry Weight - Lbs.	117,830	157,995

Richland Laundry (Building 723)

Flatwork - Pieces	48,322	57,931
Rough Dry - Pieces	26,684	30,983
Finished - Pieces	2,196	2,640
Total Pieces	77,202	91,554
Total Dry Weight - Lbs.	58,024¼	69,912

Monitoring Section (Building 2723-W)

Poppy Check - Pieces	68,420	88,504
Sealer Check - Pieces	94,601	122,116
Total Pieces	163,021	210,620

Increased volume of work in the Plant Laundry (Building 2723)is due to the extended shutdown in the 100-D Area.

1209872

Plant Security and Services Divisions

Clerical Services

Mail Room

	July	August
Pieces of Internal Mail Handled	541,514	491,714
Pieces of Postal Mail Handled	53,773	65,266
Pieces of Registered Mail Handled	1,127	1,164
Pieces of Insured Mail Handled	994	343
Pieces of Special Delivery Mail Handled	334	277
Total Mail Handled	597,742	558,764
Total Amount of Postage Used	$1,457.41	$1,830.04
Total Teletypes Handled	779	4,271

Office Equipment

	July	August
Office Machines Repaired in Shop	213	295
Office Machine Service Calls	318	323
Total Machines Serviced	531	618

Printing Section

Printing work continues to be very heavy and shows no sign of declining.

	July	August
Multilith orders received	206	282
Multilith orders completed	195	277
Multilith orders on hand	69	74
Stencil and fluid duplicating orders received	909	1,143
Stencil and fluid duplicating orders completed	855	1,155
Stencil and fluid duplicating orders on hand	63	51

Stenographic Services Section

This section was moved to a new location during the month which gives them ample space to conduct their work.

	July Hours	August Hours
Dictation and Transcription	11:45	21:00
Machine Transcription	33:45	36:30
Letters	125:10	105:15
Manual and Procedures	258:20	136:55
Duplicating--Stencils, Ditto	331:35	485:40
Special	604:40	456:35
Training	138:25	7:35
Unassigned Time during the month	20:00	38:45

120997

Plant Security and Services Divisions

Stenographic Services Section (Contin)

	July Hours	August Hours
Meeting Time	34:30	7:35
Holiday and Vacation	128:00	:00
	1,686:10	1,629:00
Employees loaned to other divisions	993:50	1,197:00
Total Hours Available	2,680:00	2,826:00

Records Control Division

Quantity of records received, processed and stored:

Accountability - SF	16	Standard Storage Cartons
Community Division	23	" " "
Design and Construction Divisions	40	" " "
Employee & Community Relations	12	" " "
General Accounting Division	81	" " "
Health Instrument Division	25	" " "
Manufacturing Accounting Division	18	" " "
Medical Division	8	" " "
"P" Division	74	" " "
Purchasing Division	26	" " "
"S" Division	2	" " "
Service Division	1	Standard Storage Carton
Stores Division	64	Standard Storage Cartons
Technical Division	14	" " "
Transportation Division	1	Standard Storage Carton
Total	405	Standard Storage Cartons

Persons provided records services: 360

Standard storage cartons issued: 526

Records retention schedules have been set and approved by division managers on approximately 50% of plant records. Schedules on approximately 25% of plant records are in the hands of division managers awaiting approval. The balance are in process of being reviewed and typed. When completed, all schedules will be summarized for Records Committee and General Electric approval prior to being sent to the Atomic Energy Commission for approval.

The uniform filing method has been placed into operation in the Health Instrument and Plant Security and Services Divisions.

All metal shelving space has been filled in the Records Service Center. Eighty-four sections of shelving on order since April was shipped by Federal Prison Industries on August 22.

Plant Security and Services Divisions

It has been agreed with the Atomic Energy Commission Records Section to eliminate four of the nine shelves per section on the balance of the shelving being ordered for the Center. It is hoped this will speed up delivery. It also effects a saving on total cost of shelving. The Atomic Energy Commission is working toward getting steel allocated to Federal Prison Industries for the order.

Office Methods Division

General Activities -

	July	August
Printing orders reviewed	286	391
New numbers assigned	247	239
Printing orders cancelled	8	41
Forms redesigned	22	19

Printing orders cancelled, represent 39 orders for small quantities of forms that are regularly stocked for distribution by either the division that originated the form or stores stock. Two orders were for forms that could not be justified. The accumulated savings on these 41 orders is approximately $225.00 in printing costs.

A "Budget Item Data" form has been designed to replace twelve forms currently in use. This form will greatly consolidate present method of recording progress data on budget items requiring special appropriations of funds for construction and maintenance purposes, and also expedite the distribution of current information. Savings to be realized from this new form and its related procedure will be evaluated on the basis of actual results.

A study was made of the 705 Building for the purpose of proper space utilization. A recommendation was made which will relieve their present needs for more space and also provide for an expansion in present personnel.

A new procedure for conducting interim medical examinations which was installed in June 1950 has now been evaluated to represent an annual saving of approximately $6,000.00.

Total estimated savings created by above activities were $6,225.00; $6,000.00 of which will be on a recurring annual basis.

PATROL AND SECURITY

General

Effective August 1, a new post was established at the west end of 234-5 area to control the entrance and exit of personnel associated with the 234-5 construction area. This post will be known as the 234-5 construction badge house and will be manned by one man 8:30 A.M. to 5:30 P.M. daily, Monday through Friday.

Twenty-two members of U.S. Army personnel started removing 7,000 railroad ties from the 200-East area on August 4. Health Instrument badges were used by these men. It will take approximately seven days to remove the 7,000 ties.

1209475

Plant Security and Services Divisions

Effective August 7, the Prosser and Richland Barricade patrolmen will call 300 Area headquarters every 15 minutes during the hours 6:00 P.M. to 6:00 A.M., Monday through Friday, and all shifts Saturdays, Sundays and Holidays. This calling is to afford better contact with these out of area posts.

Effective August 8, two patrolmen were assigned to the Richland bus terminal from 6:30 A.M. to 7:50 A.M., Monday through Friday, to check passes of persons failing to present pass to bus driver as they board the bus. This assignment was temporary.

As of August 14, the 762 Building reception desk will be opened at 7:30 A.M. and closed at 6:00 P.M. This additional open time will permit early and late workers to use this entrance.

One patrolman and a radio equipped sedan were placed on special traffic duty over the plant roads and highways on August 15. This extra traffic car will operate out of the 300 Area on the No. 2 shift only and is temporary.

The temporary post established to act as escort during construction on the 722-A Building was discontinued August 17 after work on this building was complete.

A badge system was established and approved for contractor employees doing construction work at the Pasco Depot. These badges will be issued each morning as men clock in, and picked up as they clock out. Issuance and pickup will be done by the contractor.

Two new posts were established in the 200-West Area on August 23. These posts are located on 1st Street and approximately 300 yards west of the 221-U Area. Posts will be known as (1) 200-West Main Construction Badge House, manned by one man 24 hours per day, and (2) 200-West Main Construction Vehicle Gate, manned by one man 24 hours per day. These posts will control construction personnel entering or leaving the operation construction area. Operations personnel associated with the construction program in the Redox Construction Area may arrange for entry to the 200-West area via this entrance.

Night plant inspections were made by the Security Patrol duty officers on August 4, 5, 7, 8, 9, 16 and 25.

Patrol

The 200 Areas handled 132 process escorts between the areas.

Requests handled totaled 373, consisting mainly of opening doors, buildings, gates and issuing keys for employees of other departments.

A total of 82 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 625 pat searches were made of employees leaving the operating areas during the month.

1209476

Plant Security and Services Divisions

Patrol (Contin)

Classified escorts totaling 336 were handled during the month.

A total of 83 traffic escorts were handled during the month.

Patrol made 13 ambulance runs for the Medical Division during the month.

Practice Evacuations were held as follows:

100-B Area	8-17-50	10:07 A.M.
100-H Area	8- 9-50	11:35 A.M.

Practice Blackouts were held as follows:

100-B Area	8-31-50	9:04 P.M.
100-F Area	8-30-50	9:22 P.M.
100-H Area	8-30-50	10:15 P.M.
101 Area	8-30-50	9:22 P.M.
300 Area	8- 7-50	9:50 P.M.
300 Area	8-22-50	8:15 P.M.
300 Area	8-24-50	8:15 P.M.
200-East Area	8- 8-50	9:30 P.M.
200-East Area	8- 9-50	9:30 P.M.
200-West Area	8- 8-50	9:30 P.M.
200-West Area	8- 8-50	9:30 P.M.

Practice Mobilization Plan A:

100-D Area	8-16-50	5:21 A.M.
100-H Area	8- 1-50	1:33 A.M.
100-H Area	8-13-50	1:02 A.M.
200-West Area	8-12-50	8:06 P.M.
200-West Area	8-13-50	1:32 A.M.
200-West Area	8-13-50	2:35 P.M.

Arrest Summary

	July	August
Warning Tickets issued	1	2
Verbal warning given	0	11
Citation tickets issued (traffic only)	1	6

Accident Summary

Total accidents	4	9
Government permits suspended	0	0

Training

Training courses held during the month were as follows:

	Hours
Pistol	2
Safety	1/4

1209477

Plant Security and Services Divisions

Patrol (Contin)

	Hours
Health	1/4
Security	1/2
Operations Class No. 1	1
Operations Class No. 2	1
Operations Class No. 3	1 1/2
Operations Class No. 4	1/2
Division policy regarding seniority	1

The Patrol Safety Hurdle Race inspection committee made their monthly inspection of all areas August 8. This was for the month of July. The necessary reports of the standings were sent to the areas.

Pictures were taken by the Hanford Works News photographer and an article written to publicize the Patrol Safety Hurdle Race.

Arrangements were made with the Health Instrument Division to hold an hour class with regard to Production hazards and the use of detection equipment during the training period commencing September 29.

The semi-annual inventory of Range equipment and arsenal supplies was made. A physical count was conducted.

An instructor at the Training School spent the majority of the month conducting activities associated with the formulating of a Security Patrol activities film. This was completed August 28.

Security

"Q"orientation talks were given during the month by representatives of the Security Division to 72 employees.

There were 220 security meetings held and attended by 3,090 General Electric employees during the month.

A Security representative showed the security film "Fitting U Into Security" at 12 meetings and 251 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	101
Class "Q" clearances received on new employees to date	6,784
Class "Q" clearances received on both old and new employees since February 17, 1947	11,244
Formal "P" clearances awaiting change to "Q"	72
Authorization clearances issued this month	50

*This section will be discontinued as of this month, inasmuch as the few cases of old employees receiving a "Q" clearance are hold or doubtful cases in the records of the Atomic Energy Commission and a decision has been made already.

1209478

Plant Security and Services Divisions

Statistical Summary of Outstanding Area Badges

	July					August			
	A	B	C	Total		A	B	C	Total
100-B	1837	587	437	2861	100-B	1861	583	435	2879
100-D	889	953	469	2311	100-D	939	951	469	2359
100-F	710	1150	392	2252	100-F	707	1160	390	2257
100-H	1710	955	505	3170	100-H	1720	979	498	3197
200-E	926	1901	327	3154*	200-E	941	1911	327	3179*
200-W	1380	1846	320	3546	200-W	1401	1483	309	3553
200-N	26	852	122	1001	200-N	26	852	121	999
300	1319	1766	211	3296	300	1338	1744	706	3288
P-11	50			50	P-11	53	1		54
100-DR	2344	7		2351	- -				

*Includes 37 "A" badges at Riverland Yards

*Includes 40 "A" badges at Riverland Yards

Visitor or Temporary Badges

Area	July	August
100-B	743	784
100-D	1212	1256
100-F	1151	1206
100-H	709	787
200-E	1047	1066
200-W	1593	1682
200-N	768	776
300	1981	2053
100-DR	74	—
P-11	20	25
Total	9,298	9,605

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:	34
Total companies forwarded to AEC last month:	9	Personnel:	14
Total companies forwarded to AEC to date:	289	Personnel:	2,575
Total companies cleared for "Restricted Data" this month:	7	Personnel:	11
Total companies cleared for "Restricted Data" last month:	10	Personnel:	13

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Plant Security and Services Divisions

New companies forwarded to Atomic Energy Commission this month:

Crosby Steam Gage and Valve Company
2034 Santa Fe Avenue
Los Angeles, California

Chicago, Milwaukee, St. Paul & Pacific RR
Chicago, Illinois

Hallidie Machinery Company
P. O. Box 5023
Spokane, Washington

A. B. Chance
815 Tenn Street
San Francisco, California

Union Pacific Railroad
Spokane, Washington

Tri-City Freight Lines
West Coast Fast Freight
Pasco, Washington

Young & Richardson, Carleton & Detlie
511 Central Bldg.
Seattle, Washington

Number and type of clearances granted by the Atomic Energy Commission this month to vendors and consultants:

Formal "Q"	11
Formal "P"	12
Emergency "Q"	1

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HANFORD WORKS
General Electric Company
Richland, Washington

REPORT OF VISITORS FOR PERIOD ENDING AUGUST 31, 1950

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, M.D.	8-29-50	8-30-50	X		
DESIGN AND CONSTRUCTION DIVISIONS							
I. Visitors to this Works							
B. R. Prentice Knolls Atomic Power Laboratory Schenectady, New York	Design consultation on 234-5 Project	G.Thayer	8-10-50	8-10-50	X		200-W 234 and 235
W. A. Hartman Gen. Eng. & Con. Laboratory Schenectady, New York	Work on Project 432	G. Thayer	8-20-50	6 months	X		200-W 231 234, 235 TS draftingroom
II. Visits to other Installations							
O. H. Pilkey to: Young and Richardson Seattle, Washington	Evaluate the ability of arch. engineers to do design work on aquatic biology lab.	Mr. Richardson Mr. Young	8-7-50	8-9-50		X	
O. H. Pilkey to: Barrett and Logan Portland, Oregon	Evaluate the ability of arch. engineers to do design work on aquatic lab.	M. Barrett Mr. Logan	8-7-50	8-9-50		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	Consultation regarding design and installation of equipment for 432 Project	D. H. Marquis	8-28-50	3 - 4 weeks	X		
B. H. Douglass to: Mallinckrodt Chem. Corp. St. Louis, Missouri	Obtain design information for Project C-361	W. H. Keller	8-28-50	8-30-50	X		
R. C. Hollingshead to: Kellex Corporation New York, New York	Discussion on pulse mechanism design	J. S. Atwood	8-8-50	8-16-50	X		
R.C. Hollingshead TO: Proportioneers, Inc. Providence, Rhode Island	Discussion on pulse mechanism design	R. P. Lowe	8-8-50	8-16-50		X	
R. C. Hollingshead to: Ingersoll Rand, Inc. New York, New York	Discussion on pulse mechanism design	Mr. Behrens	8-8-50	8-15-50		X	
P. M. Murphy to: Kellex Corporation New York, New York	Design conference	J. S. Atwood	8-2-50	8-9-50	X		
B. O. Shaver to: Mallinckrodt Chem. Corp. St. Louis, Missouri	Obtain design information for project C-361	W. H. Keller	8-28-50	8-30-50	X		
W. B. Webster to: Kellex Corporation New York, New York	Design consultation	N. A. Spector	8-28-50	9-2-50	X		
W. C. Royce to: L. S. Rosener San Francisco, California	Engineer liaison on project C-381	L. S. Rosener, Sr. L. S. Rosener, Jr.	8-15-50	8-19-50		X	

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Name - Organization	Purpose of Visit	Person Contacted	Arrival	Departure	Restricted Data Class	Restricted Data Unclass	Areas
B. O. Shaver to: L. S. Rosener San Francisco, California	Engineer liaison on Project C-381	L.S. Rosener, Sr. L.S. Rosener, Jr.	8-15-50	8-19-50		X	
R. C. Hoffman to: L. S. Rosener San Francisco, California	Engineer liaison on Project C-381	L.S. Rosener, Sr. L.S. Rosener, Jr.	8-15-50	8-19-50		X	
G. G. Peterson to: Corp of Engineers Walla Walla, Washington	Discuss specifications for construction work	District Engineer	8-3-50	8-3-50		X	
R. L. Brasfield to: J. A. Terteling Boise, Idaho	Audit of cancelled checks	Mr. Carter	8-14-50	8-15-50		X	
D. E. Irons to: Stainless Eng. Co. Oakland, California	Engineering assistance in connection with HW orders	Mr. Osborne	8-14-50	8-21-50		X	
D. E. Irons to: S. W. Welding Co. Alhambra, California	Engineering assistance in connection with HW orders	M . Brock	8-14-50	8-21-50		X	
D. E. Irons to: S. W. Engineering Co. Los Angeles, California	Engineering assistance in connection with HW orders	Mr. Faust	8-14-50	8-21-50		X	
D. E. Irons to: C. R. Braun Alhambra, California	Engineering assistance in connection with HW orders	Mr. Braun	8-14-50	8-21-50		X	
C. H. Holt to: Mallinckrodt Chem. Cor. St. Louis, Missouri	Consultation on design data for Project C-361	W. H. Keller	8-28-50	8-31-50	X		

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Name - Organization	Purpose of Visit	Person Contacted	Arrival	Departure	Restricted Data Class	Restricted Data Unclass	Areas
L. B. Brinkman to: Gilmore Steel Company Portland, Oregon	Investigate tank liner steel job fabrication on C-187-D	J. Rowam	8-30-50	8-31-50		X	
M. J. Rutherford to: Gilmore Steel Company Portland, Oregon	Investigate tank liner steel job fabrication on C-187-D	J. Rowam	8-30-50	8-31-50		X	
R. F. Klein to: Puget Sound Naval Shipyard Bremerton, Washington	Consult concerning work under construction	S.L. Allison	8-21-50	8-23-50	X		
R. R. Wall to: Puget Sound Naval Shipyard Bremerton, Washington	Consult concerning work under construction	S.L. Allison	8-21-50	8-23-50	X		
ELECTRICAL DIVISION							
I. Visitors to this Works							
L. C. Ford Apparatus Department General Electric Company Pasco, Washington	Inspection of equipment installed in 100-D and 100-H Areas	F. J. Mollerus	8-1-50 8-4-50	8-31-50 8-4-50		X	100-D-XXX 100-H-XXX 300-XXX (1 day)
R. B. Britton to: Gen. Eng. & Con. Lab. Schenectady, New York	Check progress on test units plus servicing and operating manuals relative to 432 Project	A. L. Vosmer D. H. Marquis	8-14-50	8-17-50	X		
EMPLOYEE AND COMMUNITY RELATIONS DIVISION							
I. Visitors to this Works							
R. H. Landes Sandia Corporation Los Alamos, New Mexico	Discuss wage administration and labor relations	C. C. Tallman J. Tagen	8-15-50	8-17-50	X		100-H-105

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Name - Organization	Purpose of Visit	Person Contacted	ARrival	Departure	Restricted Data Class	Restricted Data Unclass	Areas
VI. Visits to other Installations							
C. C. Tallman to: Oak Ridge National Lab. Oak Ridge, Tennessee	Discuss mutual labor relations problems	T. E. Lane	8-7-50	8-9-50	X		
HEALTH INSTRUMENT DIVISIONS							
I. Visitors to this Works							
H. Poritsky Gen. Eng. & Con. Lab. Schenectady, New York	Consultation on Health Instrument problems	H. M. Parker	8-21-50	8-23-50	X		
H. C. Hodge University of Richester Rochester, New York	Consultation on health problems and data	H. A. Kornberg	8-21-50	8-22-50	X		300-303 100-F-XXX
M. E. Ensminger Washington State College Pullman, Washington	Consultation on biology problems	K. E. Herde	8-15-50	8-16-50	X		100-F-108-F
II. Visits to other Installations							
C. C. Gamertsfelder to: Knolls Atomic Power Lab. Schenectady, New York	Discuss health instrumentation problems	L. L. Gorman	8-3-50	8-3-50	X		
C. C. Gamertsfelder to: Argonne National Lab. Chicago, Illinois	Discuss health instrumentation problems	J. E. Rose F. R. Shonka	8-4-50	8-4-50	X		
W. Singlovich to: Idaho Operations Office Arco, Idaho	Consultation relative to Arco background survey	L. E. Johnston	8-8-50	8-11-50	X		
M. L. Barad to: University of Wash., Seattle	Consultation on meteorology problems	P. E. Church	8-9-50	8-10-50	X		

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Name - Organization	Purpose of Visit	Person Contacted	Arrival	Departure	Restricted Data Class	Restricted Data Unclass	Areas
PROJECT ENGINEERING DIVISIONS							
I. Visitors to this Works							
E. C. Robinet Crosby Steam, Gauge & Valve Co. Los Angeles, California	Inspection of valve and steam equipment furnished by his firm	S. F. Schure	7-28-50	8-4-50		X	100-H-1717
II. Visits to other Installations							
W. R. Felts to: Gen. Eng. & Con. Lab. Schenectady, New York	Discuss P-10 equipment	D.E. Garr D.H. Marquis	8-18-50	8-19-50	X		
H. J. Bellarts to: Puget Sound Naval Shipyard Bremerton, Washington	Experimental work on Project C-379	T. E. Peterson S. L. Allison	8-11-50	8-12-50	X		
L. E. Hoff to: Puget Sound Naval Shipyard Bremerton, Washington	Experimental work on Project C-379	T. E. Peterson C. A. Forsmark S. L. Allison	8-18-50	8-19-50	X		
MANAGEMENT							
I. Visitors to this Works							
D. F. O'Connor E. I. Du Pont de Nemours & Co. Wilmington, Delaware	Discuss administrative problems in connection with new project	G. R. Prout H. A. Winne	8-23-50	8-25-50		X	
MANUFACTURING MANAGEMENT							
I. Visits to other Installations							
C. N. Gross to: Knolls Atomic Power Lab. Schenectady, New York	Consultation on 432 Project and matters pertinent to H.W.	B. R. Prentice	8-2-50	8-4-50	X		

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Name - Organization	Purpose of Visit	Person Contacted	Arrival	Departure	Restricted Data Class	Restricted Data Unclass	Areas
MANUFACTURING ACCOUNTING DIVISION							
I. Visits to other Installations							
P. E. Johnson to: Oak Ridge National Lab. Oak Ridge, Tennessee	Cost coding systems and cost reporting methods	J. P. Kelly	8-14-50	8-19-50	X		
POWER DIVISION							
I. Visitors to this Works							
A. H. I. Hedner Travelers Insurance Company Seattle, Washington	Inspection of boiler houses	H. F. Measley	8-17-50	8-18-50		X	100-B-XXX 100-D-XXX 100-F-XXX 100-H-XXX 200-E-XXX 200-W-XXX 300-XXX
"S" DIVISION							
I. Visits to other Installations							
J. R. Cartmell to: Kellex Corporation New York, New York	Design consultation	N. A. Spector	8-28-50	9-1-50	X		
F. A. Hollenbach to: Mallinckrodt Chem. Corp. St. Louis, Missouri	Consultation on design and operating problems	W. H. Keller	8-28-50	9-1-50	X		
F. T. Keenan to: Gen. Eng. & Con. Lab. Schenectady, New York	Observation of process equipment tests	D. H. Marquis W. A. Brown	8-28-50	4 weeks	X		

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Name - Organization	Purpose of Visit	Person Contacted	Arrival	Departure	Restricted Data Class	Restricted Data Unclass	Areas
D. McDonald to: Los Alamos Scientific Lab. Los Alamos, New Mexico	Consultation on 234-5 operations	M. F. Roy I. B. Venable	8-1-50	8-13-50	X		
PURCHASING AND STORES DIVISION							
I. Visitors to this Works							
D. C. Griffin DeWitt C. Griffin Seattle, Washington	Consultation on work for Project C-364	W. W. Goode	8-31-50	8-31-50		X	100-F-XXX
S. A. Richardson Young and Richardson Seattle, Washington	Consultation on work for Project C-364	W. W. Goode	8-31-50	8-31-50		X	100-F-XXX
T. V. Mogy Union Pacific Railroad Kennewick, Washington	Inspect equipment delivered in damaged conditions	H. H. Hart	8-1-50	8-1-50		X	100-H-151 sub-station
B. Maynard West Coast Fast Freight Pasco, Washington	Inspect equipment delivered in damaged conditions	H. H. Hart	8-1-50	8-1-50		X	100-H-151 sub-station
G. Fuson Consolidated Engineering Corp. Pasadena, California	Supervise installation of equipment on order HW 66805-M	O. C. Hardigg	8-14-50	8-29-50	X		100-B-108
R. Loran Layrite Concrete Products Yakima, Washington	Deliver material on order HW 67091-M	H. H. Hart	8-1-50	8-1-50		X	100-B-108
R. Culberhouse Propane Gas & Equipment Co. Kennewick, Washington	Deliver material on order HW	H. H. Hart	8-3-50	8-3-50		X	300-3706

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Name-Organization	Purpose of Visit	Person Contacted	Arrival	Departure	Restricted Data Class	Restricted Data Unclass	Areas
F. Colbert United Trucks Lines Pasco, Washington	Deliver material on order HW 63693-M	H. H. Hart	8-4-50	8-4-50		X	100-F 183
L. Colbert United Truck Lines Pasco, Washington	Deliver material on order HW 63693-M	H. H. Hart	8-8-50	8-8-50		X	100-H 1713
O. P. Miller Consolidated Freighways Kennewick, Washington	Deliver material on order HW 67383-M	H. H. Hart	8-8-50	8-8-50		X	100-B 108
J. Raeder Layrite Concrete Products Yakima, Washington	Deliver material on order HW 67539-M	H. H. Hart	8-9-50	8-9-50		X	100-B 108
W. Freuhlin United Truck Lines Pasco, Washington	Deliver material on order HW 53693-M	H. H. Hart	8-8-50	8-8-50		X	100-F 189
W. Weigand Lee & Estes Kennewick, Washington	Deliver material on order HW 63685-M	H. H. Hart	8-9-50	8-9-50		X	100-B 108
O. P. Miller Consolidated Freighways Kennewick, Washington	Deliver material on order HW 63719-M	H. H. Hart	8-10-50	8-10-50		X	200-E 275
F. Colbert United Truck Lines Pasco, Washington	Deliver material on order HW 63693-M	H. H. Hart	8-10-50	8-10-50		X	100-H 1713
W. Weigand Lee & Estes Kennewick, Washington	Deliver material on order HW 63699-M	H. H. Hart	8-11-50	8-11-50		X	100-H 183

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Name - Organization	Purpose of Visit	Person Contacted	Arrival	Departure	Restricted Data Class	Restricted Data Unclass	Areas
W. Weigand Lee & Estes Kennewick, Washington	Deliver material on order HW 59550-M	H. H. Hart	8-16-50	8-16-50		X	100-D 1717
J. Tallent United Truck Lines Kennewick, Washington	Deliver material on order HW 65810-M	H. H. Hart	8-21-50	8-21-50		X	20-0-W 271-T
F. W. Jewell Westinghouse Electric Corporation Portland, Oregon	Installation of equipment of order HWC-9216	H. A. Hauser	8-22-50	10-1-50		X	
A. Damann Bumstead-Woolford Company Seattle, Washington	Installation of equipment of order HWC-9229	H. A. Hauser	8-16-50	9-16-50		X	
G. Fuson Consolidated Engineering Corp. Pasadena, California	Installation of equipment of order HWC 66805-M	H.A. Hauser	8-14-50	8-28-50		X	
II. Visits to other Installations							
W. A. Jeffrey to: Atomic Energy Commission Division of Production Washington, D. C.	Developing voluntary allocation of steel and discuss mobilization planning for production allocations	J. J. Bray W. J. Williams	8-31-50	9-1-50	X		
W. A. Jeffrey to: C. F. Braun Company Los Angeles, California	Expedite material on order	C. F. Braun	8-14-50	8-22-50		X	
W. A. Jeffrey to: S.W. Welding Company Los Angeles, California	Expedite material on order	M. Brock	8-14-50	8-22-50		X	
W. A. Jeffrey to: S. W. Engineering Company Los Angeles, California	Expedite material on order	Mr. Faust	8-14-50	8-22-50		X	

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Name - Organization	Purpose of Visit	Person Contacted	Arrival	Departure	Restricted Data Class	Restricted Data Unclass	Areas
W. A. Jeffrey to: Stainless Eng. Corp. Los Angeles California	Expedite material on order	Mr. Osborne	8-14-50	8-22-50		X	
G. E. Hotaling to: Newport Shipbuilding and Dry Dock Co. Newport News, Virginia	Expedite material on order	Mr. Horne	8-14-50	8-18-50		X	
G. E. Hotaling to: Struthers Wells Corp. Warren, Pennsylvania	Expedite material on order	Mr. A. Micholl	8-14-50	8-18-50		X	
L. G. Jones to: Crane Company Chicago, Illinois	Expedite material on order	Mr. Larson	8-2-50	8-5-50		X	
L. G. Jones to: Alco Products Dunkirk, New York	Expedite material on order	Mr. Ward	8-7-50	8-7-50		X	
L. G. Jones to: Struthers Wells Company Warren, Pennsylvania	Expedite material on order	Mr. Druickshank	8-8-50	8-8-50		X	
L. G. Jones to: National Annealing Box Co. Washington, Pennsylvania	Expedite material on order	Miss McKinney	8-9-50	8-9-50		X	
L. G. Jones to: Allegheny Ludlum Co. Brackenridge, Pennsylvania	Expedite material on order	Mr. McKnight	8-10-50	8-10-50		X	
L. J. Jones to: G.O. Carlson Company Thorndale, Pennsylvania	Expedite material on order	Mr. Hurst	8-11-50	8-11-50		X	
L G. Jones to: Taylor Forge Pipe Co. Chicago, Illinois	Expedite material on order	A.A. Kertz	8-15-50	8-15-50		X	

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Name - Organization	Purpose of Visit	Person Contacted	Arrival	Departure	Restricted Data Class	Restricted Data Unclass	Areas
TECHNICAL DIVISIONS							
I. Visitors to this Works							
G. Fuson Consolidated Engineering Corp. Pasadena, California	Install mass spectrometer	C. R. McCully R. J. Brouns W. W. Marshall	8-16-50	8-19-50	X		100-B-108
C. F. Metz Los Alamos Scientific Lab. Los Alamos, New Mexico	Discuss analytical procedures and transfer of samples	A. H. Bushey L. M. Knights G. B. Barton	8-17-50	8-18-50	X		200-W 221-T 231 234
B. V. Coplan Knolls Atomic Power Laboratory Schenectady, New York	SPRU conference	D. W. Pearce R. H. Beaton	8-21-50	8-24-50	X		300-3706 321
E. L. Zebroski Knolls Atomic Power Laboratory Schenectady, New York	Redox consultation and assistance to Hanford program	R. H. Beaton	8-7-50	8-10-50	X		100-B-108, 105 200-W, 221-U, 231 300-3706, 321 100-H-105
G. W. Watt University of Texas Austin, Texas	Research and development consultation	R. H. Beaton	8-14-50	8-18-50			100-B-105, 108 100-F-105, 108 200-E-221-B 200-W-221-T, 221-U, 234, 235 300-3706, 321
D. H. Ahmann Knolls Atomic Power Laboratory Schenectady, New York	P-10 consultation	W. M. Harty	7-31-50	8-4-50			100-B-105, 108 100-F-105 300-3706 200-W-221-T, 231 234

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Name - Organization	Purpose of Visit	Person Contacted	Arrival	Departure	Restricted Data Class	Restricted Data Unclass	Areas
H. A. Bethe Consultant to KAPL Cornell University Ithaca, New York	P-10 Program and reactor problems	P. F. Gast	8-7-50	8-8-50	X		300-3706, 100-H-105 100-B-105, 108 200-W-221-T P-11
J. R. Low Knolls Atomic Power Laboratory Schenectady, New York	Discuss in-pile experiments	W. K. Wodds P. H. Reinker R. Ward	8-14-50	8-15-50	X		300-3706 100-H-105
A. U. Seybolt Knolls Atomic Power Laboratory Schenectady, New York	Hanford assistance on P-10 program	R. Ward	8-14-50	8-18-50	X		300-3706 100-B-105, 108 200-W-221-U 234
J. A. Piggott Knolls Atomic Power Laboratory Schenectady, New York	Discuss control problems	W. K. Woods	8-21-50	8-22-50	X		300-3706 100-H-105
A.W. Bedford Knolls Atomic Power Laboratory Schenectady, New York	Discuss control problems	W. K. Woods	8-21-50	8-22-50	X		300-3706 100-H-105
J. A. Cox Oak Ridge National Laboratory Oak Ridge, Tennessee	Consultation of special requests	J. O. Erkman	8-16-50	8-18-50	X		100-H-XXX 300-3706
H. Hurwitz Knolls Atomic Power Laboratory Schenectady, New York	Hanford assistance problems and program on physics	D. W. Pearce	8-28-50	9-1-50	X		300-3706,321

II. Visits to other Installations

W. M. Hausler to: Oak Ridge National Lab. Oak Ridge, Tennessee	Materials Testing Program	D. S. Billington	8-1-50	8-2-50	X		

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Name - Organization	Purpose of Visit	Person Contacted	Arrival	Departure	Restricted Data Class	Unclass	Areas
W. M. Hausslor to: Knolls Atomic Power Lab. Schenectady, New York	Materials testing program	C.E. Weber	8-3-50	8-4-50	X		
D. H. Curtiss to: North American Aviation Corp. Downey, California	Consultation on graphite	W.E. Parkins	8-17-50	8-18-50	X		
E.A. Eschbach to: Gen. Eng. & Con. Lab. Schenectady, New York	P-10 consultation	D. H. Marquis	8-21-50	8-25-50	X		
E. A. Eschbach to: Knolls Atomic Power Lab. Schenectady, New York	P-10 consultation	C. Mannal	8-21-50	8-25-50	X		
T. W. Gore to: Gen. Eng. & Con. Lab. Schenectady, New York	P-10 consultation	D. H. Marquis	8-21-50	8-25-50	X		
T. W. Gore to: Knolls Atomic Power Lab. Schenectady, New York	P-10 consultation	C. Mannal	8-21-50	8-25-50	X		
G. P. Kerr to: Argonne National Lab. Chicago, Illinois	Technical consultation	J. M. West	8-14-50	8-15-50	X		
A.R. Matheson to: Knolls Atomic Power Lab. Schenectady, New York	P-10 consultation P-10 consultation	C. Mannal J. Marsden	8-15-50 8-16-50	8-18-50 8-18-50	X X		
J. B. Lambert to: Oak Ridge National Lab. Oak Ridge, Tennessee	Materials testing program	D. S. Billington R. W. Coyle	8-1-50	8-2-50	X		

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Name - Organization	Purpose of Visit	Person Contacted	Arrival	Department	Restricted Data Class	Restricted Data Unclass	Restricted Data Areas
J. B. Lambert to: Knolls Atomic Power Lab. Schenectady, New York	Materials testing program	C. E. Weber	8-3-50	8-4-50	X		
J. B. Lambert to: Westinghouse ElectricCorp. Pittsburgh, Pennsylvania	Materials testing program	W.E. Johnson	8-7-50	8-7-50	X		
W. W. Koenig to: Armco Middleton, Ohio	Technical investigation of substitutes for T-347 Stainless Steel	- -	8-30-50	8-30-50		X	
W. W. Koenig to: Carnegie-Illinois Steel Allentown, Pennsylvania	Technical investigation of substitutes for T-347 Stainless Steel	- -	8-31-50	8-31-50		X	
C. E. Lacy to: Battelle Memorial Institute Columbus, Ohio	Discussion of Hanford assistance programs and metallurgical consultation	H. R. Nelson	8-2-50	8-4-50	X		
C. E. Lacy to: Atomic Energy Commission Sylvania Electric Products Bayside, L.I., New York	Discussion of Hanford assistance programs and metallurgical consultations	H. F. Reichard	8-8-50	8-11-50	X		
C. E. Lacy to: Joslyn Manufacturing Co. Fort Wayne, Indiana	Discussion of Hanford assistance programs and metallurgical consultations	- -	8-4-50	8-4-50		X	
C. E. Lacy to: Knolls Atomic Power Lab. Schenectady, New York	Discussion of Hanford assistance programs and metallurgical consultations	J. P. Howe	8-8-50	8-11-50	X		
J. L. Schwennesen to: Kellex Corporation New York, New York	TBP consultation	J. S. Atwood	8-8-50	8-10-50	X		

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Name - Organization	Purpose of Visit	Person Contacted	Arrival	Departure	Restricted Data Class	Restricted Data Unclass	Restricted Data Areas
J. L. Schwenesson to: Proportioneers Inc. Providence, Rhode Island	TBP consultation	- -	8-7-50	8-7-50		X	
J. L. Schwenesson to: Ingersoll Rand Co. New York, New York	TBP consultation	- -	8-8-50	8-8-50		X	
J. L. Schwenesson to: Milton Roy Company Philadelphia, Pennsylvania	TBP consultation	- -	8-9-50	8-9-50		X	
R. P. Smith to: Gen. Eng. & Con. Lab. Schenectady, New York	432 Project consultation	D. H. Marquis	8-21-50	9-1-50	X		
R. P. Smith to: Knolls Atomic Power Lab. Schenectady, New York	234-5 consultations	J. P. Howe D. H. Ahmann	8-22-50	9-1-50	X		
R. J. Brouns to: Gordon Research Conference New London, New Hamshire	Attend instruments conference of All American Association for the Advancement of Science	- -	8-1-50	8-5-60		X	
W. W. Marshall to: Trail, British Columbia	Consultation on P-9 analytical methods	D. Dolgoy	8-28-50	8-29-50		X	
J. A. Parodi to: Knolls Atomic Power Lab. Schenectady, New York	Discuss P-10 spectrochemical analysis	C. Mannal C. Mannal	8-14-50 8-31-50	8-31-50 9-15-50	X X		
J. A. Parodi to: Leeds & Northrup Philadelphia, Pennsylvania	Attend meeting on emission spectrometer	- -	8-18-50	8-18-50		X	

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Name - Organization	Purpose of Visit	Person Contacted	Arrival	Departure	Restricted Data Class	Restricted Data Unclass	Areas
J. A. Parodi to: Bausch & Lomb Company Rochester, New York	Attend meeting on emission spectrometer	- -	8-28-50	8-28-50		X	
C. G. Stevenson to: Portland, Oregon	Attend conference of Pacific Northwest Library association	- -	8-30-50	8-31-50		X	
R. J. Halo to: Knolls Atomic Power Lab. Schenectady, New York	Discuss laboratory design	H. H. Race	8-7-50	8-8-50	X		
R. J. Halo to: du Pont Experimental Station Wilmington, Delaware	Inspect new laboratories	D. M. Smith	8-9-50	8-9-50		X	
R. J. Halo to: Radio Corporation of America Camden, New Jersey	Discuss use of Lucoflex plastic in industrial gas exhaust systems	Mr. McCaw	8-10-50	8-10-50		X	
J. M. Fouts to: Leland S. Rosener Co. San Francisco, California	Discuss design of radiochemistry building	L. S. Rosener, Sr.	8-16-50	8-18-50		X	
F. B. Quinlan to: Diebold Safe Company Canton, Ohio	Discuss design of "cells" for radiochemistry building	J. P. Paca	8-16-50	8-18-50		X	
B. Weidenbaum to: Los Alamos Scientific Lab. Los Alamos, New Mexico	234-5 consultation	M. F. Roy	8-14-50	8-19-50	X		
H. F. Zuhr to: Los Alamos Scientific Lab. Los Alamos, New Mexico	P-10 consultation	E. S. Robinson	8-4-50	8-7-50	X		

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Name - Organization	Purpose of Visit	Person Contacted	Arrival	Departure	Restricted Data Class	Restricted Data Unclass	Areas
H. F. Zuhr to: Gen. Eng. & Con. Lab. Schenectady, New York	P-10 consultation	D. H. Marquis	8-21-50	8-25-50	X		
H. F. Zuhr to: Knolls Atomic Power Lab. Schenectady, New York	P-10 consultation	C. Mannal	8-21-50	8-25-50	X		

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PURCHASING AND STORES DIVISIONS
SUMMARY
AUGUST, 1950

Personnel of the Purchasing and Stores Divisions showed a net increase of 8 indicated by the tabulation below:

	Total Personnel as of 7-31-50	Total Personnel as of 8-31-50	Net Change
Exempt	56	57	Plus 1
Non-Exempt	307	314	Plus 7
TOTALS	363	371	Plus 8

The number of purchase requisitions received and the number of purchase orders placed increased during the month as compared with the previous month.

In order to expedite procurement of vessels, the use of tantalum-columbium for the stabilization of stainless steel was authorized so far as the Redox Program was concerned. Vendors were advised to proceed with fabrication of vessels as soon as corrosion samples were taken rather than to wait for results of corrosion tests. Corrosion tests are still a requirement, however.

The Manager of the Purchasing and Stores Divisions, in company with the Chief, Administrative Services, Atomic Energy Commission, contacted General Electric, Schenectady; the Electro-Metallurgical Company; and the Washington, D. C. Office of the Atomic Energy Commission in order to facilitate the voluntary allocation of both stainless and carbon steels. This program was well under way at month end.

2475 purchase requisitions were screened against Project inventories with the result that 1838 items were furnished from plant sources, thus obviating the necessity for the expenditure of new funds for outside purchase.

Materials valued at $24,854.10 were declared excess from active inventories during the month and materials valued at $366,751.65 were declared excess from the Construction Material Account (10.20).

The Army took over Warehouse No. 3 and adjacent outside storage space. Warehouses Nos. 1, 2, and 4 are being evacuated on or ahead of schedule.

On August 17, 1950, the General Services Administration discontinued the sale of government property from the Pasco Depot.

Shipping activities at the Pasco Depot continued at an accelerated pace--most of the material being shipped to other Government Agencies and Educational Institutions.

As a result of efforts exerted by our Traffic Section, rate reductions were obtained from carriers resulting in a savings during the month of August of $14,298.15. The total savings from September 1, 1946 to date amount to $1,332,490.16.

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PURCHASING AND STORES DIVISION
STAFF SECTION
August 1950

GENERAL

A report was submitted to the Commission outlining Stores Activities during the past two years toward the centralization and control of Inventories. The material reduction movement through excessing from the Plant and the issuances of materials to the Construction Program.

A statistical report showing requirements was submitted to the Project Engineering Division for the preliminary design of the centralized warehouse.

The 1951 budget submitted in March was reviewed and revisions were forwarded to the Budget Committee.

As of August 25, the General Accounting Division assumed responsibilities for the Sub-Ledger Accounts, 10.10, in the Surplus, Salvage and Scrap Section. To meet this change, a revision of the recently published Accounting Procedure, in use in North Richland, was made.

A procedure was developed in collaboration with the Supply Branch of the Commission to handle contaminated platinum and gold, for decontamination by Baker and Company, New York.

Six suggestion reports were investigated and recommendations were submitted to the Suggestion Committee.

During the month, the following reports were prepared and submitted:

Monthly Force Report
Monthly Force Report and Construction Forecast
Recapitulation of Inventory Balances per Financial Statement
Weekly Overtime Forecast
Weekly Purchase Order Placement Record
Pasco Progress and Completion Data Report (Weekly)

Plans were made to physically inventory and reconcile the Spare Parts Account (904.)

The reconciliation of 10.10 Accounts in North Richland has been completed with the exception of two Classes, which are being rechecked.

Audits variances and warehouse conditions were discussed with the Line Organization.

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PURCHASING AND STORES DIVISION
STAFF SECTION

PERSONNEL

	As of 7-31-50			As of 8-31-50			Net Change		
	Ex.	Non-Ex.	Total	Ex.	Non-Ex.	Total	Ex.	Non-Ex.	Total
Methods-Procedure Cost & Budget Control	3	6	9	3	7	10	0	1	1
Audit Section	2	13	15	2	13	15	0	0	0
TOTALS	5	19	24	5	20	25	0	1	1

SAFETY AND SECURITY

One Safety and Security meeting was held with twelve people in attendence.

STATISTICS	June	July	August
1. Analyze, review and change methods for establishing reorder quantities for stores stocks.	90%	95%	100%
2. Examination of record cards for excess materials to reflect total quantity of like items available to centralize record keeping.	25%	25%	25%
3. Plan and study centralized warehousing in cooperation with Project Engineering Div. and Supt. of Stores for Design, Layout and Construction.	40%	50%	55%
4. Examine the area warehousing in cooperation with Manufacturing Divisions for Stores Division assuming custodial responsibilities for materials held in the area by Manufacturing Division.	75%	75%	75%
5. Actual reconciliation of Account 10.10 (Surplus, Salvage and Scrap Section)	60%	85%	95%
6. Establish spot audit procedure	75%	75%	85%
7. Analysis of Studies and Recommendations for Business Machine utilization	60%	75%	75%

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PURCHASING AND STORES DIVISION
STAFF SECTION

STATISTICS (Continued)

8. Organizational Studies	June	July	August
A. Inv. Control Section (Operations & Maintenance Stores)			
a. Functional Job Descriptions	90%	90%	100%
b. Form and Paper Work Write Ups	75%	75%	100%
c. Functional Flow Charts	60%	60%	100%
d. Work Load Statistics	0	0	100%
e. Analysis and Recommendations	0	0	0
B. Receiving, Warehousing, Disbursing Section (Operations & Maintenance Stores)			
a. Functional Job Description	95%	95%	98%
b. Forms and Paper Work Write Ups	95%	95%	98%
c. Functional Flow Charts	0	0	20%
d. Work Load Statistics	0	0	0
e. Analysis and Recommendations	0	0	0
C. Inv. Control (Construction Held Mat'ls)			
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
D. Excess, Salvage and Scrap Section			
a. Functional Job Descriptions	90%	90%	90%
b. Forms and Paper Work Write Ups	90%	90%	90%
c. Functional Flow Charts	90%	90%	90%
d. Work Load Statistics	20%	20%	20%
e. Analysis and Recommendations	0	0	0
9. Manual of Standard Practices (Stores Division.)	3%	3%	5%

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PURCHASING AND STORES DIVISION
STAFF SECTION

STATISTICS (Continued)

10. Accounts Inventoried:	June	July	August
903-22 (Lumber)			100%
903-23 (Alloys and Shapes)			100%
903-32 (Stainless Steel)			75%
903-10 (Chemical Supplies)			75%

11. Catalogues Published

903-1, 9, 16, 15, 14, and 32. 100%

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PURCHASING AND STORES DIVISIONS
PURCHASING DIVISION
AUGUST, 1950

GENERAL:

The work load in the Division showed an increase over the previous month. 1942 purchase orders were placed as compared with 1647 placed in July. 2895 requisitions were received and assigned as compared with 2369 during July. Requisitions on hand at month end totaled 656 as compared with 675 at the end of the previous month.

Of 235 construction requisitions received, 80 were for Project C-187-D, 22 for Project C-187-E, two for Project C-198, 12 for Project C-361 and 8 for DR Water Works. The balance of the construction requisitions were for miscellaneous items charged to the construction program.

In order to expedite delivery of Project C-187-D vessels and equipment, the Purchasing Division with Design Division's approval, authorized the various vendors to proceed with fabrication as soon as corrosion samples of the stainless steel material is obtained. This change in procedure in no way changes the corrosion test requirements, however, it does permit the vendors to proceed with fabrication before the results of the corrosion tests are known.

The Purchasing Division spear-headed a move to identify and classify a large quantity of stainless steel pipe and plate which was purchased by the E. I. duPont Company in 1944 and which has been stored at the Pasco warehouse for sometime. Through records made available to the Purchasing Division by the E. I. duPont Company it was possible to identify a large percentage of this steel without having to cut samples for chemical analysis and corrosion tests. The steel is being transferred to active stock as rapidly as it can be identified and classified.

An increasing number of alterations to purchase requisitions involving changes in design were received during the month. A number of these changes were made necessary after receipt of vendors' shop drawings, however, the bulk of them were made necessary in firming-up the design of the mechanical equipment being purchased.

Orders have been placed for approximately 95% of the material required for the P-10-D project. All shipments for this project are being expedited and material receipts were approximately 70% complete.

A total number of 616 purchase orders issued by the Atkinson & Jones Construction Company were audited and certified prior to submission to the Atomic Energy Commission for reimbursement.

Field erection engineers from four companies were required during the month to supervise installation of equipment in the 100-DR Water Works.

1209504

PURCHASING AND STORES DIVISIONS
PURCHASING DIVISION

GENERAL:(continued)

The material situation became more serious with carbon and stainless steel, aluminum and chemicals being the most critical. The shortage of Tantalum free Columbium used as a stabilizing agent in stainless steel necessitated the acceptance of commercially available Type 347 steel. At the present time Type 347 stainless steel contains Tantalum bearing Columbium with various percentages of Tantalum in the Columbium compound. Acceptance of commercially available Type 347 stainless steel was limited to that purchased for the C-187-D and C-187-E projects.

In addition to material shortages a number of price increases were received and greater use of price escalator clauses is again being adopted by the various suppliers.

During the month three representatives of the Purchasing Division, including the Divisions Manager and Assistant Manager made trips to various equipment manufacturing plants to assist in improving shipping schedules of orders for process equipment for the C-187-D project.

Invitations to Bid were mailed covering our annual requirements for ferric sulphate and ferrous ammonium sulfate with the firming-up of additional requirements and of new items of essential materials, which will be required for the C-187-D and C-362 projects. The Assistant Supervisor, Purchasing, in charge of buying essential materials, left on a trip East to call on prospective sources for nitric acid, phosphoric acid, bismuth metal, ammonium silicofluoride and aluminum.

Due to the urgency to complete construction of Projects C-187-D and C-361 at the earliest possible date, it was recognized that it would become necessary and desirable to short cut certain recognized purchasing procedures in order to place equipment on the job site in time to meet construction required dates. Accordingly it was proposed that certain groups of equipment would be purchased in a manner that would insure the earliest possible delivery date. These purchasing procedures were presented to the Atomic Energy Commission and approved by the Commission for use on the two urgent projects.

PERSONNEL

	As of 7-31-50			As of 8-31-50			Net Change		
	Ex	Non-Ex.	Total	Ex.	on-Ex.	Total	Ex.	Non-Ex.	Total
Administrative	1		1	1		1			
Purchasing	12	12	24	13	11	24	+1	-1	
Expediting	3	10	13	3	11	14		+1	+1
Inspection	14	3	17	15	5	20	+1	+2	+3
Clerical	1	16	17	1	17	18		+1	+1
7. TOTALS	31	41	72	33	44	77	+2	+3	+5

1206505

PURCHASING AND STORES DIVISIONS
PURCHASING DIVISION

SAFETY AND SECURITY

Safety and Security Meetings scheduled 3
Number of employees attending 66
Minor injuries 2

STATISTICS

	G	D	Total
Requisitions on hand 8-1-50 (includes 65 assigned to Gov't)	584	91	675
Requisitions assigned during August	2660	235	2895
Requisitions placed during August	2687	227	2914
Requisitions on hand 8-31-50 (includes 81 assigned to Gov't)	557	99	656

	Number	Value
HW Orders placed	1753	$767,564.18
HW Alterations placed	121	14,673.35
Total	1874	$782,237.53
HWC Orders placed	189	$810,186.59
HWC Alterations placed	49	51,279.93 Cr
Total	238	$758,906.66
AEC Orders placed	129	$113,993.52
DC Orders placed	9	18,421.34

Government Transfers	OR	ORC	Total
	6	0	6

Return Orders issued	Number
	79

OPEN ORDERS

HW Orders 1118
HWC Orders 421
Government Orders 35

Number of new orders requiring inspection during month	48
Number of orders requiring inspection completed during month	40
Number of orders outstanding requiring inspection at month's end	185
HW Orders Expedited (Special Request)	275
HW Orders Expedited (Routine)	550
HWC Orders Expedited (Routine)	400

1269506

PURCHASING AND STORES DIVISIONS
STORES DIVISION
August, 1950

GENERAL

Materials valued at $24,854.10 were declared excess from active inventories during the month. This was accomplished by the deletion of 543 obsolete stock items.

2475 purchase requisitions were processed through screening and 1838 items were furnished from plant sources. The number of purchase requisitions screened this month is the greatest since the screening procedure was established.

Receipts of incoming shipments remained high for the month reflecting a total of 4,564 receiving reports being issued. This represents an increase of approximately 15% over each of the past two months' activities.

Materials valued at $366,751.65 were declared excess from the Construction Material Account (10.20). This material was on firm negative lists rescreened by all subcontractors.

Army occupation of Warehouse No. 3 and adjacent outside storage space at the Pasco Depot was completed during the month. Warehouses Nos. 1, 2, and 4 were being evacuated on or ahead of schedule at the end of the month.

Effective August 17, 1950, the General Services Administration discontinued the sale of government property at the Pasco Depot. No particular difficulty is anticipated because of the above in the over-all evacuation plan as it now exists.

Shipping orders were issued by the Commission for all available military equipment and vehicles and spare parts to be shipped to the Mount Rainier Ordnance Works and satisfactory progress was made in processing these orders at month end.

Shipping activities at the Pasco Depot continued at an increased rate as 411 truckloads and 4 carloads of material and/or equipment were shipped to schools or government agencies. Shipping activities at North Richland remained relatively high with a total of 24 carloads of miscellaneous equipment and material being shipped from the plant.

299 Shipping documents valued at $2,688,909.22 were processed and shipped.

Materials and equipment valued at $872,408.65 were withdrawn from excess and returned for use on the Project.

1209567

PURCHASING AND STORES DIVISIONS
STORES DIVISION

GENERAL (Continued)

12 formal excess lists totaling $797,409.69 were submitted to the Commission during the month.

69 representatives of government and private businesses were escorted through our warehouses and scrap yards for the purpose of negotiating sale of scrap and transfer of excess properties.

PERSONNEL

	As of 7-31-50			As of 8-31-50			Net Change		
	Ex.	Non-Ex.	Total	Ex.	Non-Ex.	Total	Ex.	Non-Ex.	Total
Administrative	3		3	3		3			
Construction Matl.Sect.	3	47	50	3	45	48		-2	-2
Operations Matl. Sect.	4	92	96	4	97	101		+5	+5
Surplus, Salvage & Scrap Materials Section	5	101	106	5	100	105		-1	-1
TOTALS	15	240	255	15	242	257		+2	+2

SAFETY AND SECURITY

Safety and Security Meetings Scheduled	13
Number of Employees Attending	232
Minor Injuries	7

STATISTICS

INVENTORY CONTROL SECTIONS

Construction Materials Section

Items in Stores Stock	49,059
Items in Small Tools (Estimated)	8,773
Items added to Stock	3,501
Items completely liquidated from stock	2,852
Store Orders Posted - Materials (Items)	4,461
Store Orders Posted - Tools (Items)	1,921
Number of Requisitions Screened - A.J.	541
Number of Items furnished from Stock	392
Number of Items Excessed	3,118
Number of Items Screened - G.E.	2,472
Value of Disbursements - Materials	$ 346,933.05
Value of Disbursements - Tools	73,083.06
Inventory Valuation at month end - Materials	8,995,054.61
Value of materials shipped	2,973.28
Value of materials excessed	366,751.65
Value of materials received	415,952.92

1209508

PURCHASING AND STORES DIVISIONS
STORES DIVISION

STATISTICS (Continued)

Operations Materials Section

Number of items added to Stores Stock	101
Number of items deleted from Stores Stock	543
Items in Stores Stock at month end	46,973
Store Orders Posted	21,340
Number of requisitions screened this month - G.E.	2,475
Number of items furnished from plant sources this month	1,838
Inventory valuation at month end (903-all captions, 906 & 912)	$1,232,225.99
Inventory valuation at month end (Spare Parts)	1,675,541.26
Inventory valuation at month end (Special Materials)	3,174,675.19
Total value Inventory Accounts	6,082,442.44
Value of disbursements, not including cash sale items	206,053.27*
Value of Cash Sales	853.81
Value of Sales, Payroll Deduction	1,739.55
Value of Materials declared excess	24,854.10
Value of Materials returned to Stores stock for credit	13,010.89

* Includes $12,332.11 disbursed to Construction and CPFF subcontractors.

Surplus, Salvage and Scrap Materials Section

Balance of Account 10.10 as of 7-25-50		$13,878,657.33
Receipts 7-25-50 to 8-25-50		
Lumber	$ 156,077.42	
Automotive Equipment	71,159.66	
Machine Tools & Equipment	12,041.76	
Office Machines, Furniture, etc.	17,866.99	
Household Furniture, etc.	6.00	
Material and Supplies	516,619.03	
Miscellaneous Equipment	44,883.95	818,654.81
Adjustments - Classes & Current Market Prices		11,461.62
		$14,708,773.76

Disbursements 7-25-50 to 8-25-50

On Project	
Lumber	$ 10,361.10
Automotive Equipment	599,321.34
Machine Tools and Equipment	73,288.11
Office Machines, Furniture, etc.	40.00
Material and Supplies	109,126.94
Miscellaneous Equipment	80,271.16
Transfers from Excess to Account 10.20	
Material and Supplies	59,354.48

1209569

PURCHASING AND STORES DIVISIONS
STORES DIVISION

STATISTICS (Continued)

Off Project		
Lumber	$ 27,959.58	
Automotive Equipment	250,003.58	
Machine Tools & Equipment	40,773.38	
Office Machines, Furniture, etc.	87,749.50	
Household Furniture, etc.	2,809.89	
Material and Supplies	2,185,076.15	
Miscellaneous Equipment	94,537.14	3,620,672.35
Balance of Account 10.10 as of 8-25-50		$ 11,088,101.41
Total Receipts to Date		$ 32,318,304.50
Total Disbursements to Date		$ 21,230,203.09
Scrap and Salvage Disbursed		
Scrap Sales Completed		17
Scrap Sales in Process		4
Scrap Sales Revenue for month of August		$6,592.37
Total Scrap Sale Revenue to Date		$133,926.27

WAREHOUSING, RECEIVING, DISBURSING & SHIPPING SECTIONS

Construction Materials Section	
Store Orders Filled	6,382
Items Excessed	2,976
Operations Materials Section	
Receiving Reports Issued	4,564
Emergency Store Orders Filled	3
Shipments Processed (Containers & Material)	271
Shipments Received	4,245
Store Orders Registered	22,422
Surplus, Salvage & Scrap Materials Section	
Store Orders Filled	312
Truckloads of Material Shipped	411
Carloads of Material Shipped	29

1209510

PURCHASING AND STORES DIVISIONS
TRAFFIC SECTION
AUGUST, 1950

GENERAL

In response to our proposal the Milwaukee Road has reduced the freight rate on Lime, in carloads, 7¢ per cwt. from Evans, Washington to Hanford effective August 1, 1950. This action results in a parity in the rate on Lime via all three rail lines serving Hanford Works and permits routing a portion of future shipments via the Northern Gateway at a savings of $42.00 per car.

Due to inability on the part of the vendor at Evans, Washington to obtain self-clearing covered hopper cars to protect shipments of Lime, in bulk, for the 100-DR Area, we contacted the Freight Traffic Manager of the Great Northern Railway and were successful in having this specialized equipment placed at Evans for loading to Richland, It is indicated that considerable savings in manpower will result from handling Lime in bulk rather than in sacks.

Effective August 28, 1950 Interstate truck rates between points in most Western States including Washington have been increased 4%.

Section 22 Quotation of August 21, 1950, issued by Convoy Company of Seattle, at our request, effected a savings of $450.00 on shipment of twelve one-half ton pickup trucks from Richland, Washington to Scoville, Idaho.

On August 23, 1950, the heads of the Brotherhood of Railroad Trainmen and Order of Railway Conductors called a 'surprise strike' on all railroads in the United States for August 28, 1950. This decision resulted in the seizure of all railroads by the government on August 27, 1950. Service on shipments to and from Hanford Works has been unimpaired as a result of these actions.

As a result of rate reductions obtained from the carriers, there was a total savings in freight charges for the month of August amounting to $14,298.15. This makes a total savings from September 1, 1946 to date of $1,332,490.16.

PERSONNEL

	Total Personnel as of 7-31-50	Total Personnel as of 8-31-50	Net Change
Exempt	2	2	0
Non-Exempt	7	7	0
	9	9	0

SAFETY AND SECURITY

Safety and Security Meetings Scheduled	1
Number of Employees Attending	6
Minor Injuries	1

1209511

PURCHASING AND STORES DIVISIONS
TRAFFIC SECTION

STATISTICS

Savings Report

1. Rate reductions obtained from the Carriers:

Commodity	Origin	Savings for August	Savings 9-1-46 thru July, 1950	Total Savings 9-1-46 to date
Acid, Nitric	Dupont, Wash.	$ 2,782.49		
Coal	Roslyn, Wash.	3,093.83		
Lime	Evans, Wash.	464.66		
Soda Ash	Trona, Wash.	404.00		
Soda, Caustic	Willbridge, Ore.	6,615.66		
Sulphate, Ferric	Stege, Calif.	937.51		
		$14,298.15	$1,318,192.01	$1,332,490.16
2. Freight Bill Audit		1,729.16	49,778.17	51,507.33**
3. Loss and Damage and Over Charge Claims		301.09	98,185.16	98,486.25
4. Ticket Refund Claims		486.97	8,682.05	9,169.02
5. Household Goods Claims		28.92	13,880.16	13,909.08
		$16,844.29	$1,488,717.55	$1,505,561.84

** Includes $19,495.23 for the A.E.C.

Work Volume Report

Reservations Made	Rail	33
	Air	130
	Hotel	98
Expense Accounts Checked		148
Household Goods & Automobiles	Movements Arranged Inbound	9
	Shipments Traced	3
	Insurance Riders Issued	2
	Claims Collected - Number	3
	Claims Collected - Amount	$28.92
Ticket Refund Claims	Filed	12
	Collected - Number	20
	Collected - Amount	$486.97

1269512

PURCHASING AND STORES DIVISIONS
TRAFFIC SECTION

STATISTICS (Continued)

Freight Claims	Filed	10
	Collected - Number	9
	Collected - Amount	$301.09
Freight Bill Audit Savings		$1,729.16
Freight Shipments Traced		45
Quotations	Freight Rates	187
	Routes	192
Bills Approved	Air Freight	2
	Boat	2
	Air Express	27
	Carloading	168
	Express	184
	Rail	414
	Truck	246
Carload Shipments	Inbound - GE	434
	Others	68
	Outbound - GE	30
	Others	1
Over and Short Reports Processed		9
Damage Reports Processed		20

Report of Carloads Received

	MILW	N.P.	U.P.	TOTAL
General Electric Company				
Cement	1	1	4	6
Steel Tubing			1	1
Nitric Acid		8	11	19
Playground Equipment			1	1
Steel			3	3
Lime	1	1	2	4
Caustic Soda	5	9	7	21
Phosphoric Acid	1	1	2	4
Lumber			1	1
Ferric Sulphate	3	2	1	6
Coal		154	173	327

1209513

PURCHASING AND STORES DIVISIONS
TRAFFIC SECTION

STATISTICS (Continued)

Report of Carloads Received (Continued)

	MILW	N.P.	U.P.	TOTAL
General Electric Company				
Merchandise	6			6
Asphalt	9	4		13
Sand	1			1
Express	1	1		2
Chlorine	3	3		6
Soda Ash	2	2		4
Caustic Potash	1			1
Hydrogen Peroxide	1			1
Oxalic Acid	1			1
Ammonium Silicofluoride	1			1
Sodium Nitrite		1		1
Sulphuric Acid		1		1
Ammonium Sulphate		1		1
Transformers		1		1
Bath Tubs		1		1
TOTAL	37	191	206	434
Atkinson & Jones Construction Co.				
Gravel			1	1
Merchandise	1	1	1	3
Cement	6	13		19
Tile	1			1
Machinery	1			1
Asphalt		2		2
Steel Beams		1		1
Sand		1		1
Steel Pipe		1		1
TOTAL	9	19	2	30
Richland Fuel & Lumber Co.				
Coal			2	2
Corps of Engineers				
Lumber			6	6
Gilmore Fabricators				
Steel			2	2

1209514

PURCHASING AND STORES DIVISIONS
TRAFFIC SECTION

STATISTICS (Continued)

	MILW	N.P.	U.P.	TOTAL
Combustion Engineers				
Steel	1			1
Machinery	1			1
Fred J. Early				
Cement	1			1
V. S. Jenkins Co.				
Filters	1			1
Rock Wool	1			1
United Refractory Construction				
Fire Brick	12	1		13
Rust Engineering Co.				
Cement	1			1
C. S. Johnson				
Machinery	1			1
Associated Engineers, Inc.				
Steel Pipe		1		1
Gladding McBean & Co.				
Brick		1		1
Commanding Officer				
Guns		6		6
TOTAL - SUBCONTRACTORS	28	28	12	68
TOTAL ENTIRE PROJECT	65	219	218	502

1209515

EMPLOYEE AND COMMUNITY RELATIONS DIVISIONS

SUMMARY - AUGUST, 1950

The number of applicants interviewed decreased from 1,287 during July to 1,229 during August. Of these applicants 295 were individuals who applied for employment with the Company for the first time. In addition, 204 new applications were received through the mail. Open nonexempt, nontechnical requisitions increased from 154 at the beginning of the month to 247 at the month end. Total plant roll increased from 7,813 to 7,839. Turn-over rate increased from 1.45% during July to 1.57% during August. During August, 63 new requests for transfers to other type of work were received in the Employment Office. Forty-four employees who had filed requests were transferred during the month. Continued shortages in the following job classifications: instrument mechanics and trainees, stenographers, designers, draftsmen, health instrument inspectors and glass blowers, resulted in continued newspaper advertising, and recruiting trips being planned to Spokane, Washington, for stenographers, and Denver, Colorado, for stenographers, designers and draftsmen, on August 31, and September 1 and 2.

During August, instructions for rating and rating forms for nonexempt employees were distributed to all Superintendents and Division Heads, in order that the regular ratings of these employees could be completed in September. The final tabulation of the questionnaire forwarded to all employees on the Employee Services Fund was made during August, with the majority of the employees indicating that they did not wish such a fund at this time. Six employees retired during August, and one employee death occurred. Seventy-four visits were made by a representative of the Employee Services Group to employees confined either at home or at Kadlec Hospital during August. In addition, sixty-seven salary checks were delivered to employees confined either at the Hospital or at home because of illness. At the end of August, 605 employees are members of the military reserve, and 914 employees are registered under the Selective Service Act of 1948 with 134 being classified as 1-A. Thirty-three suggestion awards, totaling $ 355.00, were made during August. These suggestions resulted in an estimated savings of $ 3,355.66. Eighty-two compensation claims were reported to the Department of Labor and Industries, and six property damage and one bodily injury claim were reported to the Travelers Insurance Company during the month.

The second four groups of supervisors began "Principles and Methods of Supervision" on August 21, with a total of 80 supervisors enrolled. This second group of supervisors attended two meetings during the month, while the first group attended five meetings. Two issues of the Hanford Works SAGE were distributed during August. The second meetings, in a series of four, were held for the Medical Division presenting the special program they had request. A total of 26 supervisors and 180 nonexempt employees attended these meetings. As the result of a request from the "S" Division for a special program on Labor Relations, covering the contract's spirit and intent, and the supervisor's responsibility, were conducted with 27 supervisors participating. During August, a notice was sent to all Divisions outlining the renewal of the 40-Hour Supervisor's Training Program in September.

1209516

Employee and Community Relations Divisions
Summary

The eighth Semi-Annual Report of the AEC contained many pictures of Hanford Works, and most of the pictures were those taken by the Hanford Works Photo House earlier this year. Subsequent articles in various newspapers in the Pacific Northwest quoted at length from the 8th Semi-Annual Report and were accompanied by many of the same photographs which the Hanford Works Photo House supplied.

The General Manager addressed the Pasco Chamber of Commerce on August 7 on the subject: "General Electric and Its Community Responsibilities." Good coverage of this talk was given by both newspapers in the Tri-City Area.

The Assistant General Manager accepted an invitation from the local Kiwanis Club to speak when that club visited the Pasco organization's regular luncheon meeting on Thursday, August 31. Declassified items of plant equipment were used to illustrate his talk. The Tri-City HERALD representative was present and an excellent story appeared in that paper the following day concerning the talk.

In addition to talks before organizations in the tri-cities, Public Functions and Services has arranged showings of "A Chance to Play", a G-E movie which points out the need for increased recreational facilities in American cities for both children and adults.

The volume of work in the Hanford Works Photo House increased during August. Total prints produced during August equalled 3,977, negatives exposed equalled 794, and total photographic assignments completed totalled 104.

The News Bureau originated and distributed 68 public information releases during August, 11 of which went to the "general list" of newspapers throughout the Northwest. These were sent out in the form of stories and/or photos.

Pictures of the visit by Harry A. Winne, Vice President of General Electric in Charge of Engineering Policy, were released to Pacific Northwest and local newspapers during his visit here which coincided with visits by the Atomic Energy Commission Chairman, a member of the Commission, and members of the Commission's staff from Washington, D.C.

As a follow-up of the meeting held with Richland businessmen recently, and of the step taken to place them on the mailing list to receive the Hanford Works NEWS each week, they were also advised during the month by letter that they are being placed on the list to receive the MONOGRAM and the NEWS DIGEST each time they are received in Richland.

At the request of a Community Councilman, the Community Divisions Public Information Supervisor was instrumental in publicizing the activities of

the Little League Baseball teams in Richland. In addition, assistance was given to another of the councilmen in publicizing the closing of the local trailer storage lot.

A final tabulation of renewals of subscriptions to "Adventures Ahead" revealed that 783 families of G-E employees at Hanford Works will be receiving the magazine during the coming year.

Although Richland has had a very light poliomyelitis season this year, the policy followed last year of informing residents when cases were reported to Kadlec Hospital has been followed during August. One story prepared by Special Programs, which handles Kadlec Hospital public information and public relations work, concerned Richland's first polio case and this story was released during August. Another story prepared by Special Programs, together with photographs was the means adopted of publicizing the nurses institute on the modern care of polio cases held at Kadlec Hospital during the month.

Among the many individual items produced by Special Programs during the month was included the 12-page community relations booklet produced for the Richland Patrol, entitled "Here's Community Patrol."

On Thursday, August 31, at 12:01 A.M., Hanford Works people completed 134 major-injury-free days and a poster was prepared by Special Programs to congratulate Hanford Works people on this accomplishment. The poster was completed in time to be placed on walls of offices and shops when the day shift came to work on Friday morning September 1.

Hanford Works NEWS became the prime medium during August for advising Hanford Works people of the approaching safety accomplishment--that of work 134 days without a lost-time injury. Also, the Works NEWS gave a picture feature coverage to the awarding of the Distinguished Service to Safety Award which the Nucleonics Department received from the National Safety Council.

The policy concerning project housing for families of personnel called into the armed forces was carried in the Works NEWS during August. In addition, the method to be followed in assigning categories to Hanford Works employees who are members of the reserves or the National Guard was published in the Works NEWS.

The Women's Activities Feature Writer prepared 12 stories during the month to assist in promotion of recreation events conducted by Community Activities at Riverside Park. One major story announced and described the installation of approximately $50,000 of park and playground equipment in the various recreation areas in the community at Richland.

1209518

Employee and Community Relations Divisions
Summary

The Company was still endeavoring to complete negotiations with the Building Service Employees International Union for the execution of a contract affecting certain employees of Kadlec Hospital. A letter was forwarded to all supervisors outlining the Company's responsibility insofar as making wage payments to rotating shift workers who work more or less than the normal 40-hour week. The Company received, on August 28, notification from the HAMTC that it wished to reopen the Contract for the purpose of discussing an adjustment in wages, with a tentative opening date of September 27.

Negotiations between A-J and the Office Workers were concluded on August 30, 1950. The Federal Mediation and Conciliation Service again intervened at the request of the Davis Committee to assist in the settlement.

The offer of settlement of the DST dispute was withdrawn on August 2, 1950. Efforts to select a fifth man from a panel submitted by the Federal Mediation and Conciliation Service to proceed with arbitration has been unsuccessful. The Union claims settlement was made when their authorized representatives on the Arbitration Committee signed the Agreement. A-J has replied that the failure of the Carpenters and Laborers to sign rendered the Agreement null and void.

Negotiatons relative to a Master Agreement for 1950-51 continued during the month. The parties are apparently of the opinion that the present Agreement which has a termination date of August 10 continues in effect so long as the parties are in negotiaton. The Unions are holding firm for a Building Trades Agreement. The contractors continue to oppose it.

The NLRB denied the motion for reconsideration of the Decision and Order submitted by A-J and the Operating Engineers relative to the Newes case. Certification election for Operating Engineers Local 370 as bargaining agent is scheduled for September 6 and 7, 1950.

Negotiations between A-J and the Teamsters Local No. 556 were successfully concluded.

The Sheet Metal Workers have requested the State and Federal Conciliation Service to sit in on wage negotiations from the beginning in order to prevent a threatened work stoppage.

Negotiations with the Ironworkers were concluded on August 16 with increases from $2.10 to $2.25 for Reinforcing Ironworkers.

A complaint regarding the Project medical and ambulance service was lodged with the Department of Labor and Industries by V. A. Larish, United Association Business Agent.

Reimbursement Authorization Requests were submitted to the AEC regarding approval of an exempt rate of record for a nonexempt job resulting from the reclassifying of an exempt employee to nonexempt and for the retroactive overtime payment of

4/

1209519

Employee and Community Relations Divisions
Summary

time and one-half to four Health Instrument employees who were changed from exempt to a nonexempt status. A Reimbursement Authorization Request was also submitted on increases in rates of Steno-Typists and Secretaries. One hundred twenty-nine requisitions covering 246 employees were reviewed, 219 reclassifications and 176 interdivisional transfers were reviewed, 297 automatic increases and 9 merit increases were approved, and 133 additions to the weekly roll were approved. Seven employees were transferred from exempt to weekly roll.

5

1209520

EMPLOYEE AND COMMUNITY RELATIONS DIVISIONS

AUGUST, 1950

ORGANIZATION AND PERSONNEL

Employee Relations:

Employment:

Effective August 31, 1950, a Stenographer-Typist "A" terminated voluntarily.

Employee Services:

Effective August 4, 1950, a General Clerk "D" was transferred to this Group from the Insurance and Suggestion System Group.

Insurance and Suggestion System:

Effective August 4, 1950, a Stenographer-Typist "D" was engaged to replace a Stenographer-Typist "D" who was upgraded and transferred to the Employee Services Group.

Training and Program Development:

There were no organization changes in this Group during the month of August.

Community and Public Relations:

Effective August 1, 1950, one Publicity Writer was employed to work in the Special Programs group.

Union Relations:

No organization changes were made during August.

Number of employees on roll	August, 1950
Beginning of month	91
End of month	92
Net gain	1

This gain was due to an increased volume of work.

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Employee and Community Relations Divisions

ACTIVITIES

Employee Relations

Employment:

	July, 1950	August, 1950
Applicants interviewed	1,287	1,229

295 of the above applicants interviewed during August were individuals who applied for employment with the Company for the first time. In addition, 204 new applications were received through the mail.

Open Requisitions	July, 1950	August, 1950
Exempt	6	11
Nonexempt	154	247

Of the 154 open, nonexempt, nontechnical requisitions at the beginning of the month, 98 were covered by interim commitments. Of the 247 open, nonexempt, nontechnical requisitions at the end of the month, 107 were covered by interim commitments. During August, 133 new requisitions were received requesting the employment of 245 nonexempt employees.

	July, 1950	August, 1950
Employees added to the rolls	157	150
Employees removed from the rolls	122	124
Net gain or loss	+ 35	+ 26

Of the 124 employees removed from the rolls, only 1 terminated due to lack of work. This employee was in the bargaining unit.

Turn-over:	July, 1950		August, 1950	
	Male	Female	Male	Female
Excluding employees laid off for lack of work	1.02%	3.26%	1.28%	2.80%

Over-all plant turn-over:	July, 1950	August, 1950
Excluding employees laid off for lack of work	1.45%	1.57%

At the end of August, there were 186 employees in lack of work status divided into the following categories:

	July, 1950	August, 1950
Nonbargaining unit employees	49	49
Bargaining unit employees	144	137

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Employee and Community Relations Divisions

During August, 63 new requests for transfers were received and reviewed by the Employment Office. Transfers were effected for a total of 44 employees who had filed requests for consideration for transfer during the month. In addition, transfers were arranged for 8 stenographers out of the Stenographic Services Group.

By the end of August, a total of 21 former employees whose continuity of service was broken while in an inactive status were informed accordingly by letter. In addition, 13 employees who were removed from the rolls without processing through termination procedures were contacted by letter.

Because of the international situation and the reopening of a local reconsignment depot, manpower availability for the following job classifications remains critical: instrument mechanics and trainees, stenographers, designers, draftsmen, health instrument inspectors and glass blowers. In addition to the newspaper advertisements to attract candidates for these positions, recruiting trips were planned to Spokane, Washington, for stenographers, and Denver, Colorado, for stenographers, designers and draftsmen, on August 31, and September 1 and 2.

Employment Statistics

Number of employees on rolls	7-31-1950	8-31-1950
Exempt		
Male	1,752	1,763
Female	45	46
Nonexempt		
Male	4,563	4,578
Female	1,453	1,452
TOTAL	7,813	7,839

ADDITIONS

	Exempt	Nonexempt	Total
New Hires	14	110	124
Re-engaged	0	4	4
Reactivations	1	18	19
Transfers (from other plants)	3	0	3
Actual Terminations	18	132	150
Payroll Exchanges	15*	9**	24
GROSS ADDITIONS	33	141	174

* Transferred from Weekly Payroll
** Transferred from Monthly Payroll

Employee and Community Relations Divisions

TERMINATIONS

	Exempt	Nonexempt	Total
Actual Terminations	11	89	100
Deactivations	1	23	24
Payroll Exchanges	9*	15**	24
GROSS TERMINATIONS	21	127	148

Nearly all terminations were on a voluntary basis, and most of these were for the following reasons: (a) Personal Reasons, (b) Another Job, and (c) To Return To school.

GENERAL

	7-31-1950	8-31-1950
Applicants interviewed	1,287	1,229
Photographs taken	227	257
Fingerprint impressions taken (in duplicate)	311	301
Procurement letters written	676	573

ABSENTEEISM STATISTICS
(Weekly Salary Roll)***

Male	1.42%	1.69%
Female	2.55	3.11
Total Plant Average	1.69	2.04

INVESTIGATION STATISTICS

Cases pending at beginning of month	1,087	1,130
Cases received during the month	198	187
Cases closed	155	409
Cases pending at month end	1,130	908
Cases found satisfactory for employment	166	170
Cases found unsatisfactory for employment	6	7
Cases closed before investigation completed	22	13
Special investigations conducted	7	18

* Transferred to Weekly Payroll
** Transferred to Monthly Payroll
*** Statistics furnished by Weekly Payroll Division

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PRIVACY ACT MATERIAL REMOVED

Employee and Community Relations Divisions

Employee Services:

During August, all Superintendents and Division Heads were notified that the regular ratings of nonexempt employees is to be completed in September. Attached to these notices were sufficient copies of Rating Form "A" for the employees in each Division.

As the result of requests received from the Technical Services Group and the Technical Procurement Division, we have discontinued forwarding Progress Reports and Weekly Rating Sheets on Technical Graduates assigned to the Rotational Training Program. However, in order to have a rating in the employee's folder, we have requested that copies of rating form "B" be forwarded to this Division for filing, instead of the Division retaining them in their files.

During August, the final tabulation was completed on the questionnaires forwarded to all employees relative to the Employee Services Fund Campaign conducted earlier this year. With approximately 50% of the questionnaires returned, the results indicate that the majority of Hanford Works people are not interested in the establishing of such a fund at this time.

Four trips were made to all areas for the purpose of posting union bulletins, Suggestion System posters and Labor Day closing notices on the Company Bulletin Boards. On August 25th, the Union Relations Division notified this office that in the future the Union would post all of their own notices on the bulletin boards.

The following visits were made with employees during the past month by representatives of the Employee Services Group:

Kadlec Hospital	71
Employees at home	3
Salary checks delivered to employees confined to Hospital	62
Salary checks delivered to employees confined at home	5

As of the first of August, participation in Company Benefit Plans were as follows:

Pension Plan	94.6%
G.E. Group Life Insurance	76.9
G.E. Group Health Insurance	94.5
Employee Savings & Stock Bonus	43.

One employee death occurred during the month of August, namely:

Purchasing and Stores Divisions.

PRIVACY ACT MATERIAL REMOVED

Employee and Community Relations Divisions

The following employees retired during August:

Hazel D. Jones, Construction Accounting Division, (Optional);
Vesta B. Erickson, North Richland Realty, (Optional);
O. W. Riggins, Maintenance Division;*
Marie S. Ponsat, Medical Division, (Optional);
Norma Burmeister, Medical Division, (Optional); and
John R. Brazzell, Plant Security and Services Division.

Each of these employees was interviewed prior to their retirement in order that all benefit plans to which they might be eligible during their retirement might be clearly explained.

*O. W. Riggins refused to sign his pension papers, as he was unwilling to accept any pension other than a lump sum settlement. This case will be discussed by the Pension Board at their meeting in September.

Four publications of Employee Benefit Plans Information were prepared and released to the Works News for publication during August.

Reserve and Selective Service

At the end of August, there were 605 reservists on our rolls. The Joint Manpower Mobilization Committee has categorized 373 of these reservists, 151 of which have been approved by the Hanford Operations Office management. Those employees whose categories have been approved have been notified of their categorization, as well as the 125 employees who were placed in Category A.

Thirty-two reservists received orders to report for physical examinations or active duty during August. Deferments were requested for 21 of these employees, 10 of which were granted, and 1 which Washington has given a sixty day delay in reporting date pending a thorough investigation. The 10 cases still pending are cases who have not actually received orders to report for active duty, but only for physical examinations.

Also during August, deferments were requested for fifty employees classified as 1-A by their Selective Service Board, and to date eight of these requests have been granted.

The statistics with respect to employees effected by the Selective Service Act are as follows:

Employees registered under Selective Service Act of 1948	914
Employees registered who are veterans	553
Employees registered who are non-veterans	361
Employees classified as 1-A who are single and non-veteran	134
Employees who are single, who have not been classified	39

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Employee and Community Relations Divisions

Suggestion System and Insurance:

Suggestion System:

	July, 1950	August, 1950	Total since 7-15-1947
Suggestions received	186	161	5,919
Investigation reports completed	178	242	4,996
Awards granted by Suggestion Committee	35	33	769
Cash awards	$ 355.00	$ 355.00	$ 11,665
Estimated savings resulting from suggestions	3,341.01	3,355.66	

Publicity concerning the Suggestion System was carried in the August 4 issue of the Works News, featuring the August Suggestion System Poster and a question and answer column explaining the processing of suggestions.

The largest suggestion award made during August was to a Maintenance Division employee in the amount of $ 60 for a suggestion regarding the use of lock tongs for quicker and safer installation of sheetmetal duct with government or cup lock joints.

Insurance and Compensation

Compensation

-- On December 9, 1949, reported to the Medical Division alleging he had injured his back several weeks earlier while carrying a sample of gravel up a steep bank. The claim was opposed as the claimant was known to have been suffering from a back condition for a number of years. The Department of Labor and Industries then denied the claim and the claimant appealed this decision. As the result of this appeal a hearing was held in Richland, Washington, on August 2, 1950, at which time it was agreed between all parties that the employee would be allowed medical expenses not to exceed $ 55.00 upon withdrawal of the appeal.

Life Insurance

Code information for use by insurance companies in issuing insurance to employees of this Works was furnished to 83 insurance companies and investigation agencies during August.

Insurance Statistics

	July, 1950	August, 1950	Total since 9-1-1946
Claims reported to the Department of Labor and Industries	72	82	3,554
Claims reported to Travelers Insurance Company	2	7*	451

* Of the above claims reported during August to the Travelers Insurance Company, 6 were property damage claims, and 1 was for bodily injury.

Employee and Community Relations

Training and Program Development:

During August a letter and questionnaire was forward to all Division Heads and Superintendents advising them that the 40-Hour Supervisors' Training Program was to be renewed in September and requesting information as to the best times to hold these meetings each month.

During the past month four new groups of supervisors to begin the "Principles and Methods of Supervision", were started with a total of 80 supervisors enrolled. Two groups were scheduled to be held in Richland and two groups were to be held at Hanford High School. These new groups attended 2 meetings during August. The first four groups started during July attended five meetings during the past month, from this group 3 of the 79 participants found it necessary to withdraw from this Program.

Two copies of the Hanford Works SAGE were distributed to supervisors during August.

The second in a series of four meetings to be held with the Medical Division, presenting the special program they requested, were conducted during August, with a total of 26 supervisors participating in one meeting and 180 nonexempt employees participating in the others. As a result of this special program, the Medical Division has stated that they have noticed a considerable change in attitude throughout their Division.

During August, 4 additional copies of the Supervisor's Handbook on Employee Relations were distributed to supervisors in various divisions. Also during August, 1 addition and 3 revisions to this Handbook were distributed to the holders of this book.

A total of 127 new employees were given orientation during August. Of this number 66% elected to participate in the Group Life Insurance Plan, and 79% elected to participate in the Group Health Insurance Plan. In addition, 5 re-engaged employees and 3 transferred employees were given orientation. Of this number, 37% elected to participate in the Group Life Insurance Plan, and 75% elected to participate in the Group Health Insurance Plan. On August 1, a new procedure was placed into effect, whereby Form 4.50, which includes the proper mailing address of the employee both at the plant and home, is distributed to the new employees as they attend orientation. The employee then completes the form and turns it over to his supervisor for correct distribution. This plan was placed into effect inasmuch as these forms have not been completed in many cases for new employees.

As the result of a special request from the "S" Division, on August 11 a meeting was held with 27 supervisors of that Division. At this meeting, a special program on Labor Relations was presented, relative to the contract, including the spirit and intent, as well as the supervisor's responsibility in dealing with stewards. This progressive type of program will be conducted at intervals for the "S" Division in the future.

Employee and Community Relations Divisions

Community and Public Relations Division

PUBLIC INFORMATION - News Bureau

During the month of August, 68 releases of information were made by the News Bureau.

Local News Releases

During August, 57 releases of information, in the form 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:

Personnel

General -- The announcement of Dr. Charles V. Larrick's appointment as a member of the Committee on Nucleonics of the American Institute of Electrical Engineers was published. A story from the General News Bureau in Schenectady concerning G.E.'s mobilization plan was reproduced and sent to the local list.

Organization Changes -- Three stories concerning changes were written. The first one concerned two appointments within the Health Instrument Divisions. W. A. McAdams became Assistant Superintendent of the Health Instrument Operational Division, and Phillips C. Jerman became Chief Supervisor in the 100 Areas with the same division. The second story concerned the changes of the title of the Hanford Works Mechanical Divisions to "Plant Utilities and Maintenance Divisions" and the transfer of the Power Division to the new divisions. The third story announced R. J. Gandy's appointment to Assistant Supervisor of the Purchasing Division.

Community

Construction -- Two stories announced the moving of 10 prefabs from Columbia Camp and the painting of 141 houses, 24 dormitories and three office buildings.

Electrical -- Residents were forewarned of six power outages during August.

Housing -- A story describing the projected remodelling of 633 Richland prefabs was sent to the "local list" and was accompanied by a photograph with outline to the newspapers on that list.

A story quoting Patrol Chief, Harry W. Strock, announced the closing of the Richland trailer lot and informed residents they could use the North Richland trailer storage lot. A brief account of the same information was given to the Columbia Basin NEWS and Tri-City HERALD which they prominently displayed in boxes.

Fire Protection -- A short humerous feature story warning residents of the danger of overloading washing machines was released.

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Employee and Community Relations Divisions

Recreation -- Seventeen stories on the summer recreation were written during August: Football pass-catch contest; children's talent show; North Richland athletic champions; badminton tournament; prizes for talent show; try-outs for Minnesingers; announcement of a public dance; the need of volunteers for the recreation program new park and playground equipment; three stories on "Summer Recreation Review"; handcraft classes and the swimming program. In addition, special stories were written for radio release; announcement of a public dance; try-outs for Meistersingers and the need of volunteers for the recreation program.

Public Works -- The new Richland garbage regulation was released in full to the local press. It was announced that irrigation water would be shut off over the Labor Day week end to facilitate cleaning of the irrigation canal.

Medical -- A story concerning the nurses institute on the modern care of polio patients was accompanied with two photographs with cutlines and sent to the "local list." A story quoting Dr. Sachs described the Richland and state polio record this year, the facilities for treating polio at Kadlec Hospital and the symptoms of polio. A story announcing Richland's only polio case up to that time was released to the "local list" during August. A brief statement urged residents to use the front entrance of Kadlec Hospital during the resurfacing and improving of driveways. These four stories were written by Special Programs and released through the News Bureau.

Plant

Construction -- A story quoting W. E. Johnson stated that construction at Hanford Works is proceeding on schedule and announced present and future hiring figures.

Safety -- Two stories concerning Bicycle Safety Classes were written during August.

Releases Sent Throughout the Northwest

During August, 11 informative news releases were sent to 75 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 releases:

Personnel --

General -- Four stories announced: The appointment of Dr. W. J. Ozeroff to Group Head of General Electric's Theoretical Physics Group at Hanford Works; the naming of Oscar D. Seawell as one of the 30 men who will attend the Atomic Energy Commission's School of Reactor Technology at Oak Ridge, Tennessee, and the visiting of Harry A. Winne to Richland. Another story described in detail the system that will be used for determining whether or not requests for military deferments are to be made for Hanford Works employees who are members of the National Guard or the Reserves

A long feature story on Harry Kramer, our local river prophet, written by Jet Montgomery of the Hanford Works NEWS staff, was released to the "daily list" by the News Bureau.

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Employee and Community Relations Divisions

Speakers — The speech that R. E. Curtis will deliver to the Chicago meeting of the American Chemical Society was summarized in a story sent to Chicago papers as well as to the daily list.

Community

Construction -- Four stories announced: the low bid of C & E Construction Co. for street construction and repair; the announcement of bids for making alterations to air conditioning control systems in 29 dormitories; the low bidder for that job (Pasco Electric Shop); and the commencement of construction in Richland's medical-dental clinic.

Housing -- A story quoting the Housing Superintendent announced the new policy whereby families of Hanford Works employees who enter the armed forces may continue to occupy their houses in Richland.

Recreation — A story briefly described the new park and playground equipment costing $50,000 that is now being installed in 18 Richland recreation and park areas.

Tri-City HERALD Only

The Tri-City HERALD Richland correspondent requested information on the extension of Swift Boulevard to the by-pass highway. He was informed that the Community Engineering Division is making a survey and preparing a cost estimate.

Two pictures with cutlines were given to the HERALD: one showed the compressed air unit being used to clean prefab electric heaters; the other was a "gag" shot using traffic signs and bathing-suited girls to publicize Richland's achievement of the best total traffic score in the 1949 traffic safety contest.

Two stories: one on the "Summer Recreation Review" and the other the installation of two sandtraps in the Richland water system were given to the HERALD.

The HERALD ran a story stating that the Benton County PUD contemplates taking over service in Richland. The Richland HERALD correspondent later asked how much facility operators pay for electricity. It was explained that rent paid by facility operators is not broken down to show amount paid for the various utilities and services. He then asked whether leases would have to be renegotiated if the PUD takes over. He was informed that the leases stipulate that equitable revision of rents will be made of electricity or any other service or utility should be taken over by an outside organization.

Columbia Basin NEWS Only

Three photographs, one of the "Summer Recreation Review", one of the compressed air unit being used to clean prefab heaters, and the other similar to the picture given to the HERALD to publicize the National Safety Council award were given with cutlines to the Columbia Basin NEWS.

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Employee and Community Relations Divisions

A copy of a release from the General News Bureau describing the new professorship honoring Charles E. Wilson that has been established at the Graduate School of Business Administration at Harvard was given to the NEWS.

Two recreation stories, one reviewing the talent show, and the other describing the "Summer Recreation Review" were released to the Columbia Basin NEWS.

Yakima Morning HERALD Only

The HERALD correspondent requested information on a rumored flurry of hiring. The correspondent was given a statement to the effect that hiring was less in July than in June and at present is at its normal turn-over.

The same correspondent asked about a rumored change in minor construction policy ad was furnished a statement describing the consolidation of Project Engineering and Plant Utilities and Maintenance Divisions in the Manufacturing Divisions.

Spokane CHRONICLE Only

Following a statement by Community Manager, L. F. Huck, at a Community Council meeting the Richland correspondent of the CHRONICLE requested further information on expenditures at Richland. The request was answered with a statement describing more completely and breaking down these expenditures.

Other Projects

Miss Bernice E. Berg of Seattle requested and was furnished information about the town of Richland to be used in a college thesis.

A proposal for the Institutional Advertising Campaign was drawn-up and submitted to the Division Head.

The News Bureau Supervisor assisted in the revision of the Nucleonics Department Section of the G.E. Source Book.

Rotational Training Program

Jeanne Weller who visited Richland last month left a request for pictures to be used in a story on the Rotational Training Program. She was furnished five pictures of typical trainees on the job at Hanford Works. The same pictures with longer cutlines were sent to the publications serving the Universities attended by the trainees. Further use was made of the same pictures and cutlines by giving them to the Richland correspondent of the Spokane CHRONICLE, who placed them in the CHRONICLE as a full-page spread. After her return to Schenectady, Jeanne Weller wrote a story on Richland teen-agers which she submitted for review by the News Bureau. It now has been returned.

A correspondent from the Lebanon Beacon, Lebanon, Oregon, visited Richland during August and was escorted through Richland and North Richland and supplied with pictures by the News Bureau Supervisor.

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Employee and Community Relations Divisions

Four pictures of the "tool dolly" with captions were sent to Keystone Pictures, Inc. in answer to their request.

A new program which will involve sending releases to the home town papers of affected employees by Hanford Works personnel changes was started during August. The first two releases on this program were sent out.

"30 for the Month" for July was written and sent to Assistant Superintendents and above. The same personnel were sent two Information Digests duplicated by the News Bureau. One was an article entitled "Atomic Energy As a Human Asset" by Harry A. Winne which was published in the July-August issue of "Atomics." The other was "The Atomic Era - the Second Phase" published in the July 8 issue of "Business Week."

An article by Richard H. Syring, staff correspondent of the Wall Street JOURNAL was duplicated in pamphlet form for distribution to prospective participants in the Rotational Training Program.

The hearings before the Subcommittee for Independent Offices Appropriations of the Senate Appropriations Committee were digested by the News Bureau and submitted to the Nucleonics Department General Manager.

PUBLIC INFORMATION - Community Divisions

Community Divisions' Organization Change - A suggested procedure for informing members of the Community Divisions, Plant, and public of any organization change in the Community Divisions was outlined and presented to the Community Manager for his approval and use.

It was recommended that Community Divisions personnel be acquainted with any changes through a letter from the Community Manager, the letters to be distributed through the various levels of supervisors. Plant people and the public would be informed of any changes through the Works NEWS and local press. The former would get the "break" on the story by date-lining it for release on a Friday.

G.E. Management - Businessmen's Luncheon - A report of this meeting was prepared and forwarded to interested persons throughout the Plant and Company.

NEWS DIGEST and MONOGRAM Mailed to Businessmen - Current copies of these publications, together with "cover" letters, were mailed to all Richland businessmen. This is part of a continuing program aimed at keeping businessmen informed of the Company's activities at Hanford Works and elsewhere.

Assistance to Richland Councilmen - At the request of a community councilman, the Community Divisions Public Information Supervisor accepted the job of publicity chairman for Little League Baseball teams in Richland. Also, the Supervisor assisted another councilman in his efforts to publicize the closing of a local trailer parking lot. Such cooperation undoubtedly goes a long way toward winning the good will of community councilmen for the Community Divisions and the Company.

Employee and Community Relations Divisions

Community and Plant Meetings Attended - The Community Divisions Public Information Supervisor attended the Community Manager's staff meetings, during August, and contacted Community Divisions superintendents, regularly, to gather information of interest and concern to Plant personnel and the public. With the assistance of the various groups within the Community and Public Relations Division, he then released this information via the Works NEWS, newspapers, radio, letter, and other public information media.

PUBLIC INFORMATION - Public Functions and Services

Papers and Speakers -

The Vice President and General Manager, Nucleonics Department spoke at the regular meeting of the Pasco Chamber of Commerce on August 7 on the subject, "General Electric and Its Community Responsibilities." This was arranged by the Division Head in response to a special request made for a program from which Pasco businessmen could learn, first hand, how G.E. handles its Community responsibilities and more especially its policies as concersn the management of Richland. The substance of the talk served as an excellent good will medium in this, another of our efforts to promote good community relations with our neighbors.

The Assistant General Manager appeared before members of the Pasco Kiwanis Club, Thursday, August 31, in a program arranged by the Division Head and the Richland Kiwanis Club through Public Functions. Declassified equipment was exhibited that showed some of the complexities involved in our work at Hanford Works. An excellent talk given by the Assistant General Manager, and recorded for typing at a later date, preceded the demonstration of the elaborate devices on display which were made available through the Technical Divisions. An interesting article was published by one of the local newspapers giving an account of the highlights of the talk.

A local businessman asked the Assistant General Mnager to give this same talk and demonstration at a luncheon meeting of the Yakima Kiwanis Club on October 24. The invitation was accepted.

"Rotational Training Assignments in the Atomic Energy Industry" is the subject of a talk to be given by R. E. Curtis of Hanford Works at the 118th National Meeting of the American Chemical Society's Division of Chemical Education at Chicago on September 4. Color film slides, institutional booklets, photographs and other material was furnished to Mr. Curtis, and the Commercial Vice President of General Electric at Chicago acknowledged correspondence informing that office of the forthcoming visit of Mr. Curtis and they are extending him their services upon his arrival.

Among Other Papers and Speech Texts cleared were those submitted by F. J. Mollerus, on "A Qualitative Study of Corrosive Galvanic Circuits," to be presented at the National Convention of the American Institute of Electrical Engineers at Oklahoma City on October 24; Herbert M. Parker, on "Biological Effects, Dosage Parameters and Personal Protection," to be read at an unclassified conference on waste disposal at the University of California at Los Angeles on September 7; John F. Gifford on "Design of Radiochemical Laboratories . . ." for publication in the November Nucleonics Journal. Ten other papers prepared by representatives of Hanford Works were cleared for presentation in a contest conducted by the Richland Section of A.I.E.E.

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Employee and Community Relations Divisions

Film Showings

"A Chance to Play" is the title of a Recreational series film shown to three Company and four community organizations this month. The presentation was prepared and issued by the General Electric Apparatus Department and depicts the plight of youngsters and oldsters who are not benefited by the advantages of sufficient recreational facilities that could be provided through well-lighted playfields and recreation areas furnished by far-sighted municipalities. The film was secured by the Community Recreation Section and current showings have been augmented by the appearance of Gray Clifton and Bob Button of the Pasco office of the Apparatus Department.

"And Then There Were Four" is the title of a General Petroleum Company film procured by the Community Safety Division on the recommendation of Public Functions and Services for safety meeting showings. This very impressive Safety film depicts the lives of five people who violate important traffic safety rules and how one of them becomes a traffic fatality and orphans the surviving children. A timely showing in Richland was held for employees of Employee and Community Relations Divisions on the Friday preceding the Labor Day holiday week end.

Twenty-eight General Electric-produced films were procured through Public Functions and Services for showings by plant groups and community organizations during the month of August.

Radio

"Lady from Safetyland," a Public Functions and Services recorded production being aired by radio station KALE each Saturday afternoon has met with real favor to the younger children and new treatments are being made to improve the program. Young listeners have written from as far as Hermiston, Umatilla, and Stanfield, Oregon and Moses Lake, Washington expressing their enjoyment of the program. Each Sunday morning the author and narrator, Betty Szulinski; the organist accompanist, Art Cooper; and radio technicians, Ray Benckenstein, Ben Willingham and George Gilson; and the director, set up and produce future series of the production. Following each broadcast, three records of each program are prepared; one for the National Safety Council at Chicago, one for the Richland Safety Council, and one for storage.

A Radio Column, "Are You . . . Listening?" was developed and made its debut in the August 4 issue of Hanford Works NEWS. Four recommended programs "aired" by each of the three local radio stations during the week are listed, in addition to programs produced by Public Functions and Services or other General Electric groups.

A Mental Health Series Forum That Presented a Challenge to our qualifications and capacities was offered to this group for development for radio presentation by the Richland Health Council through its Chairman. Since accepting the assignment, six 30-minute programs have been completed with three to be prepared next month to complete the series of nine. Each program consists of a radio play enacted by well-known radio artists and narrated by Eddie Albert, famous screen and radio star, and transcribed especially for radio broadcast. Following the fifteen-minute play,

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a forum is conducted with experienced educators, professional people and business leaders from this area ... this, too, is transcribed by local radio engineers. Upon the completion of the "package" consisting of eight recorded programs, radio station KWIE will "air" them weekly beginning in October.

The ninth program will be arranged by this group and entails a "live" broadcast consisting of all participants in each production attending a forum. The moderator will ask for comments on questions sent in by listeners during the preceding eight weeks. This is one of our best community relations efforts and is indicative of the policy of General Electric Company to cooperate with community groups in educational and wholesome ventures.

Radio Programs for Outer-Area Personnel were suggested by a local radio station for lunch hour presentation on a tailor-made basis. The suggestions were received by our General Manager, Divisions Manager and Division Head and a survey of the feasibility of such a plan was conducted by Public Functions and Services and submitted for consideration. The plan, though not original, would be an interesting employee relations production at Hanford Works.

Program Development

The Annual Summer Recreation Revue was staged for the Community Recreation Section, and attracted over 400 persons, of which 300 were parents, to Riverside Park, Tuesday evening, August 29. Highlighting the event were the demonstrations of games, Arts and Crafts exhibits, the Water Ballet, skits, awards. Arrangements for this event included furnishing, setting-up, and operating public address system and lighting facilities.

The Atomic Frontier Days Variety Show Committee was assisted in sound and stage effects for its two-hour show presented to an enthusiastic crowd of nearly 5000 Richland residents. Recordings were made of the singers appearing on the program. (See Photographic Services for other services rendered on this occasion).

Art Work

A very high compliment was paid to Hanford Works employees by our New York Manager of Employee Relations, Dick Gleason, for the enviable safety record achieved. The Hanford Works NEWS editorial and cartoon appearing in the July 14 issue provoked the interest which prompted Mr. Geason's comments. He had them photostated and forwarded to Employee and Community Relations Divisions Managers in all Departments of the Company.

Outstanding Art Work created and prepared by our artist and which will be viewed in various media by employees and community personnel is included in this list of August accomplishments: back cover of telephone directory, congratulatory Safety poster, front cover on "Guide to Richland," completed drawings in stenographic manual, "This Way, Please!", drawings and lettering in the booklet, "We Took Our CUE...", editorial, security and safety cartoons and illustrations in Works NEWS, drawings and column heads in Works NEWS, and designing and lettering special award certificates for Atomic Frontier Days.

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Photographic Services

Motion Pictures of Summer Recreation Program had a premier showing to over 400 persons attending the Summer Review at Riverside Park, Tuesday evening, August 29, and comprised some 800 to 900 feet of color-film taken by the Photo House during the summer program of activities. A script was prepared and narrated. It will be re-edited and adapted synchronously to the completed film.

"Atomic Frontier Days" was efficiently covered photo-wise by members of the H.W. Photo House. Motion pictures, color slides, and black and white photos were taken of the parade, events, and variety show. The motion pictures will be stored until a completed "package" is developed of a year's community activities, and then prepared as a documentary as well as an entertaining film for showing to employee, community, and Pacific Northwest organizations.

Technical Divisions and Reactor Divisions continued to utilize the specialized services of the H.W. Photo House during August in order to emphasize, by use of photos, the ramifications of their highly technical work assignments.

Photo Assignments and Prints nearly approached the record established in June and particular attention is called to the outstanding quality of photographs, produced by the H.W. Photo House, appearing in local and Northwest papers as well as"Candid Camera." More than one-half of the photos in the A.E.C. Eighth Semi-Annual Report were made by the Photo House. Events, such as Atomic Frontier Days, were highlighted by stories and photographs supplied by the services of Community and Public Relations as an example of the fulfillment of our community responsibilities and assistance.

EMPLOYEE INFORMATION - Works NEWS

During the month of August the Works NEWS initiated and helped develop several programs significant in the operation of Hanford Works and an aid to community activities.

Security publicity was given considerable space in the light of the Korean crisis. Considerable syndicated material was used to show what the Company was doing on security programs, its mobilization capabilities with respect to production, Presidential directive regarding to sabotage, and instructions concerning part people may play in reporting acts of espionage and sabotage. Much of the material was run and plans were completed to continue publishing such material at the request of the G.E. Security Office and of the F.B.I.

Safety news figured prominently during August. A front page picture feature was devoted to the awarding of the Distinguished Service to Safety Award to the Nucleonics Department by the National Safety Council. In conjunction with the Special Programs section, the possibility of the project attaining the first safety award in the No Accident Safety Award Plan was announced and stressed. Publicity was given through front page stories and editorials.

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Employee and Community Relations Divisions

Health Bulletins distributed to employees were the sources of several stories and features during August. These included pictures on taking care of teeth. A story on the modern methods of treatment for polio listed precautions that should be taken.

Special human interest features included predictions made by an employee of the rise and fall of the Columbia River which was written for Works NEWS and outside release, and one on the employee who accepted the National Safety Council Award on behalf of all of his fellow Nucleonics Department employees.

Sports interest was increased by the addition of publicity for the Little League baseballers. News on this activity was included because of the large number of children of plant people who were participating.

Employees eligible for service were given detailed account of the procedure to be used in requesting deferment of members of reserve components and National Guard. The policy concerning retention of project homes by families of reserve and National Guard members who enter the service also was publicized. All material of interest to employees entering service will be published as it becomes available.

Community activities included information on civilian defense, picture features and stories promoting Atomic Frontier Days including complete schedule of events, and news of the installation of $50,000 worth of park and playground equipment.

Special efforts were extended in order to place a story on the urgent need for blood donors by the National Red Cross on the front page at press time. This involved considerable change in make-up.

New columns were introduced. A column, "Are You Listening," devoted to listing of the current radio programs each week of interest to readers began its appea ance as a regular feature. As employees are called to service their names are being run under a new column titled "Roll Call." Items of special interest to old time Hanford Works employees now appear in a new column titled "Five Years Ago."

Training a new assistant to the editor was started during the month.

Reporter Booklet outline was completed. This will be a 30 to 50 page booklet designed to acquaint reporters more fully with the way to find and write the kind of material desired by Hanford Works NEWS.

EMPLOYEE INFORMATION - Special Programs

Recruiting advertising was continued during August. Classified ads were placed for Glass Blowers, Stenographers, Draftsmen and Design Draftsmen, and Instrument Mechanics.

Glass Blowers (Chicago TRIBUNE, August 12 - 14)
Stenographers (Denver POST, August 27 - September 1, ROCKY MT. NEWS, August 27 - September 2; Spokane SPOKESMAN-REVIEW, August 31 - September 2, CHRONICLE, August 30 - September 1)
Draftsmen and Design Draftsmen (Denver POST, August 27 - September 1, ROCKY MT. NEWS, August 27 - September 2)
Instrument Mechanics (INSTRUMENTS magazine, August issue, 1/3 page)

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Employee and Community Relations Divisions

Payment for all advertising bills received was arranged, and eight letters were written asking for tear sheets or statements from dilatory newspapers.

Both display and classified ads were placed in the two local daily papers to acquaint residents of the Richland trailer lot closing.

Tri-City HERALD, August 4, 10, 20, 29
Columbia Basin NEWS, August 9, 16, 18, 25, 29

The Health Activities Committee's regular monthly meeting was attended, and a letter on mosquito control was prepared and distributed to all Area Councils.

A printed and mimeographed program was prepared for use at the "Summer Recreation Revue," closing event of Richland's Summer Recreation Program.

"Adventures Ahead" subscription campaign was concluded with a total of 783 subscribers.

Three news releases concerning poliomyelitis, and two photographs were prepared and submitted to the News Bureau for release.

The mailing of the G-E NEWS DIGEST was announced in a letter prepared for mailing to Richland's business people.

G.E.'s General Engineering and Consulting Laboratory services and facilities were brought to the attention of HW Managers through a data folder and covering letter in order that they might take advantage of the assistance available from this in-Company source.

Semi-annual revision of the H.W. Organization Chart entailed preparing a new page for the Employee and Community Relations Divisions and correcting the General Manager's staff pages.

An article on Richland in THE WALL STREET JOURNAL was reprinted in leaflet form at the request of the News Bureau.

Production of "Here's Community Patrol," a 12-page Patrol community relations project, was completed during August. Containing four full-page photographs plus a double page cover photo, the booklet, which is to be mailed to residents as an introduction to Patrol, offers valuable suggestions on safeguarding persons and property.

A poster congratulating H.W. people for 134 major-injury-free days was prepared the day following completion of the record and arrangements were made to place them on plant and office walls on the 135th day.

Booklets and other printed materials concerning G.E. and Hanford Works were assembled and a covering letter prepared to be sent to junior college placement authorities.

A form-type letter was written at the request of Employee Services for use in requesting deferment of employees performing vital jobs, but for whom suitable replacements are not available.

Employee and Community Relations Divisions

G-E employees who enter the armed forces will receive a form letter produced during August which discussed G-E benefit plans and status of veterans with the Company.

Cover sheet was prepared for a report on the G-E Management-Richland Businessmen's luncheon, and the final reports were assembled.

A Kadlec Hospital news story was released informing residents that, because of current construction on the hospital grounds, the front entrance only to the hospital should be used.

The Plan for acquainting H.W. people with significance of their safety achievement of 134 days without a lost-time injury was developed and put into effect as the deadline approached.

EMPLOYEE INFORMATION - Women's Activities

One Women's Page appeared in the Works NEWS during the month of August, 1950. Other pages prepared were held back because of pressure of other more timely news.

The one Women's Page published dealt with the possibilities of back yard living, popular with Richlanders. Ideas shown were simple and inexpensive to acquire and showed a considerable amount of ingenuity.

Twelve stories were written for the promotion of recreation events directed by the Community Activities Division in Riverside Park. One major story was the announcement and description of $50,000 worth of park and playground equipment being installed in Richland park and playground areas. The story went to the local list and to other newspapers throughout the Northwest.

Three hundred-sixty requests for rides and riders were handled through the "Share a Ride" system. Requests were received for the following destinations: Pullman, Lewiston, Ephrata, Spokane, Seattle, Portland, Longview, Astoria, Bellingham, Tacoma, Yakima, Walla Walla, Los Angeles, Oakland, Oklahoma City, Minneapolis, Salt Lake City, Denver, New York, San Francisco, Kansas City, Sioux City, Missoula, Iowa City, Little Rock, St. Louis, Sacramento, Boise, Billings; Lincoln, Neb.; Bozeman, Mont.; Bismark, N.D.; Cleighton, Neb.; Ames, Iowa; Memphis, Tenn.; Casper, Wyo.; Ottumwa, Iowa; Chehalis, Wash.; South Dakota, Missouri, Iowa, Nebraska, Illinois, Minnesota, and California.

Employee and Community Relations Divisions

Hanford Works Photo House

	8" x 10"	5" x 7"	2" x 4"	2" x 2"	Negatives	Color Slides	Prefab. A Badges	Motion Pictures	Laminated Cards	Portrait
EMPLOYEE & COMMUNITY RELATIONS										
Employment	33		484	2310	257		484		30	
Special Programs	35				13					
News Bureau	132				116					
Works NEWS	253				206					
Community Divisions										
Public Information	74				7					
Public Functions & Services	14				5			700'		
MANAGEMENT										
Rotational Training	4				3	24				175
MEDICAL		35				5				
COMMUNITY DIVISIONS										
Community Activities	68				31					
Community Safety	15				12					
Public Works	83				46					
DESIGN DIVISION										
Reactor Division	83				34					
Design & Construction	35									
TECHNICAL DIVISIONS										
Pile Technology	48				6					
S Division	8				4					
Instrument Division	16				8					
Plant Record Control	28				12					
Project Engineering	7				6					
Telephone	20				15					
A.E.C. Safety	11				12					
A.E.C. Security	6									
	973	35	484	2310	794	29	484	700'	30	175

	JUNE	JULY	AUGUST
TOTAL PRINTS	4,455	2,930	3,977
TOTAL NEGATIVES	840	612	794
TOTAL ASSIGNMENTS	111	75	104

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Employee and Community Relations Divisions

Union Relations and Wage Rates

Union Relations - GE Personnel:

The Company was still endeavoring to complete negotiations with the Building Service Employees International Union for the execution of a contract affecting certain employees of Kadlec Hospital. A draft of a proposed contract was transmitted to the Union, together with a summary of job classifications, definitions and related progression schedules. Apparently, all salient points were considered acceptable by both the Company and the Union and at month-end the Agreement awaited only the required signatures to become effective.

After considerable coordinated effort between this office and the Payroll Division, a letter was composed and forwarded to all supervisors outlining the Company's responsibility insofar as making wage payments to rotating shift workers who, because of overlapping shifts, occasionally work slightly more or less than the normal 40-hour week. The letter served to acquaint supervision with the problem and to point out the legal aspect of establishing a workweek of 168 hours, which is a governing factor in determining certain overtime payments.

The Company received from the HAMTC on August 28, notification that the Council wished to reopen the Contract for the purpose of discussing an adjustment in wages as provided under Article XXIV of the Agreement. A tentative date of September 27 was set as the opening date of such negotiations.

Grievance Statistics

Thirteen grievance reports were received during the month, bringing the total received this year to 145. Three hundred twenty-one grievances have been received since the grievance procedure was established. Grievances were received this month from the following divisions:

Mfg. Instrument	4
Mfg. Maintenance	1
Mfg. "S" Div.	1
Mfg. Transportation	1
Mfg. "P" Div.	2
General & Office Services	1
Technical Services	1
Village Maintenance	2
Total	13

Employee grievance reports received during the month of August were regarding the following subjects:

Discrimination	1
Jurisdiction	3
Overtime Rates	1

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Employee and Community Relations Divisions

Seniority	2
Wage Rates	5
Miscellaneous	1
Total	13

The status of all grievances received to date is as follows:

	1949	1950	Total
Settled Satisfactorily, Step I	56	25	81
Settled Step I, per Time Limitation	59	72	131
Pending at Step II	--	28	28
Settled at Step II	61	20	81
	176	145	321

Seven per cent of the total grievances received this year have been submitted by employees outside the bargaining unit.

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:

Negotiations between Atkinson-Jones and the Office Workers were concluded on August 30, 1950. After many weeks of deadlocked negotiations, the President of the Office Employees International requested the services of the Davis Committee. A wire from the Committee requested the parties to make further use of the Federal Mediation and Conciliation Service, and failing settlement, the Committee would take jurisdiction on September 1, 1950. The Conciliation Service again attempted to mediate the dispute, but only after the arrival of D. K. Grant to take charge of negotiations for A-J were the parties able to arrive at a basis for settlement. On August 30 an agreement was reached which in essence provided the following:

1. Wage increases retroactive to April 12, 1950 approximating 6.5%, or $4.65 per week.

2. An 18-months' contract to be continued in effect without wage changes until October 12, 1951.

3. A continuation of the present method and cost of administering fringe benefits.

General Electric and the Commission have indicated that a Request for Reimbursement Authorization will be approved and the Agreement will become effective upon ratification by the Union membership.

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Employee and Community Relations Divisions

On August 2, 1950, Atkinson-Jones sent letters to the individual Unions withdrawing the offer of settlement in the Daylight Saving Time dispute and insisting that the matter proceed to arbitration. A panel of five names has been submitted by the Federal Mediation and Conciliation Service from which the fifth arbitrator can be selected. To date, the Unions have refused to meet to select the fifth man basing their refusal on the promise that the signatures of their duly authorized representatives on the Settlement Agreement constituted a disposition of the case. A-J has replied to the effect that the Agreement as signed by the Arbitrators was dependent upon execution by all Unions signatory to the Master Agreement in order to become effective. The Carpenters and Laborers did not sign. The Unions have not replied to that letter.

Negotiations between Contractor and Union representatives relative to a Master Agreement for 1950-51 have continued past the expiration date (August 10) of the present contract. D. K. Grant of A-J has expressed the opinion that the contract has continued in effect in view of the fact that the opening notices from the Unions ("--to modify and amend the Agreement") were such that according to the language of the Agreement it would continue in effect so long as the parties remain in negotiations. The Unions apparently are in accord with this line of thinking. A-J has stated they are inalterably opposed to a Building Trades Agreement but would give further consideration to an agreement to which the Building Trades Council was a party along with each Local Union. Next negotiations are scheduled for the first week in September.

An order from the NLRB denying the motion and petition as submitted by A-J and the Operating Engineers for reconsideration of the Decision and Order issued June 8, 1950 in the case of Chester R. Hewes, was received by A-J on August 28. A subsequent letter from the Board requested A-J to conform to the terms of the Decision which requires them to:

1. Notify Local No. 370, Operating Engineers, of the withdrawal of recognition from it as the representative of any A-J employees until it has been certified as the collective bargaining agent in an appropriate unit.

2. Offer Chester R. Hewes full and immediate reinstatement of his former position.

3. Post at conspicuous places copies of notices to be furnished by the NLRB.

4. Notify the Board of compliance with the above orders and furnish copies of letters to Local No. 370 and to Hewes.

The NLRB election covering the certification of Local 370, Operating Engineers, as the collective bargaining agent is scheduled for Wednesday and Thursday, September 6 and 7, 1950.

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Employee and Community Relations Divisions

Negotiations between A-J and the Teamsters Local No. 556 were concluded during the month. The new Schedule "A" provided for increases of five and ten cents per hour in five classifications and minor revisions in working rules. In lieu of the controversial Bus Drivers classification, the contractors agreed to pay the Drivers overtime at the same rate they receive during their eight-hour work day.

The 1949 negotiations with the Sheet Metal Workers failed to result in wage increases to this craft due to the fact that they were unable to show their wage demands to be prevailing. Negotiations have remained technically open during the interim period. No demand has yet been made on the Project; however, we are in receipt of copies of letters dated August 15 from the Sheet Metal Workers requesting the Conciliation Service (apparently both State and Federal) "to participate in negotiations from the beginning." The correspondence also states "the sentiment of the employees is such that it may compel work stoppage." A rumor prevalent on the job is to the effect that the men have notified their Business Agent of their intent to "go fishing" unless wage negotiations are concluded by September 18. Initial negotiations are scheduled for September 8.

The controversial issue of whether Reinforcing Ironworkers should be paid the $2.10 rate or be increased to $2.25 was resolved on August 15 when a new Schedule "A" was agreed to and signed providing for the $2.25 rate. Every Ironworker on the job (325 with A-J) would have failed to report for work on the morning of the 16th if the matter had not been settled.

Atkinson-Jones received NLRB certification of the IAM election effective July 31, 1950. The first negotiations with the Machinists were held on August 14, 1950 and may well be the most difficult that have been experienced in some time. Demands include: A closed shop, jurisdiction of all shops in White Bluffs, different shift arrangement than now prevails, pay for holidays not worked, paid vacation, disputes clause available to Union only, exclusive buses, etc. and wage increases from $2.35 to $2.75, double time and $3 and $3.50 isolation pay. At negotiations on August 16 conducted by Don Grant, the Machinist representative agreed to furnish men at the presently approved rate pending negotiation of a contract. The IAM representative stated that he believed the Machinists would be back in the A.F. of L. fold before the end of the year. Next negotiations have not been scheduled.

A letter from V. A. Larish, Business Agent for the Plumbers and Steamfitters, outlining certain abuses which had been inflicted upon his members by our Medical and ambulance service, was received by the Project with copies directed to the Department of Labor and Industries. An investigation proved the accusations to be entirely erroneous and Larish was so informed by letter. Larish also registered his complaint with the Building Trades Council resulting in a Grievance Committee meeting at which Larish failed to appear. The Grievance Committee composed of Union representatives other than the Plumbers gave the Project a clean bill of health and adjudged our medical service to be superior to any other construction project known. It is believed that Molthan, Attorney for the United Association, has requested the Department of

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Employee and Community Relations Divisions

Labor and Industries to order all injured men treated at the hospital in Yakima rather than in Richland. Two Department of Labor men arrived in Pasco on August 21, but declined a tour of the first aid and ambulance locations in the areas. After a meeting with General Electric representatives, and later the Union, they returned to Olympia without advising of the disposition of the case. An appointment with A. M. Johnson in Olympia is scheduled for September 7, at which meeting an attempt will be made to clear up the matter.

Travel to Spokane was performed by a member of this Division to attend a meeting of the Associated General Contractors for the primary purpose of determining whether Spokane should follow the Oregon A.G.C. in entering into a two-year contract with the Operating Engineers and Teamsters (in Oregon Laborers also) providing for ten cents across the board increases January 1, 1951, and five cents across the board on January 1, 1952. It is anticipated that the Spokane A.G.C. will agree to the increases and extend the agreement for two years.

Reimbursement Authorization

Requests for Reimbursement Authorizations handled during the Month:

1. Teamsters - Wages
2. Ironworkers - Overtime and Wages
3. Bitumastic Painters
4. Overtime Compensation - Meal Time, Plumbers, Steamfitters and Electricians (Linemen)
5. Bricklayers - Overtime Rates
6. Plumbers and Steamfitters - Travel Allowance
7. Overtime - Six-Day Week - Boilermakers and Plumbers

Reimbursement Authorizations received during the Month:

1. Teamsters - Wages
2. Ironworkers - Overtime and Wages
3. Bitumastic Painters
4. Overtime Compensation - Meal Time, Plumbers and Steamfitters
5. Bricklayers - Overtime Rates

Work Stoppages

The threatened work stoppage involving office employees of A-J and their CPFF subcontractors was averted by the settlement of the dispute on August 30, 1950.

A strike by 325 Ironworkers of A-J was scheduled for August 16, 1950. A negotiated settlement of the dispute occurred at 3:00 a.m. on the morning of August 16. Work continued without interruption.

The Sheet Metal Workers have requested both the State and Federal Conciliation Servicesto "participate in negotiations from the beginning", "the sentiment of the employees is such that it may compel a work stoppage." The initial negotiations are scheduled for September 8.

Employee and Community Relations Divisions

Wage Rates:

A conference was held with representatives of the Hanford Atomic Metal Trades Council to consider the proposal which would enable us to give comparable treatment to those employees laid off for lack of work and employees reactivated. The Council has not signified its agreement to this proposal to date.

A Reimbursement Authorization Request was submitted to AEC calling for approval of an exempt rate of record for a nonexempt job. This resulted from the decision to reclassify an exempt individual to a nonexempt classification and continue on the same job without a change of duties.

A Reimbursement Authorization Request was submitted to AEC calling for the payment of retroactive pay at the rate of time and one-half for four employees of the Health Instrument Division whose jobs as a result of a recent study were declared nonexempt. These cases, involving pay on the basis of time and one-half, were computed on the exempt rates of pay of these men for the period between June 7, 1948 and June 8, 1950.

A Reimbursement Authorization Request was submitted to AEC calling for approval of increases in rates of Steno-Typists and Secretaries. This request is designed to provide a more equitable alignment in our rate structure, plus the need of higher rates to attract individuals to Hanford Works to perform this type of work.

A Reimbursement Authorization Request was submitted to AEC which called for the changing of the Supervisor-in-Training classification from the exempt to nonexempt category.

Proposed changes in job content for the chemical helper classification were discussed with representatives of the union. This proposal resulted from increased manpower requirements within the affected division, with the prospect of rapid promotion of untrained employees.

A review of laboratory jobs in the H. I. Operational Division resulted in the reclassification of eleven jobs.

During the month of August, the Wage Rate Division processed 219 reclassifications and 176 interdivisional transfers. A number of the transfers also included job changes and required job studies.

Two hundred ninety-seven automatic increases were put into effect and nine merit increases were approved.

Job classifications were reviewed and approved for 129 requisitions covering a total of 246 employees. Classifications and rates were approved for 133 employees added to the weekly salary roll. Seven employees were transferred from the exempt roll to the weekly salary roll.

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COMMUNITY DIVISIONS
SUMMARY - AUGUST, 1950

ORGANIZATION AND PERSONNEL

Number of employees on roll:	Beg. of Month	End of Month
Community Administration	5	5
Community Accounting	30	28
Community Public Works	437	440
Community Safety	3	3
Community Commercial Facilities	15	15
Community Housing	43	44
Community Fire	99	96
Community Patrol	71	69
Community Activities	19	18
	722	718

There was a decrease of four (4) employees in the Community Divisions during the month of August, 1950.

	Reduced	Increased
Community Administration	-	-
Community Accounting	2	-
Community Public Works	-	3
Community Safety	-	-
Community Commercial Facilities	-	-
Community Housing	-	1
Community Fire	3	-
Community Patrol	2	-
Community Activities	1	-
	8	4

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PUBLIC WORKS DIVISIONS
MONTHLY REPORT
AUGUST 31, 1950

ORGANIZATION AND PERSONNEL

	EXEMPT	NON-EXEMPT	TOTAL
Number of employees on payroll:			
July 31, 1950	58	379	437
August 31, 1950	58	382	440

Personnel changes made during the month:

New Employees	10
Transfers from Minor Construction	11
Transfers from Transportation	1
Transfers to Manufacturing Power	3
Transfers to Transportation	2
Transfers to "S" Division	1
Terminations	13

GENERAL

On Thursday morning, August 10th, 5,818 letters to residents of the Village relative to the garbage regulation were delivered to the Post Office in time for them to make a sorting and place in hands of the carriers Friday morning, August 11th. Some re-arrangements of routes was necessary to equalize the collection and at the present time, all routes are on schedule and satisfactory collection is being experienced.

Continued high usage of water has been experienced for the month of August, averaging 18,000,000 gallons per day. The underground water table is still in a very satisfactory condition and no sign of shortage exists.

Large sand traps have been installed in the north end incoming mains, and sand is being satisfactorily removed from the system.

PROJECTS

C-232 "Construction of Carmichael Jr. High School" - Site grading is approximately 80% complete. Survey parties are starting water lines for permanent irrigation system in areas where site grading is complete. Installation or irrigation system will begin about September 12, 1950. Material required for main lines in this area have not been received as of this date by subcontractor.

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Community Public Works Divisions

PROJECTS (CONTD)

C-233 "Construction of Spalding Elementary School" - Irrigation installation is approximately 35% complete. Work is progressing satisfactorily. Lawn seeding will start on this site August 30. Work anticipated to be completed "irrigation only", September 8, 1950.

C-282 "Richland Community Dust & Pollen Program" - "Memorial Park", the area east, north and west of the cemetery has been graded, fertilized and seeded with the exception of a small area along Williams Blvd.

C-356 "Recreational Facilities" - Final specifications for fence and backstop at Columbia Baseball Field were issued 8-22-50. Relocation of baseball stands completed. Recreation material on requisition by G.E. is being delivered. Drawing for construction of handball court, to be constructed by subcontract was delivered for negotiations. Prints for field constructed equipment by G.E. forces was completed and delivered 8-16-50.

C-357 "Increase Capacity, Sewage Lift Station" - Negotiations continued with subcontractors. Manufacturers drawings were received for G.E. furnished equipment which are being approved by Project Engineering.

C-359 "Duane Avenue Street Improvement" - Modification of directive was approved 8-17-50. Modification was for increase in authorized funds. Contractor awaiting notice to proceed.

C-363 "Exterior Rehabilitation, Prefabs" - Repair of foundation posts continuing. Approximately 17% of houses completed. Relocation of stop and waste completed on approximately 130 houses. Plans, specifications and list of special provisions were completed and delivered to Contract Section.

C-367 "Moving 10 Prefabs from Columbia Camp" - Subcontractor started work at Columbia Camp 8-29-50. Excavation started on Wright Avenue building site 8-31-50.

C-372 "Exterior Painting of Houses" - Bids were opened 8-22-50. Awaiting approval of contract.

C-374 "Casey Street Improvement" - Modification of directive to increase authorized funds was approved 8-17-50. Casey Street and vicinity have been staked and are ready for contractor. Contractor awaiting notice to proceed.

C-375-R "Site Development, Clubs and Organizations" - Field Release (1) issued 8-28-50. Plans and specifications to be prepared.

C-376 "Irrigation Laterals - Carmichael and Spalding Schools" - Request for modification to decrease authorized funds was issued 8-30-50. Work progressing. Contractor approximately 35% complete.

C-382 "Additional Water Supply, Well 1100-D" - Contract was awarded and drillers moved on to plant 8-30-50. Drilling is scheduled to start 9-1-50.

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Community Public Works Divisions

PROJECTS (CONTD)

C-386 "1950 Street Patching and Seal Coating" - Contractor awaiting notice to proceed.

C- 387 "Interior Painting of Dorms" - Specifications ready for final distribution.

"S" PROJECTS

S-229 "Cleaning Furnaces" - Construction completion notice issued 8-1-50.

S-240 "Prefab Roof Maintenance" - Initial roof re-surfacing complete. Maintenance to continue to 9-7-50.

S-244 "Fencing Irrigation Ditch, Wright to Van Giesen" - Rough draft reason sheet was completed 8-3-50. Cost estimate completed for comments 8-22-50.

S-255-B "Development of School Areas and Levee Irrigation" - Temporary irrigation is being installed at Frankfort Playlot in order to initiate site grading work in this area.

S 255-C "Development of School Areas and Levee Irrigation"- Bleachers have been moved and drainage is being installed for the ball field area.

S-258 "B.O.Q. Dorm Re-roofing" - Field Release (2) was issued 8-30-50. Subcontractor started work 8-29-50. Work approximately 12% complete.

S-290 "Radio Communication, Fire Department" - Revised specifications were issued in rough draft for comments. They were returned for alterations by Community Manager's office.

S-311 "Remodeling 722-A Building" - Final inspection was made 8-18-50. Exceptions on final inspection were completed 8-22-50. Subcontractor moved from building site 8-23-50.

S-333 "Air Conditioning Dorms" - Bids opened 8-29-50.

S-342 "Roofing New Wings, 703 Bldg." - Final specifications issued 8-8-50.

S-349 "Interior Painting, 703 Bldg." - Job is approximately 25% complete.

S-366 "Exterior Painting of Hospital, Medical-Dental & Municipal Buildings" - Specifications are being prepared for subcontract negotiations. Field release issued 8-24-50.

S-377 "703 Bldg. Addition, Site Preparation" - Cancelled.

S-394 "Moving Warehouse 1125-1" - Grant Construction Company awaiting notice to proceed.

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Community Public Works Divisions

"S" PROJECTS (CONTD)

S-397 "Radio Communication - Public Works & Housing Divisions" - Reason sheets and appropriation request issued 8-21-50.

S-405-B "Street Tree Planting - Reason sheet and appropriation request issued 8-21-50.

S-415 "Hospital Soft Water Line" - Scheduled to Contract Section for negotiation into existing subcontract. It has been determined that parking lot south of hospital will interfer with soft water line. Water line is being moved to clear lot.

S-432 "Swift Blvd. Extension" - Reason sheet and appropriation request issued 8-21-50.

ENGINEERING DIVISION

Organization and Personnel

	Exempt	Non-Exempt	Total
Number of employees on payroll:			
July 31, 1950	18	14	32
August 31, 1950	18	14	32

Miscellaneous

Material procurement items handled during the month are as follows:

Requisitions	71
Store Stock Requests	4
Store Stock Adjustments	1
Purchase Orders Expedited	14

Voluntary allocation of materials by mills and warehouses, in lieu of formal Government Controls, has begun to effect deliveries on purchase orders, and should be considered on future requests. This is true, particularly in metals category.

The following number of jobs were completed on continuous engineering service requests:

ESR #97-CH - Elec. & Struct. Inspec.	4
ESR #100-CH - Back Charge Estimates	1
ESR #118-CF - Approved Alteration Permits	1

The following Engineering Service Requests were completed or cancelled:

Job No.	Description	Date Completed
59-SS	Roads, Walks & Seeding of 700 Area	8-16-50
80-CA, Pt.II	Relocation of Masonic Temple	8-21-50
264-CF	Radio Station - Cascade Broadcasting Station	8-23-50 - Cancelled

1209552

Community Public Works Divisions

Job No.	Description	Date Completed
319-MD	Landscaping Ground East of Kadlec Hospital	8-28-50
335-CA	Site Map for Free Methodist Church	8-28-50
339-MD	Automatic Water System	8-28-50 - Cancelled
392-CA	Grading - Jefferson Playground	8-14-50
407-AEC	Richland Motors Garage Converted to Public Library	8-1-50
411-AEC	Records Service Building	8-21-50
416-CF	Estimate for Increased Electrical Service Richland Concrete Company	8-21-50
419-CF	Estimate for Resurfacing Parking Area Campbell's Market	8-14-50
437-CA	Community Activities Storage & Service Yard	8-28-50

Technical information and instruction were furnished the following prospective facility operators, clubs, churches and schools.

Operator of Recreation Hall relative to proposed alteration and addition.

The status of Commercial Facility Sponsored Construction is as follows:

Theater - Construction started 12-14-49 - 90% complete

Cascade Radio Station - Cancelled 8-23-50

Morgan & Olberg Drugstore - Construction started 8-7-50 - 10% complete

McVicker Food Store - Construction started 5-22-50 - 90% complete

Joseph's Investment Bldg. - Construction started 5-22-50 - 95% complete

Carnation Milk Co. - Construction started 8-21-50 - 70% complete

Johnny's Minute Man Bldg. - Construction started 6-29-50 - 95% complete

Drive In Restaurant - Construction started 7-24-50 - 60% complete

Outdoor Roller Rink - Plans and specifications approved 8-3-50 - Awaiting start of construction

Richland Laundry and Cleaners Addition - Approved building plans 8-25-50 - Awaiting electrical and mechanical plans

Automatic Laundry Bldg. Addition - Construction started 8-10-50 - 70% complete

Community Public Works Divisions

The status of Community Activities Sponsored Construction is as follows:

Latter Day Saints Church - Construction started 2-5-49 - 98% complete - minor exceptions to clear

Assembly of God Church - Construction started 5-23-50 - 3% complete - work stopped

Church of Christ - Construction started 12-19-49 - 99% complete - minor exceptions to clear

Swimming Pool Association - Still awaiting information

Reorganized Latter Day Saints Church - Construction started 8-22-49 - 41% complete

Christian Science Society - Awaiting information

Catholic Church Site - Awaiting information

Northwest United Protestant Church - Plans and specifications approved 7-21-50 - Awaiting start of construction

Westside United Protestant Church - Preliminary plans reviewed 10-14-49 - Awaiting plans and specifications

First Baptist Church - Plans and specifications approved 4-27-50 - Awaiting start of construction

Episcopal Church - Awaiting information

Central United Protestant Church - Awaiting information

Redeemer Lutheran Church - Construction started 8-21-50 - 5% complete

Addition to Masonic Temple - Construction started 8-11-50 - 5% complete

The status of School Construction is as follows:

Chief Joseph School - Construction started 4-24-50 - No called inspection

Jason Lee Elementary School - Awaiting information

Farm Shop Bldg. - Constructinn started 3-6-50 - 95% complete

Columbia High School Addition, - Plans and specifications approved 6-28-50 - Building permit to be issued

Progress of AEC sponsored Construction is as follows:

Richland Public Library - Building permit to be issued

Airport Control Bldg. - Building permit to be issued

Records Service Building - Construction started 8-10-50 - No further work required by Community Engineering

1209554

Community Public Works Divisions

Leased Areas were Surveyed and Plot Plans Prepared for the Following:

Roller Skating Rink
Central U.P. Church
Free Methodist Church
Community Activities Storage & Service Yard

The following work was done on streets and storm sewers:

Area is staked for tearing out, jacking up and replacing sidewalk, curb and gutter sections in little "A" area.

Long Avenue connection with Thayer Drive is completed. Paving of approximately 50 ft. of Long Avenue.

Storm sewer laid along north side of Williams and east of Kimball Street is installed to tennis court approximately 140 ft. of 12" pipe.

Work done on Grounds Maintenance is as follows:

Night watering has proven very satisfactory and grass areas in general have improved noticeably. Manpower on watering has started to decrease due to student terminations. Maintenance on established areas may be slightly reduced.

Arrangements have been made with the Buckner Manufacturing Company to correct deficiencies in the pop-up units used on Levee 2-C. Installation is complete except for this item and the installation of automatic drains.

Work has not begun on Levee 2-B and cannot begin until receipt of sprinkler units for this section.

Traffic Control Report is as follows:

Traffic counts were taken and diagrams prepared for six intersections. Painting of centerlines, curbing and no passing zones was completed. 32 traffic control signs were repaired and straightened. Scotchlite on signs and reflectors were cleaned. 47 signs were renewed or raised to high standards.

OPERATION AND MAINTENANCE DIVISION
MAINTENANCE SECTION

Organization and Personnel

	Exempt	Non-Exempt	Total
Number of employees on payroll:			
July 31, 1950	19	176	195
August 31, 1950	19	185	204

Personnel changes made during the month:

New Employees	1
Transfers from Minor Construction	9
Terminations	1

Community Public Works Divisions

Miscellaneous

Renovations of vacant houses completed during month of August amounted to a total of 51 orders; 26 of these being conventional type houses and the remainder 25 prefab houses.

Work on these houses included 39 complete paint jobs, 13 partial paint jobs and miscellaneous repairs and cleaning as required to place these houses in acceptable condition. There are 29 orders open at the end of the month.

A total of 74 prefabs was completed in the interior paint program. This includes all carpentry repairs and painting throughout.

Spot painting in 66 bathrooms was completed after tile installation and 15 A&J kitchens were painted in part or entire. Five houses were spackled and repairs made so that tenants could do their own painting.

290 Scotch-lite reflectorized houses numbers were made and installed.

Dorm W-10, Nucleonics Building, is receiving a complete interior paint job and is about 60% complete.

Paint work in 703 Building is progressing according to schedule.

Miscellaneous painting completed included stairway wainscots in 4 dormitories, spraying of 50 electric heaters and 10 prefab cabinets, and numerous touch-up and sign jobs.

Carpentry labor necessary to prepare 27 railroad car loads and 4 truck loads of excess material for shipment was supplied to Stores Division.

General exterior carpentry repair of 141 houses and all women's dormitories (as necessary to prepare for painting by contractor) was completed during the month, and this same work is in process on the men's dormitories.

Major interior alterations in the third wing of 703 Building were performed during evening hours in the latter part of the month. This work was necessary to allow for re-allocation of office space to various groups.

The relocating of bleachers at Columbia playfield was completed on 8-15-50.

Leaking or cracked concrete bathtubs were replaced with metal bathtubs in 54 houses and tile board installed at the same time. In addition to these 54 tile board completions, tile board was installed in 82 houses where tubs were not replaced, or a grand total of 136 tile board installations.

The summer overhaul of boilers in Building 784 and 700 Area steam system is approximately 85% completed.

The revisions to evaporative cooling system of Building 762 was completed at the end of the month, this job consisting mainly of the replacement of existing coolers with units of sufficient size to supply the volume of air necessary to cool the building.

1209556

Community Public Works Divisions

Miscellaneous (Contd)

A standard type fuel oil cap is being placed on fill pipes of all house oil tanks. This hinged cap will eliminate the screw cap which has been a source of much maintenance cost due to persons turning the fill-pipe (along with the cap) and breaking off the return line from the fuel pump. These caps are now installed on approximately 70% of precut houses

Work was completed on a 200' extension of the 12" storm sewer on Williams, east of Kimball.

The installation of sand traps in the 14" and 24" water mains from North Richland was completed in August. This job required much scheduling and coordination and accomplished quite successfully.

The river pump which re-charges Columbia well field has been replaced on its low level base.

A panel truck was altered and revised for use as a picture and sound truck by the Special Events group of Public Relations, and another panel truck was converted for use as a "Paddy Wagon" by Patrol Division.

Installation of an irrigation grid on the river dike from Hains Avenue to Redman Gulch was completed in August, and additional irrigation outlets were provided in the ranch house area. This last mentioned work was to minimize the use of domestic water for irrigation of inner block areas.

The annual lubrication and repair of ranch house furnaces is approximately 45% complete. All "Bard" damper controls (which have been a constant source of trouble) are being replaced with Minneapolis Honeywell controls as a part of this job.

A standard coal furnace has been re-installed at 635 Cedar, where an experimental heat pump was in use for some time.

Eighteen shower stalls were fabricated and installed in prefab houses.

Three hutments in the 700 Area have been cut from utilities, interior partitions removed, and all other necessary work done preparatory to their being moved to Wellsian Way where they will be used by Richland School District. The actual moving is awaiting preparation of new foundations by the School District.

A listing of miscellaneous work completed during August, 1950, includes replacement of 2 refrigerator units, 8 laundry trays, 22 kitchen sinks, 13 water heaters; repair or replacement of linoleum on 129 floors and 86 sink-boards; the sealing and caulking of linoleum edge around sinks in 233 houses; repair of 105 screen doors, 19 roofs and 3 refrigerators; and repair and re-upholstering of 48 occasional chairs, 24 office chairs and 8 davenos.

Project C-3630

Faulty timbers have been replaced under 130 prefabs and water service revisions have been completed on 47 units. This work is preparatory to the prefab rehabilitation work which will be done by a contractor.

Community Public Works Divisions

Service Order Group

A total of 1676 orders were completed by the service order group, 93.1% of this work being for Housing Division, 1.8% for General, 2.3% for Concessions, .7% for Public Works and 2.1% for various other divisions.

The following is a status report on service orders as of the end of August:

On hand at beginning of month	197
Received during the month	1681
Completed during the month	1676
On hand at the end of the month	202

UTILITIES SECTION

Organization and Personnel

	Exempt	Non-Exempt	Total
Number of employees on payroll:			
July 31, 1950	9	57	66
August 31, 1950	9	56	65

Personnel changes made during the month:

New Employees	1
Transfers to Manufacturing Power	1
Transfers to Transportation	1

Steam Facilities

Routine normal operations were carried on throughout the month. The remainder of annual maintenance work to steam distribution system necessitating system shut-downs was completed during the month. The No. 1 boiler feed pump and turbine was completely overhauled and returned to service. Routine maintenance and overhaul work on boilers is being continued.

On August 17th, boilers No. 2 and No. 4 at 784 Building were inspected by a Travelers Insurance Company representative. An official report of this inspection has not been received as yet, but with minor exceptions the inspector indicated that the condition of the boilers were satisfactory. All planned overhaul work on the coal handling system at 784 Boiler House has been completed and the system is thought to be in good condition for the coming heating season.

The installation of steam flow meters for metering steam consumption at Columbia High and Carmichael Jr. High Schools has not been completed as yet. Orifice flanges have been installed in the steam lines at each location. The recorders and orifice plates will be installed as soon as they are received from the vendor.

Steam supply to the Carmichael Jr. High School was put in service on Wednesday, August 30th.

Community Public Works Divisions

Central Steam Plant

Steam Generated	8,611 M lbs.
Steam Sent Out	6,900 M lbs.
Coal Consumed	1,325 M lbs.

Domestic Water

Routine normal operations were continued throughout the month. Total water consumption for the month was 545 million gallons. Consumption for August, 1949 and 432 million gallons.

Sand traps were installed on the water supply lines from the North Richland and Columbia well fields. The trap on the 14" supply main was installed on August 8th and 9th, the trap on the 24" supply main was installed on August 16th and 17th. The amount of difficulty due to sand in the distribution system has been substantially reduced. It is expected that it will take some time to remove previous collections of sand from the distribution system.

Domestic Water System

	Well Production Million Gallons	Avg. Daily Production	Total Consumption Million Gallons	Avg. Daily Consumption
Richland	209.7497	6.7661	455.0054	14.6776
North Richland	239.9320	7.7397	61.0926	1.9707
Columbia Field	95.4521	3.0791		
300 Area			29.3430	0.9465
Totals	545.1338	17.5849	545.4410	17.5948

Sewerage System

Routine normal operations have been continued throughout the month. The No. 1 treatment plant digestor has been completely cleaned. Much difficulty was encountered in removing a collection of heavy grit and lime material from this unit. Some additional work of a minor nature will be necessary to put this unit in a stand-by lay-away condition.

All dried sludge has been removed from the drying beds and stockpiled by the contractor, Growers Service and Supply Company of Yakima.

Sewerage

	Total Sewage Flow Million Gallons	Average Daily Flow Million G.P.D.	Average Rate Flow Gals. per Min.
Plant No. 1	39.400	1.271	883
Plant No. 2	71.255	2.299	1596
Total	110.655	3.570	2479

1209559

Community Public Works Divisions

Irrigation System

Operation of the irrigation canal and irrigation distribution systems has been normal throughout the month. Weed growth in the canal had started to retard the water flow at the end of the month and water was shut out of the canal for three days in an attempt to control the weed growth by drying up the canal.

LABOR SECTION

Organization and Personnel

	Exempt	Non-Exempt	Total
Number of employees on payroll:			
July 31, 1950	9	130	139
August 31, 1950	9	125	134

Personnel changes made during the month:

New Employees	8
Transfers from Minor Construction	2
Transfers from Transportation	1
Transfers to Manufacturing Power	2
Transfers to Transportation	1
Transfers to "S" Division	1
Terminations	12

Miscellaneous

The garbage ordinance and new collection routes and zones were placed in effect August 14, 1950. This new system eliminates the Wednesday trash collection. Trash not meeting regulations of garbage ordinance since August 14th is picked up on back charge basis only. Six days per week coverage of eating facilities and stores is being continued.

Mowing of public areas and miscellaneous trucking continued during the month. Miscellaneous trucking required two men during the month for Activities and Commerical Facilities Division. Average of fifteen houses in renovation maintenance during August.

Watering and general maintenance of Village orchards continued. Seven acres of newly seeded areas planted during August. General program of drainage and repairs, also tree maintenance, was continued.

The miscellaneous labor and earthwork crew has completed several excavation jobs, the largest one being the installation of sand traps in water mains north of town. Other excavation were on minor repairs to underground utilities.

1209560

Community Public Works Divisions

Miscellaneous (Contd)

Grounds maintenance forces have successfully kept the seeded areas from burning, although this force is gradually becoming smaller due to the boys returning to school. All of the temporary labor will terminate by September 15, 1950.

Road and street maintenance is progressing satisfactorily. Much of our larger patch jobs have been completed, but several lifting jobs are to be done in order to better the drainage of certain areas.

Materials used this month:

Pre-Mix	
Road Maintenance	130.25 Tons
Parallel Walks	.6
Steps & Service Walks (Work Orders)	39.1
C.C Anderson Store	20.
Lee Blvd.	22.
Long & Thayer	12.
Spalding School Tennis Court	25.
Total	248.95 Tons
Bitumuls:	
Used for all Blacktop work	400 Gallons
Gravel & Chips:	
3/4" Minus Gravel:	
Road Maintenance	8 C.Y.
Parking Lots	22
Total	30 C.Y.
3/4" Chips:	
Parking Lots	11 C.Y.
5/8" Chips:	
Parking Lots	12 C.Y.
700 Area Maintenance	16
Total	28 C.Y.
1/2" Minus Gravel:	
700 Area Maintenance	21 C.Y.
Wright & Humphries	29
Road Maintenance	30
Total	80 C.Y.
Sand:	
Tank Pad - Newcomer Road	35 C.Y.
Tank Pad - Stevens Drive	132
Total	167 C.Y.

1209561

Community Public Works Divisions

Materials used this month (contd)

Pit Run Gravel:		
700 Area Grading	30	C.Y.
River Pump	197	
Total	227	C.Y.
R.R. X-Ties:		
Parking Lot	19	
Topsoil:		
700 Area	39	C.Y.
Drainage (Work Orders)	87	
Total	126	C.Y.

1209562

COMMUNITY COMMERCIAL FACILITIES DIVISION

AUGUST, 1950

ORGANIZATION AND PERSONNEL	AUGUST
Number of employees on payroll	
Beginning of month	15
End of month	15

COMMERCIAL FACILITIES:

Number of Commercial Facilities Employees:	
July	1,109
August	1,067
Net Decrease	42

The following routine items were processed:

Work Orders	43
Back Charges	0
Service Orders	27

CONTRACTS AND NEGOTIATIONS:

Commercial Facility Leases were entered into with the following individuals:

Seldon Mason - Lease dated August 3, 1950 - covering the construction and operation of an outdoor roller skating rink.

Harvey Stoller - Lease dated August 8, 1950 - which cancels and supersedes the former operating agreement and which provides for the continued operation of Richland Laundry and Dry Cleaners under a ten-year lease term.

Supplemental Agreements were entered into with the following individuals or firms:

Grover W. Dawson and James H. Richards - Supplemental Agreement No. II, dated July 10, 1950 - amending Article XIV (STATEMENTS AND BOOKS OF ACCOUNT) and Article XXXIII (DEFINITIONS) of the Commercial Facility Lease, dated March 8, 1949.

Densow and Drumheller Company - Supplemental Agreement No. I, dated August 8, 1950 - amending Article XXXIII (DEFINITIONS) and Article XIV (STATEMENTS AND BOOKS OF ACCOUNT) of its Commercial Facility Lease, dated February 2, 1949, and providing for subleasing in the facility by the lessee.

Davis Furniture Company - Supplemental Agreement No. I, dated August 17, 1950 - covering the furniture sale held on the premises formerly occupied by Richland Motor Company, Richland, Washington, from June 23 to July 2, 1950, inclusive.

1209563

COMMUNITY COMMERCIAL FACILITIES DIVISION AUGUST, 1950

Hanson Enterprises, Inc. was authorized to sublease the space formerly occupied by Sportlets, Inc. to L. Roy and Rozena Davis, for the operation of a retail children's clothing store.

Hanson Enterprises, Inc. was authorized to permit Sportlets, Inc. to continue temporary operation of a hobby shop in a portion of the space subleased to L. Roy and Rozena Davis.

The Desert Inn was authorized to sublease the space formerly occupied by International and Domestic Travel Service to Global Travel Service, for use as a travel agency.

The Desert Inn was authorized to resublet the barber shop space formerly occupied by Arthur G. Williams to William J. Newell, commencing September 1, 1950, for continued use as a barber shop.

Vance Properties, Inc. was authorized to modernize the Lobby of the Desert Inn.

Garmo's Food Store was authorized to sell the furniture and fixtures in the facility building to the partnership of F. G. Campbell, K. T. Campbell and R. W. Carriger, d/b/a Campbell's, Richland, Washington, and to assign all of its right, title and interest in its present operating agreement to Campbell's, effective as of September 2, 1950.

Assignment of Lease was executed, effective August 4, 1950, whereby R. E. Waud, M.D., assigned all of his right, title and interest in and to his Commercial Facility Lease, dated May 1, 1950, to F. M. Love, M.D. and Roy C. McCartney, M.D.

COMMERCIAL FACILITIES EXPANSION PROGRAM:

	July	August
1. Number of Government-owned Buildings	37	37
(a) Number of businesses operated by Prime Lessees	49	49
(b) Number of businesses operated by Sublessees	11	9
(c) Total businesses operating in Government-owned buildings	60	58
2. Number of Privately-owned Buildings	32	32
(a) Number of businesses operated by Prime Lessees	36	36
(b) Number of businesses operated by Sublessees	14	16
(c) Total businesses operating in Privately-owned buildings	50	52
3. Total number of businesses in operation	110	110
4. Doctors and Dentists in private practice, leasing space in Government-owned buildings	23	22
5. Privately-owned Buildings under construction	5	5
6. Leases awarded	1	0

1209564

COMMUNITY COMMERCIAL FACILITIES DIVISION AUGUST, 1950

Construction was started on the Thrifty Rexall Drugstore at 1314 Jadwin on August 8, 1950.

The installation of a large gasoline tank and electric gasoline pump was started on August 21, 1950 by Carnation Company for use of their own trucks.

Construction was started on an addition to Automatic Laundry Company Investment Building #1 at 1373 George Washington Way on August 10, 1950.

Critzer's Shoes terminated its sublease with Klopfenstein's, Inc. on August 1, 1950

Leo F. Sharkey, of the New York Life Insurance Company, terminated his sublease with Binyon Optometrists on August 15, 1950.

Sportlets, Inc. terminated its sublease agreement with Hanson Enterprises, Inc. on August 1, 1950.

Arthur G. Williams terminated his barber shop sublease agreement with the Desert Inn, effective August 31, 1950.

Cascade Broadcasting Company requested, on June 26, 1950, that it be relieved of its obligations to construct a radio broadcasting station in Richland because of extended delays in processing its application for Federal license. This request was granted, on June 28, 1950, inasmuch as award for ground lease was contingent upon its FCC licensing approval.

Ragmar's, Inc., sublessee of Hughes of Richland, Inc., commenced operation of a women's shoe department on August 25, 1950.

EXPRESSIONS OF INTEREST IN ESTABLISHING BUSINESSES IN RICHLAND:

A number of individuals and firms, the majority of which were not interested in constructing their own buildings, expressed an interest during the month to establish and operate businesses in Richland. Inquiries were received covering the following types of establishments:

Auto Agency	Food Store
Book Store	Fountain Lunch
Electrical Appliances	Funeral Home
Fixit Shop	Gift
Florist	Restaurant

1209565

COMMUNITY DIVISIONS

COMMUNITY HOUSING DIVISION

August, 1950

ORGANIZATION AND PERSONNEL

Number of employees on payroll	August
Beginning of month	44
End of month	44

RICHLAND HOUSING

Housing Utilization as of Month End

Houses Occupied by Family Groups	Conventional	Block	T	Pre cut	Ranch	Pre fab	Apt.	Tract	Total
G. E. Employees	2198	260	7	377	837	1151	59	42	4931
Commercial Facilities	91	7	1	26	71	58	4	5	263
Medical Facilities	7	12	-	2	-	1	-	-	22
Community Activities	9	-	-	1	7	3	-	1	21
Post Office	7	-	-	1	2	11	-	3	24
A.E.C.	103	32	-	13	40	24	4	4	220
School District	38	-	-	5	13	44	1	-	101
Kellex Corporation	4	5	-	5	6	1	-	-	21
Atkinson-Jones	10	15		5	11	3	4	-	48
J. G. Turnbull					1	2	-	-	3
C. T. Main Company	2	-	-	5	4	1	1	-	13
J. A. Terteling			2	1	1	-	-	-	4
Newberry Neon	3	1	-	1	-	-	-	-	5
Vernita Orchards								4	4
Roberts Filter						1			1
Fred J. Early Company					1				1
TOTAL HOUSES OCCUPIED	2472	332	10	442	994	1300	73	59	5682
Houses assigned Leases written	12	1	-	3	3	14	-	1	34
Houses assigned Leases not written	10	-	-	1	3	7	1	-	22
Houses available for assignment	6	-	-	4	-	11	-	-	21
TOTAL HOUSES	2500	333	10	450	1000	1332	74	60	5759

1.

1209566

COMMUNITY HOUSING DIVISION

Housing Turnover During Month	Begin Month	Moved In	Moved Out	Month End	Difference	
Conventional Type	2479	38	45	2472	Minus	7
Block Type	331	5	4	332	Plus	1
"T" Type	9	1	--	10	Plus	1
Precut Type	445	9	12	442	Minus	3
Ranch Type	994	17	17	994	--	
Prefab Type	1310	40	50	1300	Minus	10
Apartments	74	1	2	73	Minus	1
Tract	60	--	1	59	Minus	1
Total	5702	111	131	5682	Minus	20

Dormitory Statistics

Dormitories			Occupants	Vacancies	Total Beds
Men	Occupied	13	566		566***
Men	Unoccupied				
Women	Occupied	13	427 *	154**	581
Women	Unoccupied	2			

Women's Dormitories occupied by:

G. E. Office	1
Education	1
Apartments	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.
*** This includes 50 beds transfered from Women to Men on August 2, 1950 in W-21.

GENERAL

		Allocation Section Statistics	
Houses allocated to new tenants	61	Voluntary Terminations	28
Exchanged houses	25	R. O. F.	4
Moves (Within the Village)	26	Discharge	--
Turnovers	13	Transfer	4
Total Leases Signed	111	Retirement	3
Terminations	59	Move Off Project	13
Total Cancellations	131	Houses assigned "As Is"	25
Applications Pending	357	Houses sent to renovation	59

The last tenant, and caretaker, at Columbia Camp cancelled his lease and moved out on August 7, 1950.

Electric heat was installed in Tract House N-1106, located at 1107 Lee, on August 16,1950.

Nine leaseholders left for military service during the month, six retained their houses and three cancelled.

1209567

TENANT RELATIONS

Processing of Service Orders, Work Orders and Service Charges

	Issued from August 1, to August 31, 1950	Incomplete August 31	Issued Previous Month
Service Orders	1681	202	1648
Work Orders	761	2573	813
Service Charges	167	9	168

ITEMS OF INTEREST

	Total Outstanding	Total outstanding Previous Month
Laundry tubs	46	34
Bathtubs	177	185
Kitchen sink linoleum	169	170
Bathroom tileboard	291	358
Bathroom floor linoleum (after tubs)	177	208
Bathroom floor linoleum(after tileboard)	20	
Kitchen floor linoleum	2	25

Alteration permits issued during the month of August totaled 81 compared to 171 in July.

Air conditioners	13	Automatic washer	13
Clothes Poles	1	Refinishing floors	1
Cooling pads	3	Basement excavation	11
Patio	2	Rear Door Prefab	6
Tool shed	4	Fence	1
Range & Ref. location	2	Dishwasher	2
Dishmaster faucets	1	Glaze sunporch	1
Basement partitions	2	Fireplace	1
Railing on porch	1	Clothes dryer	4
Water softener	3	Porch steps	1
Water heater location	1	Driveway	1
Re-insulate water pipes	1	Electrical wiring	2
Broom closet removal	1	Stairway enclosure	1

1038 Inspections were made during the month of August as compared to 1559 made during July.

Alteration permits	195	Bathtubs	58
Cupboards	16	Drainage	15
Driving on grass	3	Floor boards	16
Grass seed	25	Jack & Shim	20
House siding	5	Leaking basements	4
Linoleum	141	Lot lines	10
Paint	7	Porch & Steps	31
Screen doors	37	Shades	20
Shower stalls	21	Sidewalks	42
Sinks	12	Tileboard	94
Toilet seats	12	Top Soil	13
Trailers	4	Walls	9
Windows	33	Miscellaneous	195

1209568

DORMITORIES

Work is progressing on touch up on water damage to walls and preparation for both inside and outside painting.

1209569

M.S. WAREHOUSE SUMMARY FOR July 25, thru August 25, 1950

TOTAL INV. $97,900.66

INVENTORY ITEMS AMOUNT $57,024.17

RECEIVED IN INVENTORY	CODE	AMOUNT
ON STORE ORDERS		$1,067.32
ON PURCHASE ORDERS		389.06
FROM EXCESS		70.96
FROM HOUSING (20-20)	20-20	68.73
FROM DORMS (21-20)	21-20	23.46
FROM Misc. Chg.		108.15

TOTAL RECEIPTS $1,727.68

INVENTORY DISBURSED		
TO EXCESS		140.12
MISC. CHG.		654.30
INV. ADJUSTMENT		1.00
FREE ISSUE	20-20	1456.56
CASH ITEMS	20-20	127.56
DORM SUPPLIES	21-20	776.91
DORM LINENS	21-20	34.21
DORM SHADES & REFLECTOR	21-20	83.67
DORM FURNITURE	21-20	76.12
WHSE. SUPPLIES	20-20	133.34

TOTAL DISBURSED $3,483.79

INVENTORY ITEMS BALANCE $55,268.06

PLANT ITEMS AMOUNT $42,398.11

	CODE	AMOUNT
RECEIVED	20-20	1,826.79
DISBURSED	20-20	1,717.60
DISBURSED TO EXCESS		60.00

TOTAL DISBURSED $1,777.60

PLANT ITEMS BALANCE $42,447.30

GRAND TOTAL INVENTORY $97,715.36

	PIECES
DORM FURNITURE EXCHANGED	32
RANGES EXCHANGES	11
REFRIGERATORS EXCHANGED	9
PREFAB HEATERS EXCHANGED	120

	PIECES
SENT TO MAINTENANCE	61
RECEIVED FROM MAINT.	108

120951O

COMMUNITY SAFETY DIVISION

AUGUST 1950

ORGANIZATION AND PERSONNEL

Number of employees on Payroll	August
Beginning of month	3
End of Month	3

GENERAL

"Signs of Life", traffic safety program for August was carried on in Richland, with some newspaper publicity, two radio interviews and a number of movie films on traffic safety were shown through civic organizations.

The Richland Safety Council met and planned their portion of the program for the Fire Prevention Week. Extensive planning has gone into the program, and a well rounded program appears to be in the offing.

Publicity material has been prepared and completed for submission to the National Safety Council for publishing in the Public Safety magazine, which incorporated the Richland Safety Council Award Banquet for the various traffic safety awards which were presented to Richland.

A new traffic safety poster has been installed on the 24-sheet billboards at both entrances of Richland, "It's Her Street, Too."

The "Lady from Safetyland" radio program over KALE continued through the month of August.

Extensive plans are being made to help promote the Automobile Drivers Training Program which will be held at the school and also the adult program which will be held in the evenings.

The Hunting Limits maps for Richland were prepared by this office. Plans are now being made for a safety training program for all interested hunters in this area, due to the fact that areas around Richland will be open for hunting. The two gun clubs have agreed to accept the sponsorship of this program, and put on the activity.

Safe way to school sheets were prepared by this office, for distribution to students from kindergarten to the third grade by the schools. This is in keeping with the national program to promote the selection of the safest routes to school by the children.

Articles Incorporation and the By-Laws have been drawn up for the Richland Safety Council, and they are now ready for submission to the Board of Directors, which will meet in the very near future.

A number of plans and specifications were reviewed by this office for fire prevention and safety features on new construction. One alteration at the Recreation Hall.

The Supervisor of Community Safety met with all of the principals and superintendants of the school system in August, at the first principal's meeting, for the purpose of getting better acquainted with the principals and to incorporate the Richland Safety program within the schools, and to encourage the principals to use the available services and give fullest participation to the program.

1209572

COMMUNITY FIRE PROTECTION DIVISION

August 1950

Organization and Personnel	July
Number of employees on payroll	99
Transfers	3
End of the month	96

	Richland	North Richland
Response To Alarms	14	13
Fire Loss (Estimated)		
Hanford Works	$130.20	0.0
Personal	430.96	0.0
Investigations of minor fires and incidents	16	0
Safety Meetings	8	4
Outside Drills	75	74
Inside Drills	54	15
Fire Alarm Boxes Tested	183	74

Miscellaneous Fire Department Activities:

Serviced four chlorine gas masks for Utilities Division.

First aid instruction given to 12 employees of Utilities Division.

Ladder truck dispatched to Government Airport to assist the Electrical Division replace airport beacon light.

Two Boy Scouts examined for firemanship merit badge.

Emergency night lights in dormitory connected to fire telephone in North Richland station.

Inspection made of all tract houses in 3000 Area.

Prefire inspections of 3000 Area made by each officer.

Faulty fire hydrant in North Richland reported to Maintenance group.

Special meetings held with all employees in Richland and North Richland pertaining to organization.

North Richland Assistant Chief conferred with Colonel Wells and Major Snow relative to the numerous false and accidental fire alarms responded to recently in barracks occupied by U.S. Army personnel.

1209573

COMMUNITY FIRE DIVISION August 1950

RICHLAND FIRE PREVENTION

Fire Inspections:

700 Area Buildings	40
1100 Area Buildings	63
Commercial Facilities (Gov't owned)	39
Schools, Clubs and Churches	25
Government Airport Buildings	12
Hospital Buildings	3
Dormitories	6
Buildings Under Construction	4
	192

Fire Extinguishers:

Inspected	442
Recharged	23
Installed	14
Removed	20
Relocated	14
Defective	4

Fire Extinguisher Demonstrations:

8-10-50 - Conducted fire extinguisher demonstration before 27 employees of Stores Division.

8-31-50 - Conducted fire extinguisher demonstration, using actual fires, before approximately 60 employees of Community Engineering and Commercial Facilities Divisions.

Fire Evacuation Drill Meetings:

Attended meeting with Kadlec Hospital fire wardens relative to inaudible fire signals.

Met with chief warden of 762 Building to discuss procedure revisions.

Miscellaneous Fire Prevention Activities:

Fire inspection reports submitted: 34

Adhesive type operating-instruction labels installed on 385 fire extinguishers. Upon receipt of sufficient supply, all extinguishers to be labeled.

Plans for Library and Records Buildings reviewed for fire-safety.

Assisted on final acceptance inspection of alterations to 722-A Building.

Completed six maps of 702 Building to be used for Fire Division training.

Atomic Frontier Days booths inspected for fire-safety.

1209574

COMMUNITY FIRE DIVISION August 1950

Removed fire extinguishers from three 700 Area hutments prior to their being moved from the area.

Community Fire Chief met with Chamber of Commerce board of directors to request their sponsorship of the 1950 Fire Prevention Week campaign.

Two evening meetings held with representatives of Chamber of Commerce and Richland Safety Council to plan for Fire Prevention Week.

Approximately 30,000 pieces of free Fire Prevention Week promotional material were ordered.

A news item relative to fire calls caused by overloaded home washing machines was submitted to representative of News Bureau.

Assisted 6-man 700 Area Safety Council on inspection of the area.

Arrangements made with Richland theatre management for Fire Marshal's staff to dispose of waste movie film as consequence of report that children were retrieving film from trash cans and burning it in downtown business area.

A representative of the Ellensburg Junior Chamber of Commerce and the Chief of the Ellensburg Fire Department visited Richland on August 11th and met with Fire Division supervision to obtain ideas for Fire Prevention Week from recent campaigns conducted in Richland.

Inspected construction projects at following locations:

1. Radio-traffic tower at Government Airport.
2. Gasoline pumping station at Carnation Milk Depot.
3. Alterations to C. C. Anderson store.
4. Alterations to Building 722-A.
5. Alterations to 703 Building.

Hot air furnaces in two Commercial Facilities inspected and report submitted on their condition.

Following a near-fire from failure of a warehouse air-conditioner, a conference was held with Community Maintenance supervision on servicing such equipment.

Conferred with supervision of Transportation Division regarding use of fire hose in one of their building.

A preliminary program for Fire Prevention Week and other advance preparations were made to assist the Chamber of Commerce Fire Prevention committee.

1209575

COMMUNITY DIVISIONS

COMMUNITY PATROL

AUGUST 1950

ORGANIZATION AND PERSONNEL

Number of employees on payroll:	August
Beginning of month	71
End of month	69
Net Decrease:	2

Reason: Two transfers to Security Patrol

GENERAL

As a result of the reduction in force which became necessary in July it became necessary to eliminate the positions of four lieutenants assigned to North Richland as shift commanders in the interest of economy. This change was made effective on August 1, 1950. In effecting this change four lieutenants were reduced to rank of sergeant and four sergeants were reduced to rank of patrolman.

Effective August 31, 1950 the trailer parking lot on Abbott Street was discontinued. The unclaimed trailers will be sold after thirty days at a Sheriffs Auction Sale.

During the month a new Chevrolet panel truck was received to replace the paddy wagon now in use.

Patrol boundary between Richland and North Richland was changed from McMurray Road to Spengler Road.

During the month, 102 traffic violation reports were received which consisted mainly of Speeding and Illegal Parking. A total of 180 other reports were received which consisted mainly of Petit Larceny and Prowlers.

During the month, a total of 77 letters were received, consisting of 71 inquiries on arrests and 6 requests for assistance.

During the month, 15 prisoners were processed through the Richland Jail.

During the month, 33 gun registrations were taken by Community Patrol.

During the month, 69 bicycle registrations were taken by Community Patrol.

TRAFFIC

Traffic accidents in Richland increased from 11 in July to 13 in August. Traffic counts taken at main arterials indicated a slight increase in vehicular traffic movement over the streets of Richland.

There were no fatalities or serious injuries. Three persons involved in traffic accidents received minor injuries requiring first aid attention.

Community Patrol Division - Continued

Causes for the majority of the accidents were charged to violations of traffic laws. Two drivers were cited for negligent driving, four were charged with failure to yield right of way and one for reckless driving.

Accidents in North Richland increased from two during July to six in August. Traffic volume remained constant with the previous month. One man received a compound fracture of the right leg as a result of a woman driver backing into the man while he was standing behind his car. One other person received a minor injury requiring first aid treatment as a result of a collision.

Traffic safety lectures were given to seven civic and plant groups during the month. The new traffic safety film "And Then There were Four" was shown to one group and "Are You Guilty" was shown to the other six.

All Richland and North Richland patrolmen were given an eight hour traffic training course during August. Subjects covered traffic control at intersections, accident investigation and traffic law enforcement. Each man was required to direct traffic at an intersection to check his method against the methods recommended by the Northwest Traffic Institute and International Chiefs of Police. All patrolmen were given a 25 question examination relating to traffic law enforcement and other police problems. Results of the examination showed the majority of men to be well informed on state traffic laws and the laws of arrest.

TRAINING

Subjects covered in the lieutenant's training classes for the month of August were as follows:

Courtesy
Conduct of an Officer

Due to the traffic training school held during the month, no men reported to the Range for firearms instruction.

ACTIVITIES AND SERVICES (RICHLAND)

	June	July	August
Check on absentees	0	1	2
Persons assisted *	201	225	139
Doors and windows found open	26	46	103
Lost children	11	17	10
Ambulance runs	23	20	25
Lost dogs reported	8	6	2
Dog, cat, loose stock complaints	35	43	60
Persons injured by dogs	10	13	13
Bank escorts and details	40	40	46
Fires investigated	20	25	20
Miscellaneous escorts	18	10	11
Complaints investigated	77	56	46
Natural deaths reported	0	1	0
Lost and found articles	26	34	36
Totals	495	537	513

 1209577

Community Patrol Division - Continued

ACTIVITIES AND SERVICES (NORTH RICHLAND)

	June	July	August
Check on absentees	0	0	0
Persons assisted *	73	104	80
Doors and windows found open	25	48	28
Lost children	2	0	3
Ambulance runs	6	5	1
Lost dogs reported	0	0	0
Dog, cat, loose stock complaints	3	3	1
Persons injured by dogs	1	1	0
Bank escorts and details	4	4	0
Fires investigated	7	17	12
Miscellaneous escorts	5	5	3
Complaints investigated	2	1	5
Natural deaths reported	0	0	0
Totals	128	188	133

* Includes: Assisting other departments, assisting outside police agencies, assisting private persons, delivering emergency messages, etc.

1209578

COMMUNITY PATROL DIVISION
RICHLAND JUSTICE COURT CASES

AUGUST 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	4	1	1				2				$ 7.50		$10.00
Drunken Driving	1	1								1	$ 52.50		
F.T.S.A.I. *	3	1	1	1							$ 42.50		$17.50
F.T.Y.R.O.F.	1			1									
Improper Parking **	24	6	11			4	3				$ 21.00	$17.50	$45.00
Imp. Passing ***	3	1	1				1				$ 12.50		$ 7.50
Negligent Driving	10	7		1		1	1				$175.00	$15.00	
Reckless Driving	2	2								2	$155.00		
Speeding ****	12	1	7	1		1	2				$ 17.50		$85.00
Stop Sign	6	2	3				1				$ 15.00		$15.50
Drunk & Dis. Conduct.	1	1									$ 17.50		
Public Intoxication	3	2						1			$ 35.00		
Public Nuisance	3	2	1								$ 35.00		$17.50
TOTALS:	73	27	25	4		6	10	1		3	$586.00	$32.50	$198.00

Cases proc., thru crt.	73
Other cases inc., with above viol.	7
Cases Pending.	0
Cases orig., in prev's mo's., and tried in Aug.	24
	104

Note: 1 Drunken Driving case, reduced to Reckless Dr.
1 Reckless Driving case, reduced to Negligent Dr.

(Continued on page two)

1209579

C3C8

(Continued from page one) Richland - August 1950

*	1	Negligent Driving case, included with this violation.
**	1	License plates case, included with this violation.
***	1	Speeding case, included with this violation.
***	1	Driver's License,case, included with this violation.
****	1	Driver's License case, included with this violation.
****	1	No Muffler case, included with this violation.
****	1	Improper Passing case, included with this violation.

DISPOSITIONS AND EXPLANATIONS OF CASES INCLUDED IN PREVIOUS MONTHS:

CONTINUED CASES THAT ORIGINATED AND WERE INCLUDED IN JULY REPORT AND WERE TRIED IN AUGUST:

Driver's License	Fined $7.50 - Susp.
Negligent Driving	Fined $15.00 - Susp.
Negligent Driving	Fined $17.50

PENDING CASES THAT ORIGINATED AND WERE INCLUDED IN JULY REPORT AND WERE TRIED IN AUGUST:

Driver's License	Fined $7.50 - Susp.
Driver's License	Fined $5.00
Driver's License	Fined $5.00
Driver's License	Fined $5.00 - Susp.
F.T.Y.R.O.W.	Fined $12.50
Ill. Parking	Fined $3.50 - Susp.
Ill. Parking	Fined $3.50 - Susp.
License Plates	Fined $5.00 - Susp.
Negligent Driving	Fined $17.50
Negligent Driving	Fined $27.50
Speeding	Fined $10.00
Speeding	Fined $12.50
Stop Sign	Forf: $10.00
Drunk & Disorderly	Fined $17.50
Public Intoxication	Fined $12.50

(Continued on page three)

1209580

(Continued from page two) Richland - August 1950

DISPOSITIONS AND EXPLANATIONS OF CASES INCLUDED IN PREVIOUS MONTHS, CON'T.

9

WARRANTS ISSUED ON CASES THAT ORIGINATED AND WERE INCLUDED IN JULY REPORT AND WERE TRIED IN AUGUST:

Ill. Parking	Holding Warrant
Negligent Driving	Nolle Prossed
Speeding	Fined $10.00
Forgery	Holding Warrant
Forgery	Holding Warrant
Sex Crimes	Holding Warrant.

1209581

350

COMMUNITY PATROL DIVISION
NORTH RICHLAND JUSTICE COURT CASES

AUGUST 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 *	3	2					1				$20.00	$12.50	
Imp. Passing	1		1										$ 7.50
Negligent Driving	1	1									$17.50		
Perm. Unlic. Dr., to Dr.	1		1										$10.00
Speeding **	3	2	1								$40.00	$22.50	$12.50
Stop Sign	2	1	1								$ 5.00		$10.00
Forgery	1							1					
Public Intoxication	1		1										$12.50
Public Nuisance	1			1									
2nd. Degree Assault	1							1					
TOTALS:	15	6	5	1			1	2			$82.50	$35.00	$52.50

Cases proc., thru crt.	15
Other cases inc., with above viol.	3
Cases pending	0
Cases orig., in Prov's mo's., and tried in Aug.	7
	25

CASES INCLUDED WITH VIOLATIONS ABOVE:

* 1 Improper Passing case, included with this violation.
* 1 Defective Equipment case, included with this violation.
** 1 Defective Equipment case, included with this violation.

(Continued on page two)

1209582

(Continued from page one) North Richland - August 1950

DISPOSITIONS AND EXPLANATIONS OF CASES INCLUDED IN PREVIOUS MONTHS:

CONTINUED CASES THAT ORIGINATED AND WERE INCLUDED IN JULY REPORT AND WERE TRIED IN AUGUST:

Stop Sign	Forf: $10.00
Public Nuisance & Vagrancy	Fined $103.75

PENDING CASES THAT ORIGINATED AND WERE INCLUDED IN JULY REPORT AND WERE TRIED IN AUGUST:

Illegal Passing	Forf: $7.50
Negligent Driving	Fined $17.50
Speeding	Forf: $12.50
Stop Sign	Fined $5.00
Stop Sign	Fined $5.00

1209583

PATROL DIVISION - TRAFFIC CONTROL STATISTICS

August - 1950

MOTOR VEHICLE ACCIDENTS:

	Total Number		Fatalities		Major Injuries		Minor Injuries	
	July	Aug.	July	Aug.	July	Aug.	July	Aug.
Richland	11	13	0	0	0	0	3	3
North Richland	2	6	0	0	0	1	0	1
Totals	13	19	0	0	0	1	3	4

ACCIDENT CAUSES:

	Negligent Driving		Failure to Yield Right of Way		Reckless & Drunken Driving		Other Causes	
	July	August	July	August	July	August	July	August
Richland	2	2	4	4	0	1	5	6
North Richland	0	1	0	1	0	0	2	4
Totals	2	3	4	5	0	1	7	10

PLANT WARNING TRAFFIC TICKETS ISSUED:

	Speeding		"Stop" Sign		Parking		Imp. License		Def. Equipment		Other Violations		Totals	
	Jul.	Aug.	July	Aug.	Jul.	Aug.	July	August	July	August	July	August	Jul.	Aug.
Richland	0	1	1	3	26	30	0	4	2	18	0	1	29	57
North Rich.	0	0	0	0	24	29	0	0	1	0	0	0	25	29
Totals	0	1	1	3	50	59	0	4	3	18	0	1	54	86

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	
	Jul.	Aug.	Jul.	Aug.	July	Aug.	July	Aug.	July	August	Jul.	Aug.	Jul.	Aug.	Jul.	Aug.	Jul.	Aug.
Richland	18	17	18	7	3	2	0	2	3	2	11	11	17	25	27	22	97	88
N. Rich.	4	1	11	2	1	0	0	0	0	0	7	1	0	0	5	6	28	10
Totals	22	18	29	9	4	2	0	2	3	2	18	12	17	25	32	28	125	98

TRAFFIC VOLUME: Average 24-hour Traffic Volume Count for week ending on 8-26-50, at the intersection of Swift Boulevard and Goethals Drive - 9,883 Motor Vehicles.

Note: Traffic Control Statistics show ORIGINAL CHARGES ONLY.

1209584

MONTHLY REPORT
COMMUNITY PATROL DIVISION
RICHLAND, AUGUST, 1950

OFFENSES	KNOWN	UNFOUNDED	CLEARED ARREST	CLEARED* OTHER
PART I				
1. Murder	0	0	0	0
2. Rape	0	0	0	0
3. Robbery	0	0	0	0
4. Aggravated Assault	0	0	0	0
5. Burglary-Break & Enter	4	1	0	2
6. Larceny-Over $50.00	6	0	1	1
Larceny-Under $50.00	23	3	4	3
Bicycle Theft	19	1	0	17
7. Auto Theft	3	0	0	3
TOTAL PART I CASES	55	5	5	26
PART II				
8. Other Assaults	1	1	0	0
9. Forgery & Counterfeit.	2	1	1	0
10. Embezzlement & Fraud	0	0	0	0
Impersonation	0	0	0	0
11. Stolen Prop:buy:rec:poss:	0	0	0	0
12. Weapons: Carrying:poss:	0	0	0	0
13. Prostitution	0	0	0	0
14. Sex Offenses	4	2	1	0
15. Offenses Ag Fam.& Child.	11	0	8	3
16. Narcotics-Drug Laws	0	0	0	0
17. Liquor Laws	0	0	0	0
18. Drunkenness	9	0	9	0
19. Disorderly Conduct	10	0	8	2
20. Vagrancy	0	0	0	0
21. Gambling	0	0	0	0
22. Driving While Intoxicated	1	0	1	0
23. Violation Rd. & Dr. Laws:				
Speeding	13	0	13	0
Stop Sign	6	0	6	0
Reckless Driving	2	0	2	0
Right of Way	1	0	1	0
Negligent Driving	11	0	11	0
Defective Equipment	1	0	1	0
24. Parking	24	0	24	0
25. Other Traffic Violations	22	0	22	0
26. All Other Offenses				
Public Nuisance	11	0	9	2
Prowlers	23	3	1	14
Pickup for Outside agency	0	0	0	0
Dest. of Personal Prop.	7	1	1	3
Malicious Mischief	11	0	3	5
Vandalism	13	1	5	1
Dog Nuisance	12	0	0	12
27. Suspicion	7	1	3	2
TOTAL PART II CASES	202	10	130	44

(Continued on Page Two)

1209565

PAGE TWO—MONTHLY REPORT—COMMUNITY PATROL DIVISION—AUGUST, 1950 RICHLAND

OFFENSES	KNOWN	UNFOUNDED	CLEARED ARREST	CLEARED* OTHER
PART III				
28. Missing Persons	9			9
Lost Persons	4			4
Lost Animals	7			7
Lost Property	8			3
29. Found Persons	5			5
Found Animals	5			3
Found Property	23			21
TOTAL PART III CASES	61			52
PART IV				
30. Fatal Mot.Veh.Traf.Acc.	0			
31. Pers. Inj.Mot.Veh.Traf.Acc.	3			
32. Prop. Dam.Mot.Veh.Traf.Acc.	13			
33. Other Traffic Accidents	0			
34. Public Accidents				
35. Home Accidents	No Accurate Statistics Kept			
36. Occupational Accidents				
37. Firearms Accidents	1			1
38. Dog Bites	7			7
39. Suicides	0			
40. Sucide Attempts	0			
41. Sudden Death & Bodies Found	0			
42. Sick Cared For	0			
43. Mental Cases	1			1
TOTAL PART IV CASES	25			9
COMPOSITE TOTALS PARTS I,II,III,IV CASES	343	15	135	131

Value of Property Recovered $959.93

*Cases listed under "Cleared Other" are those cleared by various means other than arrest, such as: orders from prosecutor, juvenile probation officer or other situations in which a mutual agreement is obtained. They are definitely "cleared" cases and differ from the arrest column only in that there were no arrests.

JUVENILES INVOLVED

Larceny Over $50.00—1 Case 1 Perp. Age 13(Male)
Larceny Under $50.00—3 Cases, 12 perp. Ages 3,5,6,7,9,14,15,16 & 17 (9 Males)
Prowlers—1 Case 2 Perp. Ages 14 & 16.(All Males)
Breaking & Entering—1 Case, 2 perp. Ages 13 & 15.(All Males)
Vandalism—3 Cases, 5 perp. Ages 9,13,14, & 15.(All Males)
Malicious Mischief—4 Cases, 5 perp. Ages 6,7,9, 16 & 17 (All Males)
Molesting—1 Case, 2 perp. Ages 9 & 11. (1 Male)
Disturbance—3 Cases, 6 perp. Ages 11,15 & 16. (All Males)
Missing Persons—2 Cases, 2 Perp. Ages 10 & 16. (All Males)
Suspicion—1 Case, 1 perp. age 15. (Male)

There were no Colored Persons Involved.

1209506

MONTHLY REPORT
COMMUNITY PATROL DIVISION
NORTH RICHLAND, AUGUST, 1950

OFFENSES	KNOWN	UNFOUNDED	CLEARED ARREST	CLEARED* OTHER
PART I				
1. Murder	0	0	0	0
2. Rape	0	0	0	0
3. Robbery	0	0	0	0
44. Aggravated Assault	1	0	1	0
5. Burglary Break & Enter.	3	1	0	1
6. Larceny-Over $50.00	4	0	0	3
Larceny-Under $50.00	5	0	0	3
Bicycle Theft	0	0	0	0
7. Auto Theft	5	0	0	5
TOTAL PART I CASES	18	1	1	12
PART II				
8. Other Assaults	2	1	1	0
9. Forgery & Counterfeit	1	0	1	0
10. Embezzlement & Fraud	0	0	0	0
11. Stolen Prop:buy:rec:poss:	0	0	0	0
12. Weapons:Carrying:poss:	1	0	0	0
13. Prostitution	0	0	0	0
14. Sex Offenses	1	0	0	1
15. Offenses Ag.Fam. & Child	1	0	1	0
16. Narcotics-Drug Laws	0	0	0	0
17. Liquor Laws	0	0	0	0
18. Drunkenness	4	0	4	0
19. Disorderly Conduct	7	0	5	2
20. Vagrancy	0	0	0	0
21. Gambling	0	0	0	0
22. Driving While Intoxicated	0	0	0	0
23. Violation Rd. & Dr. Laws				
Speeding	3	0	3	0
Stop Sign	2	0	2	0
Reckless Driving	0	0	0	0
Right of Way	0	0	0	0
Negligent Driving	1	0	1	0
Defective Equipment	2	0	2	0
24. Parking	0	0	0	0
25. Other Traffic Violations	6	0	6	0
26. All Other Offenses				
Public Nuisance	2	0	2	0
Prowlers	3	0	1	0
Pickup for Outside Agency	2	0	2	0
Dest. of Gov't. Prop.	1	0	0	1
Malicious Mischief	1	0	1	0
Vandalism	1	0	1	0
27. Suspicion	1	0	0	0
TOTAL PART II CASES	42	1	33	4

(Continued on Page Two)

 1209587

PAGE TWO—COMMUNITY PATROL DIVISION—MONTHLY REPORT, AUGUST, 1950 NORTH RICHLAND

OFFENSES	KNOWN	UNFOUNDED	CLEARED ARREST	CLEARED OTHER
PART III				
28. Missing Persons	0	0	0	0
Lost Persons	2	0	0	2
Lost Animals	1	0	0	1
Lost Property	3	0	0	3
29. Found Persons	0	0	0	0
Found Animals	0	0	0	0
Found Property	5	0	0	5
TOTAL PART III CASES	11	0	0	11
PART IV				
30. Fatal Mot.Veh.Traf.Acc.	0	0		
31. Pers. Inj.Mot.Veh.Traf.Acc.	1			
32. Prop.Dam.Mot.Veh.Traf.Acc.	6			
33. Other Traffic Accidents				
34. Public Accidents				
35. Home Accidents	No Accurate Statistics Kept			
36. Occupational Accidents				
37. Firearms Accidents				
38. Dog Bites				
39. Suicides				
40. Suicide Attempts				
41. Sudden Death & Bodies Fd.	1	0	0	1
42. Sick Cared For	0			
43. Mental Cases	0			
TOTAL PART IV CASES	8			1
COMPOSITE TOTALS PARTS I,II,III,IV, CASES	79	2	39	28

There were no colored persons involved.

*Cases listed under "Cleared Other" are those cleared by various means other than arrest, such as: orders from prosecutor, juvenile probation officer or other situations in which a mutual agreement is obtained. They are definitely "cleared" cases and differ from the arrest column only in that there were no arrests.

JUVENILES INVOLVED

Disturbance, 1 Case 1 Perp. Age 15 (Male)
Vandalism 1 Case 2 Perp. Ages 10 & 10. (All Males)
Unauthorized Shooting-1 Case, 2 Perp, Ages 13 & 13 (All Males)

COMMUNITY PATROL DIVISION
CRIME COMPARISON REPORT
AUGUST, 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 Six Months (Jan-June 1949)	North Richland Six Months (Jan-June 1949)	Richland July 1950	Richland August 1950	North Richland July 1950	North Richland August 1950
Murder	.60	.10	0	0	0	0	0	0
Robbery	15.80	2.63	0	1	0	0	0	0
Assault	10.15	1.69	4	16	0	0	0	2
Burglary	90.90	15.15	8	5	1	3	0	2
Larceny	254.22	42.37	181	97	53	44	9	9
Auto Theft	38.4	6.40	4	5	3	3	0	5

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 July 1950	Richland August 1950	North Richland July 1950	North Richland August 1950
Murder	.79	.13	0	0	0	0	0	0
Robbery	11.25	1.87	0	1	0	0	0	0
Assault	3.82	.63	4	16	0	0	0	2
Burglary	74.35	12.39	8	5	1	3	0	2
Larceny	241.60	40.26	181	97	53	44	9	9
Auto Theft	38.05	6.34	4	5	3	3	0	5

The portion of offenses committed by persons under the age of 25 years, is shown by the following:

Class.	National Average Six Months (Jan-June 1949)	Richland Six Months (Jan-June 1949)	North Richland Six Months (Jan-June 1949)	Richland July 1950	Richland August 1950	North Richland July 1950	North Richland August 1950
Robbery	53.4	0	0	0	0	0	0
Burglary	59.9	1	0	0	1	0	0
Larceny	45.1	25	44	4	4	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 group because of the practice of some jurisdictions not to fingerprint youthful offenders."

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COMMUNITY DIVISIONS

COMMUNITY - ACTIVITIES DIVISION
August, 1950

ORGANIZATION AND PERSONNEL

Number of employees on roll

Beginning of month		19*
Additions	0	
Terminations	1*	
End of month		18

*Summer recreation personnel - 5

SCHOOLS

The following is a tabulation of full-time paid School District #400 personnel as of August 31, 1950:

Administration	6
Principals & Supervisors	15
Clerical	20
Teachers	0
Health Audiometer	0
Building Custodians	44
Cooks	0
Nursery School and Extended Day Care	11
Bus Drivers	0
Farm Manager	11
	97

CLUBS AND ORGANIZATIONS

As of August 31, 1950, organizations' 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	51
Veterans Administration	2
Girl Scouts	2
Masonic Lodge	1
Justice of the Peace	1
Y.W.C.A.	1
	71

1209590

Community - Activities Division

The Recreation Advisory Committee held their regular meeting on August 29, 1950. The minutes of the July 25, 1950, meeting were approved by the Atomic Energy Commission on August 27, 1950.

The following organizations were approved subject to proper security clearance: Richland Humane Society, a civic organization; and the Boots and Calico Club, a recreation (dance) organization.

The Committee recommended the establishment of a "Circus Grounds" in Richland at the northeast corner of Newcomber and Stevens Drive.

Approval was recommended for the Junior Chamber of Commerce to sponsor a Carnival September 20 - 25.

The Atomic Energy Commission approved on August 7, 1950, Project S-366 for the Exterior Painting of the Municipal Building. Completion date for this project is December 7, 1950.

The third annual Atomic Frontier Days were held on August 11 - 14. The affair was sponsored by the Junior Chamber of Commerce with the aid of many of the local organizations. A fireworks display was given on Friday night, August 11, and an hour-long parade was held August 12, with an estimated 6,000 spectators lining the route.

The Richland Kiwanis Club sponsored the King Brothers Circus on August 11. Due to site problems the event was held on a plot of ground northeast of the Richland "Y".

On August 11, the Masonic Temple started construction on the addition to their building. All work on this addition is being done by Masons.

On August 17, 1950, the Atomic Energy Commission approved Project C-375-R, "Site Development Clubs and Organizations." This project will be for the installation of sewer, electrical, and water lines in the site and provides a roadway for the area. It is scheduled for completion by January 1, 1951.

On August 29, the Atomic Energy Commission approved the Building Lease for the Richland American Legion Post #71 at the 426 Cullum site.

Eighteen Service Orders and thirty-five Work Orders were issued during the Month of August.

CHURCHES

Reverend Robert A. Uphoff, the new minister for the Central United Protestant Church, preached his first Richland sermon on Sunday, August 6. Rev. Uphoff, who recently arrived from Polan, Ohio, replaces Rev. Roy Smith, who retired and Rev. Kenneth Bell, who has accepted a position in another city.

1209591

Community - Activities Division

The Redeemer Lutheran Church held their ground breaking ceremony for their new church building, located on south Thayer Drive, on Sunday, August 6. Actual construction started on August 11, 1950.

On August 29, 1950, the Atomic Energy Commission approved the Ground Leases for the Church of the Nazarene, Assembly of God, and Redeemer Lutheran Churches.

A Bill of Sale for all government owned equipment in the Catholic Church was signed by the Church on August 14, and has been forwarded to the Atomic Energy Commission for final approval.

Reverend Walter A. Buck of Havre, Montana, replaced Reverend Wesley Banta as minister for the Richland Assembly of God Church on August 20, 1950.

The following is a tabulation of full-time paid church personnel as of August 31, 1950:

	Ministers	Staff	Total
Assembly of God	1	0	1
Catholic	2	2	4
Central United Protestant	1	2	3
Church of Christ	1	0	1
Church of God	1	0	1
Episcopal	1	0	1
Free Methodist	1	0	1
Foursquare Gospel	1	0	1
Mission Baptist	1	0	1
Mo. Synod. Lutheran (Redeemer)	1	1	2
National Lutheran	2	1	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	6	25

The church construction program status is as follows:

CHURCH	DATE STARTED	ESTIMATED % COMPLETE	OCCUPANCY DATE
Nazarene Church	April 12, 1949	100%	11/30/49
Latter Day Saints	February 5, 1949	98%	3/5/50
Latter Day Saints (Reorganized)	August 22, 1949	41%	
U. P. Southside	November 5, 1948	100%	4/10/49
Richland Baptist	November 27, 1948	100%	4/17/49
Church of Christ	December 21, 1949	99%	3/19/50
Assembly of God	May 23, 1950	3%	3/19/50
Redeemer Lutheran	August 21, 1950	5%	
	Organizations		
Masonic Temple (addition)	August 11, 1950	5%	

 1209592

Community - Activities Division

COMMUNITY

Park Development

Site work in preparation for irrigation installation and grass seeding is in progress in both Columbia Playfield and Carmichael Playground.

The relocating of the baseball bleachers at Columbia Playfield was completed on August 15, 1950.

Fine grading and grass seeding of Memorial Park was started August 11, and is complete except for a narrow strip along Williams Boulevard.

A Community Map showing voting precincts was prepared August 22, 1950, as a community service in the coming elections.

Engineering Service Requests were issued August 31, to increase Columbia Parking Lot Project by $2,400, to allow curbs and walks as originally designed and to prepare a project for $18,000 to fence the river bank at Riverside Park.

RECREATION

The number and types of organizations presently served by the Community - Activities Division include:

Business and Professional Clubs		20
Churches & Church Organizations		25
Civic Organizations		5
Fraternal Organizations		24
Music & Art Associations		8
Recreation & Hobby Groups		42
Schools & Parent Teachers Assoc.		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	289

The average daily attendance at Riverside Park Pool was 616, the high attendance for the month was on August 1 with 1,026 swimmers and the lowest attendance was on August 5, with 16 swimmers.

Arrangements were completed to co-sponsor the Richland Boys Choir, the Minnesingers, with the Richland Youth Council. Tryouts are being held at this time in the home of Mrs. Evelyn Nageley, director of the choir. This activity is open to all boys between the ages of 8 and 14.

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Community - Activities Division

Attendance figures for the Month of August are shown on the following tabulations:

Daily activities (Sports & Games, Dramatics & Crafts)	13,552
Spectator Attendance	1,641
TOTAL	15,193
Tournaments: (Number of participants)	
Table Tennis	60
Badminton	37
Box Hockey	40
Softball Pass-Catch	42
Swimming Meet	46
TOTAL	225
Special Events: (Number of Participants)	
Buddy Day	28
Talent Show	8
Hobby Show	23
Play by Dramatic Group	30
Closing Day Activities	80
TOTAL	169
Night Activities: (Number of participants)	
Sports and Games	2,934
Co-Rec Night (3 nights)	91
Band Concerts (3 nights)	850
Square Dancing (3 nights)	262
TOTAL	4,137
Swimming: (Number of Participants)	16,021
Community House (Tuesday through Saturday) (Includes recreation, count of over 1,000 for 2 community dances)	4,505
Servicemen's Center (2 Sundays, 2:00 - 6:00 PM)	450
GRAND TOTAL	40,700

Two members of the Parks and Recreation Division attended a joint meeting with the American Red Cross personnel and Army personnel stationed at North Richland to complete plans for the continued operation of the Servicemen's Center at Community House on Sunday afternoons. It was the concensus of opinion among all those present that the operation had been successful during the time of operation and that it should be continued in the interest of servicemen stationed at North Richland. A permanent Chairman was appointed to handle all arrangements for the American Red Cross and a Chairman was appointed to handle the food service. Assistance will be solicitated from all community organizations.

1209594

Community - Activities Division

The final event of the summer recreation program was presented on the night of August 28, from 7:00 to 9:00 PM. The program consisted of a review of high lights of the summer program, including a handcraft exhibit, water ballet, two short plays, demonstrations of various games by boys and girls and the presentation of the awards to the best all-around participants through the summer's activities. Also moving pictures of summer activities were shown. Total attendance for the event was 450, including spectators and participants.

The year-around program of recreational activities to be co-sponsored by the Richland Youth Council and the Activities Division is in the final stages of development and will be ready for release by the middle of September, 1950. The program is scheduled to get underway October 2, 1950.

Triple "O" softball play continued throughout the month with the final play-offs resulting in a three way tie for the championship for the entire season. Managers of the leading teams agreed to a play-off for the championship and games have been scheduled for September 8 and 11.

On August 7, the Riverside Park Swimming Pool was rented to the Latter Day Saints Church for exclusive use from 7:15 to 8:15 PM.

The American Red Cross classes were concluded on August 19, at Riverside Park Swimming Pool.

Assistance was given to the Richland Softball Association, Inc. in planning for the City Softball Tournament (August 11, 12, and 13), District Tournament (August 14 - 22) and the Women's Regional Softball Tournament (September 1 - 4.)

On August 20, tennis courts at Riverside Park were reserved for match play between the Richland Tennis Club and the Yakima Tennis Club.

Twenty-three bookings were made for picnics in park areas during the month with a total attendance of 2,081. Twenty bookings were made in park buildings for community organizations in addition to regular bookings scheduled at Community House. Other bookings included 11 at Bomber Bowl, 22 at Memorial Softball Field and 13 at tennis courts.

The following arrangements, services, and facilities were rendered or made available by the Activities Division in connection with the third Annual Frontier Days celebration sponsored by the Junior Chamber of Commerce on August 11, 12, and 13, 1950:

- 40 government trucks made available for the parade.
- Arranged for Patrol assistance during the parade and the afternoon and night programs.
- Arranged for barricading the parade route and special areas for various activities.
- Made available salvage materials consisting of electrical wire and outlets and lumber for construction of booths and fireworks platforms.

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Community - Activities Division

Provided 1 piano for activities at the bandstand.
Arranged for the loan of 1 portable generator.
Provided two amplifiers with speakers and mikes.
Arranged for special mosquito control spraying of the Park area through the Public Health Division.
Arranged for use of the Ford Motor Company building for decorating floats.
Provided for special clean-up of the parade route and return of barricades after the parade.
Special arrangements were made with Tenant Service to provide emergency electrical service as needed at the Midway on each night of operation.
A member of the Activities Division acted as liaison for the entire Atomic Frontier Days operation and was on duty during the major performances of the program.

Preliminary preparations and arrangements have been made for conducting the Primary Election on September 12, including selection and approval of voting places in each precinct, arrangements for Patrol assistance at all voting places and arranged for delivery of voting booths, ballot boxes, flags and necessary tables and chairs for each voting place (29 including North Richland.)

MAJOR EVENTS DURING MONTH

August	11 - 13	Atomic Frontier Days	Community
	11	King Bors. Circus - Kiwanis Club sponsored	Richland "Y"
	13 - 15	Richland Softball Championship	Memorial Field
	14	Exhibition Softball - Phoenix Queens	Memorial Field
	18 - 22	District Softball Tournament	Memorial Field
	31	Summer Recreation Review	Riverside Park

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COMMUNITY ACCOUNTING DIVISION

MONTHLY REPORT FOR AUGUST, 1950

ORGANIZATION

Employees-Beginning of month	30	Exempt	5	Male	11
Employee terminations	2	Non-Exempt	23	Female	17
Total - End of Month	28	Total	28	Total	28

RENTS

House Leases Processed	August	July
Total active leases beginning of month	5672	5708
New Leases	125	49
Cancellations	98	85
Total Active House Leases End of Month	5699	5672
Modifications	3	9
Dormitory		
Total occupancy beginning of month	929	941
New Assignments	190	82
Removals	135	94
Total occupancy end of month	984	929
Rental Revenue Was As Follows:		
Equipment (1)	$ 17.80	$ 78.07cr
Houses		
Basic Rent	198.052.16	197,315.91
Electricity	48,314.32	48,044.74
Water	8,001.12	7,965.65
Steam	1,069.60	1,082.99
Dormitory	12,994.76	13,012.49
Facility		
Basic Rent	27,105.63	31,472.25
Electricity	3,433.92	3,433.92
Water	490.00	490.00
Steam	10,416.67	10,416.67
	$309,895.98	$313,156.55
Unoccupied Dormitory Revenue Loss	1,637.74	1,620.01
Unoccupied House Revenue Loss	2,447.75	3,492.66
	$313,981.47	$318,269.22

(1) Six facility operators still have equipment on rental basis.

Telephone		
Number of work orders processed	329	356
Number of working phones	4,982	4,895
Revenue including services	$18,936.34	$19,035.45

1.

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COMMUNITY ACCOUNTING DIVISION

Miscellaneous	August	July
Invoices Prepared During the Month	234	215
Revenue from above Invoices	$2,003.97	$ 1,447.96

The following building permits were issued during August:

Ernie McVicker	$ 4.50
L. A. Hopkins	187.05
M. R. Sommers	2.00
Neil Sorrick	2.00
Carnation Co.	6.50
Redeemer Lutheran Church	129.95
Total	$332.00
Previously Reported	6,335.82
Total to Date	$6,667.82

General

Seventy-two collection letters were written during the month resulting in collection of twenty seven accounts in the amount of $1,183.15.

Thirty-three of the forty-three telephone accounts 30 days or older as of July 31, 1950 have been paid.

Three minor telephone accounts totaling $.99 were written off during the month.

The following accounts were submitted to Yakima Adjustment Service during August for collection:

Nancy L. Palmer - Dormitory	$ 2.25
Juanita Logan - Dormitory & Tenant Service	30.82
Glen W. Norton- Dormitory	2.25
Bert Tiesman - House	7.53
John Chamberlin - Tenant Service	6.55
William C. Mulcahy - Telephone	17.25
Earl B. Harvey - Tenant Service	4.99
Amer F. Eaton - House	52.50
	$124.14
Previously Submitted - 11 Accounts	80.96
Total Submitted 8-31-50,19 Accounts	$205.10
Accounts Collected by Yakima Adjustment (1)	2.32

ACCOUNTS PAYABLE

Statistics	August	July
Accounts Payable Vouchers Processed	236	249
Freight Bills Processed	23	13
Purchase Orders Received	70	69
Net Amount of Purchase Orders	$12,952.00	$25,567.00
Receiving reports received	106	118
Total Net Amount Disbursed	$49,972.00	$55,726.00
Number of Checks Issued	186	188

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Community Accounting Division

A summary of active Community Subcontracts is shown below:

Subcontractor	Subcontract Number	Amount Awarded	Paid This Month	Total Paid	Amount Retained
Newland Cafeteria		* 60.80	10.52	60.80	
Richland Maint. Co.		*119,497.92	6,763.69	119,497.92	
Holaday & Edworthy	G-284	4,700.00		4,112.50	
Bailey's Plumbing & Heating	G-293	8,158.89		7,844.05	412.84
Associated Engineers, Inc.	G-305	89,462.05			
Empire Electric Co.	G-310	16,760.00			
A.G. Patton & Cecil Hill	G-311	16,694.00	10,149.95	15,859.30	834.70
Algot C. Grant	G-318	19,985.00			
American Steel & Wire Co.	G-319	6,484.05			
Roof Service Inc.	G-325	3,569.00			
Packard Pipe & Roof Co.	G-326	10,248.50			
		$295,620.21	$16,924.16	$147,374.57	$1247.54

* Total amount of contract will be total of estimates submitted.

COST

Reports

The July Operating Report was completed and distributed on August 21, 1950. The report included several improvements in method of reporting and in distribution procedures.

The Comptroller's Appropriation Report for July was distributed on August 22, 1950.

The July Utility Reports were issued August 29, 1950.

Budget

Operations

Commitments against budgeted items were posted in order to determine expenditure trends of budgeted funds.

Information was gathered and submitted to several members of the A.E.C.

Construction

An analysis of the Civic Activities Division budget was compiled and issued. Similar analyses are being made for all Community Divisions.

Appropriation Requests

Three new appropriation requests were written this month.

1. Relocation of Castle Club. 2. Shelterbelt Planting & Irrigation.
3. Asbestos shingle siding for A&J Houses.

Two requests for additional funds for previously approved requests were written.

1. Casey Avenue, Street improvement. 2. Duane Avenue, Street Improvement.
One request, covering the difference between A. E. C. approved funds and original appropriation request;

1. Exterior rehabilitation of prefabs.

1209599

Community Accounting Division

Service Orders

The increase in Service Orders is accounted for mostly in the Electrical Craft. The average cost per order increased about 9 % over July and the increased order cost is in the material charge, which indicates that more replacement parts were used.

	Service Orders		Labor		Material		Total	
Code	July	August	July	August	July	August	July	August
1	621	781	$1,027.72	$1,270.16	$ 344.32	$ 609.61	$1,372.04	$1,879.77
2	1095	1521	1,261.98	1,628.88	1,324.62	1,674.01	2,586.60	3,302.89
3	68	41	139.74	102.00	113.25	49.63	252.99	151.63
4	44	45	194 89	139.80	97.58	127.42	292.47	267.22
5	163	222	256.30	352.20	249.18	571.06	505.48	923.26
6	186	237	408.66	565.53	65.11	151.39	473.77	716.92
	2177	2647	3,289.29	4,058.57	2,194.06	3,183.12	5,483.35	7,241.69
Net Increase	470			769.28		989.06		1,758.34
Percent of Increase	.215			.23		.45		.32
Average cost Per order			1.51	1.53	1.01	1.21	2.52	2.74
Percent of Increase				.0135		.20		.087

1 - Plumbing
2 - Electrical
3 - Heat & Vent
4- Glazing
5- Lock & Key
6- Carpentry

Work Orders

	June	July	Aug.	Net Change
Active Routine	428	402	310	-92
Active Normal	2070	2053	2121	+68
	2498	2455	2431	-24
W. O. Rec.	2157	2335	2236	
W. O. Comp.	2132	2378	2260	
	+25	-43	-24	

A study of Work Orders in connection with the Electrical Distribution System revealed that a savings up to 8% per month could be effected if certain changes were made in the distribution of costs in line with the Report on Economic Studies of the Richland Electrical Distribution System. Manufacturing Division has indicated that our recommendation will be accepted.

General Ledger	No.	Debit	Credit
Second Class Invoices Received	80	$300,323.06	$263,225.33
Second Class Invoices Issued	58	$124,744.46	$ 6,096.59

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DESIGN AND CONSTRUCTION DIVISIONS

August, 1950

I. ORGANIZATION AND PERSONNEL

Number of employees on payroll

Beginning of Month	617*
End of Month	627**
Net Increase	10

*Does not include the 'On Loan' personnel:

**Does not include the following personnel:

Instrument Division	(Loan)	7
Fluor Corporation	(Contract)	8
Technical Divisions	(Loan)	1
Schenectady, N. Y.	(Loan)	2
Total on loan as of 8-31-50		18

Total Beginning of Month	643
Total End of Month	645
Net Increase	2

II. INVENTIONS AND 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.

None

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[redacted]

ACCOUNTING DIVISION

I. SUMMARY

During the last week in August a draft of Instructions was issued covering the operation of Subcontractor's Service Contract which is to become effective September 1, 1950. Nearly three months have been spent in preparation of these Instructions, which have been distributed to General Electric management, Atkinson-Jones management, Urban, Smyth & Warren management, Newbery Neon Electric and other interested personnel, including Atomic Energy Commission.

The total number of employees reported by CPFF Subcontractors August 29 was 4,982 which is a net increase of 154 reported July 27. CPFF Construction Subcontractor Payrolls total $1,475,358 for the four-week period ended August 20. This is an increase of $187,371 over the previous four-week period, or a weekly average increase of $46,342. Also, the Average Weekly Earnings increased from $84.92 to $91.31. These increases were partly due to two factors; one was that in July we had a holiday for which a number of employees were not paid, the other factor was an $18,000 increase for the week ending August 20, due to USW employees working Saturday of that week.

Total cash disbursed during the month of August was $3,231,124 which is approximately 3% over June disbursement.

II. STATISTICAL AND GENERAL

Accounts Payable Distribution Summary follows:

General Electric Purchases	$	453 322 1)
Reimbursement-Atkinson-Jones CPFF Subcontract	2	320 031
Reimbursement-Other CPFF Subcontractors		316 403
Partial Payments to Lump Sum Subcontractors		173 654
Travel (General Electric)		3 033
Freight		4 100
Miscellaneous		60 252
Total Credited to Accounts Payable	$ 3	336 295

(1- Of this figure $423,852 was transferred to Atkinson-Jones for inclusion in their costs.

Project C-295, Enlarging 251 Substation was transferred to the Design & Construction Accounting Division, Construction Work in Progress from the Manufacturing Division.

As of August 1 Atkinson-Jones opened subledgers to their cost ledger for recording White Bluffs shop order costs.

Entries are being made on Atkinson-Jones books to transfer Expendable Small Tools from MS Stores to Assets Account 26.5. Amortization at the rate of 3% monthly, will be distributed to projects and shops on the basis of direct labor.

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Physical inventory of Major Equipment was taken during the month of August. Reconciliation to Ledger balances should be completed during September.

III. ORGANIZATION AND PERSONNEL

During the month of August three employees terminated and one new employee was added to D&C Accounting Division.

Personnel in D&C Accounting Division was:

July 31, 1950	73
August 31, 1950	71
Net Decrease	2

[redacted]

[redacted]

CONSTRUCTION SERVICES DIVISION

I. SUMMARY

No major changes were made within the Construction Services Division during the month.

II. STATISTICAL AND GENERAL

NORTH RICHLAND CONSTRUCTION CAMP POPULATION*

Trailers	2,434
Barracks	868
Houses	651
Total	3,953
Net Increase	68

*Note: This does not include U. S. Army

Barracks

During this period there were two wings of one-story male barracks opened.

August, twenty-two, two-story male barracks, and two one-story male barracks were released to the U. S. Army

Steam Generating Plant

Steam generated, M lbs.	13,838.00
Oil Consumed, gals.	7,065.00
Coal consumed, tons.	844.17
Boiler efficiency, average %	65.99

*Steam cost, per M lbs. $1.43

*Note: Computation of unit cost of steam is based on estimated cost of coal of $3.60 per ton and estimated indirect cost applicable to the steam plant.

Water consumption for the month was 59,694,000 gallons or an average daily consumption of 1,925,613 gallons.

Commercial Facilities

There was no change in the number of commercial facilities in business.

During the month, a rental schedule for the Cocktail Lounge was executed.

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Construction Services Division (Continued)

Community Activities

The month of August saw the playground program brought to a close. Championship Day was sponsored on August 17, 1950, with awards being given to approximately 100 children.

Religious and social meetings have continued their usual prominence during the month.

OFFICE SERVICES

The demand and need for office space continues to be of major importance.

SECURITY

During the month, 407 meetings were held and 10,176 employees attended. A total of four Construction Security Bulletins was issued.

Statistical Information

Total lost badges this month	28
The number on Subcontractor and Vendor Payrolls as of August 27	4,544
Total Hires	556
Total terminations	349
Visitors clearances requested for the month	6
Total clearances requested this month	622
Total clearances received this month	497

LABOR RELATIONS

The dispute concerning daylight saving time continues unsettled.

No agreement has been reached to date regarding the office workers dispute.

III. ORGANIZATION AND PERSONNEL

Beginning of Month	135
End of Month	135
Net Increase	0

[redacted]

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CONTRACT DIVISION

I. SUMMARY

Modifications to the CPFF Subcontract and Sub-subcontracts, covering plant wide labor services to be performed for the period from 9-1-50 through 11-30-51, have been completed.

STATISTICAL AND GENERAL

The Subcontract for Ventilation Stack for P-10 Program has been awarded and is progressing on schedule.

Negotiations relative to the estimated cost of work for the 1st phase of the TBP Program have been completed with the CPFF Construction Subcontractor and Sub-subcontractors.

Twenty-seven contract items totaling $7,035,477.60, and one contract item showing a decrease of $98.00, were completed during August.

Amount involved per contract type is as indicated below:

CPFF	$6,439,808.00
Fees	147,185.00
L.S. and U.P.	498,484.60

Forty-four contract items remained open at the end of the month.

III. ORGANIZATION AND PERSONNEL

Number of employees on payroll:

Beginning of month	31
End of Month	32
Net Increase	1

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ENGINEERING SERVICES DIVISION

I. SUMMARY

The scheduled drafting work load was in excess of available manpower. Efforts to increase the drafting force were unsuccessful and the month ended with a decrease in personnel. The drafting schedule was overhauled; work on projects C-204-B and RDA-DC-1 was slowed down and projects C-187-D, C-187-E, C-198, C-362, C-361, and C-295 were given top priority.

The work load in estimating was very heavy, necessitating some overtime work. Efforts continue to increase the personnel in the Estimating and Standards Sections.

The speed-up on Separations Division's projects resulted in a sudden increase in demand for prints from the Reproduction Section. Deliveries of prints fell somewhat behind but the Section worked itself back into a current position by month's end.

There was a further increase in the number of charts posted in the Chart Room covering developments on major projects.

II. STATISTICAL AND GENERAL

DRAFTING SECTION

Drafting Production

New Drawings	200
Miscellaneous	37
Drawing Revisions	61
Drafting Efficiency - man-day per drawing	6.5

ESTIMATING & STANDARDS SECTION

Estimating

Estimates scheduled	15
Estimates completed	9 Total value $32,700,000.
Estimates to be completed	6
Estimates with insufficient information	3
Estimates being processed	3

Unit Costs

A study was made of excavation costs on the Redox Tank Farm. Observations are being tabulated and a report will issue.

Standards:

1. Preparation and issue in final form of specifications HW-4596, "Welder Qualification Tests".

2. Preparation of a preliminary issue of a Design Guide for "Heating, Ventilating, and Air Conditioning" of buildings

in the process area.

3. Issue of a Guide Specification for "Excavation, Filling, and Backfilling for Structures".

4. Evaluation of Blanket Type Fiberglass Insulation as an alternate of 3" thick Block Insulation.

5. Several other Guide Specifications are in the rough draft stage.

REPRODUCTION SECTION

The volume of work for the month of August increased 28.5 percent.

The newly created Audit and Inventory Unit started field inventories of files.

Production of Prints	August
Originals Handled	17,077
Prints Produced	148,376
Square Feet of Production	517,430
Average Square Feet per Employee	34,495

PERSONNEL, RECORDS AND HISTORY SECTION

Changes in D&C Divisions' Personnel

Additions	33
Terminations	21
Transfers within D&C Divisions	6
Transfers out of D&C Divisions	3

PROJECT COST & PROGRESS ANALYSIS SECTION

Forecasts Issued:

Subcontractor and D & C Line Division personnel.

Reports Issued

Five monthly narrative and progress reports.

Charts Prepared:

Six charts showing D & C projects progress

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III. ORGANIZATION AND PERSONNEL

Number of Employees on Payroll:

Beginning of month	152
End of month	158
Net Increase	6

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PRINCIPAL ENGINEERS

I. SUMMARY

The activities of the Principal Engineers consisted of reviewing and commenting on drawings, Design Instruction Letters, Specifications, preparation of special reports, and recommendations on utilities such as steam, water, electric power serving several projects in one operating area, special advisory and consulting services requested by Design & Construction and other Divisions.

The above services were rendered for the following projects:

II. STATISTICAL AND GENERAL

PRINCIPAL MECHANICAL ENGINEER

Special Reports

Project C-362 - Waste Metal Recovery Plant
Engineering proposals for the steam and water systems to serve 200-W Area Expansion Program. These were included in Project Proposal.

Review and Comments

Project C-362 Waste Metal Recovery Plant

Project C-361 Metal Conversion Facilities

Project C-187-D Redox Production Plant

Project C-187-E Redox Analytical & Plant Assistance Laboratory

Consulting and Advisory Services

(1) Specifications for welder qualification procedures (for Power & Mechanical Division)

(2) Design guide for air intake systems (for Power & Mechanical Division)

(3) Proposal for heating and ventilating changes to the Kadlec Hospital (for Power & Mechanical Division)

PRINCIPAL ELECTRICAL ENGINEER

Reviews and Comments

Project C-362 Waste Metal Removal & Recovery Plant

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Review and Comments (Continued)

(1) Electric Testing Specification HW-4604.
(2) Kellex Design Proposal - Heating & Ventilating System for Phase IV, Bldg. 221-U.
(3) Kellex Electrical Construction Specification HW-4601.
(4) Design Instruction Letter No. G-2, Electrical Power System.
(5) Design Instruction Letter No. G-3, Supplement No. 1, Heating and Ventilating.
(6) Design Instruction Letter No. G-4, Supplement No. 1, Equipment Removal & Building Renovation.
(7) Outline of Design Requirements for Phase I and II.
(8) Description of Phase I - Waste Metal Removal System.
(9) Specifications and Purchase Requisition for 6000 KVA Substation.

Project C-364 Aquatic Biology Laboratory

Project C-385 Radiometallurgy Bldg.

(1) Special Equipment Scope Drawings.
(2) Design Criteria.

Project C-187-D-Redox Production Plant

Drawing H-2-8640 - Silo Viewing Window Placement.

Project C-187-E - Redox Analytical & Plant Assistance Laboratory

Design Basis Letter No. 18, Revision 1-
Outside Facilities - Laboratory
Waste Retention - Bldg. 219-S.

Consulting and Advisory Services

(1) Schedule of electrical System construction in 200 West Area issued for purposes of co-ordinating new facilities.

(2) Meeting with Electrical, Power, and Project Engineering Divisions to discuss emergency generating capacity in 100-D Area, and co-ordinate the power demands of the 100-DR Water Plant and the P-10-X Program.

(3) Meeting with members of the Electrical, Technical, and Project Engineering Divisions to co-ordinate electrical system construction in the 300 Area in view of the elimination of the Rolling Mill.

(4) Application of electric furnace and control to the decomposition phase of Metal Recovery, Project C-361.

(5) Miscellaneous subjects, such as interlocking and relaying on transformer installations and on certain features of the heat transfer test.

Consulting and Advisory Services

(6) Discussions with members of the Reactor Division and Mr. B. R. Prentice with respect to a proposed study on drives and drive systems for 100 Area process pumps to be performed by the Industrial Engineering Division.

(7) Continuation of the critical study of electrical systems in the 105-H Building.

PRINCIPAL CIVIL ENGINEER

Special Reports

Letter Opinion on "Significance of Tying the Richland and Plant Co-ordinate Systems into North American Datum."

Reviews and Comments

Project C-199 - Expansion of 300 Area Sewage Disposal System

Alternate Plans were reviewed and recommendation made to utilize septic tanks for treatment and open lagoon for disposal.

Project C-364 - Design of Aquatic Biology Laboratory

Project C-385 - Radiometallurgy Building for Hanford Works Laboratory

Design Criteria recommended for approval.

Project C-362 - Waste Metal Removal and Recovery Facilities

The Outline of Design Requirements for Phases I and II was reviewed and was not considered adequate for Project Proposal or Outline Specifications.

Consulting and Advisory Services

(1) Project C-353 - Richland Water Study

The preparation of a scope of work believed compatible with the Alvord, Burdick, & Howson's July 17, 1950 letter proposal and "Description of Proposed Work" "Part I" of Project Proposal C-353.

(2) It was suggested by letter to E. W. Seckendorff, dated August 2, 1950, that a representative committee be appointed by the Manager of the Design & Construction Divisions to standardize the Structural, Architectural and Civil Design Criteria for process area construction.

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Consulting and Advisory Services

(3) Review of structural problems involved in connection with Design of 100 Area Stack Gas Filters.

III. ORGANIZATION AND PERSONNEL

Beginning of month	4
End of month	4
Net change	0

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HW-16740

POWER AND MECHANICAL DIVISION

I. SUMMARY

The work load in the Design Sections has increased considerably this month necessitating a temporary deferment of work on three projects, considerable adjustment in personnel assignment was required to carry on the work. During August 66% of Design Engineering time was spent on other divisions' work and 34% on Power and Mechanical Division work.

The Construction Sections' work load increased slightly this month, due to the increased tempo of the DR Water Plant and the starting of a new construction project in Richland.

Procurement of engineered items of material and equipment is on schedule except as noted in the July report and no loss of time is anticipated.

In general, satisfactory progress is being made. Schedules are being met, and in some cases progress is ahead of schedules.

II. STATISTICAL AND GENERAL

C-199, Expansion of 300 Area Sanitary Sewer Disposal System: A study of three schemes of sewer treatment and disposal was made and presented to the Power Division. Submittal of project proposal is expected August 31st as scheduled.

C-204-B, Additions and Alterations to Kadlec Hospital & Medical Arts Building: Construction contract for the Medical Arts Building was signed August 17, 1950, with the Lewis A. Hopkins Company and notice to proceed was issued August 18th. Since start of construction August 22nd, excavation work and installation of curb and gutter is in process.

C-257, Health Instrument Control Laboratory: Specifications prepared by J. Gordon Turnbull, Inc., need revisions to advertise on lump sum construction basis. The Contract Div. will advertise about September 15th.

C-276, (Part II), Overall Plant Telephone System: Construction is complete and final inspections are made on all three sections. Close out papers are being processed.

C-289, Additional Laundry Facilities, 200-West: Project physical completion is 60% against scheduled 50%. Interior carpenter work 55% complete, roofing 95%, heating & ventilating 30%, electrical 25% complete.

C-295, Enlarging 251 Substation: Responsibility for Project C-295 was transferred from Manufacturing Divisions to Design & Construction Divisions effective August 1, 1950. Project proposal, Part II, was transmitted by Manufacturing Divisions to AEC August 11th.

C-342, DR Water Works: As built drawings 39% complete. Construction work is proceeding in good shape slightly ahead of schedule, 85% complete. Progress by building items:

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183-DR: Treated and filtered water was obtained on August 28th. The clearwells are 92% complete, and painting 50% complete.

190-DR: The north seven pumps have been given an initial 24-hour test run. The piping is complete in the north tunnel and almost complete in the south tunnel.

184-D: The power plant extension is about complete architecturally. The boiler is 62% complete. Boiler brick laying work was started August 26th. The ash-handling system is now being installed.

105-DR: Large piping in 105-DR valve pit is complete. Work started on impulse lines and the electrical work in the valve pit.

115-D: Minor construction work on Work Orders is in progress. Construction forces are now working in room #5 preparing it for the installation of a steam driven blower unit to be moved from 115-B Bldg. by Minor Construction.

Concrete: Approximately 1160 cu. yds. of concrete were poured during the month, bringing the total to 48,860 cu. yds.

Saturday overtime authorized for pipefitters, welders and insulation crafts.

C-353, Richland Water Supply: AEC approval has been obtained with modifications for the scope of work and proposed fee of $9,000 as submitted by Alvord, Burdick & Howson. Negotiations are being made by the Contract Division for the subcontract.

C-364, Aquatic Biology Laboratory: AEC approved architects Young & Richardson, Carleton & Detlie, Seattle, Washington, as prospective architect-engineers. On August 28th, AEC approved scope drawings and design criteria for this project.

C-381, Radiochemistry Building: Leland S. Rosener is proceeding with design work in accordance with subcontract schedule. Preliminary plans and specifications have been received.

C-385, Radiometallurgy Building: Negotiations for design subcontract with Leland S. Rosener were unsuccessful. We are now negotiating with the Bechtel Corporation.

C-394, Plot Plan and Utilities - Hanford Works Laboratory: Due to increased workload of design engineering section it was agreed that the design work on this project could be performed by the A-E to be selected for Project C-385. Negotiations with Bechtel Corp. are in progress on this project. Construction project proposal requesting funds to perform initial construction work of site grading, line changes, etc., has been approved by the A&B Committee. We hope to start this work in the early part of September.

[redacted]

GET-17, Pile Technology Building: Shifting of design engineering personnel and draftsmen will delay design criteria and scope plans several months. However, the preparation of the estimate and project proposal is in process.

GET-18, Mechanical Development Building: An estimate and project proposal will be submitted in the early part of September.

III. ORGANIZATION AND PERSONNEL

Personnel on payroll	
Beginning of month	71
End of month	70
Net decrease	-1

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REACTOR DIVISION

I SUMMARY

Due to Atomic Energy Commission's request for a reduction in the proposed 1951 Research and Development Budget, the development program for New Pile Area "G" was revised and certain minor reductions in scope were made. A revised Research and Development Authorization (HDC-1861) was prepared and submitted to the Appropriations & Budget Committee for approval. A budget estimate and a manpower forecast prepared to suit the revised scope of work were supplied to the D&C Budget Committee.

In general, the test program has progressed very satisfactorily. The major work of preparing the 189-D Building for use as a test laboratory has been completed. The heat transfer tests set-up was completed this month and preparations were made for other of the major tests which are to take place in this laboratory.

Three engineers left the Division during the month to return to school to obtain advanced degrees. In addition to these, Mr. O. D. Seawell, who was selected to attend the School of Reactor Technology, left for Oak Ridge National Laboratory.

No inventions or discoveries were made by members of the Reactor Division during the month of August.

II STATISTICAL AND GENERAL

This was most productive of any month to date, devoted to the "G" Reactor Program. The major accomplishments are as follow:

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STATISTICAL AND GENERAL (continued)

1. Process Tube Heat Transfer Tests

Installation of the process tube heat transfer test equipment in the 189-D Building was completed this month. The full scale process tube heat transfer test was run at part load without unforeseen difficulties. The initial success of this test, which resulted from careful planning, was very encouraging.

2. Vertical Rod Drive

This assembly completed its no-load run-in tests successfully at the Bremerton Navy Yard and was shipped to Hanford where it will be tested in the 189-D Building.

3. Recirculation Water System

A meeting was held with du Pont representatives who indicated a desire to take part in the Reactor Division's recirculation water test program. This request was made to obtain data for the design of the new P-10 reactor. A formal request will be sent by du Pont to the General Electric Company through the A.E.C.

The installation of the test equipment was delayed because of the diversion of minor construction forces to other projects of higher priority.

A meeting was held with representatives of North American Aviation Co. to discuss the design of a recirculating water system.

4. Gas Cooled Control Rods

The manufacture and check-out testing of a three dimensional analogue was completed during the month. This analogue will be used to solve problems associated with gas cooling the control rods.

5. Ball Third Safety System

A thorough analysis was completed of the results of tests of the full scale Ball 3-X System planned for the "G" reactor. This analysis indicated that the system satisfies the original design objectives and, therefore, the basic development can be considered completed.

Development work on a nickel-boron ball is now complete and arrangements are being made by KAPL for the manufacture of 2½ to 3 cubic feet of balls for testing at Hanford. Development of a low-density ball has been deferred until development of powder-metallurgy gadolinium alloys is complete.

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STATISTICAL AND GENERAL (continued)

6. Conventional Type Water Plant Design

Management approval was obtained for running tests on primary pumps in an existing area to obtain basic design data regarding the effectiveness of the primary pump flywheels and also turbine control characteristics. Some of the pumps in existing areas have been reworked to eliminate the costly dissipation of energy in cone valves.

7. Continuous Charging Equipment

The drawings of the prototype charging machine are in the hands of seven potential vendors for bid purposes. This prototype machine incorporates all of the complete design features of the full-scale machine but has been simplified to expedite procurement, thus allowing tests to start at the earliest possible date.

8. Shielding

The bulk pour tests of Brookhaven concrete in the wooden forms were completed and the results, based on visual observation only, appear to be satisfactory. Four steel crates of the type planned for the final shield were welded together satisfactorily within allowable construction tolerances.

Plans have been completed for inserting a section of a Brookhaven concrete shield in the DR test opening. The actual work for this test has been started.

9. Vertical Rod Assembly

All parts for this full-scale test have been ordered and some parts should arrive this month. It is expected that this test can be started during the early part of November. The test tower is being modified in accordance with recommendations obtained from the Power & Mechanical Divisions.

10. Moderator Temperatures

The results of the analogue studies on moderator temperatures are reported in HDC-1855, "Electric Analogger Studies of Graphite Temperatures", by G. M. Roy and R. E. Schilson.

Graphite contact resistance tests are still in progress. Several anomalous results are still to be resolved.

11. Materials Development

The following are the major points of interest in the Materials Development program:

[redacted]

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STATISTICAL AND GENERAL (Continued)

Materials Development (cont'd)

KAPL reports that an extruded zirconium tube 39" long, 0.979" O.D. and 46 to 57 mil wall thickness was drawn in two draws using an intervening anneal to 0.960" O.D. and 35 mil wall thickness. The finished tube had very good appearance. Preparations are underway at Superior Tube to produce pilot scale ribless tubing by other methods.

Investigations at KAPL of forming gadolinium alloys by using powder-metallurgy techniques have been delayed two to three months while other higher priority work is completed.

III ORGANIZATION AND PERSONNEL

Three engineers left the Reactor Division Design Section to return to school, and one rotational engineer completed his stay and was transferred to "S" Division.

Two new engineers were added to the rolls, one being assigned to Design Staff and one to Design Section.

Five rotational engineers were assigned to the Reactor Division--two to the Test Section and three to the Design Section.

Beginning of Month	42
End of Month	45
Net Increase	3

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MONTHLY REPORT AUGUST 1950 - SEPARATIONS DIVISION

I. SUMMARY

A six day work schedule through the month of October was authorized for General Electric personnel concerned with Projects C-187-D, C-198, C-361 and C-362 in order to expedite completion of the designated facilities in compliance with the urgency placed on these projects. A six day schedule has also been authorized for Kellex engineering personnel in New York to expedite design of Projects C-187-D and C-362.

The current shortage of ferrocolumbium has seriously affected the producurement of columbium stabilized stainless steel for urgently required equipment. To alleviate this hold up, procurement of commercial tantalium-containing columbium stabilized steels has has been authorized for Redox, until further notice, and a decision on TBP will be reached shortly based on a survey of steel mills now being made.

The Project Proposal (HDC-1837) on Metal Conversion Facilities (C-361) was transmitted to the AEC on August 11. Modification 2 to Directive HW-158 authorizing total design funds of $155,000 for this facility was received from the AEC on August 22. Scope material together with a design directive (SPM-13) was furnished the Power & Mechanical Division.

The Project Proposal (HDC-1853) for Waste Metal Recovery Facilities (C-362) was submitted to the Manufacturing Divisions on August 25, 1950.

Active projects in the field progressed somewhat ahead of schedule. The Redox Production Plant attained 16% completion and the Redox Plant Assistance and Analytical Laboratory reached the 33% completion mark.

A procedure for expediting procurement of critical equipment items for Redox, TBP and UO_3 in order to obtain earliest possible project completion dates was approved by General Electric and AEC and placed in effect.

II. STATISTICAL AND GENERAL

A. Project C-187-D - Redox Production Plant

The Kellex design work is approximately 79% complete compared to the scheduled 81.5%. As of July 26th, of a total of 2033 drawings to be made, 1777 had been started, 1645 had been completed, 1566 were scheduled to be approved, 1499 had been received for approval, and 1489 (73.3%) had been approved and forwarded to the field. The rate of approval of Kellex drawings has improved greatly during the month as a result of the overtime authorization.

[redacted] HW-18740

A. Project C-187-D - Redox Production Plant (Continued)

It appears probable that drawing approvals will be returned to schedule by October 1, 1950.

Design work by the Power and Mechanical Division is approximately 64.6% complete compared to 82.8% scheduled. As of August 26th, of a total of 266 drawings to be made, 132 (52%) had been approved and forwarded to the field. The above figures are corrected to show the removal of the 241-S 240-S and pertinent utilities which are being handled directly by the Separations Division.

The use of unusual means to expedite certain equipment necessary for the mock-up of Cells, E, F, and D was authorized during the month. Overtime, bonuses, and premium payments may be authorized with the approval of the Separations Division Manager, the Purchasing and Stores Division Manager and the Chief Engineer of the Atomic Energy Commission.

CONSTRUCTION PROGRESS STATISTICS

Facility	Completion, August 26th
202-S Building	12.7
277-S Mock-Up	65.2
284-W Emergency Generator	.6
291-S Stack, Filter, Fans	12.3
2702-S Badgehouse	64.5
Waste Facilities	11.6
Electrical Distribution	2.6
Water Distribution	26.4
Steam Distribution	44.8
Railroads	49.3
Overall Redox Production Plant	16.0%

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Project C-187-D - Redox Production Plant (Continued)

The construction work on the 241-S Tank Farm and associated facilities under Sub-contract G-302 is approximately 5.0% complete. About 210,000 yards of excavation and the forms and steel work for three tank bottoms were completed by months end.

B. Project C-187-E - Redox Analytical and Plant Assistance Laboratory

Design of the Waste Disposal System is 53% complete. The balance of the scope drawings for the system were approved by the Scope Committee during the month and eighteen construction drawings were issued to the field. Design emphasis is being placed on concrete drawings so that, if possible, excavation can start about September 15. Two test wells were drilled to check the soil composition in the cribbing area. Results have shown that a great deal of fine sand and silt is present and two test holes were dug and filled with water and tests are being made of percolation rates in this type of soil. It appears that the location shown on the present plot plant will be satisfactory. This is subject to further verification.

It is expected that construction will start on the Waste Disposal System about September 15, 1950.

Construction of the Laboratory (222-S) is 33% complete, 5% ahead of schedule. Progress has been good during the month, and work has progressed at a rate exceeding the schedule with a smaller labor force than previously estimated to be necessary.

C. Project C-198-234-5 Building Program

Atkinson-Jones* fee determination cost estimate covering the completion of Phases II and III has been carefully reviewed. The basic labor and material costs are within $20,000 of the Design and Construction Division estimate.

GE & CL monthly reports for June and July have been studied. Based on the July report, there is indicated the possibility of a small cost overrun.

[redacted]

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[redacted]

Progress statistics for the month of August are as follows:

	Basic Design	Percent Comp. Overall Design	Percent Comp. Constr.
Phase II	84.0	57.0	5.0
Phase III (Richland,)	35.0	25.0	2.0
Phase III (Schenectady)		92.0	87.0

D. Project C-361-Metal Conversion

The Project Proposal for this facility (HDC-1837) was transmitted to the AEC on August 11. Approval of this Project Proposal has not yet been received from the AEC. Work Authority Number C-361 (5), referenced to Directive HW-158, Modification 2, was received on August 22. This increases the total funds authorized for design to $155,000

Scope material was transmitted to Power & Mechanical Divisions and detailed design was released to Power & Mechanical Division on August 22 by SPM-13. The UO_3 project equipment was authorized for purchase under the Special Procurement Procedure during the month.

E. Project C-362 Waste Metal Removal and Recovery

The Project Proposal for the Waste Metal Facilities, (HDC-1853) was submitted to the Manufacturing Division August 25, 1950.

Agreement was reached on the estimate for fee purposes for the construction of Phase I, the Mock-Up Building and the preparation of the 221-U and 224-U Facilities. This was delivered to the AEC for determination of fee. It is hoped that construction may begin in the field September 11.

Progress statistics for the month are as follows:

	Phase I	Phase II	Phase III	Phase IV	Phase V	Phase V
Scope	98%	10%	100%	100%	100%	100%
Design	35	2	10	3	---	0
Procurement	0	0	2	0	0	0
Construction	0	0	0	0	0	0

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III. ORGANIZATION AND PERSONNEL

Personnel as of July 31	98
Personnel as of August 31	99*
Increase	1

*Includes three Fluor Corporation Personnel

Effective August 1, J.L. Boyd was transferred to the Engineering Services Division and replaced as Assistant to Manager by R. J. Schier from the Reactor Division.

W. A. Hartman of GE & CL arrived during the month to assist in the installation of R.M. Line equipment for Project C-198.

The construction field force was augmented by the addition of two field engineers. A cost analyst and chemical engineer were hired during the month for the Control Section and Process Design Section, respectively.

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HW # 18740

PROJECT & RELATED PERSONNEL AUGUST 1950

	7-31-50		8-31-50	
GOVERNMENT EMPLOYEES				
Civilian Personnel - Atomic Energy Comm.	346		348	
Civilian Personnel - G. A. O.	8		8	
Total		354		356
RICHLAND VILLAGE PERSONNEL				
Comm. Facilities (Includes No. Richland)	1109		1067	
Organizations, Clubs, Etc.,	68		71	
Schools	97		97	
Churches	25		25	
Total		1299		1260
CONSTRUCTION SUB-CONTRACTORS				
Atkinson & Jones	3141		3254	
Newberry Neon	291		316	
Urban, Smyth, & Warren Co.,	386		370	
Hanley & Company	208		259	
Kellex Corp.	456		500	
Charles T. Main Inc.,	36		26	
No. Electric Mfg. Co.,	5		2	
J. Gordon Turnbull	7		6	
Flour Corp.	11		11	
Booz, Allen & Hamilton	2		2	
Chicago Bridge & Iron Co.	42		9	
Rust. Engr. Co.	11		-	
Edmond P. Erwin	38		19	
Creamer Electric	3		3	
J. P. Head	8		8	
Royal Company, Inc.	12		14	
Combustion Eng'r. -Superheater Inc.,	1		2	
P. S. Lord	16		19	
Fred J. Early, Jr.	32		41	
Gilmore Fabricators Inc.,	3		7	
Lewis & Queen	39		33	
Bergman & Lampson	2		2	
H. G. Shotwell	14		14	
Graybar Electric Co.	2		3	
V. S. Jenkins	8		11	
Total		4774		4931
General Electric Personnel		7813		7839
Grand Total		14240		14386

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