[redacted] DECLASSIFIED

HW 13793-DEL

JUL 19 1949

727811

#1 - H. A. Winne
#2 - Zay Jeffries, Pittsfield
#3 - C. G. Suits, Schenectady
#4 - G. R. Prout
#5 - J. R. Rue
#6 - C. N. Gross
#7 - A. B. Greninger
#8 - F. R. Creedon
#9 - Hanford Operations Office
Attention: F. C. Schlemmer, Manager
#10 - Hanford Operations Office
Attention: F. C. Schlemmer, Manager
#11 - Hanford Operations Office
Attention: F. C. Schlemmer, Manager
#12 - Hanford Operations Office
Attention: F. C. Schlemmer, Manager
#13 - Hanford Operations Office
Attention: F. C. Schlemmer, Manager
#14 - Hanford Operations Office
Attention: R. W. Richardson, Historian
#15 - 700 File
#16 - 700 File
#17 - 700 File

July 18, 1949

REPOSITORY PNL

COLLECTION Atmospheric Releases

BOX No. N/A

FOLDER N/A

HANFORD WORKS

MONTHLY REPORT

JUNE 1949

CLASSIFICATION REVIEW FOR DECLASSIFICATION BUT LEFT UNCHANGED

By [illegible] 5/3/73

Date

U.S. AEC Director of Declassification

CAUTION

This document co[illegible]ns information [illegible]ecting the National Defense of the Un[illegible] Stat[illegible] [illegible]e transmission or the disclosure of its con[illegible] [illegible]y manner to an unauthorized person is prohibited [illegible]y result in severe criminal penalties under app[illegible]eral laws.

DECLASSIFIED

By Authority of WA Snyder 6-10-91
RLO-CG-4
By J E Savely 8-7-91
Verified By TL Burnside 8-9-91

This Document Consists of 275 Pages. No. 9 of 17 Copies. Series [redacted]

DECLASSIFIED

THIS DOCUMENT HAS BEEN SCANNED AND IS STORED ON THE OPTICAL DISK DRIVE

1221290

[redacted]

THIS DOCUMENT IS PUBLICLY AVAILABLE

[redacted]

HW 13793
July 18, 1949

TABLE OF CONTENTS

DECLASSIFIED

General Summary 3

Staff 10

Force Report. 11

Personnel Distribution 12

Manufacturing Divisions 20
- Plant Statistics 22
- Expansion Problems Section 24
- Operations Division
  - P Division 28
  - S Division 37
  - Power Division. 44
- Mechanical Division
  - Instrument Division 49
  - Maintenance Division. 52
  - Electrical Division 54
  - Transportation. 59
  - Project Engineering Division 61

Technical Divisions 71
- Pile Technology Division 73
- Separations Technology Division. 81
- Metallurgy and Control Division. 97

Medical Division 110

Health Instrument Division 121

General Accounting Division. 142

Plant Security and Services Division. 158

Purchasing and Stores Divisions 191

Employee and Community Relations Division 204

Community Divisions 223
- Public Works 224
- Community Administration 235
- Commercial Facilities 236
- Community Housing 240
- Community Safety. 245
- Community Fire 246
- Community Patrol. 249
- Community Activities 257
- Community Accounting 266

Design Division. 271

Project and Related Personnel 275

1221291

DECLASSIFIED

GENERAL SUMMARY

JUNE 1949

Manufacturing Divisions

A total of 48 tons of metal was discharged from the three piles at an average concentration of 331 MWD/ton. The operating efficiency was 90.8 percent, and the nominal power level of 275 M.W. was maintained through the month at B and F piles. The D pile level was increased from 290 M.W. to 305 M.W. on June 20, the latter figure being a new high level.

Approximately 22 tons of Class V metal (completely beta transformed, alpha-rolled, triple-dipped material) were discharged at a concentration of 392 MWD/ton without difficulty. This is the first material to reach the nominal 400 MWD/ton goal.

A total of 56 tons of acceptable slugs was canned at a new high record yield of 93.0 percent. The machining yield was 70.8 percent which is somewhat lower than in May because of very erratic rod diameters. The melt plant production amounted to 37 tons of billets at a yield of 68.5 percent.

A total of 35 batches was started in the Canyon Buildings and 37 were processed through the Concentration and Isolation phases of the Separations operation. The average purity of completed batches was 98.5 percent.

Morrison-Knudsen, track maintenance subcontractor, completed their contract on the Plant Railroad Rehabilitation Program as of June 30.

The construction of C-163, TX Tank Farm Facilities, was completed and turned over to Operations.

The construction of the Cascade Demonstration Unit in the 231 Building was completed and turned over to the Technical Division for operation.

K. C. Vint was appointed Chief Supervisor of the Manufacturing Expansion Problems Section effective June 1, 1949.

The Section participated in the preparation of the following project proposals:

1. Project Proposal for the design and construction of a Rala Plant.
2. Project Proposal for the design of additional 100-DR facilities.
3. Budgetary Project Proposal for Redox facilities.

Technical Divisions

The power level of the D Pile was raised to 305 M.W. during June. At this power level reactivity considerations require that each shut-down be an extended shut-down (about 30 hours or more) and that temporary poison be used before starting the pile again.

The far side shield of the D Pile moved outward a total distance of about 1/4 inch during May and June after having been stationary during the previous six months. It is not known whether this effect was caused by the higher operating level. There has been no upward movement of the top shield during this period.

The carbon dioxide additions to the B and F Piles appear to be effective. The top of the F Pile has not risen during the last four months, and motion of the top and far side shields of the B Pile has been reduced.

The ratio of initial to final thermal conductivity of graphite irradiated in a cooled test hole has now reached 64 after an irradiation of 2250 MD/CT and is continuing to increase linearly with exposure.

No serious or unusual operating incidents occurred in the Separations Plants during the month. Volume and time cycle reduction tests are still being continued, particularly in the Concentration and Isolation Buildings. Plant material balances, hydrogen formation in process and reagent make-up gases, and iodine balances are being studied. Stack gas clean-up studies have been continued with Fiberglas and the experimental electrical precipitator has been overhauled and returned to operation.

Approximately 15 cerium stand-in runs were completed in Part I of Building 234-5 with satisfactory operation through purification and not-unexpected low yields through Hoods 8 and 10. One out of two uranium test runs in Hood 10 produced a good button with a 98.9% yield. Hoods 14, 25, and 26 are being carefully checked to eliminate significant leaks in the vacuum systems. Sulfate-complexed plutonium has been run through the 10 gram-scale pilot line to metal production. Methods for plutonium recovery from slag and crucible material are being reviewed in the literature and qualitative tests have been started in the laboratory on methods of oxalate decomposition.

Twenty additional Redox Scale-Up runs carried out during the months have indicated that satisfactory mixing of scrub and feed solutions within the columns can be obtained, emulsification of IB Column systems can be prevented by a revised extractant distributor, and there are no significant scale-up factors for 1C Columns between 5 and 8 inches in diameter. Revision of the Demonstration Unit to provide cascade operation and increased throughput has been completed. Testing of submerged and horizontal pumps and automatic flow control instrumentation for potential "hot" installation has continued to produce highly encouraging results. Process Laboratory studies of aluminum nitrate preparation and recovery have received primary emphasis.

Laboratory research studies have further established the time-temperature relationships of ruthenium volatization and construction of an ozone cell for extending this work has been completed. Pulse analyses of 200 Area $BiPO_4$ extraction wastes have established the americium^{241} and curium^{242} content of current metal waste. Hexone-HNO_3 studies have been continued and a method has been obtained for diketone removal from solvent. Methods of neutralization of uranyl nitrate feed solutions within the Redox system have been established. Steady progress has been made in the scouting of methods of pretreatment of metal waste solution for solvent extraction recovery of metal.

[redacted]

DECLASSIFIED

General Summary

Effective June 1, all the metallurgical activities of the Metallurgy and Control Division were consolidated to form a single integrated Metallurgy Section. This step will facilitate the coordination of metallurgical plant assistance, research and development, and miscellaneous services.

The installation of facilities in Building 108-B for the alloying, casting, and machining of the lithium-aluminum alloy to be produced for the P-10 program was approaching completion at month-end. The Metallurgy Section will operate these facilities and has completed its preparation for this work.

Arrangements were completed for the resumption in July of analytical control services in the T Plant laboratory, as required by revised S Division run schedules. Analytical research personnel will utilize any excess facilities in both T and B laboratories.

The construction and occupancy of analytical control laboratories in Building 234-5 were completed except for final hood ventilation balancing and the transfer of some contaminated equipment from Building 231. Preliminary work was completed on the analysis of essential materials, and specifications and sampling procedures were prepared.

Health Instrument Divisions

The force increased by one. There were three Special Hazards Incidents, all without serious consequences.

Health Instrument Operational Division findings were generally normal. Conditions were improved in the T and B Plant canyons. In the Concentration Buildings, better measurements of the escape of plutonium through the roof vents indicated the need for corrective action.

Control results from the Development Division were normal. Tests on thin window ion chambers with field sources of beta radiation again pointed up the unsuitability of many commercial meters for such measurements.

Biology Division control monitoring showed no exceptional result.

Plant Security and Services Divisions

Hanford Works completed its second consecutive month without a lost-time injury, further reducing the frequency rate for the year to 0.87.

There were 23 fire alarms in the Industrial Areas with a property damage of $40.

Organization of the Records Control Division, which began in May, has been completed and the work is progressing satisfactorily. Record surveys were completed in the Purchasing and Stores Divisions and the Plant Security and Services Divisions.

[redacted]

1221294

DECLASSIFIED

General Summary

Employee and Community Relations Division

The last set of questions and answers was distributed to all supervisors participating in the 9-Point Job Improvement Program.

Open requisitions for additional non-technical personnel increased from 177 at the beginning of the month to 182 at the end of the month. Total plant roll increased by 11 employees during June. Turn-over rate, including terminations due to lack of work during June, was 2.31%. Turn-over rate exclusive of terminations due to lack of work was 1.69%.

Seven employees retired during June, five of whom were on an optional retirement basis. Two employee deaths occurred. There were no suggestion awards approved during June as circumstances prevented the Committee members from convening. A code designation schedule of job titles was received from R. C. Stratton, Home Office Life Underwriters Association's representative, who conducted a recent survey here. It has been agreed that the new schedule is a vast improvement over the previous one.

Scheduled meetings were held in all areas during June with supervisors by the Training and Program Development Group for the purpose of discussing highlights of the H. W. Agreement with the H.A.M.T.C. A total of 21 meetings was held during the month with 570 supervisors attending. Additional sessions will follow. The Supervisors' 40-Hour Training Program was again presented on a plant-wide basis. A total of 37 supervisors attended these meetings during June. This program will be discontinued during the remainder of the vacation period, and will probably be resumed in September.

The activities of the Labor Relations and Wage Rate Division during the month of June have been directed toward the handling of post negotiation arrangements, processing grievances, preparation of reimbursement authorizations directly and indirectly applying to the G.E.- H.A.M.T.C. contract, and the mechanics of completing the necessary records to convert the classifications and wage rates of employees involved in accordance with such requested changes in the wage rate system. Several meetings were held with the Council Grievance Committee in which contract application procedure and grievances were reviewed. Company seniority proposals were developed and submitted to the Union. A survey was started for the purpose of ascertaining the effect of recent notice of change of rental rates in the city of Richland. Two formal hearings were held with the N.L.R.B. with regard to the petition requesting bargaining rates for Hanford Guard Local No. 21, which resulted in the matter being referred to the Washington, D.C., office of the N.L.R.B.

On June 21, the movie "By Their Works" was introduced with appropriate remarks and presented at the noon luncheon meeting of Kennewick Kiwanis Club. On June 26, the Nucleonics Department General Manager spoke at the Kennewick Kiwanis Club meeting.

The Speakers' Bureau function was also active outside of the Tri-City area during the month. The Employee and Community Relations Division Manager addressed employees of the Iglehart Brothers Milling Company in Pendleton, Oregon, as the featured speaker on the occasion of a dinner meeting presented in connection with a safety program just completed in that company.

DECLASSIFIED

General Summary

The talk given was of a general informative nature concerning Hanford Works.

Twenty-one informative releases were made to newspapers on the G. E. Nucleonics Department News Bureau "Local List" during the month of June, and 17 releases were made to the 41 leading daily newspapers, radio stations, and wire services included on the "General Newspaper List".

The month of June provided Community Relations an opportunity to enter more actively into the field of radio programing in the Tri-City area. The transcription of an interview based on information given by C. P. Cabell before the Butte and Great Falls, Montana, Chapters of the A.I.E.E. was broadcast by radio station KWIE on June 26.

The promotion activities of the Kadlec Hospital's Open House, held during May, were compiled into a complete report during the month of June. The report included reproductions of clippings from the various local newspapers, as well as samples of the letters and souvenir booklets which were distributed in advance of and during the Open House. Sufficient copies of the report were prepared to provide one to each Employee and Community Relations Division Manager in the various departments and manufacturing plants, thus affording an opportunity to make activities of the Nucleonics Department more widely known among others in General Electric Company. Additional copies of the report were prepared for distribution to Kadlec Hospital for record purposes, to the Atomic Energy Commission, and to the public school system in Richland.

Purchasing and Stores Divisions

The personnel of the Purchasing and Stores Divisions was further reduced as indicated by the tabulation below:

	Total Personnel as of 5-31-49	Total Personnel as of 6-30-49	Net Change
Exempt	52	45	- 7
Non-Exempt	185	185	0
Totals	237	230	- 7

The New York office of the Purchasing and Stores Divisions was closed during the month. Our last representative, Mr. R. J. Carpenter, returned to his former assignment at General Electric Company, Schenectady, New York. The five remaining HWN purchase orders are being followed for cancellation by this Division working in conjunction with the Kellex Corporation Buying Group.

An agreement was reached during the month with the Redox Committee which will permit this Division to do the purchasing for the Redox Program here at Hanford Works rather than at New York as previously planned.

In general the work load of the Purchasing and Stores Divisions shows little change over the preceding month. Activity in the Surplus, Salvage

1221296

DECLASSIFIED

and Scrap Section of the Stores Division does, however, continue to be on the increase. The total disbursements to date is $1,424,484.24.

The duties of Receiving Clerks B have been restudied and new job assignments made so that no individual is performing duties outside the framework of his job writeup as accepted by the Union. In conjunction with this study, new Stockroom Keeper B assignments have been recognized in our Pasco warehouses and the over-all is far more equitable and lends flexibility to our Stores responsibilities. As a result of the above outlined changes, there is some rumored unrest among our employees, but all changes have been affected in strict accordance with the Union contract and in consultation with the Labor Relations Group.

Savings in the amount of $12,051.73 on freight charges were reflected during the month as a result of rate reductions obtained from carriers.

An agreement was reached with members of the Manufacturing Divisions to write requests for material on Minor Construction jobs on purchase requisitions in order that this Division may more effectively control inventories.

A meeting was scheduled with members of the Transportation Division organizations to study possible ways and means of eliminating duplicate Stores setups and excess inventories of automotive spare parts.

Community Divisions

Notification was released to house lessees of a rental adjustment to be effective August 1, 1949.

Sales of basic items show the usual seasonal trends.

Considerable progress is being made in the establishment of additional commercial facilities.

Activities in all Community Divisions were generally routine during the month of June, 1949.

Medical Division

The Medical Division roll decreased by 4 from 461 to 457.

There was a decrease in most medical activities due to seasonal decline in illness and to a continued decline in population. This is reflected in higher net operating costs as it is difficult to follow the rapid changes with appropriate changes in number of employees.

Revised expansion plans for Kadlec Hospital and Clinic, based on up-to-date operating statistics and revised population estimates, reduce the space requirements by 8,550 square feet (22%) and the total beds from 151 to 126.

1221297

[redacted]

DECLASSIFIED

General Summary

At the request of the Atomic Energy Commission, consideration was given to erecting an entirely new multi-story hospital. Unless a good use could be found for the present structure, it is estimated that more than forty years would be required to amortize the added cost by applying the savings due to added efficiency of operation and decreased maintenance costs.

General Accounting Divisions

Hanford Works and Nucleonics Department Financial Statements were completed on June 17 and June 20, 1949, respectively. General Divisions' Operating Reports were completed on June 15, 1949.

On June 1, the new procedure covering AEC reimbursements and the financing of the GE operation of Hanford Works was made effective. The advance from AEC as of May 31, 1949 in the amount of $25 000 000 was reduced during the month to $749 924. This reduction was accomplished through the submission to AEC of non-payment Public Vouchers totaling $14 915 651, and transferring $9 334 425 to the current advance account. In addition to transfers from the original advance account, additional advances of $6 500 000 and $987 101 were booked in the current advance account in June. After June liquidations, balances in the advance accounts at the end of the month totaled $8 000 000. These balances consist of:

Cash in Banks		$5 537 975
Contract Accounts	$5 482 975	
Salary Accounts	55 000	
Travel Advance Funds		50 000
Cash in Transit		987 101
Advance to Subcontractors		675 000
Original Advance - Unliquidated Portion		749 924
Total		$8 000 000

CPFF Subcontract No. G-1012 with the Morrison-Knudsen Company for plant railraod track maintenance expired on June 30, 1949. The AEC Audit Branch has approved the payment of salaries to the three remaining employees who will remain for an estimated four to six weeks.

A change in the procedure for delivering salary checks to employees by supervision in the areas was made effective June 9. Checks are now delivered to patrolmen on Thursdays at the area gate houses and are picked up for delivery by authorized personnel from each division for distribution to employees during their regular work shift. This change has resulted in (1) delivery of checks by supervision during regular work shift, and (2) more stringent control in distributing checks.

Work in connection with 1950 and 1951 Budget Estimates continued in June. Revisions in original budgets were made and considerable additional informations was furnished as requested by AEC.

[redacted]

1221293

[redacted]

DECLASSIFIED

STAFF

General Manager	G. R. Prout
Assistant General Manager	R. S. Neblett
Assistant General Manager	F. K. McCune
Assistant to the General Manager (Technical and Education Matters)	W. I. Patnode
Assistant to the General Manager	J. R. Rue
Assistant to the General Manager and Manager of the Plant Security and Services Divisions	G. G. Lail
Department Comptroller	F. E. Baker
Counsel	L. F. Huck
Community Manager	E. L. Richmond
Manager, Design and Construction Divisions	F. R. Creedon
Manager, Manufacturing Divisions	C. N. Gross
Manager, Technical Division	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

[redacted]

[redacted]

HW 13793

DECLASSIFIED

FORCE REPORT
JUNE - 1949

	Non - Exempt		Exempt		Total	
	5-31-49	6-30-49	5-31-49	6-30-49	5-31-49	6-30-49
GENERAL	20	20	11	12	31	32
LAW DIVISION	3	2	4	4	7	6
DESIGN & CONSTRUCTION DIV'S						
Administrative	23	22	5	5	28	27
Construction	121	116	137	129	258	245
Construction Accounting	64	60	8	8	72	68
Design	124	124	123	123	247	247
North Richland Realty	159	107	22	19	181	126
MANUFACTURING DIVISIONS						
General	2	3	6	6	8	9
Project Engineering	69	71	55	55	124	126
Manufacturing Accounting	41	44	7	7	48	51
OPERATING DIVISIONS						
"P" Division	254	252	70	69	324	321
"S" Division	266	273	71	72	337	345
Power	391	420	77	77	468	497
MECHANICAL DIVISIONS						
Maintenance	421	423	68	67	489	490
Electrical	223	222	46	45	269	267
Instrument	169	171	43	43	212	214
Transportation	575	611	62	62	637	673
TECHNICAL DIVISIONS						
Technical General	1	2	6	6	7	8
Pile Technology	20	20	55	53	75	73
Separations Technology	58	57	99	99	157	156
Metallurgy & Control	316	311	113	116	429	427
MEDICAL DIVISION	371	365	94	92	465	457
H. I. DIVISIONS	216		96		312	
General		3		6		9
Operational		120		54		174
Development		68		25		93
Biology		21		16		37
ACCOUNTING DIVISIONS						
Accounting-Payroll	63	62	14	14	77	76
Accounting-All Others	83	81	7	7	90	88
EMPLOYEE & COMM. REL. DIVISION	44	49	27	26	71	75
PLANT SECURITY & SERVICE DIV'S.						
Patrol & Security	518	523	56	56	574	579
Safety & Fire	111	110	37	36	148	146
General & Office Services	233	241	20	22	253	263
PURCHASING & STORES DIVISIONS	185		53		238	
PURCHASING		36		28		64
STORES		148		19		167
COMMUNITY DIVISIONS	601	612	145	145	746	757
GRAND TOTAL	5,745	5,770	1,637	1,623	7,382	7,393

[redacted]

1221300

PERSONNEL DISTRIBUTION - JUNE 1949

	100-B Area	100-D Area	100-F Area	100-H Area	200-E Area	200-W Area	300 Area	Plant General	3000 Area	700-1100 Area	Total
GENERAL											
Clerical	-	-	-	-	-	-	-	-	-	12	12
Total	-	-	-	-	-	-	-	-	-	20	20
	-	-	-	-	-	-	-	-	-	32	32
LAW DIVISION											
Clerical	-	-	-	-	-	-	-	-	-	4	4
Total	-	-	-	-	-	-	-	-	-	2	2
	-	-	-	-	-	-	-	-	-	6	6
DESIGN & CONST. DIVISIONS											
ADMINISTRATIVE											
Supervisors	-	-	-	-	-	-	-	-	-	5	5
Engineers	-	-	-	-	-	-	-	-	-	1	1
Clerical	-	-	-	-	-	-	-	-	-	17	17
Others	-	-	-	-	-	-	-	-	-	4	4
Total	-	-	-	-	-	-	-	-	-	27	27
CONSTRUCTION											
Supervisors	-	-	-	-	-	-	-	9	22	-	31
Engineers	-	-	-	21	-	6	-	14	26	9	76
Clerical	-	-	-	7	-	1	1	8	61	3	81
Others	-	-	-	13	-	2	-	23	15	4	57
Total	-	-	-	41	-	9	1	54	124	16	245
CONSTRUCTION ACCOUNTING											
Supervisors	-	-	-	-	-	-	-	-	8	-	8
Clerical	-	-	-	-	-	-	-	-	59	-	59
Others	-	-	-	-	-	-	-	-	1	-	1
Total	-	-	-	-	-	-	-	-	68	-	68

DECLASSIFIED

	100-B Area	100-D Area	100-F Area	100-H Area	200-E Area	200-W Area	300 Area	Plant General	3000 Area	700-1100 Area	Total
DESIGN & CONST. DIVISIONS											
DESIGN											
Supervisors	-	-	-	-	-	-	-	-	-	14	14
Engineers & Estimators	-	-	-	-	-	-	-	-	-	109	109
Clerical	-	-	-	-	-	-	-	-	-	57	57
Others	-	-	-	-	-	-	-	-	-	67	67
Total	-	-	-	-	-	-	-	-	-	247	247
NORTH RICHLAND REALTY											
Supervisors	-	-	-	-	-	-	-	-	18	-	18
Engineers	-	-	-	-	-	-	-	-	4	-	4
Clerical	-	-	-	-	-	-	-	-	19	-	19
Others	-	-	-	-	-	-	-	-	85	-	85
Total	-	-	-	-	-	-	-	-	126	-	126
MANUFACTURING DIVISIONS											
GENERAL											
Supervisors	-	-	-	-	-	-	-	-	-	6	6
Clerical	-	-	-	-	-	-	-	-	-	3	3
Total	-	-	-	-	-	-	-	-	-	9	9
PROJECT ENGINEERING											
Supervisors	-	-	-	-	-	1	-	-	-	35	36
Engineers	-	-	-	-	-	2	2	-	-	15	19
Drafting Personnel	-	-	1	-	-	5	1	-	-	32	39
Clerical	-	-	-	-	-	1	-	-	-	15	16
Others	-	-	-	-	-	3	-	-	-	13	16
Total	-	-	1	-	-	12	3	-	-	110	126
MANUFACTURING ACCOUNTING											
Supervisors	-	-	-	-	-	-	-	-	-	7	7
Clerical	-	-	-	-	-	-	-	-	-	44	44
Total	-	-	-	-	-	-	-	-	-	51	51

DECLASSIFIED

	100-B Area	100-D Area	100-F Area	100-H Area	200-E Area	200-W Area	300 Area	Plant General	3000 Area	700-1100 Area	Total
MANUFACTURING DIVISIONS											
OPERATING DIVISIONS											
"P" DIVISION											
Supervisors	15	17	15	2	-	-	14	-	-	6	69
Operators	44	50	47	5	-	-	94	-	-	-	240
Clerical	2	2	1	-	-	-	3	-	-	4	12
Total	61	69	63	7	-	-	111	-	-	10	321
"S" DIVISION											
Supervisors	-	-	-	-	29	35	-	-	-	8	72
Operators	-	-	-	-	102	155	-	-	-	-	257
Clerical	-	-	-	-	5	8	-	-	-	3	16
Total	-	-	-	-	136	198	-	-	-	11	345
POWER											
Supervisors	14	12	12	13	6	10	1	3	-	-	71
Engineers	-	-	-	-	-	-	-	6	-	-	6
Operators	96	86	92	8	25	44	10	1	-	-	362
Clerical	1	1	1	1	-	1	-	5	-	-	10
Others	11	12	9	1	5	7	3	-	-	-	48
Total	122	111	114	23	36	62	14	15	-	-	497
MECHANICAL DIVISIONS											
MAINTENANCE											
Supervisors	2	8	8	-	5	14	6	11	-	2	56
Engineers	-	-	4	-	-	-	-	1	-	6	11
Mechanics	22	41	40	-	35	80	50	73	-	-	341
Clerical	-	2	3	-	1	2	1	6	-	1	16
Others	2	4	9	-	5	16	10	20	-	-	66
Total	26	55	64	-	46	112	67	111	-	9	490

DECLASSIFIED

1321303

	100-B Area	100-D Area	100-F Area	100-H Area	200-E Area	200-W Area	300 Area	Plant General	3000 Area	700-1100 Area	Total
MECHANICAL DIVISIONS											
ELECTRICAL											
Supervisors	2	2	3	2	1	5	2	2	-	20	39
Electricians	14	12	14	1	11	14	15	-	-	95	176
Clerical	1	-	1	-	-	1	1	2	-	6	12
Others	1	1	2	1	1	5	2	2	-	25	40
Total	18	15	20	4	13	25	20	6	-	146	267
INSTRUMENT											
Supervisors	4	4	2	-	2	4	6	-	-	4	26
Engineers	3	-	-	-	-	2	8	-	-	4	17
Mechanics	7	5	8	-	7	15	19	-	-	8	69
Clerical	1	1	1	-	1	1	5	-	-	4	14
Others	9	8	8	-	8	11	38	-	-	6	88
Total	24	18	19	-	18	33	76	-	-	26	214
TRANSPORTATION											
Supervisors	2	1	2	1	1	1	2	18	-	34	62
Drivers (Based on areas served)	2	4	10	-	3	5	6	170	-	37	237
Mechanics	8	1	1	-	-	5	-	1	-	65	81
Trainmen	-	-	-	-	-	-	-	30	-	-	30
Laborers	3	3	12	-	4	4	7	27	-	13	73
Clerical	-	-	-	-	-	-	-	10	-	10	20
Others	7	7	10	-	-	12	2	67	-	65	170
Total	22	16	35	1	8	27	17	323	-	224	673

DECLASSIFIED

1221394

	100-B Area	100-D Area	100-F Area	100-H Area	200-E Area	200-W Area	300 Area	Plant General	3000 Area	700-1100 Area	Total
TECHNICAL DIVISIONS											
TECHNICAL GENERAL											
Supervisors	-	-	-	-	-	-	-	-	-	6	6
Clerical	-	-	-	-	-	-	-	-	-	2	2
Total	-	-	-	-	-	-	-	-	-	8	8
PILE TECHNOLOGY											
Supervisors	1	1	-	-	-	-	10	-	-	-	12
Chemists-Eng'rs. & Physicists	6	6	2	-	-	-	29	-	-	-	43
Laboratory Assistants	3	4	1	-	-	-	7	-	-	-	15
Clerical	-	1	-	-	-	-	1	-	-	-	2
Others	-	-	-	-	-	-	1	-	-	-	1
Total	10	12	3	-	-	-	48	-	-	-	73
SEPARATIONS TECHNOLOGY											
Supervisors	-	-	-	-	1	5	19	-	-	1	26
Chemists-Eng'rs.& Tech.Grads.	-	-	-	-	5	14	56	-	-	1	76
Clerical	-	-	-	-	-	2	8	-	-	1	11
Others	-	-	-	-	-	1	42	-	-	-	43
Total	-	-	-	-	6	22	125	-	-	3	156
METALLURGY & CONTROL											
Supervisors	1	2	-	-	6	7	31	-	-	5	52
Chemists-Eng'rs.-Tech.Grads & Metallurgists & Technologists	4	5	1	-	17	13	95	-	-	1	136
Laboratory Assistants	3	5	1	-	35	17	88	-	-	-	149
Clerical	-	1	-	-	1	1	38	-	-	32	73
Others	-	-	-	-	-	-	17	-	-	-	17
Total	8	13	2	-	59	38	269	-	-	38	427

[redacted]

[redacted]

DECLASSIFIED

5

1221305

46

	100-B Area	100-D Area	100-F Area	100-H Area	200-E Area	200-W Area	300 Area	Plant General	3000 Area	700-1100 Area	Total
MEDICAL DIVISION											
Physicians	-	-	-	-	-	-	-	2	7	26	35
Dentists	-	-	-	-	-	-	-	-	2	9	11
Technicians	1	-	-	-	-	1	1	-	3	24	30
Clerical	1	1	1	-	1	1	-	-	18	79	102
Others	3	2	4	4	4	5	2	-	17	238	279
Total	5	3	5	4	5	7	3	2	47	376	457
H. I. DIVISIONS											
GENERAL											
Supervisors	-	-	-	-	-	-	-	-	-	5	5
Engineer	-	-	-	-	-	-	-	-	-	1	1
Clerical	-	-	-	-	-	-	-	-	-	3	3
Total	-	-	-	-	-	-	-	-	-	9	9
OPERATIONAL											
Supervisors	1	1	2	-	2	5	8	-	-	2	21
Engineers	5	4	5	-	4	11	4	-	-	-	33
Clerical	-	-	1	-	-	-	-	-	-	-	1
Others	7	11	9	-	18	33	35	5	-	1	119
Total	13	16	17	-	24	49	47	5	-	3	174
DEVELOPMENT											
Supervisors	-	-	-	-	1	5	5	-	-	1	12
Engineers	-	-	-	-	5	5	3	-	-	-	13
Clerical	-	-	-	-	-	2	3	-	-	2	7
Others	-	-	-	-	12	26	15	-	-	8	61
Total	-	-	-	-	18	38	26	-	-	11	93
BIOLOGY											
Supervisors	-	-	1	-	-	1	1	-	-	-	3
Engineers	-	-	7	-	-	6	-	-	-	-	13
Clerical	-	-	-	-	-	-	1	-	-	-	1
Others	-	-	12	-	-	8	-	-	-	-	20
Total	-	-	20	-	-	15	2	-	-	-	37

DECLASSIFIED

	100-B Area	100-D Area	100-F Area	100-H Area	200-E Area	200-W Area	300 Area	Plant General	3000 Area	700-1100 Area	Total
ACCOUNTING DIVISIONS											
ACCOUNTING-PAYROLL											
Supervisors	-	-	-	-	-	-	-	-	-	14	14
Clerical	-	-	-	-	-	-	-	-	-	62	62
Total	-	-	-	-	-	-	-	-	-	76	76
ACCOUNTING-ALL OTHERS											
Supervisors	-	-	-	-	-	-	-	-	-	7	7
Clerical	-	-	-	-	-	-	-	-	-	81	81
Total	-	-	-	-	-	-	-	-	-	88	88
EMPLOYEE & COMM. RELATIONS DIV.											
Supervisors	-	-	-	-	-	-	-	-	-	25	25
Employee Relations Counselor	-	-	-	-	-	-	-	-	-	1	1
Clerical	-	-	-	-	-	-	-	-	-	42	42
Others	-	-	-	-	-	-	-	-	-	7	7
Total	-	-	-	-	-	-	-	-	-	75	75
PLANT SECURITY & SERV. DIVISIONS											
PATROL & SECURITY											
Supervisors	5	6	5	6	5	9	7	9	-	4	56
Patrolmen	37	46	61	63	64	124	66	9	-	37	507
Clerical	-	-	-	-	-	-	-	12	-	1	13
Seamstress	-	-	-	-	-	-	-	3	-	-	3
Total	42	52	66	69	69	133	73	33	-	42	579
SAFETY & FIRE											
Supervisors	9	-	-	-	-	4	5	9	-	8	36
Firemen	-	-	-	8	10	14	14	-	-	37	83
Inspectors	5	4	4	-	4	1	1	3	-	1	23
Clerical	-	-	-	-	-	-	-	2	-	2	4
Total	14	4	4	8	14	19	20	14	-	49	146

DECLASSIFIED

1221301

	100-B Area	100-D Area	100-F Area	100-H Area	200-E Area	200-W Area	300 Area	Plant General	3000 Area	700-1100 Area	Total
PLANT SECURITY & SERV. DIVISIONS											
GENERAL & OFFICE SERVICES											
Supervisors	-	-	1	-	2	2	-	-	-	17	22
Laundry Operators	-	-	-	-	-	9	-	-	-	2	11
Janitors-Servicemen	4	6	7	1	6	14	14	-	-	34	86
Office Machine Operators	-	-	-	-	-	-	-	-	-	47	47
Clerical	-	-	-	-	-	-	-	-	-	43	43
Others	-	-	-	-	-	26	-	-	-	28	54
Total	4	6	8	1	8	51	14	-	-	171	263
PURCHASING & STORES DIVISION											
PURCHASING											
Supervisors	-	-	-	-	-	-	-	8	-	20	28
Clerical	-	-	-	-	-	-	-	-	-	36	36
Total	-	-	-	-	-	-	-	8	-	56	64
STORES											
Supervisors	-	-	-	-	-	-	-	-	5	14	19
Clerical	1	-	-	-	-	2	-	-	21	124	148
Total	1	-	-	-	-	2	-	-	26	138	167
COMMUNITY DIVISIONS											
Supervisors	-	-	-	-	-	-	-	-	22	123	145
Patrolmen	-	-	-	-	-	-	-	-	27	28	55
Firemen	-	-	-	-	-	-	-	-	46	58	104
Mechanics	-	-	-	-	-	-	-	-	-	134	134
Laborers	-	-	-	-	-	-	-	-	-	52	52
Truck Drivers	-	-	-	-	-	-	-	-	-	40	40
Power Operators	-	-	-	-	-	-	-	-	-	64	64
Clerical	-	-	-	-	-	-	-	-	-	89	89
Others	-	-	-	-	-	-	-	-	-	74	74
Total	-	-	-	-	-	-	-	-	95	662	757
GRAND TOTAL	370	390	441	158	460	852	936	571	486	2729	7393

DECLASSIFIED

[redacted]

MANUFACTURING DIVISIONS

JUNE 1949

DECLASSIFIED

SUMMARY

Operations Divisions

A total of 48 tons of metal was discharged from the three piles at an average concentration of 331 MWD/ton. The operating efficiency was 90.8 percent, and the nominal power level of 275 MW was maintained through the month at B and F piles. The D pile level was increased from 290 MW to 305 MW on June 20, 1949, the latter figure being a new high level.

Approximately 22 tons of Class V metal (completely beta transformed, alpha-rolled, triple-dipped material) were discharged at a concentration of 392 MWD/ton without difficulty. This is the first material to reach the nominal 400 MWD/ton goal.

A total of 56 tons of acceptable slugs was canned at a new high record yield of 93.0 percent. The machining yield was 70.8 percent which is somewhat lower than in May because of very erratic rod diameters. The melt plant production amounted to 37 tons of billets at a yield of 68.5 percent.

A total of 35 batches was started in the Canyon Buildings and 37 were processed through the Concentration and Isolation phases of the Separations operation. The average purity of completed batches was 98.5 percent.

Mechanical Divisions

Morrison-Knudsen, track maintenance subcontractor, completed their contract on the Plant Railroad Rehabilitation Program as of June 30, 1949.

The construction of C-163, TX Tank Farm Facilities, was completed and turned over to Operations.

The construction of the Cascade Demonstration Unit in the 231 Building was completed and turned over to the Technical Division for operation.

Expansion Problems Section

K. C. Vint was appointed Chief Supervisor of the Manufacturing Expansion Problems Section effective June 1, 1949.

The Section participated in the preparation of the following project proposals:

1. Project Proposal for the design and construction of a Rala Plant.
2. Project Proposal for the design of additional 100-DR facilities.
3. Budgetary Project Proposal for Redox facilities.

for C. N. GROSS, MANAGER
MANUFACTURING DIVISIONS

[redacted]

1221309

[redacted]

DECLASSIFIED

MANUFACTURING DIVISIONS

PATENT REPORT SUMMARY
FOR
MONTH OF JUNE, 1949

Richland, Washington
July 8, 1949

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
O. V. Smiset (S Division)	Portable Optical Devices

C. N. Gross

C. N. GROSS

MANAGER, MANUFACTURING DIVISIONS

2

1221310

21

DECLASSIFIED
WITH DELETIONS

1221311

DECLASSIFIED
WITH DELETIONS

1221312

[redacted]

MANUFACTURING EXPANSION PROBLEM SECTION

JUNE, 1949

DECLASSIFIED

GENERAL

Work has continued on Redox, Rala, the 100-DR and 100-H Areas, as detailed below. In addition, considerable scope work was done on additional 100-DR facilities required for similtaneous operation of 105-D and 105-DR production units. The section participated in the preparation of the following Project Proposals:

1. Project Proposal for the design and construction of a Rala Plant.
2. Project Proposal for the design of additional 100-DR facilities.
3. Budgetary Project Proposal for Redox facilities.

ORGANIZATION

K. C. Vint was appointed Chief Supervisor of the Section effective June 1, 1949

ACTIVITIES

1. Redox

The re-scoping of the Redox program has continued, under the guidance of the Redox Plant Design Committee, on schedule. The following developments were significant:

a. Elimination of Aluminum Nitrate Recovery

A review, by the Redox Plant Design Committee, of altered economic factors, and the considerable work load, both design and construction wise, associated with Aluminum Nitrate Recovery has led the Committee to the conclusion that this recovery process should be eliminated from the scoping of the first Redox Plant. Inclusion of Aluminum Nitrate Recovery in the second Redox Plant will be considered when more detailed information has been developed on this process.

b. Redox Budgetary Project Proposal

The Design Division submitted a Budgetary Project Proposal (Doc. HDC-1314 - Preliminary Project Proposal for Budget Purposes only - Redox Facilities) to the A & B committee. Two dual-purpose plants were included, each at a cost of $80,500,000 with estimates of completion of construction set for June, 1951, in the 200 West Area, and April, 1952, in the 200 East Area.

[redacted]

1221313

[redacted]

DECLASSIFIED

c. Re-scoping of Redox Program

At month-end, considerable progress has been made in the re-scoping of the Redox Program. All preliminary engineering flow sketches have been issued and comment has been made on them by interested Divisions. Mutual agreement has been reached on the comments and so recorded. The preparation of a comment issue of engineering flow diagrams is now under way based on the above agreements. Preliminary issues of general building arrangements are in preparation, some of which have been issued for comment. The scoping of the waste storage area and diversion ponds has been agreed upon and completed.

2. Rala

During the month, minor corrections were made to the Specifications Letters issued during the previous months. These corrections, incorporating the comment of interested parties on the Specifications Letters were issued in a letter by the Contact Engineer at mid-month.

The major development in Rala was the preparation by the Design Division of a Project Proposal for the design and construction of a Rala Plant in the Head End of T Plant. The Rala group of the Section spent most of the month in study and approval of the preliminary prints and other items of scope nature required for its preparation.

3. 100-H Area and 105-DR (Production)

105-DR

107-DR basin repairs were complete at month-end, and acceptance tests had been started.

The completion of 105-DR items now awaits (1) receipt of materials under procurement by D & C Divisions, and (2) an extended shut-down of 105-D for tie-in of electrical and effluent water systems. This shut-down is to be scheduled after acceptance of the 107-DR basin. Completion of items awaiting material is estimated at August 1, based on presently promised receipt dates of material.

105-H

Progress of work on this building continues satisfactory. At month-end, flushing of the Gas Wing, and gas testing of the unit were underway. Construction now plans on being able to leave the building in early September.

Difficulty has appeared in the galvanizing of stainless steel nozzles to produce a quality coat 5 mils in thickness. Investigation at the plants

[redacted]

[redacted]

DECLASSIFIED

of two vendors has confirmed the difficulty, and the specification has been altered to provide a minimum coating 2½ mils in thickness. The Technical Division estimates a life of 4.5 years for a nozzle of 2½ mil coating, and believes that a considerable extension of this life period can be effected through use of magnesium sacrificial dummies.

To expedite the procurement of galvanized nozzles, the nozzles have been divided between the Portland Vendor and Bremerton Navy Yard. Completion of receipt of these nozzles is set at Sept. 10. Procurement of the aluminum nozzles is giving more trouble, with current shipment dates (by fast freight) distributed over the period from Sept. 26 to Oct. 10, from Los Angeles.

Further efforts are being made to expedite receipt of the aluminum nozzles. At the present rate of construction in 100-H Area, start-up of the area may be delayed by this item. If the choice is made to install aluminum nozzles sometime after start-up, a material loss in output will be incurred.

4. 100-H Area and 105-DR (Power)

105-DR

Two clean-up items remain for completion in power facilities at this building.

100-H

Progress of construction has been generally satisfactory except for a pipe-fitter's strike in 184 building which is delaying the completion of this building. The scheduled drying-out of No. 3 boiler has been delayed several weeks for this reason. Continuance of this strike will soon disrupt the schedule of acceptance tests in the area, with respect to steam-powered equipment. A settlement of the strike is hoped for on the week-end of July 10th.

The area sub-station has been energized, and power supplied to 181-H for 24 hour run-in of electric pump motors. Major equipment and piping has been installed in buildings 181, 182, 183, and 190. Acceptance tests are scheduled to start early in July, on building 181.

5. Additional 100-DR Facilities

A design basis for these facilities was established early in the month, by interested Manufacturing Divisions, and transmitted to the Design Division by the Contact Engineer. Based on this transmittal, the Design Division, in collaboration with the Contact Engineer, prepared and forwarded to the A & B committee a Project Proposal for the design only of these facilities by an Architect-Engineer at a total engineering cost of $770,000. Included in the Project Proposal was an estimated construction cost of $22,800,000, not including engineering costs. This figure is subject to considerable revision as design features are worked out with the Architect Engineer.

[redacted]

1221315

[redacted]

DECLASSIFIED

The above facilities are required to provide the additional water, gas and steam capacities necessary to permit simultaneous operation of 105-D and 105-DR production units.

Pending receipt of an authorizing directive on this proposed project, the Contact Engineer and the Design Division are engaged in further study of the problems involved.

[redacted]

1221316

[redacted]

DECLASSIFIED

July 7, 1949

P DIVISION

JUNE, 1949

I. GENERAL

The nominal operating level for the B and F piles was 275 MW throughout the month except for outages listed under Area Activities. The D pile operated at 290 MW through June 20, at which time the level was raised to 305 MW as the second step of the program outlined in Production Test No. 105-260-P to evaluate the feasibility of operating piles at higher power levels.

A total of 48 tons of metal, at an average concentration of 331 MWD/ton, was discharged from the piles during the month.

Approximately 22 tons of Class V (alpha rolled, triple dipped, completely transformed) metal was discharged at a concentration of 392 MWD/ton without difficulty. A portion of this material has been inspected at month end and all slugs appear to be in satisfactory condition. This is the first material to reach the 400 MWD/ton (nominal) goal established for the concentration increase program begun in August, 1948.

A record yield of 93% was established in the 300 Area for the canning of 4" slugs.

II. ORGANIZATION AND PERSONNEL

Number of Employees on Payroll - June, 1949

Beginning of Month	322
End of Month	320
Net Decrease	2

One operator terminated voluntarily and one was terminated under planned reduction of force.

One Secretary B was transferred from the division and one Steno - Typist was hired to fill a vacancy.

P. E. Lowe visited the Green Bay Foundry and Machine Works and the Northern Paper Company at Green Bay, Wisconsin, on June 27, 1949 to inspect filter plant facilities for possible use in the 100 Area operation.

[redacted]

28

1221317

DECLASSIFIED

III. AREA ACTIVITIES

Pile Summary	PILE B	PILE D	PILE F
Time Operated (%)	92.5	91.3	93.5
Operating Efficiency (%)	90.9	89.1***	92.4
*Power Level (M.W.)	275	305	275
*Inlet Water Temperature (°C)	15.7	15.7	15.7
*Outlet Water Temperature (Maximum °C., 10 tubes, 0.240" Zone)	58.8	62.3	55.9
Number of Scrams	1	0	3
Number of Purges	2	1	0
Helium Consumption (cu. ft.)	27,273	86,420	30,555
Metal Discharged (tons)	18.32	16.68	13.03
**Inhours Gained (this month)	4.0	17	24
*Inhours Poisoned	499	528	539
*Inhours in Rods	92	85	50

* Month end figures.
** Does not include reactivity gains attributed to CO_2 in pile atmosphere.
*** Based on nominal level of 290 and 305 as reported.

PILE BUILDING

Outage Breakdown

Date of Outage	Scheduled Metal Discharged	Scheduled Maintenance	Unscheduled	Length of Outage (Hours)
*6-4-49			B	.7
6-7-49	F			22.8
6-8-49		B		19.0
***6-13-49			F	.1
6-14-49	B			18.1
**6-15-49	D			27.9
***6-19-49			F	.2
6-21-49	B			16.2
6-22-49	F			23.8
**6-28-49	D			35.0
***6-29-49			F	.1

* Unit scrammed due to failure of #4 Beckman.
** Includes outage to discharge temporary poison.
*** Unit scrammed due to failure of #1 Beckman.

Operating Experience

Production tests having operational significance are reported below:

1221318

DECLASSIFIED

105-81-P (Probe Test of Top Central Tubes)
The tubes listed below successfully passed probes as indicated:

1.480"	1.485"	1.490"
4559-D	4560-B	4674-F
	4578-B	
	4588-D	
	4672-D	

105-168-P (Replacement of Pile Helium Atmosphere with CO_2)
The CO_2 concentration in the pile atmospheres was maintained at 40% at B and D piles and at 60% at F pile throughout the month. No unexpected changes in operating conditions were observed at any of the piles.

105-214-P (Supplement B - Silica Feed Reduction)
The silicate content in the process water was maintained at 2.5 ppm at B and D piles and at 0 ppm at F pile throughout the month. No unexpected changes in operating conditions were observed at any of the piles.

105-260-P (Increase in Power Level)
The nominal level of the 105-D pile was increased from 290 MW to 305 MW on June 20 in accordance with this production test. No unusual or unexpected conditions have been observed at the higher levels.

One tube (2091-F) of Class IV (alpha rolled, triple dipped, partially transformed) material was discharged with difficulty during the month. Forces up to 2300 pounds were required to discharge the metal. Inspection of the material from this tube revealed several warped pieces.

A total of 22.44 tons of Class V material was discharged without incident during the month. The concentration of this material approximated the 400 MWD/ton goal established for the increased concentration program. Inspection of a portion of this metal indicated that the condition of the pieces was satisfactory. The tonnage was distributed as follows:

Pile	Tons	Average Conc.
B	15.80	390 MWD/T
D	6.64	397 MWD/T

The use of Mark II segmented discharge equipment on four tubes at B Area, two tubes at D Area and one tube at F Area proceeded without incident. This program to familiarize the operating crews with the equipment will continue.

During the month three bismuth columns at F pile and one at D pile were removed from this service. The total number of bismuth tubes in the piles is now 63, which number is sufficient to meet the production quotas.

1221319

DECLASSIFIED

Three process tubes were replaced during the month. (Channels 1176-D, 1267-D and 1884-F.)

Mechanical Experience

All horizontal and vertical safety rods are in satisfactory operating condition with the following exceptions:

#33-D - Appears to have a leaking thimble. At month end the rod is tied out and the thimble plugged to prevent gas loss pending replacement of the thimble.

#27-B - Binds in the guide half-way in. Further investigation is planned.

Work of an unusual nature performed on safety rods during the month included:

1. Vertical Rod #28-D, reported earlier as being out of service (HW-13561-A), was replaced with a new rod and now operates satisfactorily.

2. The binding of #19-F Vertical Safety Rod was relieved on June 7 by installing a new short rod guide and a flexible "knuckle jointed" rod.

Further investigation of the rippling effect of Van Stone flanges reported earlier (HW-13561-A) revealed the cause to be excessive tightening of the nozzle nuts. Random examination did not reveal any other tubes with this condition.

During the outage of June 28, a water leak was discovered in the near end of No. 28½ front face cross header at D pile. Investigation revealed that the cause of leakage was a "V" shaped crack at the flange. The crack was satisfactorily repaired by welding but it is planned to replace the entire flange on a subsequent outage.

Pile Development

1. A hydraulic ram and mandrel for use in discharging metal from stuck tubes and for replacing process tubes was developed at 100-F Area. It is anticipated that this new device will reduce by one-half the time required to perform the above work. Division-wide adoption of the equipment will be postponed pending further tests under operating conditions at 100-F pile.

2. A Mason Nielan valve containing a neoprene seal was installed on one flood tank at 100-F Area on June 22. It is expected that installation of this type valve on the 3-X system will eliminate the necessity for overhauling and testing the Mason Nielan valve each time a flood tank is drained. The installation will be exhaustively tested under operating conditions before further replacements are effected.

1221520

DECLASSIFIED

3. A special tool was developed at 100-D Area, in cooperation with Maintenance Division, to smooth the sharp edges between graphite blocks in the process tube channels. Prior to this development, attempts to insert tubes had resulted in severe galling of some tubes and replacement was delayed. This device has been used on several occasions with satisfactory results and its adoption for similar work, when needed, has been recommended in all areas.

GAS PROCESSING BUILDING

Operation of these buildings was normal during the month.

During the outage of June 15, blanks were installed at the D-DR pile division valves. Since that time, approximately 500 cu. ft. of gas per day have been supplied to the DR pile through a special line drawing from the system make-up line.

SPECIAL HAZARDS

The gamma dosage rate from the beam at the top far edge of the F pile has apparently leveled off at 3.2 r/hr. but the slow neutron component of the beam has increased to 97 mrem/hr. at month end as compared to 77 mrem/hr. at the end of May.

300 AREA - METAL FABRICATION

Production Statistics

Production for the month of June was as follows:

Billets Produced	37 Tons
Rods Machined	84 Tons
Bare Pieces Machined	60 Tons
Acceptable Pieces Canned	56 Tons

Melt Plant

The casting yields were as follows:

	May	June	To Date 1949
Billet	71.3	68.5	67.9
Solid Metal	83.2	84.0	85.6

The decrease in billet yield resulted chiefly from a reduction in the percentage of etched TXB charged. Approximately 30% of the TXB charged was processed from pickled chips as compared with 45% in May.

1221321

[redacted]

P Division

DECLASSIFIED

Work was continued on Production Test No. 313-59-M, (Effect of Furnace Pressure on Quality of Remelted Uranium). To date, a total of 120 billets has been cast at various vacuum ranges for this test.

Machining

Machining yields were as follows:

% Yield		
May	June	To Date 1949
71.6	70.8	69.2

Rod diameters continued to vary considerably on all rods machined. Those rolled at Simonds from Electro-Met billets ranged from 1.408" to 1.462" in diameter. Those rolled at Vulcan from Mallinckrodt billets ranged from 1.429" to 1.465" in diameter.

Chip Recovery

The Chip Recovery yield was as follows:

% Yield		
May	June	To Date 1949
89.4	90.1	90.5

The entire Chip Recovery process was operated four shifts and the press was operated an additional eight shifts. A total of 34,620 pounds of TXB was produced, of which approximately 71% was processed from pickled chips.

The material burned in the Oxide Burner was as follows:

Weight Out - Pounds		
May	June	To Date 1949
27,754	25,290	111,414

The oxide burner was operated continuously on a two-shift five-day week schedule except for an eight hour maintenance shutdown on June 27.

Canning Operation

The canning yield was as follows:

% Yield		
May	June	To Date 1949
90.9	93.0	91.1

[redacted]

1221322

[redacted]

P Division

DECLASSIFIED WITH DELETIONS

Canning rejects by cause were:

	Percent		
	May	June	To Date 1949
Non Seating	0.5	0.6	0.8
Marred Surface	2.2	2.0	2.6
AlSi on Outside of Can	1.0	1.4	1.0
Frost Test	3.7	1.7	2.3
Bad Welds	0.7	0.6	0.7
Miscellaneous	1.0	.7	1.5
	9.1	7.0	8.9

The canning yield (93%) for the month is the highest monthly yield attained for canning 4" slugs. There was a decided reduction in frost test rejects, which has been gained chiefly through continued emphasis on quality. Further investigations were made to determine causes for frost test rejects. Ten trucks of canned pieces were frost tested immediately after facing and then again after welding. Twelve type 4 rejects (unbonded area between can and slug just below base of cap) were found after welding that were not apparent after facing. Based on these results it is evident that a number of rejects are resulting from expansion and contraction rather than torsional stresses during facing.

Beginning June 27 the minimum dip time in the bronze bath, using mechanical agitators, was increased This change is outlined in Document No. HW-13624 (Authorization For Process Change - 300 Area) and was made to give greater assurance of 100% alpha-beta transformation of slugs.

The following special request pieces were canned:

Request No.	Contents	No. of Pieces
SR 65-8	Lithium Aluminum Alloy	250
SR 40-7	Plutonium Oxide	3
UCRL 117	Americium	1
KAPL 101	Beryllium and Aluminum Magnesium Alloy	3
ORNL 113	Scandium Oxide	2
ORNL 116	Gold	16

In addition 675 lead slugs were canned.

Slug Recovery

DECLASSIFIED WITH DELETIONS

	% Recovered		Average Wt. - Lbs.	
	June	To Date 1949	June	To Date 1949
Z Slugs	97.2	88.1	3.921	3.912
X Slugs	1.0	9.6	3.861	3.858
Rejects	1.8	2.3	-----	-----
	100.0	100.0		

[redacted]

1221323

[redacted]

DECLASSIFIED

Inspection and Testing

Autoclave rejects were as follows:

	May	June	To Date 1949
	0.13/H	0.10/H	0.06/H

Three autoclave failures occurred in June. One piece ruptured at the base of the cap, one had a slight swelling of the can wall at the base of the cap, and the third was completely destroyed.

No penetration was found within 0.015" of the outer can wall on any of the test samples checked during the month.

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

	% Usable (4")		
	May	June	To Date 1949
Aluminum Cans	92.3	94.3	95.4
Aluminum Caps	96.5	99.2	95.1
Steel Sleeves	92.9	*	87.5

*No sleeves were inspected during the month.

Two sample shipments of aluminum cans were received from Scoville Manufacturing Company during the month. Only 23.5% of the first shipment of 306 cans was acceptable; 76.4% were rejected for thick bases and 0.1% for marred surfaces. The second shipment contained 1251 cans of which 73% was acceptable, 27% being rejected for thick bases, 0.5% for dents, and 0.4% for marred surfaces. The results on both shipments have been reported to the vendor.

Material Handling

A total of 136 tons of alpha-rolled rods was received from Simonds Saw and Steel Company. Seventeen tons of oxide were shipped to the Vitro Manufacturing Company and 29 tons of oxide were shipped to Mallinckrodt Chemical Works.

305 Test Pile

The test pile was operated on a one-shift five-day week schedule. A total of 90 tests was run on canned slugs, 117 on billet eggs, 365 on graphite bars, and the following on special work requests:

Request No.		No. of Tests
88	To irradiate yttrium oxalate in pile for traces of dysprosium.	1

[redacted]

1221324

DECLASSIFIED

Request No.	(Continued)	No. of Tests
89	To calibrate the graphite stringer with boron to get ratio of dih to absorption cross section using a $\frac{1}{2}$ absorber.	20
90	To determine the ratio of the flux between the inside and outside of a slug.	2

Special Hazards

No unusual conditions developed during the month.

Development

Favorable gains have been made on the element life in bronze furnaces through continued evaluation of crucibles having a $1\frac{1}{2}$" lip or flange around the top. It now appears that an element life of three weeks or more can be expected as compared with about two weeks for the standard crucible.

[redacted]

DECLASSIFIED

S DIVISION

JUNE, 1949

OPERATING SECTION

I. GENERAL

Thirty-five batches were started in the Canyon Buildings, thirty-seven batches were processed through the Concentration Buildings, and forty-two batches were completed through the Isolation Building. The average purity for the completed batches was 98.5 percent.

The over-all material balance for the T and B Plants (including the Isolation Plant) averaged 98.6 and 102.8 percent, respectively, for a combined average of 101.1 percent. Waste losses for the two plants averaged 2.4 percent.

Canyon and Concentration Building Production Performance Data - (6-1-49 to 6-30-49, inclusive)

	B Plant	T Plant	Combined
Number of charges started	21	14	35
Number of charges completed	25	17	42
For completed charges:			
Percentage of starting product in waste:			
This month	2.4(a)	2.4(a)	2.4
Last month	2.3(b)	2.3(b)	2.3
Cumulative to date	4.5(c)	4.3(c)	4.4
Percentage of starting product recovered:			
This month	100.4	96.2	98.7
Last month	95.0	92.9	93.7
Cumulative to date	97.3	95.3	96.4

[redacted]

1221326

DECLASSIFIED

[redacted]

	B Plant	T Plant	Combine
Percentage of starting product accounted for:			
This month	102.8	98.6	101.1
Last month	97.3	95.2	96.0
Cumulative to date	101.8	99.6	100.8
Gamma decontamination factor (Log.)			
This month	7.64	7.48	7.56
Last month	7.53	7.72	7.64
Cumulative to date	7.36	7.34	7.35

(a), (b), (c): Include waste from processing recycle. The recycle wastes are estimated as: (a) 0.010%-T Plant; 0.0145%-B Plant. (b) 0.017%-T Plant; 0.012%-B Plant. (c) 0.109%-T Plant; 0.0085%-B Plant.

Isolation Building Performance Data (6-1-49 - 6-30-49, inclusive)

	% of Incoming Product				
	Prepared for Shipment	Recycle	Waste	Retained Samples	Material Balance
Average for this month	94.3	5.05	0.10*	0.03	99.5
Average for last month	96.7	4.51	0.007	0.03	101.3
Average to date	95.9	4.65	0.06	0.02	100.6

* Contains 0.08% loaned to Technical Division.

II. ORGANIZATION AND PERSONNEL

Number of employees on payroll:

Beginning of month	342
End of month	348
Net increase	6

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

2 transfers from other Divisions (both weekly roll)
4 rehires from lay-off (all weekly roll)
2 terminations from weekly roll
2 return from leave of absence (one weekly and one monthly roll)
1 on leave of absence (weekly roll)
1 new hire on weekly roll

III. AREA ACTIVITIES

PRODUCTION PERFORMANCE

T and B Plants

[redacted]

1221327

[redacted]

DECLASSIFIED

Extraction Waste Losses

The average original analyses of extraction effluent wastes from T and B Plants for the month were 0.73 and 0.75 percent, respectively. These are 0.12 and 0.16 percent higher than May's values and reflect the increased MWD/T metal processed during June. The average MWD/T level handled in T Plant, for example, was 270 as compared to 243 in May. This upward trend was anticipated and is expected to become progressively worse as metal of increasing enrichment is processed. It should be noted, however, that due to the presence of alpha emitters other than plutonium, these values are fictitious in that they do not represent a true product yield loss. Eventually the goal level of 400 MWD/T will be reached and it may be possible to apply a factor which will correct for this isotopic content.

The average throw-away waste losses were 0.45 percent at T Plant and 0.53 percent at B Plant and reflect the reworking of essentially all runs during June. These losses are not materially higher than usual.

B Plant Acid Wash

Acid wash B-9-06-AW1 was processed through the Canyon and Concentration Buildings during June. Although the over-all product pick-up was only slightly higher than normal (35.3%) the pick-up in Section 8 (extraction) was significantly greater than has been the case in the past. This has been attributed to the reduced volumes processed in this Section as the result of the enrichment level increase. It is probable that special acid flushes will have to be made periodically in the future to minimize this product holdup. This problem will be investigated in detail during July.

Change in Cell D Cake Removal Procedure

Elimination of the slurrying operation in the lanthanum fluoride by-product cake removal procedure has resulted in a saving of 45 minutes of processing time in D Cell of the Concentration Building without affecting the efficiency of the cake removal. This revision to the procedure has been adopted as standard in both T and B Plants.

F Cell Time Reduction Study

A preliminary study of using reduced volumes in the F Cell process was made during the month in the T Plant Concentration Building. Results were so promising that a production test is being prepared covering a formal investigation of this change which would effect a considerable reduction in the F Cell time cycles.

Isolation Building

Use of 50 Percent Hydrogen Peroxide - Production Test 231-9

The first phase of Production Test 231-9 was completed in June after

[redacted]

1221326

[redacted]

DECLASSIFIED

using 50 percent hydrogen peroxide for first and second cycle precipitations in fifteen B Plant runs. Evaluation of the results has not yet been completed; however, it does appear that the formation of a cake suspected to be lanthanum sulphate will preclude the use of the higher strength peroxide. The test will be postponed until the problem of cake formation can be more thoroughly investigated.

WASTE DISPOSAL

241-BY Tank Farm - Project C-271

Construction progress by the sub-contractor has been completed. The underground waste storage tanks were inspected and accepted by the S Division on June 22, 1949. The General Electric phase of the project is approximately ten percent complete and will be resumed in the near future.

241-TX Tank Farm - Project C-163

This project is essentially complete; only a few minor exceptions remain to be done in July. The final inspection and acceptance of this facility will be made as soon as these items are completed.

Waste Evaporator Design

With the concurrence of the Technical Divisions and assisted by the Project Engineering Division, the S Division initiated a program early in June which has for its objective the design fabrication and installation of a waste evaporator in the 241-T Tank Farm. Initially the equipment is intended to evaporate first cycle supernatant solution. A tentative process flow sheet has been prepared and steps are currently being taken to inventory the plant for available excess equipment which can be utilized for this purpose.

On July 6, 1949, approximately 50 gallons of Hanford first cycle supernatant will be shipped to the Oak Ridge Clinton Laboratories to be used for experimental purposes in their pilot plant evaporation equipment. This work, which will be carried out by S Division supervisors working in close cooperation with Oak Ridge personnel, is expected to be completed in July. The data obtained should provide a firm basis for Hanford evaporator design.

Waste Status

The status of the Waste Storage Areas as of June 30, 1949, is shown in the following table.

[redacted]

1221329

[redacted]

DECLASSIFIED

B Plant

Bldg. 241 Tanks	Waste	Percentage Full B	Percentage Full C	Percentage Full BX	Reserve Capacity in Batches to Process B	Reserve Capacity in Batches to Process C	Reserve Capacity in Batches to Process BX	Reserve Capacity in Batches to Process Total
x101;2;3	Metal	100	100	100	0	0	0	0
x104;5;6	Metal	-	100	56.3	-	0	138	138
x201,2,3,4	Metal	0	100	-	-	0	-	-
x112	Metal	-	-	0	-	-	105	105
x107;8,9	Metal	-	-	-	-	-	-	-
x107,8	Metal	-	-	-	-	-	-	-
x107,8,9	1st Cycle	100	100	58.2	0	0	185	185
x110;11,12	1st Cycle	-	100	-	-	0	-	0
x104,5,6	1st Cycle	-	-	-	-	-	-	-
x104;5,6	2nd Cycle	46.0	-	-	343	-	-	343
x110;11,12	2nd Cycle	100	-	-	0	-	-	0
x110,11	2nd Cycle	-	-	0	-	-	424	424

T Plant

Bldg. 241 Tanks	Waste	Percentage Full T	Percentage Full U	Percentage Full TX	Reserve Capacity in Batches to Process T	Reserve Capacity in Batches to Process U	Reserve Capacity in Batches to Process TX	Reserve Capacity in Batches to Process Total
x101;2;3	Metal	100	100	0	0	0	484	484
x104,5,6	Metal	-	100	0	-	0	484	484
x201,2,3,4	Metal	0	0	-	-	47	-	47
x107;8,9	Metal	-	95.3	-	-	16	-	16
x107,8	Metal	-	-	0	-	-	323	323
x107;8,9	1st Cycle	100	-	-	0	-	-	0
x110;11,12	1st Cycle	-	100	-	-	0	-	0
x104,5,6	1st Cycle	100	-	-	0	-	-	-
x109;10,11,12	1st Cycle	-	-	18.1	-	-	671	671
x115,18	1st Cycle	-	-	0	-	-	410	410
x104,5,6	2nd Cycle	-	-	-	-	-	-	-
x110;11;12	2nd Cycle	87.2	-	-	151	-	-	151
x113,14,16,17	2nd Cycle	-	-	0	-	-	1123	1123

MECHANICAL

Spray Assembly Failure - B Plant

The extraction section precipitator tank (8-1) spray assembly failed on June 16, 1949 and was replaced by standard remote control methods. The failure was indicated by a rise in the conductivity meter and verified by visual inspection which revealed a leaking gasket on the steam inlet to the jet. No loss of product was involved.

Section 16 Centrifuge Repairs - T Plant

5 The second cycle by-product Section centrifuge which failed on March 31,

[redacted]

DECLASSIFIED

1949, due to the bowl jamming on the dip tubes, was successfully repaired and installed in the Section 18 position during June. A run-in subsequent to the repairs indicated normal operations.

Section 6 Agitator Failure - T Plant

The 15 H.P. agitator assembly on the 6-1 pre-extraction metal storage vessel failed and was replaced. Exact cause of the failure cannot be determined because of the excessive radiation level. This agitator had been repaired previously and was placed in service approximately six months ago. It was originally installed in Section 14 and had been removed because of motor failure.

Failure of Centrifuge Overflow Line - B Plant

The overflow line of the lanthanum fluoride production section centrifuge (E-2) developed a leak in the vicinity of the casing where temporary repairs had been effected by welding on May 5, 1949. Due to the fact that this machine is subjected to the corrosive action of hydrofluoric acid and since the 25-12 stainless steel cannot be heat treated after welding, it was necessary to design a packing sleeve which could be fitted over the stub of the centrifuge overflow. If this repair proves to be satisfactory, it will eliminate the need for replacing this machine at a cost of approximately $10,000.

291-T Electric Fan Bearing Failure

The inboard bearing of the No. 1 electric fan at the T Plant 291 Stack Building failed and was replaced. Subsequent operation has been satisfactory. The cause was not determined.

Status of 234-5 Facility

During the month of June, the processing of simulated runs through Part I of the 234-5 facility was completed satisfactorily. Equipment difficulties which were uncovered were corrected and preparations were made for the receipt of product. Due to difficulties experienced in balancing the ventilation system, the actual start-up of operations was only in its very initial stages by month-end.

SPECIAL HAZARDS

Disposal of Contaminated Equipment - B Plant

A considerable amount of contaminated equipment that had failed in canyon service in B Plant was removed to the storage garden during June and buried. In all cases, the high levels of activity prohibited either repair or salvage.

Stack Gas Decontamination

6 Operation of the sand filters in T and B Plants was satisfactory

DECLASSIFIED

during the month and remained essentially unchanged with respect to past performance.

The project proposal for the installation of the dissolver off-gas filter units was approved by the Atomic Energy Commission on a modified basis. The design and preparation of a project proposal for the installation of a silver nitrate reactor for the removal of iodine from the dissolver off-gases was 75 percent complete by month-end. This project will not be submitted for approval until several investigations now underway have been completed.

[redacted]

POWER DIVISION
JUNE 1949

DECLASSIFIED

GENERAL

Extensive boiler performance tests were conducted for several days during the month in several areas on Echeta Wyoming coal in order to evaluate its performance and competitive position as related to the new coal contracts now being negotiated. Results were satisfactory performance-wise but its economic value was not favorable.

A few small fires in coal storage areas were discovered during the month, undoubtedly accelerated by summer temperatures. All were quickly extinguished without incident.

The reduction of river flows to normal, together with a decrease in river water turbidity allowed a return to normal values of filter plant water coagulant during the month.

PERSONNEL

Number of employees on roll	June
Beginning of month	473
End of month	497
Increase	24

One stenographer, sixteen coal handlers and thirteen operators were employed during the month while one coal handler and three operators were terminated. Two other operators were removed from the payroll for illness and leave of absence reasons, respectively.

Effective June 6 the standard supervisory crew in each of the operating 100 Areas was reduced to twelve. Five supervisors and eight operators were transferred to the 100 H Area at about this date.

The standard operating crew in the 100 F Area was reduced by 4 operators on June 14 in connection with the temporary discontinuance of sodium silicate feed in that area.

On June 21, the standard coal handling crew in the 300 Area was reduced from four to one persons, when the new coal handling equipment was placed in operation.

On June 28, four Shift Supervisors were assigned to the 234-5 Building in order to expedite the start-up and preliminary operation of the area.

100 AREAS

Testing of reduced sodium silicate feeds in the 100 Areas continues under the direction of the Power, Technical and P Divisions. As of June 14, direction to discontinue its use in the F Area for an indefinite period of time was received. Accordingly, it was decided to postpone the re-installation of sodium silicate facilities in the 185 Deaeration Building, as had previously been decided concurrent with the transfer of the 108 Chemical Mixing Building to the Health Instrument Division.

[redacted]

1221333

[redacted]

DECLASSIFIED

Power Division

For sixteen hours on June 15 and 16, the 36-inch filtered water line between the 183, Filtration Building and the 185, Deaeration Building in D Area was removed from service in order to repair a leak.

On June 15, in the F Area, a new 10-inch Fire and Sanitary water connection was made for the new Health Instrument Building in that area.

On June 17, a temporary 10-inch water connection was made at the North 100 DR water tank in order to supply testing water for the 107 DR basin.

The ash removal line in the F Area was out of service from June 27 to 30 in order to clear a plugged line and to replace one section of pipe.

The installation of roof slab anchors at the 190 Process Pump Room in B Area was completed during the month. This work had previously been done in the D and F Areas.

200 AREAS

For nine months, tests in the West Area filtration plant, have been conducted to determine the value of activated silica addition to the water coagulants. It has been found that these filters may be operated in this manner at 600 gpm each as compared to their Design Rating of 400 gpm.

Concerted activity has been directed towards the 234-5 Building ventilation system during the month At month's end, reasonably satisfactory progress had been made in the system balancing, training of personnel and general performance of power facilities.

300 AREA

On June 21, the new coal handling system serving the boiler plant was placed in operation.

WHITE BLUFFS

Operations were normal with 2,600,900 pounds of ice in storage at the month's end.

[redacted]

1221334

[redacted]

DECLASSIFIED

Power Division

From June 1, 1949

Through June 30, 1949

			AREAS		
			100-B	100-D	100-F
RIVER PUMP HOUSE (Building 181)					
River stage	Feet above sea level	(max)	405.2	394.0	380.9
		(min)	396.3	386.8	373.4
		(avg)	401.6	391.2	377.8
River temperature	avg. °F.		55.4	55.6	56.1
Water pumped to Reservoir	gpm avg. rate		39756	41666	38421
Water pumped to Refg. Condensers	gpm avg. rate			0	0
RESERVOIR (Building 182)					
Water pumped to Filter Plant	gpm avg. rate		33776	35538	33896
Water pumped to Condenser System	gpm avg. rate		3666	3339	3696
Water pumped to Export System	gpm avg. rate		2314	2789	829
	gpm normal rate		5932	5932	5932
Chlorine added at #1 inlet	pounds		19122	13500	14000
FILTER PLANT (Building 183)					
Filtered water to Power House	gpm avg. rate		245	244	237
Filtered water to Process	gpm avg. rate		30621	30721	30892
Filtered water to Fire & Sanitary	gpm avg. rate		133	182	185
Chlorine used in Water Treatment	pounds		7324	6500	6000
	ppm avg.		1.9	1.4	1.5
Lime used in Water Treatment	pounds		69000	54200	60500
	ppm avg.		5.7	4.2	5.0
Coagulant used in Water Treatment	pounds		188263	192300	173900
	ppm avg.		15.4	15.0	14.2
Raw Water pH	pH avg.		7.80	7.9	7.9
Finished Water pH	pH avg.		7.55	7.50	7.7
Alkalinity, M. O. - Raw	ppm avg.		55	53	55
Finished	ppm avg.		54	49	55
Residual Chlorine - Settled	ppm avg.		.26	.22	.23
Finished	ppm avg.		.07	.09	.16
Iron - Raw	ppm avg.		.24	.24	.20
North Clearwell	ppm avg.		.01	.02	.02
South Clearwell	ppm avg.		.01	.02	.02
Hardness - Finished	ppm avg.		77	70	76
Turbidity - Raw	ppm avg.		12.2	10.0	5.0
Filtered	ppm avg.		0	0	0
REFRIGERATION (Building 189)					
Refrigeration produced	Tons per day			0	0
Temperature, Process Water In	avg. °F.			—	—
Temperature, Process Water Out	avg. °F.			—	—

[redacted]

1221335

[redacted]

Power Division

DECLASSIFIED

From June 1, 1949

Through June 30, 1949

POWER HOUSE (Building 184)

Steam generated - Total	M pounds	86633	83998	88164
Average rate	lbs./hr.	120323	116663	122450
225 psi Steam to plant (est.)	M pounds	73407	71172	74726
15 psi Steam to plant (est.)	M pounds	58	58	37
Coal consumed	Tons	6563	7863	7609
Coal in storage (est.)	Tons	27118	29892	27719

DEAERATOR PLANT (Building 185)

Water flow	gpm avg. rate	30371	30471	30642
Chemicals consumed:				
Dichromate	pounds	24000	20900	18800
Sodium Silicate	pounds	101722	97680	0
Chemical Analysis:				
pH	pH avg.	7.65	7.66	7.60
Dichromate	ppm avg.	1.9	1.9	1.8
Silica	ppm avg.	2.5	2.5	0
Dissolved Iron	ppm avg.	.02	.02	.02
Free Chlorine	ppm avg.	.03	.07	.15

PROCESS PUMP ROOM (Building 190)

Total water pumped	gpm avg. rate	30196	30296	30467
	gpm normal rate	31633	32560	31480
Water temperature	avg. °F.	59.0	58.9	58.6

VALVE PIT (Building 105)

Chemicals consumed:						
Solids		pounds		2800	2000	950
Chemical analysis:						
A, B, C & D Headers	Standard limits					
pH	7.5-7.8	pH	(max)	7.70	7.70	7.70
			(min)	7.60	7.60	7.60
			(avg)	7.65	7.66	7.65
S_iO_2		ppm	(max)	2.5	2.5	0
			(min)	2.5	2.5	0
			(avg)	2.5	2.5	0
$Na_2Cr_2O_7$	1.8-2.2	ppm	(max)	2.0	1.9	2.0
			(min)	1.9	1.8	1.8
			(avg)	1.9	1.9	1.9
Iron		ppm	(max)	.03	.03	.02
			(min)	.01	.01	.01
			(avg)	.02	.01	.01
Chlorides		ppm avg.		1.7	1.7	1.6

[redacted]

1221336

[redacted]

Power Division

From June 1, 1949 DECLASSIFIED

Through June 30, 1949

	Unit	200 Areas	
Reservoir (Building 282)		200-E	200-W
Raw Water Pumped	gpm avg. rate	1903	1836
Filter Plant (Building 283)			
Filtered Water Pumped	gpm avg. rate	325	502
Chlorine Consumed	lb.	225	415
Alum Consumed	lb.	2742	4536
Chlorine Residual - Sanitary Water	ppm	.5	.56
Power House (Building 284)			
Steam Generated - Total	M lb	15556	26427
Steam Generated - Ave. Rate	lb./hr.	21605	36704
Coal Consumed (Est.)	tons	1256.9	1898.1
Coal in Storage (Est.)	tons	12131	13591

		300 Area
Power House (Building 384)		
Steam Generated - Total	M lb	6384.7
Steam Generated - Avg. rate	lb./hr.	8868
Coal Consumed - Total (Est.)	tons	518.7
Coal in Storage (Est.)	tons	1434.5
Sanitary and Fire System (300)		
Well Water Pumped - Total	gal	28,753,500
Well Water Per Day	gal/day	958,450
Well Water	gpm avg. rate	665
Chlorine Residual	ppm	0.43

5

[redacted]

1221337

[redacted]

DECLASSIFIED

INSTRUMENT DIVISION

MONTHLY REPORT

JUNE, 1949

GENERAL

Due to the urgency of placing Building 234-5 in operation, two Engineers from the 300 Area Development Section and three Mechanics from the Electronic Construction Group were temporarily assigned to assist in this work.

Shift coverage has been provided for the 234-5 Building.

B. E. Woodward, Engineer on Assignment, has been given the responsibility of maintenance in the 234-5 Building.

The organizational status of the Instrument Group in the 321 Building was changed to place them administratively under the 300 Area Engineer.

100 AREAS (Reference Report HW-13813)

Operations supervision has been assigned to 100-H Area. Acceptance testing of Power instrumentation in this area was started June 20, 1949.

A vertical bowing traverse was completed June 8, 1949, on tube No. 4574, 100-B unit. Maximum deflection practically unchanged from previous traverse.

On June 28, 1949, the range of the BGST recorders was increased from 300°C to 400°C at the 100-D unit.

A number of tubes in the 100-F unit have been operating at higher pressures, causing attached pressure monitor gauges to operate too near the trip point. To alleviate this situation, 18 of the 45-95 psi range have been changed to 65-115 psi range.

A vertical traverse on tube No. 4674, 100-F unit, was run on June 22, 1949. The maximum deflection was 5/16" less than the previous reading taken on May 5, 1949.

On June 24, 1949, the quadrant monitor chamber in tube No. 0353 failed after being in service since January 21, 1949.

[redacted]

1221338

[redacted]

DECLASSIFIED

100 AREAS (Cont.)

During this period, the quillotine valve to No. 12 filter, 183-F Building, was dismantled for inspection. Cotter pins had rusted out allowing the linkage to become unattached. In addition, it was found that the ball bearing retaining rings had also decomposed. It is not unreasonable to expect that overhauls of this nature may be required on the remaining valves.

Water treatment experiments currently being made at 185-F Building, have permitted the removal from service of pH measurement systems.

On June 4, 1949, at 9:50 A.M. the 100-B unit was shut down due to a failure of the No. 80 tube in No. 4 control Beckman.

On June 13, 1949, at 3:30 A.M. a "scram" occurred at 105-F when the annunciator tab for No. 1 Beckman dropped. No indication of high reading was recorded. Examination of unit failed to reveal cause.

On June 19, 1949, at 11:37 A.M. a "scram" occured at 105-F. The annunciator bell rang, but no tab dropped until the operator cleared the alarm; then No. 1 Beckman tab dropped with the others. Examination during shutdown revealed the 2A control shaft support to be loose, a condition that might possibly have caused the trouble experienced.

On June 29, 1949, at 12:35 A.M., the 105-F unit was "scrammed". No. 1 Beckman tab dropped, however, no high reading was recorded.

[redacted]

200 AREAS (Reference Report HW-13814)

Work necessary for the activation of sections 18 and 19, Building 221-T is complete with the exception of a final check on the temperature sensing element.

The installation of a decontamination station in the operating gallery at Section 1, Building 221-B, required the removal of instruments and instrument panels. These are stored in the instrument storage room, Building 221-B.

No. 2 boiler, Building 284-E, was temporarily placed in operation on June 14, 1949. All instruments operated satisfactorily and the boiler was on automatic operation within one hour.

Work on tie line thermocouple installation, Project C-163, has been completed.

300-700-1100 AREAS (Reference Report HW-13815)

The portion of Project C-189 (Design and Building Periscope for Building 3N45-A) for which the Instrument Division is responsible has been completed.

[redacted]

DECLASSIFIED

1221339

50

[redacted]

DECLASSIFIED

300-700-1100 AREAS (Cont.)

Fabrication of 10 air samplers for the Health Instrument Divisions has been completed.

The periscope for the 105-DR discharge has been completed. Operating instructions have been issued.

Forty electronic G.M. survey meters, received in April, 1949, have been serviced and passed by the Health Instrument Divisions' Calibration Group.

Scanning irregularities have been encountered with the new C.P. survey meters. Investigation of this problem is in process.

A Taylor recording and integrating flow meter and a Bristol two-pen level recorder were installed during the month at the Newport, Kern and Kibbe pumping station near North Richland. Satisfactory operation has been obtained to date.

Design of a CO_2 scrubber which gives 99.8% efficiency on a 50-50 mixture of helium and carbon dioxide has been completed and tested at flow rates of 300 cc per minute.

DESIGN AND CONSTRUCTION (Reference Report HW-13816)

Schematic instrument diagrams, specifications and cost estimates, were prepared for project proposal studies, GEO-7A (water plant for 100-DR Area) and GET 12 (Rala installation). In addition, panel layout drawings were prepared for the Rala study.

[redacted]

1221340

[redacted]

MAINTENANCE DIVISION
JUNE, 1949

DECLASSIFIED

As of June 30 the Maintenance Division backlog was 13,869 mandays of which 8,422 was Minor Construction work. This represents a decrease of 2.5% from the May backlog.

A sub-major injury occurred in the 200 East Area when a painter shifting a drum of thinner on a storage rack, reached quickly to prevent overbalance and fractured his right wrist

100 AREAS:

The manufacture of 17 horizontal safety rods for 105-H pile has been completed in the 100-B Area shops.

Process tubes #1176 and #1267 were removed from the "D" pile and after reboring were replaced with new tubes. A similiar replacement was made in the 100-F Area pile in opening #1884.

The stainless steel vertical safety rod #28 in the "D" pile developed excessive camber and a chrome plated rod was installed for replacement. In the #19 position in the "F" pile a stainless steel knuckle jointed vertical safety rod was installed as replacement.

Because of plugging, it was necessary to replace the tile field in the 115-F Building septic tank.

The work on the construction exceptions list for DR Building has been completed except for several minor items for which material has not been received.

Construction on the Project C-184 Experimental Animal Farm in 100-F Area has been started and is progressing satisfactorily.

200 AREAS:

Approximately 8000 manhours of work was performed during the month in 234-5 Building process hood line, preparing for start-up.

The area shops completed 38 cell, trench and diversion box connectors of which 21 were for Project C-163. Also, one 15 HP agitator unit was prepared for standby replacement.

The construction of C-163, TX Tank Farm Facilities, was completed and turned over to operations.

300 AREA:

The construction of the Cascade demonstration unit in the 321 Building was completed and turned overto the Technical Division to operate.

The vacuum system in the 314 Melt Plant was restored to service with the replacement of one pump and cleaning of the lubrication system to all three pumps.

[redacted]

1221341

[redacted]

Maintenance Division

DECLASSIFIED

101 AREA

General

During the past month a number of discussions have been held with Technical and Project Engineering relative to experimental work to be done in the 101 Area on the Sigma and Exponential piles. Some assistance has been rendered Project Engineering in the preparation of a project for this work. As much preliminary planning as possible for the experimental work has been done.

Drawings for 105-B, D and F, nine-tube mock-ups, have been received and a plan developed for doing this work. It is anticipated that machining work on graphite for this test will be started in the early part of July.

Craft personnel have been reduced by a total of four. Three mechanics have been returned to the Maintenance Division, and one mechanic to the Instrument Division.

Operation

Work is continued on the receiving and storing of raw material received from the National Carbon Company. Surfacing and end milling of sample material is being continued. Samples are still being transported to the 300 Area for testing and raw materials moved into color storage as soon as results become available from Technical.

Special machine work for the Design Division has been done on special details for friction coefficient tests.

[redacted]

1221342

[redacted]

ELECTRICAL DIVISION

JUNE, 1949

DECLASSIFIED

GENERAL

During the month, the unfinished work backlog decreased 197 mandays, leaving a month end total of 11,933 mandays. There were small backlog decreases for all work areas as well as in Minor Construction and Telephone groups, but the general decrease was partially offset by an increase of 500 mandays of reinstated distribution maintenance.

The total divisional personnel at month end was 267, a decrease of three; this included two voluntary terminations and one leave of absence.

A review of existing plans for enlargement of 251 (A-8) Substation, in consideration of further development of firm power requirements for the 200 Areas, has resulted in recommendations to cancel outstanding orders for additional 220 KV power transformer and associated high tension equipment since present transformer capacity is sufficient. The 13.8 KV switchgear, building changes, and dispatch room plans were not changed.

The load chart for the peak day of the month, June 29, is attached, showing a peak of 57,900 KW for the entire project with coincidental demand of 20,500 KW for the combined 66 KV and 115 KV systems (Richland, 300 Area and vicinity). The decrease for the latter system from the previous month is in line with seasonal expectations.

The Divisional Educational Committee reports 51 Electricians and Linemen and 19 Telephone Servicemen have completed respective educational courses started last January.

The Electrical Standards Committee gave final approval to general design and installation standards for inside electrical work and for fire alarm systems for guidance of Designers and Architect Engineers. Similar standards for outside electrical work and for telephone system are being developed.

A request was made of the Plant Standards Committee to develop cathodic protection standards, and a Subcommittee has been appointed for this purpose.

AREA ACTIVITIES

Projects P-10 and P-10A in the 100-B Area continue on top priority electrical minor construction schedule. Lines 3, 4 and 5 are 95 percent complete. The overall project is 65 percent complete and all electrical work is on schedule.

A division of responsibility agreement has been established with the "P" Division to permit their personnel to operate certain 440 volt switches, thus saving time during shut-down periods, enabling Electricians to continue their work without interruptions.

In 100 B Area, on June 4, after scram, vertical rod No. 17 could not be raised due to tripping of winch overload relays. After correction of defective motor

[redacted]

1221343

DECLASSIFIED

contactor, and of geared limit switch, equipment was returned to service.

Project C-279, Remodeling 1704-F Building, is electrically complete.

In 100-H Area, acceptance tests are being conducted at accelerated pace and are essentially complete in 1701-H, 1709-H and 1720-H. The 100-H Area 220 KV west tap was accepted and energized on June 14. Electrical equipment for the 151-H Substation (A-5) has been inspected, and the station was energized on June 20. Building 181-H has been energized from this station. All 13.8 KV switchgear and cable has been given hi-potential test.

Project C-184, New Animal Farm at 100-F - both inside and outside electrical work have been started.

All electrical work in 105-DR has been completed insofar as possible. Electrical design changes have been requested by separate letter to H. T. Wells, Contact Engineer.

A study has been made (together with factory representative) of rectifier action in the 200-E Area (292-AB). A work order has now been received to overcome high cable capacity by substitution of new pipe conductor enclosed in 12 inch square duct.

Temporary cathodic protection has been provided to BY Tank Farm, now completed by Subcontractors. Permanent equipment is on order.

The 18-3 agitator installation in 221-B Canyon Building is complete. In 200-Z, 234-5 Area, the entire month was spent in an effort to complete process area for operation. Considerable time consuming difficulties were encountered, especially in loading induction heating equipment at hood 25. All work is essentially complete.

In the 300 Area, 314 Melt Plant, a work order has been requested for replacement of insulating caps over entrance leads which have been badly burned after long and heavy service. Studies and recommendations for correction of excess canning furnace element failures have been made in the 313 Preparation Building.

TRANSMISSION AND DISTRIBUTION

The new 115 KV/66 KV 3000 Area Substation, Project C-177, has been completed and placed in service on June 23, 1949. Only the 300 Area, White Bluffs, and 100-H construction is now served from the 66 KV system.

Construction of the 300 Area 115 KV station and corresponding distribution system changes are proceeding satisfactorily. The main 115 KV/2300 volt station is 60 percent complete. Distribution work is approximately two weeks behind schedule due to difficulties in arranging for power outages in this area. Such have now been scheduled.

There were no unscheduled power outages, or outages of emergency nature, during the month.

Apparent weakening of carrier signals between stations A-6 and A-8 (220 KV system) during hot weather is under study.

[redacted]

1221344

Electrical Division [redacted]

DECLASSIFIED

TELEPHONE SECTION

The new Kennewick trunk cable is complete and in service with 15 common battery tool trunks, five ring down foreign exchange circuits, and two Western Union printer circuits.

Installation of new automatic trunking equipment at BY Tandem Office is complete.

Telephone work generally continues at a high rate and all is proceeding as scheduled.

[redacted]

1221345

[redacted]

DECLASSIFIED

POWER STATISTICS - ELECTRICAL DIVISION
FOR MONTH ENDING JUNE 30, 1949

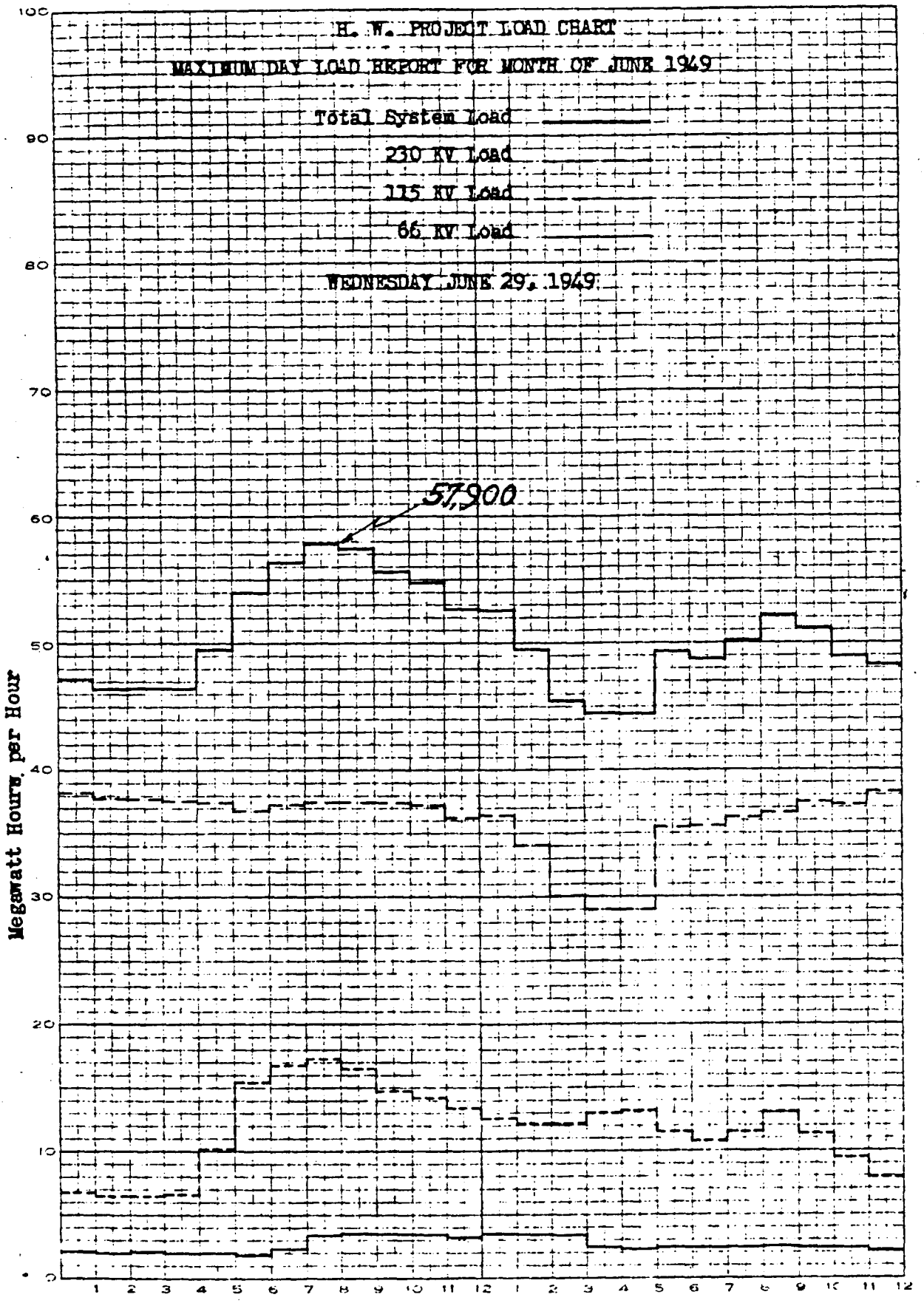
ITEM	ENERGY - MW HRS. May	ENERGY - MW HRS. June	MAX. DEMAND - KW May	MAX. DEMAND - KW June	LOAD FACTOR - % May	LOAD FACTOR - % June
230 KV SYSTEM						
A-2 Out (100-B)	7,180	7,100	11,100	11,400	86.9	86.5
A-4 Out (100-D)	7,440	7,530	12,700	12,800	78.7	81.7
A-6 Out (100-F)	6,840	7,010	11,400	11,800	80.6	82.5
A-8 Out (200 Areas)	2,540	2,780	4,800	5,000	71.1	77.2
TOTAL OUT	24,000	24,420	40,000**	41,000**	80.6	82.7
MIDWAY IN	24,359	24,810	36,800*	38,400	89.0	89.7
Transm. Loss	359	390				
Percent Loss	1.5	1.6				
66 KV SYSTEM						
B3-S4 Out (300 Area)	210	288	576	624	49.0	64.1
B3-S5 Out "	494	354	1,280	920	51.9	53.4
B1-S4 Out (N.Richland)	1,632	1,123	3,456	2,938	63.5	53.1
B7-S10 Out (W.Bluffs)	285	267	877	787	43.7	47.1
B9-S11 Out (100-H)	528	480	1,320	1,120	53.8	59.5
Hanford Out	331	306	500	500	89.0	85.0
TOTAL OUT	3,480	2,818	8,009**	6,889**	58.4	56.8
Hanford In	1,969	1,752	7,600*	8,000*	34.8	30.4
Pasco In	1,711	1,188	3,200*	3,200*	71.9	51.6
TOTAL IN	3,680	2,940	10,800**	11,200**	45.8	36.4
Transm. Loss	200	122				
Percent Loss	5.4	4.1				
115 KV SYSTEM						
BB1-S1 Out (Richland)	3,214	2,988	8,640**	8,280	50.0	50.1
BB1-S2 Out "	3,056	2,558	9,720**	6,480	42.3	51.9
BB1-S3 Out (N.Richland)		389		2,938		18.4
TOTAL OUT	6,270	5,935	18,360**	15,120**	45.9	54.5
Benton In	3,360	3.168	9,900*	9,000*"	45.6	48.9
S. Richland In	3,528	2,856	8,100*	7,704"	58.5	51.5
TOTAL IN	6,888	6,024	18,000**	16,704**	51.4	50.1
Transm. Loss	618	89				
Percent Loss	9.0	1.5				
PROJECT TOTAL						
230 KV Out	24,000	24,420	40,000**	41,000**	80.6	82.7
66 KV Out	3,480	2,818	8,009**	6,889**	58.4	56.8
115 KV Out	6,270	5,935	18,360**	15,120**	45.9	54.5
TOTAL OUT	33,750	33,173	66,369**	63,009**	68.3	73.1
230 KV In	24,359	24,810	36,800*	38,400*	89.0	89.7
66 KV In	3,680	2,940	10,800**	11,200**	45.8	36.4
115 KV In	6,888	6,024	18,000**	16,704**	51.4	50.1
TOTAL IN	34,927	33,774	59,280*	57,900*	79.2	81.0
Transm. Loss	1,177	601				
Percent Loss	3.4	1.8				

* Coincidental Demand
** Non-Coincidental Demand
" Denotes Estimate

Average Power Factor - 230 KV System--98.1
Average Power Factor - 115 KV System--99.5
Average Power Factor - 66 KV System--78.1

[redacted]

1221346


H. W. PROJECT LOAD CHART
MAXIMUM DAY LOAD REPORT FOR MONTH OF JUNE 1949
Total System Load
230 KV Load
115 KV Load
66 KV Load
WEDNESDAY JUNE 29, 1949
57,900
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

1221347

[redacted]

[redacted]

Classi[redacted]

By Authority of ~~HANFORD OPERATIONS OFFICE~~ NON-TECHNICAL DOCUMENT REVIEW BOARD. ~~H. J. Newton~~, Chairman 12-18-51

TRANSPORTATION DIVISION
MONTHLY REPORT
JUNE 1949

DECLASSIFIED

General

Transportation Division personnel forces were increased during the month from 636 to 673 by forty-two new employees and rehires and five terminations.

Railroad Activities

Commercial inbound cars increased approximately 20% over May. Process movements continued slightly below normal. Two thousand seven hundred and forty-eight cars were handled in June compared with 2,040 in May and 1,376 in April. The June increase resulted from increased coal receipts for the Power Division.

Responsibility for railroad operations in 100-H Area was assumed by the Transportation Division effective June 1, 1949. Stockpiling of coal in this area involved much heavy switching.

Carload outbound shipments increased during the month and are expected to be heavier in July. The June movement consisted of greater quantities of lumber from North Richland, Construction equipment from North Richland and White Bluffs, and scrap metal from Richland and Leazure Spur.

Operation of the Riverland Roundhouse was reduced from a two shift to a one shift schedule, Monday through Friday, effective June 6, 1949.

Morrison-Knudsen, Track Maintenance Subcontractor, completed their contract on the Plant Railroad Rehabilitation Program. Their total force on June 30 was an office manager, bookkeeper and timekeeper, who are completing final details.

All track maintenance, both inside and outside the fenced areas, will be performed by Transportation Division forces. It is anticipated that 30 additional trackmen and three track formen will be required to maintain the approximate 100 miles of track outside the fenced areas vacated by the subcontractor. Of this number, 29 trackmen and one track foreman were engaged during the latter part of the month and account largely for the force increase reported in the opening paragraph.

Automotive Activities

Area and Village Bus Systems registered a combined decrease of 4,567 passengers over May.

Fare boxes in area buses were installed and placed in service effective June 5, 1949, at which time drivers began making change for passengers paying cash fares.

[redacted]

DECLASSIFIED

[redacted]

1221348

Transportation Division [redacted]

DECLASSIFIED

Completed a study on the distribution of cost for Area Cargo Trucking Service. The cost of this operation is to be charged off to the Divisions using this service on a percentage basis in direct ratio with the quantity of materials received.

Completed installation of safety stands on all Gar Wood garbage units for holding dump door while unloading.

Construction and Labor Activities

Labor and transportation facilities were supplied for Projects C-163; C-177; C-184; C-189, C-192, C-214, C-227, C-274, C-276, C-287, C-291, C-308, C-330, C-331, Well Drilling Operations and the 101 Area.

Classification [redacted]

By Authority of [redacted] NON-TECHN[redacted] DOCUMENT RE-VIEW BOARD. [redacted]on, Chairman

D[redacted] 12-[redacted]-51

2 (Statistical information is attached to the file copies of this report)

DECLASSIFIED

[redacted]

1221349

[redacted]

PROJECT ENGINEERING DIVISION

DECLASSIFIED

MONTHLY REPORT

JUNE 1949

PRESENT STATUS OF WORK

Projects Authorized and Under Construction

100 AREAS

Project Number		% Phys. Complete	Date Auth.	Est. Cost
C-172	Dismantling of Equipment in Demineralization & Deaerating Plants.	15	8-19-47	$ 486,000
C-184	Experimental Animal Farm	11	4-28-49	288,000
C-192	Biology Lab. Bldg. 108-F	70	4-20-49	101,000
C-290	Fabricate & Install Spectrometer	61	9-29-48	17,400
C-306	Revised Pile Shielding - Front Face Shield Nozzle Caps (Postponed until after July 1, 1949)	0	11-30-48	88,000
C-323	Vertical Rod Replacement - 105 BD & F	70	3-10-49	280,600
C-334	P-10 Alloy Facilities	70	1-28-49	242,000
	TOTAL Estimated Cost Active 100 Area Projects			$1,503,000

200 AREAS

C-163	Additional Waste Storage & Tie Lines 200-W (G.E. Portion Only - Subcontract not Included)	100	7-25-47	800,000

1.

[redacted]

1221350

61

[redacted]

Project Engineering Division

DECLASSIFIED

Projects Authorized & Under Construction (Cont'd)

200 AREAS (Cont'd)

Project Number		% Phys. Complete	Date Auth.	Est. Cost
C-298	Decontamination Stations for Small Equipment - 221-T,B.	85	11-15-48	$ 33,000
C-268	Sanitary Tile Field Addition 200 E-W	27	7-21-48	60,000
C-337	Dissolver Off-Gas Filtration Facilities (Only "T" plant authorized at present - Total Est. cost of entire job incl. "B" plant $337,000)	0	6-22-49	173,000
	TOTAL Estimated Cost Active 200 Area Projects			$1,066,000

300 AREA

C-189	Bldg. 3745-A X-Ray Facility	92	8-20-47	$ 33,000
C-219	Construction of Additional H.I. Instruments	87	1-27-48	97,200
C-227	Conversion of Offices to Labs Bldg. 3706 & Construction of 3707-C Change House	97	3-15-48	557,000
C-287	Experimental Metallurgy Lab. Bldg. 3730 (Field release Issued)	0	12-2-48	140,000
C-308	Process Development Lab. Bldg. 3732	93	1-17-49	50,000
C-330	Improved Ventilation 313 & 314 Bldg.	1	9-24-48	540,000
C-331	Rehabilitation of Bldg. 321 (Including Remodeling & Ventilation)	58	1-31-49	227,000
	TOTAL Estimated Cost Active 300 Area Projects			$1,644,200

GENERAL PLANT AREAS

C-138	Richland Telephone Exchange Bldg. 702	80	5-12-47	470,500

[redacted]

62

1221351

[redacted]

Project Engineering Division

Projects Authorized & Under Construction (Cont'd)

DECLASSIFIED

GENERAL PLANT AREAS (Cont'd)

Project Number		% Phys. Complete	Date Auth.	Est. Cost
C-144	Additional Tel. Cables - Richland	65	5-12-47	$ 71,000
C-177	115 KV Power Transmission Line	84	8-14-47	1,364,000
C-214	Rehabilitation of Plant Railroad	100	2-18-48	3,206,000
C-265	Additional Telephone Cable-Richland to Kennewick	100	7-29-48	30,000
C-276	Overall Plant Telephone Project	86	10-6-48	1,232,000
C-291	Security Fences - All Areas	9	10-18-48	441,800
C-279	Improvement to Area Administration Buildings (Project Re-activated at Request of A.E.C.)	90	(Rev.Dir.) 5-18-49	167,800
C-333	H.I. Operational Survey Insts.	0	4-20-49	85,000
C-322	Osmose Treatment of Plant Elec. Poles & Replacements where Necessary (Postponed Until After July 1, 1949)	56	2-1-49	154,000
	TOTAL Estimated Cost Active Plant General Projects			7,222,100
	GRAND TOTAL Est. Cost Authorized Work-ALL AREAS			$11,435,300

Informal Project Requests Authorized

ALL AREAS

Request Number		% Phys. Complete	Date Auth.	Est. Cost
M-704	Special Cadmium Plated Splines	90	2-7-49	$ 18,300
M-711	Experimental Algae Filter - 107 Bldg.	0	5-6-49	13,000
MED-1	Surgical Wing Air Conditioning - Kadlec Hospital	0	5-5-49	16,100

[redacted]

1221352

[redacted]

Project Engineering Division

DECLASSIFIED

Informal Project Requests Authorized

ALL AREAS

Request Number		% Phy. Complete	Date Auth.	Est. Cost
SERV-9	Badge House Addition 300 Area	0	12-15-48	$ 14,500
TECH-22	Laboratory Hoods Bldg. 222-T	0	5-17-49	15,000
TECH-24	Radiography Equipment 234-5	20	6-24-49	14,300
		TOTAL		$ 91,200

Projects Being Routed for Authorization

E.R. No.	Project No.		
2469	C-326	Underground Geological & Hydrological Investigation Program Including Test Wells & Other Fac.	$ 193,000
A-3075	C-338	Nine Tube Test Units With B, D, & F Style Blocks.	25,400
A-3062	C-339	300 Area Rolling Mill	1,340,000
A-1093	C-340	P-11 Project (Part I)	130,000
A-532	C-192 Pt. II	Biology Laboratory Bldg. 108 F	1,020,000
E-406	C-341	Additions to Richland Electric Distribution System	173,600
E-415		Dismantle 66 KV Trans. Line and Substations	130,000
	TOTAL Est. Cost of Projects Awaiting Authorization.		$3,012,000

Project Engineering Division Area Reports

Status of Engineering Study & Design Work in Progress During Month of June.

100 AREAS

E.R. No.		% Engineering Complete
A-1001	As-Built Drawings	0

[redacted]

G4

1221353

[redacted]

Project Engineering Division Area Reports (Cont'd)

DECLASSIFIED

100 AREAS (Cont'd)

E.R. No.		% Engineering Complete
A-1002	G. E. C. Study	10
A-1034	Alterations to Bldgs. 186 & 185	38
A-1068	Prepare Informal Request for Developing a Flexible Vertical Rod.	30
A-1074	Design Moisture Extraction System for Gas System - 105 Building.	2
A-1075	Recommend Adequate Warehousing for 100, 200 & 300 Areas.	10
A-1076	Prepare Project to Replace V.S.R. and Guides in 105 B, D, F (Designs for Project C-323)	80
A-1077	Prepare Project for P-10 Alloy Facilities (Designs for Project C-334).	87
A-1080	Thermocouple for 105 Process Tube	52
A-1083	Hot Thimble Mock-Up	90
A-1085	Prepare Project forPile Operation with 100% CO_2 Atmosphere, 100 F Area	15
A-1089	Design Draft Free Class Blowing Table P-10	5
A-1093	Prepare P-11 Project (Parts I & II) Designs for C-340	35
A-1094	Algae Pilot Filter	60
A-1096	Study Lubrication of Process Tubes During Charging	5
A-1097	Prepare Project for Hot and Cold Exponential Experiments in 101 Building.	25
A-1098	"B" Hole Casks	100
A-1099	Magazine Feeding Induction Furnace Lid	0

[redacted]

1221354

C5

[redacted]

DECLASSIFIED

Project Engineering Division - Area Reports (Cont'd)

Status of Engineering Study & Design Work in Progress During Month of June.

100 AREAS (Cont'd)

E.R. No.		% Engineering Complete
A-1100	Nozzle Galvanizing and Replacement	35
A-1101	IBM Equipment	35
A-1102	Design Furnace Tube Out-gassing facilities	50
A-1103	Revisions to Air Monitoring System and Air Supply for Face Masks in 108-B Building.	50
A-1104	Prepare informal request for repairs to 107 Basin	0
A-1105	Design Pedestal and Hood for 108-B balance.	0

200 AREAS

2266	As-Built Drawings	20
2279	Prepare Project for Regasketing Facilities 221 T & B.	85
2459	Design Facilities for Diluting Caustic Solution 221 Areas.	100
2461	Survey Sanitary Tile Field Addition 200 E-W	35
2467	Engineering Contact on New Processes	20
2474	Design & Est. Railing & Mirrors for Diversion Boxes.	100
2481	Revise Drawings for Agit. Shafts Bldg. 221-TB	100
2489	Revise Bucket Lifting Yoke 221-B	100
2490	Prepare Project for Idoine Removal	55
2491	Design Evaporation Facilities First Cycle Waste	5
2493	Check Elevation of Inlet Duct Bldg. 291-B	20

[redacted]

1221355

GE

[redacted]

DECLASSIFIED

Status of Engineering Study & Design Work in Progress During Month of June

200 AREAS (Cont'd)

E.R. No.		% Engineering Complete
2494	Prepare Dwg. of Teflon valve seat.	100
2495	Study Building 221 & 224 Steel Requirements	60
2496	Prepare Dwg. - Flow sheet first Cycle Waste Evaporation.	100
2497	Additional Waste facilities 241-BY (G.E. Portion of Project C-271)	0

300 AREA

A-3002	As-Built Drawings	25
A-503	Change in Air Conditioning System 321 Bldg.	96
A-3060	Temporary Melting & Fabrication Bldg. (Designs for Project C-287)	80
A-3061	Increased Ventilation - 313 & 314 Bldgs. (Designs for Project C-330)	55
A-3062	Install Rolling Mill - 300 Area (Designs for Project C-339)	13
A-3066	Revise Maps - 300 Area Water and Sewer Systems	0
A-3067	Billet Lifting Tongs (Alternative method being considered)	60
A-3069	Solvents Storage - 3706 Building	2
A-3075	Design for Nine Tube Mock Up for 105 BDF Design (Designs for Project C-338)	80
A-3077	Design Installation for Three Automatic Screw Machines 313 Building.	27
A-3080	Design and Estimate Loading Platform & Acid Storage Area, Bldg. 3706.	

[redacted]

1221356

C7

[redacted]

DECLASSIFIED

Status of Engineering Study & Design Work in Progress During Month of June

GENERAL PLANT AREAS

E.R. No.		% Engineering Complete
E-403	Install Traffic Signals at Richland Railroad Crossings	75
E-405	Electrical As-Built Drawings	0
E-406	Prepare Project - Additions to Village Distribution System	40
E-407	Prepare Project - Inst. Htrs. on Evacuation Busses & Service Facilities	65
E-411	Study Design & Est. Cost of Dual Feed of Sewage Lift Station.	55
A-420	Engineering Work for Rehabilitation of Plant Railroad. Project C-214	100
A-452	Prepare Project for Expansion of Main Plant Telephone System (Design Work Only)	95
E-505	Electrical Standards	15
A-514	Prepare Project for Improvement to Area Fence Lighting (Cancelled)	15
E-413	Study & Project - Telemetering 115 & 230 KV Lines & Remote Control on 115 KV Substation	10
A-526	Special Field Information for 300 Area As-Builts	75
A-530	Design Work for Rehabilitation of Bldg. 321 Project C-331.	97
A-532	Design Work for Project C-192 Construction of Biology Lab. - Bldg. 108-F Pts. I & II.	20
A-536	Additional Capacity for Sewage Lift Pumps Richland	15
A-537	Survey for Maintenance of R. R. Inside Restricted Areas.	20

[redacted]

1221357

GS

[redacted]

DECLASSIFIED

Status of Engineering Study & Design Work in Progress During Month of June

GENERAL PLANT AREAS (Cont'd)

E.R. No.		% Engineering Complete
941	Designs for Experimental Animal Farm Project C-184.	95
A-541	Design & Survey for Railroad and Spurs to Redox Plant.	50
E-417	Hood Alarm System Bldg. 3706.	75
A-962	Designs for 115 KV Power Line Through Richland.	95

ACTIVE STUDIES

4327	Maintenance of Pitched Roofs	85
4336	Review Oil Coding System	70
4361	Chip Recovery Method	95
A-505S	Electrical Equipment Standards	85
4362	Mfg. Div. Personnel Analysis	75
4363	Project Eng. Div. Personnel Analysis	75
4365	Methods Studies, P Division, 300 Area	0
E-416S	Electrical Power Conservation	5
4366	Welder Classification Tests	25
4367	Power Equipment Lube Specs. 100 H	75

WORK DEFERRED

		Date
4346	Welding Line Analysis - Bldg. 313	4-8-49
4347	Improved Frost Test Line - Bldg. 313	4-8-49
4354	Bronze Furnance Heating - Bldg. 313	4-8-49

[redacted]

1221358

[redacted]

DECLASSIFIED

Project Engineering Division

BACKLOG SUMMARY

	Work on Hand 5-31-49 Estimated Man Days	Work on Hand 6-30-49 Estimated Man Days
Studies	246	298
Project & Design	7,634	7,225
	7,880	7,523

[redacted]

1221359

[redacted]

TECHNICAL DIVISIONS

June 1949

DECLASSIFIED

SUMMARY

Pile Technology Division

The power level of the D Pile was raised to 305 MW during June. At this power level reactivity considerations require that each shut-down be an extended shut-down (about 30 hours or more) and that temporary poison be used before starting the pile again.

The far side shield of the D Pile moved outward a total distance of about 1/4 inch during May and June, after having been stationary during the previous six months. It is not known whether this effect was caused by the higher operating level. There has been no upward movement of the top shield during this period.

The carbon dioxide additions to the B and F Piles appear to be effective. The top of the F Pile has not risen during the last four months, and motion of the top and far side shields of the B Pile has been reduced.

The ratio of initial to final thermal conductivity of graphite irradiated in a cooled test hole has now reached 64 after an irradiation of 2250 MD/CT and is continuing to increase linearly with exposure.

Separations Technology Division

No serious or unusual operating incidents occurred in the Separations Plants during the month. Volume and time cycle reduction tests are still being continued, particularly in the Concentration and Isolation Buildings. Plant material balances, hydrogen formation in process and reagent make-up gases, and iodine balances are being studied. Stack gas clean-up studies have been continued with Fiberglas and the experimental electrical precipitator has been overhauled and returned to operation.

Approximately fifteen cerium stand-in runs were completed in Part I of Building 234-5 with satisfactory operation through purification and not-unexpected low yields through Hoods 8 and 10. One out of two uranium test runs in Hood 10 produced a good button with a 98.9% yield. Hoods 14, 25, and 26 are being carefully checked to eliminate significant leaks in the vacuum systems. Sulfate-complexed plutonium has been run through the 10 gram-scale pilot line to metal production. Methods for plutonium recovery from slag and crucible material are being reviewed in the literature and qualitative tests have been started in the laboratory on methods of oxalate decomposition.

Twenty additional Redox Scale-Up runs carried out during the month have indicated that satisfactory mixing of scrub and feed solutions within the columns can be obtained, emulsification of IB Column systems can be prevented by a revised extractant distributor, and there are no significant scale-up factors for IC Columns between 5 and 8 inches in diameter. Revision of the Demonstration Unit to provide cascade operation and increased throughput has been completed. Testing of submerged and horizontal pumps and automatic flow control instrumentation for potential "hot" installation has continued to produce highly encouraging results. Process Laboratory studies of aluminum nitrate preparation and recovery have received primary emphasis.

1221360

[redacted]

DECLASSIFIED

Laboratory research studies have further established the time-temperature relationships of ruthenium volatilization and construction of an ozone cell for extending this work has been completed. Pulse analyses of 200 Area $BiPO_4$ extraction wastes have established the americium^{241} and curium^{242} content of current metal waste. Hexone-HNO_3 studies have been continued and a method has been obtained for diketone removal from solvent. Methods of neutralization of uranyl nitrate feed solutions within the Redox system have been established. Steady progress has been made in the scouting of methods of pretreatment of metal waste solution for solvent extraction recovery of metal.

Metallurgy and Control Division

Effective June 1, all the metallurgical activities of the Metallurgy and Control Division were consolidated to form a single integrated Metallurgy Section. This step will facilitatethe coordination of metallurgical plant assistance, research and development, and miscellaneous services.

The installation of facilities in Bldg. 108-B for the alloying, casting, and machining of the lithium-aluminum alloy to be produced for the P-10 program was approaching completion at month-end. The Metallurgy Section will operate these facilities and has completed its preparation for this work.

Arrangements were completed for the resumption in July of analytical control services in the T Plant laboratory, as required by revised S Division run schedules. Analytical research personnel will utilize any excess facilities in both T and B laboratories.

The construction and occupancy of analytical control laboratories in Bldg. 234-5 were completed except for final hood ventilation balancing and the transfer of some contaminated equipment from Bldg. 231. Preliminary work was completed on the analysis of essential materials, and specifications and sampling procedures were prepared.

ABG:dg

ABG

[redacted]

DECLASSIFIED

July 8, 1949

PILE TECHNOLOGY DIVISION

JUNE, 1949

VISITORS AND BUSINESS TRIPS

J. R. Humphreys, Argonne National Laboratory, Chicago, Illinois, was here June 16 and 17, 1949 for consultation on a proposed special irradiation.

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

P. F. Gast visited the Atomic Energy Commission in Washington, D. C. to serve on the Subcommittee on Reactors, Declassification Branch, USAEC, on June 2, 1949. He also attended meetings of the General Advisory Committee on June 2-3, 1949.

P. F. Gast visited Argonne National Laboratory, Chicago, Illinois on June 6, 1949 for consultation on graphite.

C. W. Botsford visited the Dow Chemical Company, Midland, Michigan, for consultation on the use of magnesium alloys, June 8-11, 1949.

J. B. Lambert visited Oak Ridge National Laboratory, Oak Ridge, Tennessee, on June 12-16, 1949 to observe the elevated temperature reactor test channel experiment.

ORGANIZATION AND PERSONNEL

	May	June
Pile Physics Section	38	35
Pile Engineering	28	28
P-10 Project	6	6
Administration	3	3
Special Assignment	1	0
	76	72

One former Division Head on special assignment, one engineer, and one physicist terminated during the month of June. One Steno-typist A was terminated, one Secretary B transferred to General, and one Steno-typist A transferred to Administration. Two Laboratory Assistants C transferred from Pile Physics to Pile Engineering and one Laboratory Assistant D was hired.

PILE PHYSICS

Higher Power Level

The power level of the D Pile was increased from 290 MW to 305 MW over a period of four hours on June 20, 1949. The observed reactivity loss associated with the change in power was only 40 to 50 per cent of the calculated loss but the actual numbers involved are so small that this difference is not considered particularly significant.

In order to obtain a workable time difference between minimum and maximum permissible duration of shutdown at the new level, every start-up will have to be made with temporary poison columns and reduced power. For example, use of 140 inhours of temporary poison will allow the pile to start up after 29 hours and to remain down as long as 36 hours. When the level is raised to 330 MW this range will be reduced from 7 hours to 6 hours. This situation has arisen due to increased graphite temperatures and consequent increase in the associated reactivity transient. At the same time the effective strength of the horizontal rods has been decreased by shadowing with increasing amounts of permanent poison columns used for flattening. All three operating piles have made large reactivity gains during the past year as a result of the increase in product concentration in the metal and the increase in graphite temperatures due to the presence of carbon dioxide. These reactivity gains in the "hot" piles have been compensated by increasing the poisoning strength of columns in the so-called permanent poison pattern.

H-Pile Graphite Purity

Analysis of all the data from the thermal neutron diffusion length measurements at the H Pile has been completed. The measured diffusion length was found to vary slightly with position, the average value being 55.0 cm. with a maximum of 56.1 cm. in the upper right of the pile (as viewed from the charging face) and a minimum of 54.6 cm. on the left side. The average value of the diffusion length at the DR Pile was 52.0 cm. Correction for the 3.3% lower density of the H Pile graphite gives a value of 53.2 cm. to be compared with the DR value.

Pile Technology Division

DECLASSIFIED

Shielding - Pile Life

The stepped plug removed from the No. 20 vertical rod hole at F Pile recently was used as a source of irradiated masonite samples for the determination of density and crushing strength. The stepped plug does not have a masonite layer corresponding to the innermost such layer in the pile shield proper. Therefore, no data could be obtained for this layer where the most damage occurs. In all the other layers the density of the masonite was not significantly different from that of unirradiated samples. The crushing strength of the masonite in the second layer was 10% less than in the other layers and in unirradiated samples.

Graphite Development

Three experimental heats of GBF graphite were prepared in which the addition of Freon was begun at lower temperatures than normal. The graphite was of slightly better purity than currently produced GBF. Two of the heats had dih values of 1.00. The third heat had a dih of 0.98 with the exception of one questionable bar. Preliminary data from crushing and cross-breaking strength tests indicate that the strength of this graphite may be below normal. However, the strength test values varied widely, even among samples from the same heat, so that more tests will be needed to establish the significance of the result.

Five heats of GBF were processed with coke flour mixed with the granular coke packing at the sides of the furnace bed. This was intended to reduce the permeability of the sides to the purifying gases, thus forcing all of the gases through the graphite bars. However, burning tests with methane showed that the flow pattern was not appreciably changed. Functional tests confirmed this in that these five heats were not significantly better than recent heats produced with normal coke packing.

D Pile Abandonment Studies

The study made in March, 1949, of the operating limitations imposed by a reduction in the number of tubes loaded in the D Pile has been revised to take into account the recent gains in reactivity caused by higher product concentrations. A value of 900 inhours was used as the cold, clean reactivity of the D Pile compared to the value of 800 inhours used originally. The allowable power levels for different size piles are within 10 MW of those originally calculated, the main difference being an average increase of approximately 120 inhours in the available flattening. The additional flattening would allow operation at 85 MW with 800 central tubes loaded, whereas previously 1000 tubes loaded was considered the minimum feasible case. A maximum power of 330 MW for a completely loaded pile was calculated on the basis of a 70° C. outlet temperature from the hottest tube in the 0.240" orifice zone at equilibrium at the time of maximum inlet water temperature.

[redacted]

DECLASSIFIED

Pile Technology Division

Reactivity

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

	B Pile	D Pile	F Pile
In rods	92 ih	85 ih	50 ih
In Special Requests			
Within poison pattern	385	358	407
Outside poison pattern	0	0	0
In Plant Assistance Irradiations	0	30	0
In lead-cadmium columns	0	0	0
In bismuth columns	114	114	84
In dummy columns (including empty fringe tubes)	0	26	48
In xenon	479	498	468
In over-all coefficient	-180	-201	-235
Total cold, clean reactivity	890	910	822

During the month there were net gains of 4 inhours for the B Pile, 17 inhours for the D Pile, and 32 inhours for the F Pile. Metal is now being discharged from the B Pile at an average exposure of nearly 400 MD/ton so the large gains in reactivity have apparently stopped. The B Pile had a net gain of 136 inhours in the past six months. The D and F Piles had gains of only 66 inhours and 59 inhours respectively for the same period.

Since useful flattening is being obtained from all of the Special Requests loaded in process tubes, the distinction between those within the poison pattern and those in other locations is without any real significance. Henceforth all Special Requests will be listed together in the reactivity table except in any special cases where they are loaded in positions which do not contribute to the flattening.

PILE ENGINEERING

Blistering of Slugs

Alpha-rolled, triple dipped, completely transformed metal (Group 5 material) has been discharged without difficulty at an exposure of 396 MD/ton. Inspection of two tubes showed 11% unchanged, 72% slightly blistered, and 17% moderately blistered. No significant warping was observed.

It has been shown that the presence of up to 200 ppm of nickel in uranium slugs (Production Test No. 105-224-P) has no adverse effect on the irradiation stability of the slugs at an exposure of 200 MD/ton.

[redacted]

1221365

76

DECLASSIFIED

Pile Technology Division

Aluminum and Van Stone Flange Corrosion

Tests indicate that galvanized nozzles with a coating thickness of 0.0025" will protect Front Fact Van Stone Flanges for 4 to 9 years. Recent results indicate that the addition of a sacrificial magnesium slug over the Van Stone will afford additional protection and may increase the effective life of the galvanizing indefinitely. The shielding slugs of all front face nozzles are to include provision for eventual installation of magnesium slugs.

Magnesium Alloy Test Program

The problems associated with the substitution of magnesium for aluminum were discussed with Dow Chemical Company personnel. This discussion indicated that the metal fabrication problems can be solved and that there is a possibility that corrosion can be reduced to a tolerable rate. Dow's recommendation that the pH be adjusted to 10.6 and that sulfate and chloride be reduced to a minimum will be followed in flow laboratory tests.

Water Soluble Slug Lubricating Oil Test

Thirty tubes were discharged using "Ucon" water soluble oil without causing any cloudiness in the basin. It was found that a full two minutes of lubrication was necessary before pushing the tube and that the tip offs were contaminated more than usual. Added experiments will be performed only on the special request tubes requiring a special pick up, and a further study will be made of possible added contamination before recommendations are made.

Experimental Facility for Water Recirculation Tests in H Pile

It is planned to use a horizontal experimental hole in the 22nd graphite layer for the initial recirculated water experiments. Design changes are being made to provide a long process tube, graphite tube supporting blocks, and a revised step plug and gun barrel assembly in the test hole.

Third Safety System

Thirty gallons of butyl carbitol-boric acid ester containing 30 milligrams of boron per cc of liquid were prepared and tested in the mock-up vertical safety rod thimble. The thimble was heated to 400° C. prior to the test. Boiling occurred after 58 minutes. Under similar conditions water boiled in 45 minutes.

Although the high boiling point of this material makes it appear attractive, its use in a pile is doubtful value because of the following factors: 1) it possesses a very low flash and fire point, 2) it has a low specific heat, and 3) there is a slight amount of boiling or decomposition at about 230° C. which is accentuated by the large volume to surface ratio in a pile vertical thimble.

Preliminary plans have been made for a production test to evaluate the present 3X system by dropping water into one thimble of an operating pile immediately after a scram.

DECLASSIFIED

Pile Technology Division

Beta Experiment

Beta slug B-6 was discharged on June 7 after an irradiation of 187.3 days at 275 MW. Slug E-4 was charged into Tube 1481-F on June 22. Beta slug B-9 in Tube 0865-7 had an irradiation of 260.2 days at 275 MW as of June 30.

Graphite Expansion

No changes were made in the carbon dioxide concentration in the pile atmospheres during the month. The B Pile had a nominal concentration of 40%, and F Pile 60%. There are some indications of a decreased rate of graphite expansion at the B Pile. The Far Side moved outward 0.02 inches from May 15 to June 30 as compared to a previous rate of 0.06 inches per month. Wye Level measurements of the elevation of the Top tend to confirm this decreased rate; however, the precision of data is not sufficient to permit definite conclusions. At the D Pile there was no upward movement of the Top, however, the Far Side moved outward a total of 1/4 inch during May and June after having remained stationary for 6 months. Wye Level measurements of the Top of the F Pile have shown no rise since the carbon dioxide concentration was increased to 40% which was about four months ago.

The program of improvement of pile motion instruments was continued. Surveys at the F Pile show that the Top Shield is straight from Near to Far Side except at the corners which are not supported by the "tee" beams. Similarly, the Far Side was found to be straight within 1/4 inch from top to bottom.

Increase in Power Level at D Pile

The power level of the D Pile was increased from 275 to 290 MW on May 23 and from 290 to 305 MW on June 20. No significant difference was measured between the thermal movements of the biological shields at 275 and 305 MW. It is not clear from the pile motion measurements whether or not the 1/4 inch outward movement of the Far Side during May and June can be attributed to the increased power level. The increase in the central graphite temperature attributed to the power level change from 275 to 305 MW is 20 to 25° C.

Van Stone Flange Damage

The Front Van Stone Flanges on two tubes in the B Pile were found to be necked in so as to reduce the inside diameter of the tube as much as 0.1 inch. The probable cause was demonstrated by tightening a nozzle so that the aluminum flowed out from between the nozzle and gun barrel. The use of torque wrenches to limit the pressure has been suggested.

Assistance to Construction at H Pile

Assistance was given to Construction during removal of the lead which was inadvertently poured down rod openings 35, 36, 37, and 43 at the H Pile. Borescopic inspection after removal indicated that less than two pounds remained.

1221367

78

DECLASSIFIED

Pile Technology Division

Graphite Monitoring

The ratio of the initial to final thermal conductivity (K_o/K) for parallel cut KC graphite was found to be 63.6 after a test hole exposure of 2250 MD/CT. This result shows that at this exposure, K_o/K is continuing to increase linearly with exposure.

Although Sykes stored energy results and thermal conductivity data show that the possibility of a sudden release of stored energy in pile graphite is remote, additional experiments are being initiated to investigate extreme conditions which might initiate a self-sustaining stored energy release. In experiments in which one end of a 4-inch sample was heated rapidly to above 1200° C., it was not possible to initiate a self-propagating thermal wave.

Electrical resistance monitoring during pile exposure of a transverse cut CSF sample was discontinued after an accumulated exposure of 131 MD/CT, at which time R/R_o was 3.622. The sample was removed without difficulty. The physical properties of the asbestos insulation on the aluminum wire leads appeared to be unchanged after this exposure.

Effective neutron flux variations in the B test hole in positions 2-5-D and 3-3-D were determined from measurements of the electrical resistance ratio of two casings of parallel-cut CSF graphite after 17.2 MD/CT. An average maximum variation (peak to trough) of 9 per cent was obtained in position 2, while position 3, which is less symmetrically placed, gave an average variation of about 18 per cent. At the time of exposure (2-7-49 to 2-16-49) D Pile had empty tubes at 2177, 2186, and 2286. The single empty tube next to the test hole resulted in a lowering of the effective neutron flux by 35 per cent, while two empty columns (above and below the test hole) resulted in an effective neutron flux loss of 55 per cent.

P-10 Project

Design and construction work on the conversion to the lithium-aluminum alloy process has proceeded on schedule during the month, and it is expected that the first line will be ready for operation at the end of July.

Additional air monitoring equipment recommended by Health Instruments has been designed and will be installed before extraction operations are resumed. An air system is being installed to supply the fresh air masks which will be worn for all work in the extraction hoods in the future.

Alloy slugs with six months' exposure have been shipped to Argonne. A total of 1297 alloy slugs are now being irradiated.

1221360

Pile Technology Division

DECLASSIFIED

INVENTIONS

All Pile Technology 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 the period covered by this report. Such persons further advise that, for the period therein covered by this report, notebook records, if any, kept in the course of their work have been examined for possible inventions or discoveries.

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

WK Woods:bb

DECLASSIFIED

July 11, 1949

SEPARATIONS TECHNOLOGY DIVISION

JUNE, 1949

VISITORS & BUSINESS TRIPS

H. Haaland of the Western Precipitation Co., Los Angeles, visited the Hanford Works from June 6 to 10 to service an electrical precipitator in the 200-E Area.

W. A. Bain, R. O. Hill, and J. E. Whitney of the Kellex Corp., New York City, visited this site from June 28 to 30 for consultations on metal recovery process development.

C. S. Lowe, W. H. Reas, and C. M. Slansky visited the Argonne National Laboratory on May 31 and the Oak Ridge National Laboratory from June 1 to 3 for Redox conferences. W. H. Reas and C. M. Slansky also visited the Knolls Atomic Power Laboratory on June 6 and 7 for a Redox consultation.

R. H. Beaton visited the Oak Ridge National Laboratory for a Redox Steering Committee Meeting on June 6 and 7 and the Argonne National Laboratory on June 8 and 9 for Redox consultations.

J. T. Stringer visited the General Engineering and Consulting Laboratory on June 13 and 14 and the Knolls Atomic Power Laboratory on June 15 and 16 for Redox technical consultations. He also visited the Fischer & Porter Co., Foxsboro, Pa., on June 17 for a discussion of flow control problems.

A conference on solvent extraction technology at Chalk River, Canada, was attended by F. W. Albaugh and R. B. Richards from June 15 to 17.

F. W. Albaugh visited the Knolls Atomic Power Laboratory on June 14 for a Redox consultation.

J. B. Work visited the General Engineering and Consulting Laboratory on June 13 and 14 for a 234-5 consultation. He also attended an A.E.C. meeting on 234-5 at Washington, D.C. on June 15, a stack gas disposal conference at Chalk River,

DECLASSIFIED

Canada, on June 16 and 17, and a meeting of the Stack Gas Working Committee at the Oak Ridge National Laboratory from June 20 to 22.

J. F. Gifford visited the General Mills Research Laboratory, Minneapolis, on June 27 and 28 and the Argonne National Laboratory on June 29 and 30 for inspection and discussion of laboratory equipment.

C. M. Slansky visited the Radiation Laboratory, University of California at Berkeley, on June 28 and 29 for inspection of laboratory facilities.

ORGANIZATION AND PERSONNEL

Personnel totals in the Separations Technology Division are summarized as follows:

	May	June
Administration	2	2
Process Section	28	28
Development Section	94	94
Research Section	32	31
	156	155

One new hire, an Operator D, was added to the Development Section. One Steno-Typist B was transferred from the Service Division to the Process Section. Terminations were as follows: one Chemical Engineer from the Process Section and one Operator D from the Development Section. In addition, one Laboratory Assistant A in the Research Section was granted a leave of absence until August 1, 1949.

200 AREA PLANT ASSISTANCE

Canyon Buildings

The procedure previously initiated at B Plant, wherein the extraction conditions and the maximum batch-size in total alpha counts is determined by an analysis of the metal solution (6-1MS), was put into effect at T Plant with the first run of June. This was made possible by scale tank modifications.

Bismuth dissolver off-gas samples were taken for hydrogen analyses to supplement those previously taken. A maximum hydrogen content of approximately 0.5%. during the early part of the reaction was in good agreement with that previously determined.

Steam leakage into Dissolver Cell 4-L at B Plant resulted in excessive dilution of the metal solution during a dissolving when the steam was drawn by the air stream into the dissolver reflux condenser. Due to the dilution, the maximum specific gravity of the dissolver cut was 1.67 instead of the standard 1.82. No difficulty was experienced in processing this material. The extraction loss for Run B-9-05-F-18, containing this metal solution, was 0.31%.

122171

82

All runs started at T Plant during July are to be closely observed for evidences of material balance discrepancies. An Acid Wash Run and an N-1 filter leach are preceding these runs. It is planned to follow this series with similar flushes.

Normally, process samples are taken at temperatures other than laboratory room temperatures. This necessitates the application of a correction to the plant specific gravity to allow volume calculations on the same basis as the laboratory analysis. This temperature correction has been redetermined for the basis solution, 6-3MR. It was found that the previous method of application of this correction, in increments of 0.01 specific gravity units, allowed the bases to be high by approximately 0.5% at 50°C. The new corrections will be used starting July 1, 1949.

Concentration Buildings

Modification in the use of the bowl sprays during removal of the lanthanum fluoride by-product cake from the centrifuge has reduced the net cycle in this precipitation by approximately forty-five minutes.

A series of runs was made at T Plant to determine if the lanthanum fluoride product precipitate could be transferred successfully from the centrifuge to the metathesis tank by smaller volumes of potassium hydroxide and water. No difficulties were observed with volumes reduced to 80% of the present standard. Additional potassium hydroxide and water was added after these tests to perform the metathesis at standard volumes. Metathesis at volumes 83% of present standards was demonstrated previously under Product in Test SE-224-T-PA-9. A 20% reduction in the metathesis volume will reduce centrifugation time by approximately seventy minutes.

Variations in the material balance of Isolation Building recycle material passing through the storage tank have been indicated. Analytical limits, based on analyses predicted assuming a 100% material balance, have been initiated in an attempt to reduce this variation.

The effect of the small product heel found in the bismuth phosphate by-product precipitator tank on the by-product loss has been investigated. No correlation between the amount of product in this heel and the waste loss could be found.

Isolation Building

Fifteen runs have been processed under Production Test 231-9 with 50% hydrogen peroxide used in place of the 27.5% material. No decrease in product recycled to the Concentration Building has been observed on these runs.

The P-1 solution of Run B-9-06-B-10 contained 5.575 g/l of iron. This is approximately ten times the average concentration experienced in routine operation. The recycle returned from this run was 10.1% of P-1. This is approximately 2.5 times greater than average. It is believed that the excessive iron originated with a hydrofluoric acid leak into the lanthanum fluoride product precipitation tank.

1221372

234-5 Building

Calibration of the heating cycle in Hood 10 was completed. The original coil was modified to give a satisfactory power input and heat distribution with mild steel bombs and a better heating rate with stainless steel vessels than the previous coils. Heating rate and heat distribution with stainless steel bombs, however, is still unsatisfactory and it has been decided to use only the mild steel units.

Approximately 15 cerium stand-in runs have been completed in Part I. In Hood 8 conversion yields were approximately 55%. Equipment in Hoods 5, 6, and 7 was flushed with water in preparation for start-up. Stand-in runs from Hood 8 were processed in Hood 10 with low yields, presumably a result of the incomplete conversion.

Two uranium stand-in runs were processed in Hood 10. The first, in a mild steel bomb, resulted in a well-formed button and a yield of 98.88%. The second was inadvertently charged to a stainless steel bomb and gave a yield of 80.6%. The lower yield was probably due to excessive heating at the top of the vessel, thus causing the reaction to take place prematurely. This local heating was also blamed for the gasket failure which allowed the bomb to leak into the hood. A survey of the hood revealed no detectable contamination.

Equipment in Hood 17 was given a preliminary check with a piece of dural.

In Hoods 25 and 26, satisfactory power input was obtained when the transformer unit was removed and the coil was operated directly from the capacitors. Stainless steel, mercury, and aluminum were used as stand-ins to check the heating rate. The vacuum system in Hoods 25 and 26 was pumped down to 10^{-3} mm. of mercury. Further work is required to eliminate leaks in the equipment.

A pressure of 40 microns of mercury was obtained in Hood 19. Both pressure and leak rate in this hood were considered satisfactory. A pressure of 9×10^{-6} mm. was reached in Hood 14, but the leak rate was higher than desired.

Lucite panels with plastic bag access ports were installed in the rear of Hoods 5, 6, 7, 8, and 9.

REDOX DEVELOPMENT

Scale-Up Studies

Twenty solvent extraction studies were completed during the month, including both simple and dual-purpose IA Column runs in an 8.42-in. diameter column and IC Column and IB Simple Scrub Column runs in both 5-in. and 8.42-in. diameter columns. In addition to indicating in a preliminary manner that the IAF feed-mixing chamber installed on the 8.42-in. column functions satisfactorily for a plant-size dual-purpose IA Column, data from these 20 runs will assist in firming up design specifications for solvent extraction columns to be used in Redox Production Plant No. 1.

Preliminary data from the dual-purpose and simple IA Column studies are summarized below:

1221373

IA COLUMN SIMPLE AND DUAL-PURPOSE RUNS: 8.42-INCH COLUMN

Packing: 1/2-in. by 1/2-in. stainless-steel Raschig rings; extraction section 13.9 ft.; scrub section unpacked for simple runs, 4.3 ft. for dual-purpose runs.

IAF Feed Mixing Chamber: (For dual-purpose runs) 16-in. i.d. by 18-in. high. IAF distributed by a 9-in. diam. ring through 6 holes discharging upward (1/8-in. diam. holes).

Nominal Compositions: HW-#1 Flowsheet (HW-13320). During operation as a IA Simple Extraction Column it was intended to simulate conditions in the extraction section during the dual-purpose column runs (i.e., scrub 1.8 M ANN, 0.2 M HNO_3-deficient, feed 0.2 M HNO_3-deficient, Extractant 0.2 M HNO_3).

Run No.	Gal./(HR.)(Sq.Ft.), Sum of Both Phases	Short Tons U /24 Hr.	% of IAF U in IAW	H.E.T.S.* Ft.	H.T.U.* Ft.
Simple Extraction Column Runs:					
8"-16-U	415	1.2	0.04	2.4	1.6
8"-17-U	1005	3.2	0.4	2.9	1.7
8"-17-U	1595	5.0	0.8	3.2	1.9
Dual-Purpose Runs:					
8"-19-U	416	1.2	0.5	2.9	1.7
8"-20-U	1020	3.2	0.23	2.4	1.5
8"-21-U	1570	5.0	1.9	3.1	2.2
8"-21-U	1750 ∠ 100	(Complete flooding capacity)			

* Note: These are very preliminary values based on estimated equilibrium data. H.T.U's. were calculated on an "overall water-film basis".

Waste losses were relatively high because the height of extraction-section packing was only 13.9 ft. Operating conditions for the above dual-purpose and simple runs were purposely planned to be as nearly as possible the same, in order to study any differences in extraction performance due to mixing of the aqueous phases at the IAF feed point during dual-purpose runs. Although a refined comparison cannot be made until suitable equilibrium data are obtained, the uranium waste losses and preliminary H.E.T.S. and H.T.U. values from the corresponding dual-purpose and simple runs were all of the same general order of magnitude, indicating no gross loss of extraction performance attributable to poor feed mixing using the IAF feed-mixing chamber indicated above. Flooding initiated near the top of the extraction section and propogated downward, as has been noted previously in glass IA Columns (dual-purpose).

IB Simple Scrub Column studies in a 5-in. diameter column, as reported last month, have been extended to complete the evaluation of the 3-hole "spider-type"

IBS distributor and to study the effect on flooding capacity and extraction performance of leaving ferrous sulfamate out of the IB system. These runs and three additional IB Simple Scrub Column runs in an 8.42-in. diameter column are summarized below:

IB SIMPLE SCRUB COLUMN RUNS; 5-INCH AND 8.42-INCH COLUMNS

Packing: 1/2-in. by 1/2-in. stainless-steel Raschig rings.

Packed Heights: 5-in. column, 19.6 ft. 8.42-in. column, 13.9 ft.

Flowsheet: O.R.N.L. #1, as reported previously (same as HW-13320).

Run No.	Ferrous Sulfamate In IBFX, M	Gal./(Hr.)(Sq.Ft.), Sum of Both Phases	Equiv. Short Tons U/24 Hr.	% of IBF U in IBP	H.E.T.S.,* Ft.	H.T.U.,* Ft.
H.E.T.S. Studies:						
5"-5-BU	0.00	1245	3.5	3.6×10^{-5}	5.3	1.6
5"-6-BU	0.05	1200	3.2	1.2×10^{-5}	4.9	1.5
5"-7-BU	0.05	483	1.3	$13. \times 10^{-5}$	5.7	1.8
8"-3-BU	0.00	307	2.4	10.5×10^{-5}	4.1	1.3
8"-4-BU	0.00	620	4.7	3.2×10^{-5}	3.7	1.1
8"-5-BU	0.00	1180	8.4	5.3×10^{-5}	4.0	1.2
Flooding Studies:						
5"-5-BU	0.00	2700 ± 100	(Complete flooding capacity)			
5"-6-BU	0.05	1900 ± 200	(Approx. complete flooding capacity)			

* Note: These values are subject to revision when better equilibrium data are available. H.T.U. was calculated on an "overall water-film basis".

From the above 5-in. column data, it is concluded that the ferrous sulfamate or some unknown impurity in the ferrous sulfamate solution reduced the complete flooding capacity from 2700 to approximately 1900 gal./(hr.)(sq.ft.), sum of both phases. Ferrous sulfamate was prepared from powdered iron and technical grade sulfamic acid. Neither the H.E.T.S. nor the H.T.U. was significantly affected by leaving out the ferrous sulfamate. Extraction performance with the 3-hole spider-type distributor was approximately the same as for previous runs 5"-1-BU and 5"-3-BU using a 121-hole organic-phase distributor (0.04-in. hole diam.). Although the preliminary H.E.T.S. and H.T.U. values for the 8.42-in. column studies were actually slightly lower than for the 5-in. column studies, the differences involved are practically within the limits of uncertainty with which these values are known, using IB column equilibrium data which do not apply for O.R.N.L. #1 Flowsheet conditions.

Data from IC Column studies in a 5-in. diameter column (3-hole spider-type organic distributor), and data from IC Column studies in an 8.42-in. diameter column (253-hole organic distributor, 0.04-in. hole diam.) are summarized below:

IC COLUMN O.R.N.L. #1 FLOWSHEET RUNS: 5-INCH AND 8.42-INCH COLUMNS

Packing: 1/2-in. by 1/2-in. stainless-steel Raschig rings.

Packed Heights: 5-in. column, 19.6 ft. 8.42-in. column, 13.9 ft.

Organic Phase Distributors:
5-in. column: 3-hole spider (approx. 7/16-in. holes).
8.42-in. column: 253-hole "shower-head" (0.04-in. holes).

Compositions: ICF 0.3 M UNH, 1 to 2 g./l. HNO_3.
ICX 0.04 M HNO_3.

Run No.	Gal./(Hr.)(Sq.Ft.) Sum of Both Phases	Short Tons U/24 Hr.	% of ICR U in ICW	H.E.T.S., Ft.	H.T.U.,* Ft.
5"-50-CU	423	0.32	0.006	6.9	2.0
5"-51-CU	690	0.57	0.003	6.6	1.8
5"-52-CU	960	0.8	0.001	6.1	1.7
5"-53-CU	1260	1.1	0.002	6.3	1.8
5"-54-CU	1640	1.4	0.023	7.0	2.3
5"-54-CU	1750 ± 50	(Complete flooding capacity)			
8"-19-CU	302	0.7	0.02	5.1	1.6
8"-20-CU	810	1.8	0.03	4.8	1.64
8"-21-CU	1170	2.7	0.06	4.4	1.8

* Note: Calculated on an "overall hexone-film basis".

The very low uranium losses in the ICW stream for the 5"-CU series indicate that the 3-hole distributor is a suitable one for operation over the 4-fold range of rates indicated. Comparison of the H.T.U. values in the above table indicates no significant scale-up factor for IC Columns between 5-in. and 8.42-in. diameter. The downward trend in H.E.T.S. for runs 8"-19 through 21-CU is believed due to a progressive increase in the magnitude of mV/L values (m = equilibrium-line slope at the dilute end of the operating diagram; L/V = operating-line slope) from approximately 0.005 for 8"-19-CU to 0.01 for 8"-21-CU. The H.E.T.S. is sensitive to the magnitude of mV/L, while the H.T.U. is relatively insensitive. H.E.T.S. values for the 5"-CU series were higher than for the 8"-CU series because mV/L values were significantly lower--on the order of 0.002 for runs 5"-50 through 54-CU.

During run 8"-21-CU, signs of emulsification and local flooding were noted at 1400 gal./(hr.)(sq.ft.), but operation was satisfactory at 1170 gal./(hr.)(sq.ft.). This flooding is in substantial agreement with previous 5-in. column IC studies when an organic-phase distributor with 0.04-in. holes was used.

1221376

Bldg. 321 Construction and Maintenance

Revisions to the Demonstration Unit to provide increased feed and receiver capacity, increased solvent handling capacity, automatic flow control, and cascade operation of the IA-IB-IC column system, were completed during the month. Final cost figures will be about $16,620, approximately $82 less than the appropriation.

Hinges and door closers for the canyon explosion-resistant doors are presently being installed. The blocking of two ventilation fan holes remains the only item to be completed on Project C-331-B, 321 Building Rehabilitation. Work on Part C--Ventilation Revisions, is progressing satisfactorily. During the month, the air conditioning building floor and walls were erected and progress made toward the fabrication of louvres and duct work. Part D of Project C-331, Tank Farm Gas Blanketing, is moving slowly. The generator, compressor, and surge tank are on order and should arrive on the site by August 1. Installation drawings are still on the drawing board.

Several notable equipment changes were completed during the month. The 121-hole solvent distributor in the 5-inch Scale-Up column was replaced by a 3-hole (ca. 7/16-inch i.d. each hole) spider. This change decreased the tendency of IB systems to produce emulsification and permitted operation at higher capacities. The 8-inch column differential pressure tap system was revised to permit more reliable readings and more efficient maintenance. A heating coil providing an additional 100 sq.ft. of heating surface was installed in Scale-Up tank AQ-8 to increase the rate of concentration and HNO_3 boil-off. An additional spray nozzle was installed in the AQ-8 vent condenser to handle the additional condensation load. Water meters have been installed in the hexone steam stripper and the AQ-8 condenser water lines in order to determine the uranium losses via entrainment.

Equipment Development

During the month, a G.E. & C.L. submerged turbine pump equipped with forced-lubrication carbon-filled fluorothene shaft bearings has been shaken down with water and is currently under life test with 2.0 M aluminum nitrate solution. Life testing has proceeded satisfactorily for about 60 hours at a head of 10.5 psig., a pump speed of 1750 rev./min., a pumping rate of 0.9 gal./min., and forced flow to the upper and lower bearings of about 100 ml./min./bearing. Thus far, operation has been uniform and vibrationless.

A submerged motor (Type KT, 3-phase, 220-volt) designed for operation with process fluid lubrication to graphitar sleeve bearings and graphitar thrust rings has been received from G.E. & C.L., Schenectady. The design of the necessary adaptor plates and suspension tube has been completed. It is expected that three weeks will be required to place the unit in test with a G.E. & C.L. turbine pump.

A Model 1011 all-stainless steel Roth turbine pump for horizontal operation has been operating for 924 hours in 2.0 M aluminum nitrate solution.

Pre-operation testing of the Fischer Scientific Company carbon vane pumps indicates that vane wear is the order of 6.3% after 40 hours of operation in the as-received condition. Careful polishing of the stainless steel housing surface has reduced vane wear to about 0.17% after 288 hours of operation.

1221377 88

Automatic flow control equipment consisting of a Fischer and Porter all-stainless steel transmitting rotameter coupled to an F. & P. recorder-controller operating a Hammel-Dahl motor valve has been on continuous test for about 660 hours with 2.0 M aluminum nitrate. The maximum deviation has been 0.81% from an average flow of 0.563 gal./min. at 61% of full instrument capacity.

Installation of a 12-inch solid bowl centrifuge with suitable auxiliaries for feeding dissolver metal containing a scavenger (Super Filtrol FO) was completed during the month.

Amercoat finishes 1528 and 1528 E reported by manufacturers to be acetone-resistant failed in four days exposure to IAX (0.5 M HNO_3 in hexone).

All materials have been received for the fabrication of low carbon (12 points or less) test cylinders and plates for testing in neutralized and evaporated wastes when treated with Amercoat, Ucilon, Prufcoat, and Seachrome primer.

Process Laboratory

Attention has been given the preparation of $Al(NO_3)_3.9H_2O$ from Alcoa hydrated alumina grades C-33 and C-34 in nitric acid. Dissolution is very small at room temperature but a 2.0 M solution may be prepared by refluxing the oxide with 60% HNO_3 for four hours. The resulting solution contained 2.0 M HNO_3. Some undissolved solids remain. Efforts are being made to determine whether the dissolution may be carried out to acid deficiency.

The following pertinent points have been ascertained with respect to the ANN recovery steps:

1. It is advisable to seed the saturated ANN solution in order to prevent the spontaneous formation of easily shattered needle-type crystals which are difficult to filter and wash.

2. UNH is separated from ANN by a factor of 10^3 in two crystallization cycles.

3. Sodium is separated by a factor of 10^3 in two crystallization cycles.

4. Iron in a simulated composite waste can be removed to a final mol ratio of 1 to 1000, Fe to Al.

5. Adjustment of 2.0 M ANN solutions containing Fe to Al in mol ratio of 1 to 1000 to 0.2 M acid-deficient solution results in formation of ferric hydroxide or hydrated ferric oxide which is difficultly removed. As yet no practical method has been found for this separation.

Neutralization of ANN-containing aqueous waste streams with 50% NaOH to a stable sodium aluminate solution will require at least the stoichiometric amount of caustic and preferably a slight excess.

During the month, study was also given to (1) the reduction of ICU acidity by ion-exchange resins, (2) the preparation of sodium aluminate for use as a neutralizing agent, and (3) the flow characteristics of Super Filtrol slurries.

1221376 89

DECLASSIFIED

Process Design

During the month, chemical flowsheets were issued for the main extraction battery containing the IS Column and the aluminum nitrate recovery unit. Comments on the engineers' flow sketches prepared by the Design Division were prepared and issued. Process information was also forwarded on demineralized water specifications, precipitation during ICU neutralization, HNO_3 specifications, and ferrous sulfamate preparation.

SEPARATIONS PROCESS RESEARCH

Ruthenium Tetroxide Distillation

Tests with one ml. samples of undiluted dissolver solution comparing ruthenium removal at 95° and 75° as a function of time indicate that the lower temperature may be employed, and evaporation of large amounts of water thereby avoided, if one is willing to allow about two hours extra distillation time.

Further studies of possible silver chromate precipitation in the feed solution (2 M UNH) indicate that 0.01 M Ag^+ and 0.1 M $Na_2Cr_2O_7$ are compatible at either 0.2 M free HNO_3 or 0.2 M acid-deficiency. With 0.03 or 0.05 M Ag^+, precipitates occur in the acid system at $Na_2Cr_2O_7$ concentrations of 0.04 M or greater; however, on adding 10 M NaOH to give 0.2 M acid deficiency, these precipitates dissolve, provided the $Na_2Cr_2O_7$ concentration does not exceed 0.08 M. In choosing process conditions, the above results must be considered in relation to (1) the probability that if ozonization is employed 0.1 M $Na_2Cr_2O_7$ will not be needed in Column IA, and (2) the results of experiments with one ml. samples of undiluted dissolver solutions, which indicate that reduction of Ag^+ concentration from 0.05 M to 0.01 M increases the ozonization time required for a given ruthenium removal by only ca. 1-1/2 hours.

The construction of an electrolytic cell for the production of up to 15% by weight of ozone in oxygen has been completed. The ozone yield is varied by changing the temperature of the electrolyte (40% perchloric acid). At 50°C. the cell produces 13% by weight of ozone at a flow rate of 50 ml./min. This cell will be employed to study the distillation of RuO_4 from Hanford dissolver solution as a function of the ozone concentration.

Based upon one experiment with nitrite with low level activity, the addition of nitrite to IBP solution at the start of distillation appears to have no beneficial effect upon the rate of ruthenium removal.

Allyl Alcohol Effects in Redox

It has been established that the major effect of allyl alcohol in decreasing the distribution ratio for ruthenium is due to reduction of the acidity of the aqueous solution through the reaction of the allyl alcohol with the dichromate.

Scavenging Studies

In the event that plutonium (IV) is adsorbed on Filtrol because of incomplete oxidation to plutonium (VI) prior to scavenging, it can be removed by oxidation with dichromate at 100°C. or with ozone at room temperature, without removing an

undue amount of fission product activity. Ozonization shows the greater promise, but both processes are slow. Removal with ozone at somewhat elevated temperatures will be tested and it is anticipated that this will greatly increase the rate of desorption of the plutonium.

Americium and Curium Content of Bismuth Phosphate Extraction Wastes

The nature of the apparent plutonium losses (on the basis of alpha assays) in the extraction wastes has been studied by working at the Radiation Laboratory of University of California. The reported loss on Plant Run No. T-9-05-D-9 for the 8-3-WS was 0.67% and for the 8-3-WS-2 (re-work), 0.35%. The results of the alpha pulse height analysis showed the following contributions from americium^{241} and curium^{242} to the observed alpha losses:

	8-3-WS	8-3-WS-2
Pu^{239}	0.418%	0.089%
Am^{241}	0.064%	0.067%
Cm^{242}	0.188%	0.194%
Total apparent loss	0.67%	0.35%

Reactions of Hexone and Nitric Acid

Past attempts to account for the volumes of gas formed in hexone - nitric acid reactions on the basis of CO_2, NO_2, and NO have not been successful. It was postulated that the error was, at least in part, due to neglect of N_2O formed by reaction of hydroxylamine and nitrous acid. Experimental work has shown that this is the case.

Removal of Methyl Isopropyldiketone from Hexone

It has been previously reported that methylisopropyldiketone can be removed from hexone by refluxing with NaOH solutions for a period of several minutes. The possible design of process equipment involving a vapor phase scrubbing of hexone raised the question as to whether contact can be maintained between the hexone-MIDK and the NaOH solution for a sufficient length of time to cause the desired diketone condensation to occur. Several simple experiments in which 0.4% to 2.0% diketone in hexone was evaporated and bubbled through 2 M NaOH solution held at 100°C. indicated that from 90-95% of the diketone was removed. Since these rough experiments provide only a short contact time (of the order of a few seconds), it would appear that adequate diketone removal can be obtained by this method.

Neutralization of Uranyl Nitrate Solution by NaOH

A few batch experiments were carried out to determine the rate of dissolution of the precipitate formed when IIEU is neutralized with 25% NaOH in preparing IIIDF. The experiments were run at 25° with mechanical stirring and at reflux temperatures where a moderate rate of boiling at total reflux provided the only stirring. Both high temperature and high concentration of UNH decreased the time required for complete dissolution of the precipitate. It appears that a hold-up

1221300

time of two to three minutes should be adequate if neutralization is done in the pot. On the other hand, a hold-up time of eight minutes or more is indicated if neutralization is accomplished just before the feed enters the column; i.e., at room temperature and a more dilute uranium concentration.

Pulse Column Studies

Preliminary IC Column runs have given H.E.T.S. values of ca. 17", higher by a factor of 3-5 than those obtained in Column IA operation. This trend is in agreement with data on packed column performance obtained by the Redox Development Section. The influence of the location of the interface on H.E.T.S. in the IC Column is under investigation.

Preparation of Solvent Extraction Feed from Metal Wastes

Further study of diuranate precipitation in simulated current metal waste solution and of metathesis of the precipitate has given the following results:

1. Phosphate removal in the initial diuranate precipitation does not appear to be improved by the use of excess caustic.

2. Phosphate removal during metathesis appears to increase with the time of metathesis and the amount of caustic solution used.

3. Lack of control of all significant variables is indicated by wide variations in the results of different experiments carried through diuranate precipitation and metathesis. Over-all U/PO_4 ratios of 9 and 70 were obtained in experiments performed under non-identical but reasonably comparable conditions.

Precipitation of uranium peroxide from a nitric acid solution of sodium diuranate gives little or no phosphate removal if ammonia is used for pH adjustment. This is ascribed to the low solubility of uranyl ammonium phosphate, as indicated by substantial improvement in phosphate removal on substitution of sodium hydroxide for pH adjustment.

By substitution of sulfuric for nitric acid in dissolving the diuranate precipitate, the performance of uranium peroxide precipitation is improved in respect to settling characteristics of the precipitate, phosphate removal, sodium separation, and uranium loss. When a 100% excess of sulfuric acid was used in dissolving the diuranate precipitate, precipitation of the peroxide at a pH of 0.6 increased the U/PO_4 mole ratio from an initial 10 to 1600, with a uranium loss of 0.7%. U/Na mole ratios of 20-60 have been obtained. Preliminary attempts to decompose uranium peroxide have, however, indicated that, even in the presence of platinum black catalyst, it may be necessary to add nitric acid to pH <0 to obtain complete dissolution. Also, the question of sulphate carrying by the peroxide precipitate must be answered before the feasibility of this approach can be evaluated.

Favorable results have been obtained by the use of uranyl phosphate precipitation as a method of phosphate clean-up. For example, heating a 2 M UNH solution containing 0.1 M Na_2HPO_4 (pH = 0.5) for 1/2 hr. at 90°C. increased the U/PO_4 mole

1221361

ratio to 190. The precipitates obtained by this means settled readily. Similarly, in systems containing equi-molar concentrations of uranium and sodium, U/PO_4 ratios of 200 to 700 were obtained by heating for one to two hours at 60°. The settling characteristics of the precipitates obtained in these systems were somewhat poorer. Chemical and X-ray analyses strongly suggest that $(UO_2)_3(PO_4)_2$ is the compound precipitated.

A procedure under consideration for both phosphate clean-up and sodium removal combines precipitation of uranyl phosphate (to be recycled) for phosphate removal at pH = 0.5 followed by peroxide precipitation, which may then be conducted at the optimum pH of 2.5. By this procedure, an initial U/PO_4 mole ratio of 10 in the nitric solution of the diuranate was increased to 210 with a resulting U/Na mole ratio of 40 and a uranium loss of but 0.01%.

The solubility of phosphate at room temperature in the presence of 1 M ANN has been determined as a function of UNH and HNO_3 concentrations; i.e., in systems corresponding to various stages of the IS Column operated at various possible acidities. Minimum phosphate solubilities occurred at ca. 0.25 M UNH for the acid-deficient systems and at the maximum uranium concentration studied, 1 M, corresponding to ISF solution, for the acid systems. In terms of the U/PO_4 mole ratio required in a 2 M UNH ISF solution, the solubility minima correspond to 125, 1500, 60, 30, 15, 5 for nitric acid molarities of -0.25, -0.05, 0.2, 0.5, 1.0, and 2.0, respectively.

234-5 PROCESS DEVELOPMENT

The work on the preparation of plutonium on the ten-gram scale by the precipitation of the sulfate-complexed peroxide from a "cut" sample can was completed during this period. A total of seven (7) runs were made in the entire program, three of these during the last month. Two of the last three runs were made to prove the reproducibility of the process. The final run was carried out in a manner that duplicated the run in which a poor reduction yield (74.5%) had been obtained. In the repeat trial, during which particular care was taken to duplicate the original run in every respect, a reduction yield of 96.1% and a good button were obtained. The cause of the low yield in the original run is now known, but it is not likely that the hydrofluorination cycle change made in this particular run is directly responsible for the poor reduction yield.

Apparatus is being assembled to carry out exploratory work on a 200-milligram scale for the precipitation of sulfate-free plutonium peroxide. This work will serve to set the conditions for the precipitation on the 10-gram scale.

Methods to recover plutonium from slag and crucible material have been reviewed in the project literature. It has been found possible to disintegrate uncontaminated crucible material by prolonged exposure to hot concentrated nitric acid. The silaceous material in the crucible is not dissolved, but remains as a precipitate. Work on crucible fragments and slag containing plutonium will be undertaken as soon as the hood in Room 41, 231 Building, is converted into a glove-box hood.

1221382

Qualitative tests in which a solution of oxalic acid in 35% nitric acid was evaporated to dryness indicated that approximately 97% of the oxalic acid initially present is decomposed. The oxidation of dilute oxalic acid, approximately 0.15M, by nitric acid (0.18M) at the boiling point of the solution is first order with respect to oxalic acid. The rate of reaction, however, is too slow to allow the use of dilute nitric acid to destroy the excess oxalic acid in the supernatants from the precipitator. It is very probable that concentrated nitric acid will be found suitable for this purpose.

STACK GAS DISPOSAL

Spot check evaluation of the plant sand filters was continued at both 200 Areas during the month. All monitoring measurements were within the range of normal operation. Routine activity traverses of the plant sand filters with ionization chambers lowered into the vertical monitoring ports continued to show the maxima located at the base of the Type G sand layer.

The investigation of steam injection with the No. 55 Fiberglas unit, packed to a depth of 48 inches at a density of 3 lbs./cu.ft. and employing velocities of 25 and 50 ft./min., was completed. The contamination removal efficiencies obtained with steam injection check well with previous determinations. The filtration efficiencies without steam addition, however, were appreciably higher than those obtained with a previous unit of similar composition. In this particular series of runs, the steam injection determinations were made prior to the dry runs whereas the previous series had used the reverse order. It is planned to repeat these runs at a future date in an attempt to determine whether the discrepancy was caused by this factor or by some other variable.

An investigation of the effect of thin "clean-up" layers of "AA" Fiber (filament diameter 0.00005 inches) upon the filtration efficiency of a No. 55 Fiberglas bed has been initiated. The filtration efficiency of a unit, with a bed depth of 24 inches at a packing density of 3 lbs./cu.ft., was determined over a flow range of 1.8 to 10 ft./min. A single thickness of the Type "AA" mat fiber, 1/2 inch thick at a packing density of 6 lbs./cu.ft., has been placed above this bed. A series of runs at comparable linear velocities is now in progress.

The electrical precipitator installation was checked by a service engineer of the Western Precipitation Corp. It was determined that the repeated electrical failure of the unit was due to a fault in the high tension wiring. The characteristics of the installation were such that the cable leading from the high voltage tap of the rectifier to the discharge electrode within the precipitator was acting as a condenser. A charge was being built up between the copper core of the cable and its lead shielding. This would then spill over to the discharge electrode and result in a heavy arc to the collecting electrode. The consequent current overload would throw out the protector relay. A temporary high voltage line, by-passing the cable, was run from the rectifier to the discharge electrode. A sixteen-hour test run, at a flow rate of 20 cfm, was made with this arrangement. The unit operated well and gave a contamination removal efficiency in excess of 99%. The temporary high tension wiring, used in this run, is being replaced with a permanent lead.

In an effort to determine the proportion of the recontamination activity due to I^{131} in the air exhausted from the top of the stack, three "snifter" monitors

1221383

were subjected to special beta and I^{131} analyses. The results indicate that the bulk of the beta activity, obtained on the filter monitors, is due to fission products other than I^{131}. The use of the proposed Fiberglas filter in the off-gas line should be effective in reducing the extent of the recontamination.

To obtain an indication of the ratios of I^{131} and other fission products present in the dissolver off-gas stream, decay curves have been followed on two monitoring filters. In each case, the sample was drawn from the off-gas stream when no dissolving was in progress. The extremely slow rate of decay reveals that no significant amount of the activity was due to I^{131}. Decay curves will also be determined for filters wherein the sampling period coincides with dissolving operations. Laboratory beta, I^{131}, and fission product analyses will also be made on these filters.

An attempt was made to operate the recently installed effluent sampler on the B Plant 3-5R scrubber. When sampling was attempted, the dissolver pot vacuum fell sharply. The system will be investigated under simulated dissolving conditions, to determine if it is operable.

The contamination removal efficiency of the Farr Wire Impingement Air Filter was checked with a second unit. Canyon ventilation air was again passed through the filter at a flow rate of 500 ft./min. The efficiency range of 20 to 30% checked the previous determinations.

DECLASSIFIED

[redacted]

INVENTION AND DISCOVERY STATEMENT

All persons engaged in work that might reasonable 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 of Invention or Discovery
R. L. Moore	Use of uranyl phosphate precipitation as a specific clean-up step for the removal of phosphate ion in preparing solvent extraction feed.
C. S. Lowe	Removal of Fission Products from Redox Streams by Scavenging with Super Filtrol FO.

R H Beaton

R. H. Beaton, Head
Separations Technology Division

Date: July 1, 1949

[redacted]

1221305

[redacted]

HW-13793

DECLASSIFIED

METALLURGY & CONTROL DIVISION

JUNE 1949

VISITORS & BUSINESS TRIPS

P. R. McGinnis and J. L. Klein of the Metallurgical Project, Massachusetts Institute of Technology, spent June 6-11 at Hanford obtaining metallurgical specimens of irradiated pile process tubes. They were assisted by members of the Metallurgy Section.

Business trips of personnel in this Division were as follows:

C. G. Stevenson attended an AEC conference of the Technical Information Panel at Knolls Atomic Power Laboratory on June 7-10. While in Schenectady he reviewed library, files and publications practices at KAPL and the Research Laboratory. He also spent June 13 at the Argonne National Laboratory discussing these technical information procedures.

H. R. Schmidt and S. A. Hays spent June 6-7 at Oak Ridge National Laboratory and Carbide and Carbon Chemical Corporation (K-25 Division) and June 9-10 at Knolls Atomic Power Laboratory discussing Redox analytical methods.

J. K. Figenshau visited the Leupold-Stevens Instrument Co., Portland, Oregon, on June 10 to inspect special laboratory equipment fabricated by this concern for Hanford.

ORGANIZATION & PERSONNEL

Effective June 1, the metallurgical activities of this Division were reorganized as follows: The 300 Area Plant Assistance Group and the Metallurgy Laboratory Section were combined to form the Metallurgy Section under the supervision of R. Ward, Section Chief. E. A. Smith was appointed Group Head in charge of the 300 Area Plant Assistance work, vice R. J. Schier, who was transferred to the Design Division.

Personnel totals in the several subdivisions are summarized below:

	May 31	June 30
300 Area Plant Assistance Group	10	34
Metallurgy Laboratory Section	23	
Analytical Section	326	323
Statistics Group	12	12
Information Group	56	55
Administrative	3	3
Totals	430	427

[redacted]

1221386

The Metallurgy Section employed one exempt metallurgist, and transferred one draftsman to the Project Engineering Division. The Analytical Section employed one exempt chemist and two clerical personnel. One exempt chemist was transferred into this Section from the Works Laboratory of the Apparatus Department at Pittsfield, Mass. This Section transferred two laboratory assistants to the Metallurgy Section. Three non-exempt personnel were placed on leave of absence for medical reasons, and one returned from a leave. The Information Group employed one non-exempt files clerk.

There were a total of six voluntary quits, all non-exempt.

METALLURGY

Uranium Metal Quality

Work on the evaluation of melt plant furnace pressure and its effect on billet metal quality (Production Test 314-59-M) has been unavoidably delayed by trouble with the vacuum system.

No success has yet attended efforts to locate the cause of high silicon contents in billets cast locally. This study is being continued.

The Test Pile checking of slugs canned from Electromet metal made before and after their change in green salt was completed, and the data are being analyzed statistically.

Uranium Billet Casting

Efforts to improve the surface quality of billets cast locally, and to lengthen the life of the casting molds, have included the experimental use of a mold made of meehanite. After fourteen billets had been cast in this mold it was considered no longer fit for use, due to cracking and pitting near the inside shoulder that rests on the graphite egg cup. This shoulder had deteriorated progressively during the trial period. However, the main bore above the shoulder remained unharmed, and it seems probable that a mold of the same material, but designed to eliminate the shoulder and permit use in the inverted position, would remain usable for at least double the number of castings obtained in the experimental trial. Thus no conclusive statement can yet be made in regard to the feasibility of using ferrous metal molds for casting uranium, although from the standpoint of billet surface quality the metal mold appeared superior to graphite molds.

Uranium Rolling

Measurements were completed on representative samples from the remaining two carloads of rolled uranium rods in the May shipment from Simonds. There was no appreciable difference between these last two carloads and the first two (reported last month) with respect to diameter variation and degree of ellipticity. The average rod diameter continued to run about 0.015" less than in former shipments, but the expected improvement in diameter uniformity was not realized.

DECLASSIFIED

Slug Canning

Continued studies into the causes of No. 4 frost test rejects (those in which a defective bond occurs within 1/2" of either end of the slug) have shown that fracturing of the bond at the cap end occurs principally at the welding operation (due presumably to thermal shock when water quenched), rather than during facing as previously suspected. Tests have shown that the bond strength of slugs currently being fabricated is in general less than that of slugs canned prior to the triple-dip process modifications introduced in August 1948.

Induction Heating Experiments

Due to water shut-offs and other uncontrollable conditions on Saturdays when the melt plant motor-generator equipment was available, it has not been possible to continue the experimental work on induction heating during the past month. However, work has gone ahead on the construction of equipment for recording temperature changes during the heating-quenching cycle, and that for passing 2-1/2 foot rod-sections through the induction coil and into the quench water at a uniform rate.

Special Request Program

Fabrication and/or preparation of specimens for pile irradiation under the Special Request program occupied practically the full time of one man during the past month. The following pieces were processed:

R-40-7	-	3 pieces
ORNL-113	-	2 pieces
ORNL-116	-	16 pieces
UCRL-117	-	1 piece
KAPL-101	-	2 pieces

P-10 Alloy

The installation of facilities in Bldg. 108-B for the alloying, casting, and machining of the lithium-aluminum alloy to be produced for the P-10 program was approaching completion at month-end. Testing of some of the new facilities has been started. Arrangements were made with the Purchasing Division to make another search for a West Coast extrusion mill. If none is located, the alloy billets will be extruded into rod at Phoenix, Ariz. or Detroit, Mich.

Uranium Alloys

A metallographic study of heat treated uranium-molybdenum alloys has been initiated. Four and six percent alloys were examined after being quenched from 800°C followed by annealing at 500°C for various periods of time. After quenching from 800°C, the 6% sample had a polyhedral grain structure similar to that of recrystallized alpha uranium. Upon heating at 500°C the alloy transformed to a fine eutectoid-like structure; this transformation was complete after 2-1/2 hours. The 4% alloy also had a polyhedral grain structure after being quenched from 800°C; however, the grains contained an acidular second phase. Heating at 500°C caused this alloy to transform in a manner similar to

the 6% alloy, but the transformation required 8 hours for completion. The phase retained on quenching from 800°C is probably gamma uranium; however, this will require x-ray confirmation.

A second interim report covering the work to date on the uranium alloy program is being prepared.

X-Ray Crystallography

X-ray orientation work on uranium which had been induction heated into the beta phase and quenched was continued. A series of alpha rolled slugs which had been through the heating and quenching cycle 1, 3, 5, and 10 times were found to have a slight preferred orientation, the degree of which increased with the number of cycles. The orientation differed from that normally observed in alpha rolled material since the (041) and (011) planes tended to become perpendicular to the rolling axis. Only preliminary work was done on cycled gamma extruded metal, since a comparable series of samples was not yet available. However, back reflection patterns of small specimens which had been cycled 1, 2, and 3 times indicated that cycling tended to refine the grain size. A report dealing with metallographic work on the first group of 20 slugs heat treated by induction has been issued. This work on induction heated metal is related to Production Test 313-109-M.

Radio-Metallurgy

The projected use of the underwater bend testing equipment removed from Bldg. 212-N has been abandoned because of the high cost of making this equipment operable, and the limited operating conditions that could be obtained.

Tests have shown that the mechanical sample polisher located in Bldg. 111-B is unsatisfactory. A new design, using the existing main drive mechanism, has been made.

The construction of one optical plug has been completed for the mock-up cell in Bldg. 108-B. A second plug, with additional equipment including an ocular extension and a scanning device, has been requested of the Instrument Division.

Assistance in the sampling of an irradiated pile process tube for tensile and hardness tests was given to J. L. Klein and P. R. McGinnis of M.I.T. A number of samples were retained for study here.

Dilatometry

The alpha coefficient of expansion was determined on two samples of beta annealed, alpha rolled uranium during three cyclic heatings into the beta phase. The coefficient, measured both on heating and cooling, remained essentially constant during the three cycles. Numerically the coefficient was the same as the random value normally obtained for alpha rolled metal which has been heated into the beta phase. These data indicate that repeated heating of alpha rolled uranium into the beta phase does not set up an orientation different from that established by the initial heating of the as-rolled material, at least when slow rates of heating and cooling are used.

DECLASSIFIED

Redox Corrosion Testing

Tantung and Alumina No. 2548 in static, total immersion tests in 1AF Redox solution at room temperature showed no significant change after 96 hours. Steatite under these same conditions showed yellow discoloration and a 0.225 percent weight loss.

Reports were issued on "Automatic and Hand Welded Stainless Steel," Unclassified, dated June 30, and "Waste Storage Tank Corrosion Tests," Document HW-13620, dated June 13.

Miscellaneous

The capsules containing the beryllium creep specimens and the aluminum-magnesium alloy specimens were charged into D pile on June 28. Three capsules were charged, each containing beryllium in four stress conditions and aluminum-magnesium alloy in four conditions of heat treatment. Irradiation times of one, three, and six months will be used.

Construction work on the Experimental Metallurgy Building (3730), Project C-287, was started the week of June 20.

Corrosion tests on stainless steel in HI solution have been re-initiated.

A diagram showing the complete flow and recycling of materials in uranium processing from the ore to the canned slug was completed and issued (Document HW-13699, dated June 20). Yield data (on a VO_3 basis) are included on this flow-sheet.

Preliminary work has started on the problem of renovating canning bath metal scrap in order to render it fit for re-use.

ANALYTICAL LABORATORIES

Work Volume Statistics

The following tabulation shows the source and volume statistics for samples on which analyses were completed:

	May		June	
	Samples	Determinations	Samples	Determinations
Routine Control - 200	1986	3679	1462	2717
Routine Control - 300	482	1240	511	1240
Water Control - 100, 700	527	2972	486	2480
Redox Program Analyses	2172	6135	1627	4287
Process Reagents	935	1817	647	1166
Essential Materials	60	218	155	931
Special Samples	3337	8462	4253	10146
Stack Gas Filters	116	137	49	57
Totals	9615	24660	9190	23024

DECLASSIFIED

100 Areas

In connection with the Pile Technology Division program concerning the recirculation of pile coolant water, assistance has been given in relation to the construction of a stainless steel condensor to be used for condensing a sample of dry steam at 100-D Area.

200 Areas Process Control

In order to accommodate revised production distribution between T and B Plants, the S Division has requested that the 222-T Laboratory be reopened for control work. Steps are being planned to accomplish this by the end of July. The process request laboratories in Bldgs. 271-T and B will be rehabilitated to allow all non-radioactive work to be done in these facilities, and thereby accommodate analytical research personnel in the 222-B & T Bldgs. Until such time as two complete crews are needed in each of these buildings, the shift crews will be split to accommodate the work load, with one supervisor covering both laboratories.

The 234-5 Bldg. Control Laboratory was completed except for balancing of the ventilation air. A small amount of equipment remains to be moved from Bldg. 231 after Special Hazards Regulations can be placed in effect. Analytical control coverage of this operation on a 24-hour per day, seven days per week basis has been arranged.

It has been concluded from results obtained in a program of analyses established to verify the radio-iodine balance in the exit stack gas and process solutions that I^{131} can be determined on process solution samples to an accuracy well within 25%. This would include approximately 5% counting error, back scattering, and analysis error. A detailed report covering the analytical data accumulated is being prepared.

A 3-foot section of stainless steel pipe from Bldg. 292 was analyzed for iodine retention. This pipe section had been located immediately above the monitoring filter. Stack gas from the snifter level (top of stack) had effectively passed through the pipe for a period of three days except during the routine changes of the monitoring filter. Analysis of washings from the pipe indicated 2 μc iodine and 8 μc total Beta. Total beta readings on the end of the pipe were 110 mrep and 25 mrep, respectively, before and after washing.

Routine geometry measurements of the methane proportional alpha counting instruments (accepted value 50.50%) in the 200 Area Laboratories were as follows:

Laboratory	Ave. Geometry (%)	No. of Tests
B Plant (222-B)	50.48%	102
Isolation Bldg. (231)	50.49%	44

The precision of the analytical results of the canyon starting solution (6-3-NR), the Isolation Bldg. starting solution (P-1), and the final product solution (AT) may be summarized as follows:

DECLASSIFIED

Sample	Precision Expected	May Average	June Average
6-3-MR	1.43%	1.59	1.47
P-1	2.39	2.23	1.76
AT	1.98	1.44	1.48

The results from the assay of the synthetic 6-3-MR solution are tabulated below. The standard precipitation procedure, CA-2a, was used and the percent recovery based on 2.077×10^6 c/m/ml.

Month	Laboratory	Ave. Results ($\times 10^6$)	No. Assays	% Recovery
May	222-B	2.065	19	99.4
June	222-B	2.065	21	99.4

A report on the statistical analysis of control data submitted from both the 222-T and 222-B laboratories, and covering analyses on T and B Plant 6-3-MR samples, was issued June 10 by the Statistics Group. No significant difference between laboratories was found.

The standard iron solution used in the Isolation Bldg. Laboratory to check the chemical titration of plutonium was analyzed a total of 66 times during the month. There were 49, 16 and one results inside ± 1%, ± 2% and outside ± 2% of the assay value, respectively. The average precision of duplicate titrations was ± 1.39% as compared to ± 1.38% for May.

Assay Value	Group Ave.	% Diff.	No. Determinations	Precision (±%) Single	Duplicate
11.06	11.06	0	14	1.96	1.39
10.21	10.26	+ 0.4	22	2.33	1.65
14.98	15.04	+ 0.4	14	1.41	1.00
10.22	10.25	+ 0.3	16	2.14	1.52

A statistical report, "Comparison of Weight and Volume Burette Measurements Used for AT Sample Assay," issued June 8, indicated good precision between the two methods. This test is being continued.

300 Area and Essential Material Control

Preliminary work was completed on the analysis of essential materials for Bldg. 234-5, and specifications for all but one of these materials are in the process of being issued.

Difficulty was encountered in applying standard gas techniques to the determination of trace amounts of oxygen in noble gases. No satisfactory explanation has been advanced for the anomalous results obtained. This problem has been referred to the Analytical Research Group for further study.

A spectrographic procedure for the determination of copper and aluminum in tin was developed, approved, and placed in routine use.

DECLASSIFIED

Redox Program Control

At month end there were 61 people assigned to the Redox Control Laboratory in Bldg. 3706. It is planned to reduce this number still further during July.

Methods Adaptation

A modification of the acidimetric method for the determination of aluminum (Redox Method RAV-3) was found to be satisfactory on a micro scale for solutions containing up to 25 g/l of aluminum. A description of the micro procedure has been issued as Redox Method RAV-3a. The interferences caused by nitric acid, UNH and iron were studied and tolerance values were established for these constituents. Procedures for the preliminary separation of the interfering ions were also developed. In the course of these latter investigations it was found that TBP (tri-N-butyl phosphate) is an excellent extractant for the thiocyanate complex of ferric iron. This solvent was found to be superior to amyl alcohol, diethyl ether, or ethyl acetate.

The calibration of the Sargent Model XXI Polarograph for the determination of UNH in IAW type Redox samples is nearly complete. These studies demonstrated that the damping adjustment on this instrument has an effect on the accuracy of the diffusion current measurements. This effect is not critical when the calibration and determination are made at the same damping position.

The volumetric method for the determination of sulfate using THQ (tetrahydroxy-quinone) as an internal indicator was found to be unsatisfactory for IAW solutions due to the slowness of the endpoint.

Investigation of a volumetric determination of nitric acid using potassium fluoride as a complexing agent was continued. Satisfactory results were obtained when aluminum alone was present. In this case the concentration of the fluoride ion is sufficiently small that the buffering action of SiF_6^{--} is not significant. However, when both aluminum and uranium are present, a fluoride concentration greater than 2M is required to avoid hydrolysis of $K_3UO_2F_5$. Under these conditions both SiF_6^{--} and SiO_2 interfere, the latter causing low results.

Instrumental Development

A second neon-amyl acetate tube was tested and a fatigue rate of approximately 4% was noted. The window of this tube was then coated with Aqua Dag and the test was repeated. No fatigue was detected at counting rates as high as 12,000 c/m, and exceptionally good plateaus were obtained.

Additional data have substantiated a previous report that the ASP counters supplied by the Instrument Development Laboratories operate at a geometry of 50.7 to 50.9%. These instruments were calibrated against the standard ASP's by the standard "pie-plate" technique. Comparison of results indicates that the two types of instrument agree within 0.05%, well inside the allowable tolerance of 0.10%. The coincidence losses of these instruments are now being determined.

DECLASSIFIED

Service Groups

Experimental Shop

The Constant Temperature Bath and Agitator being constructed for the Chemical Research Section was 95% completed during the month. The electrical wiring is to be checked for installation and a suitable outlet is to be installed in the laboratory in which it will be used. This piece of equipment has been of special interest because of its size and specifications. The unit will agitate twenty 50-500 ml. volumetric flasks at 420, 750 or 1000 zero to two-inch strokes per minute. A one-horsepower motor drive is required.

Glass Shop

This shop completed fifty-nine requests for new glassware items during the month. Included were a number of pieces of distillation and extraction apparatus. The increasing need for specialized equipment has raised the backlog of work to approximately 180 man hours.

Special Hazard Control

Two pairs of coveralls, specially treated with "Dry-Film" (a silicone compound supplied by the Chemical Department), were submitted to the laboratory for contamination and decontamination tests. Results indicated that these coveralls did not afford any greater ease in decontamination than normal untreated coveralls.

Recommendations developed from the area investigations of Special Hazards Incident #114 and the Near-Serious Accident #49-13 have been acted upon. A report on the corrective steps taken is being prepared.

Analytical Research

Analytical control personnel have been trained in methods for the determination of impurities in 234-5 Process materials; procedures for assay of the process reagents and essential materials have been established.

A method has been examined for the determination of lanthanum in P-1 solution, whereby the combined lanthanum and plutonium oxalates are titrated with ceric ion and the result corrected for plutonium content as determined by radio assay.

The ZPA method for determination of Pu (IV) and the "hydroxide" method for determination of total plutonium have been found satisfactory when applied to Redox solutions of higher plutonium content. Chromic ion interferes with the separation of plutonium and aluminum according to the latter method, but this interference may be avoided by making a prior oxidation of chromic ion to the chromate state. A study of rates of reaction showed that the reduction of Pu (VI) nitrate by $HONH_2$ is immediate, whereas that of Pu (VI) sulfate requires one-half hour.

Investigations have shown that Ru (IV) nitrate may be prepared either by treatment of a solution containing both Ru (III) and Ru (IV) with chlorine and then fuming with nitric acid, or by distilling RuO_4 and subsequently reducing with

DECLASSIFIED

H_2O_2 or SO_2; polarographic techniques were employed to identify the valence state in each case. The standard method for determination of active cerium was tested on synthetic Redox solutions and found to be satisfactory.

Infrared absorption studies designed to determine acetic and isobutyric acids in hexone have shown the method to lack sensitivity in the concentration range of interest. Similar studies on gases evolved during the reaction of hexone and nitric acid have shown definite absorption bands for N_2O and NO_2, whereas investigations on the liquid phase have revealed three bands not assignable to reaction products already studied.

STATISTICAL STUDIES

300 Area Operations

A Lot Summary Record System recommended by the Statistics Group, whereby controls on incoming shipments, machining, canning, and autoclaving will afford a more complete and continuous record of the history of each uranium shipment, is being put into effect in the 300 Area. Process recommendations were made to the P Division and the 300 Area Plant Assistance Group for reducing the probability of producing incompletely transformed slugs. A statistical study revealed that no significant operating or control advantage accrues from the present practice of separating Z and M type slugs.

Other statistical studies pertained to the following 300 Area problems: (1) Calculation of yields from rods through machining, canning, and autoclaving; (2) study of canning, dipping, and inspection rejects; and (3) study of silicon content of B billets in relation to dust storms.

300 Area SF Accountability

Sampling procedures for C-6 sludges were designed for both the P Division and the Redox Development Section to aid in accountability records. Average weights and variations in weights of Z and M type slugs for 75 lots were calculated for the Accountability Section. The study to determine the precision of the analysis of uranium oxide samples submitted by the P Division to the Analytical Section is nearing completion.

Pile Technology

An analysis of diffusion length measurements was completed for the Pile Physics Section, and an analysis of thermal motion in the 100 Area Piles was completed for the Pile Engineering Section. Several arithmetic calculations of integral problems were made.

200 Area Operations

The statistical analysis of sand filter efficiency data was reported in Document HW-13655, dated June 8.

1221395 100

DECLASSIFIED

Routine statistical precision control is being extended to include all separations process analyses.

The statistical program covering the study of 200 Area material balances, for the purpose of improving accuracy and precision, is being expanded.

Redox Development

A number of correlation coefficients between various chemical constituents and properties of Redox feed solutions, and the disengaging time of hexone from aqueous solutions, were obtained as part of a study being made for the Chemical Development Section. Work is continuing on this problem.

LIBRARY AND FILES

Plant Library

The automatic water sprinkler system in the Library portion of Bldg. 3702 in the 300 Area was replaced with a Gamewell "Sprinklostat" alarm system. This installation eliminates the possibility of water damage resulting from the accidental discharge of a wet sprinkler head.

Literature searches were undertaken during the month on such varied topics as: Layout designs for laboratories and machine shops; pile driving; critical pressure ratios of gases; health hazards of metallic calcium; heat conductivity of mixed gases; etc.

Library statistics were as follows:

	May	June
Number of books on order received	84	47
Number of books fully cataloged	96	133
Number of bound periodicals processed but not fully cataloged	0	0
Pamphlets added to pamphlet file	29	461
Miscellaneous material received, processed, and routed (Included maps, photostats, patents, etc.)	20	38
Books and periodicals circulated	1135	1266
Unclassified reports processed	427	163
Unclassified reports circulated	127	184
Reference services rendered	579	1031

	Main Library	W-10 Branch	Total
Number of books	4442	1696	6138
Number of bound periodicals	3354	100	3454

1221396

DECLASSIFIED

Classified Files

L. R. Michener, Acting Deputy Chief, Materials and Information Branch, Division of Research, AEC, visited Hanford Works June 22-25. During his stay, problems of mutual interest were discussed in regard to preparation, categorization, and distribution of Technical Research and Development reports. It is anticipated that his visit will result in some re-definition of current categories in M-3679 to adapt them more precisely to our program.

The tentative list of subject headings on the Rala process, which was submitted some time ago to the Technical Information Branch of the AEC at Oak Ridge was returned, with the addition of further headings suggested by ORNL, for final review before inclusion in the next edition of CA-1927 (List of subject headings for the indexing of reports). The new revised edition will contain in final form the locally prepared subject headings on the Rala process, Redox process, and Hanford canning operations. This will materially increase the usefulness of CA-1927 for our Technical Abstracting Unit.

In response to a request by the local AEC Security Office, a report on the document inventory initiated by GH Instruction No. 96 was prepared for retransmittal to Washington, D. C.

A number of equipment rearrangements were made in the 300 Area File room to make available all wall space for lock file cabinets, and to gain additional office work space.

Work statistics for the Classified Files were as follows:

(Two additional statistical entries are shown this month. These five categories reflect the major percentage of the work of the Classified Files.)

	May	June
Documents routed	9,182	12,548
Documents issued	2,957	4,841
Reference services rendered	1,864	2,796
Reports abstracted	802	845
Registered packages prepared for offsite		391
Inter-area mail sent via transmittal		11,329

Files Assistance Unit statistics were as follows:

Ditto masters run	802	886
Mimeograph stencils run	1,098	557
Ditto master copies prepared	31,300	27,203
Mimeographed copies prepared	52,029	27,039
Volume of mail handled	17,680	16,914

1221397

DECLASSIFIED

INVENTIONS

All Metallurgy & Control 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 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	Item
W. N. Carson, Jr.	Automatic Titrator
F. B. Quinlan	Hydraulically Operated Vise

Signed _____
T. W. Hauff
Division Head

TWH:mcs

MEDICAL DIVISION

JUNE 1949

Summary

The Medical Division roll decreased by 4 from 461 to 457.

In general there was a decrease in most medical activities due to seasonal decrease in illness and to a continued decline in population. This is reflected in higher net operating costs as it is difficult to follow the rapid changes with appropriate changes in numbers of employees.

Industrial

There was no evidence of injury to any employee during the month due to radiation.

Employee physical examinations were down 7% to 3124, while first aid treatments dropped by 27% to 8407.

Total absenteeism decreased by .35% to 1.98%, while that due to sickness only was down by .39% to 1.29%.

Four major and 23 sub-major injuries were treated. Four of the sub-major injuries were sustained by G. E. employees.

The health topic of the month covered Summer Health problems.

Communities - Hospital and Clinics

The average daily hospital census dropped from 74 to 68, while clinic visits declined by 7% to 7577. Dental visits were down by 7% to 2423.

Revised preliminary drawings were made covering additions to Kadlec Hospital and clinic. There were based on up-to-date actual operating experience and revised population estimates. The revised plans reduce the additional space requirements by 8,550 sq. ft., or 22%, and the total beds from 151 to 126. At A. E. C. request, consideration was given to erecting an entirely new multi-story hospital. Estimate indicated that more than forty years would be required to amortize the added cost by applying savings due to added efficiency of operation and decreased maintenance costs.

Public Health

Home nursing visits were down by 50% due to drop in contagious diseases and in general sickness.

The temporary sewage disposal plant in North Richland has been taken out of service after eighteen months of operation. All sewage is now handled in the enlarged Richland plant.

Summary (Continued)

Costs (May)

Net cost of operation of the Medical Division (before assessments to other divisions) was $128,658., about $20,000. more than for April. This was largely accounted for by a decrease of $18,000. in net revenues.

The net expense of the Richland community medical program was $31,226., an increase of $26,985. over April expense. Kadlec Hospital expense was up $12,355. to $22,678. due almost entirely to decrease in revenue.

Clinic expense increased by $14,630. to $8,548. (The clinic operated at a profit of $6,082. during April.) This increase was due to about equal decrease in revenue and increase in direct expense due to payment of commissions to physicians which were actually earned in April.

1221400

MEDICAL DIVISION

JUNE 1949

Plant Medical Section

General

The total number of examinations decreased from 3362 to 3124 in June. Termination examinations remained about the same, 145 being done during the month. First aid treatments decreased from 11,520 in May to 8,407 in June. In June, 1948, there were 18,579 treatments given. Major and sub-major injuries treated, including subcontractors, were 23 as compared to 25 in May.

The industrial physicians' scientific meeting dealt with the properties of nuclear particles, and was presented by a Health Instrument Division member from a practical standpoint.

Further inspection of the 234-5 building was made during the month along with studies of the special hazard problems involved.

The 200-E construction first aid station discontinued operation with completion of the tank farm on June 24th.

The Health Activities Committee met on June 15th, and the coming month's health topic on "Summer Health Problems" was discussed.

Absenteeism due to sickness was down to 1.29%, as compared with 1.68% for the previous month. Study of absenteeism at Hanford as compared with other plants is now under way. The committee plans more investigative work along these lines in an effort to help maintain or even reduce the present low percentage.

Physical Examinations	May 1949	June 1949	Year to date
Pre-employment (G.E.)	76	205	613
Annual	422	403	2744
Food Handlers	52	34	414
Sub-contractors	1937	1597	13640
Rechecks	186	186	1705
Interval Rechecks (Area)	544	548	3321
Terminations & Transfers (G.E.)	141	145	1653
Government	4	6	47
Total	3362	3124	24137

Laboratory Examinations - Clinical Laboratory			
Government	24	35	223
Pre-employment, terminations, transfers	2346	2472	28256
Annual	2611	2467	16812
Rechecks (Area)	2848	2771	17064
First Aid	47	31	334
Clinic	3758	3189	22728
Hospital	2675	2150	20247
Public Health(Inc. food handlers)	258	202	2365
Total	14567	13317	108029

1221401

MEDICAL DIVISION

JUNE 1949

X-Ray	May 1949	June 1949	Year to date
Government	5	2	36
Pre-employment, terminations, transfers	324	347	3762
Annual	427	420	2831
First Aid	205	198	1659
Clinic	310	269	2213
Hospital	190	139	1524
Public Health (Inc. food handlers)	60	118	492
Total	1521	1493	12517
Electrocardiographs			
Industrial	115	151	950
Clinic	18	6	91
Hospital	15	22	169
Total	148	179	1160
Allergy			
Skin Tests	26	33	284
Pathological Slides			
Hospital	170	38	744
First Aid Treatments			
Occupational Treatments	1261	1040	9926
Occupational Retreatments	4699	4023	37173
Welfare Treatments	5560	3344	31879
Total	11520	8407	78978
Major Injuries			
General Electric	0	0	7
Sub-contractors	16	4	76
Total	16	4	83
Sub-major Injuries			
General Electric	3	4	24
Sub-contractors	22	19	196
Total	25	23	220
Absenteeism			
Weekly employees - all causes	2.33%	1.98%	2.57%
Weekly employees - sickness only	1.68%	1.29%	1.77%
Total days lost by males due to sickness.	1193	822	9004
Total days lost by females due to sickness	802	672	6150
Total days lost due to sickness	1995	1494	15153

1221402

MEDICAL DIVISION

JUNE 1949

	May 1949	June 1949	Year to date
Absenteeism Investigation:			
Total calls requested.....	13	23	130
Total calls made.....	13	23	130
No. absent due to illness in family...	1	0	1
No. not at home when call was made....	1	6	15

Village Medical Section

General

Two clinic physicians terminated and will not be replaced.

The average daily hospital census was 68, as compared to 74 for May and 82 for June, 1948.

Clinic visits decreased from 7577 to 7038, which is 7% lower than the previous month, and a similar decrease over a year ago. The North Richland medical center accounted for 9% of the current total.

The net expense of the Richland community medical program was $31,226., as compared to $4,241. for April. This item was made up of the following:

Kadlec Hospital expense..... $ 22,678.
(This figure increased $12,355. over April, due primarily to decrease of $11,000. in revenue.)

Clinic expense..... 8,548.
(This figure increased $14,630. over April, due to decrease of $6,000. in revenue, and increase of $8,000. in direct expenses due to payment of commissions to doctors this month which were earned the previous month.)

The net expense of the North Richland clinic was $6,306., as compared to $7481. for April. In order to effect a more economical operation at North Richland, all services were combined in Wing #1 of the medical center with first aid and pre-employment. This consolidation allowed the reduction of nine employees.

Clinic Visits	May 1949	June 1949	Year to date
Medical.....	1239	1221	9947
Podiatrics.....	693	646	4636
Well Babies.....	106	153	1228
Surgical.....	868	733	5248
Gynecological.....	651	539	3833
Obstetrics (new).....	84	70	572
Obstetrics (recheck).....	937	860	5365
Venereal Disease.....	121	42	1326
Ear, Nose & Throat.....	416	406	3032
Eye.....	272	267	1647
Visits handled by nurses.....	1414	1333	10022
Night clinic visits.....	776	768	4967
Total.....	7577	7038	51823

1221403

MEDICAL DIVISION

JUNE 1949

	May 1949	June 1949	Year to date
Average clinic visits per day.....	291	271	332
Home Visits			
Doctors.....	280	174	1739
Nurses.....	322	208	2747
Total.....	602	382	4486
Kadlec Hospital - Census			
Admissions.....	492	435	3273
Discharges:			
Surgical.....	102	88	674
Medical.....	66	50	675
Obstetric & Gynecologic.....	135	127	778
Eye, Ear, Nose, Throat.....	63	80	411
Pediatrics:			
Children.....	30	30	303
Newborn.....	88	77	470
Total Discharges.....	484	452	3311
Patient Days.....	2295	2043	17310
Average Stay.....	4.6	4.6	5.1
Average Daily Census.....	74.0	68.1	95.9
Discharged against advise.....	2	3	16
One-day cases.....	95	103	568
Occupancy Percentage - Adults.....		61.9	
Occupancy Percentage - Infants.....		161.0	
Occupancy Source: Richland.....		257	
North Richland.....		29	
Other.....		72	
Total.....		358	
Operations			
Transfusions.....	50	38	273
E. E. N. T.....	56	72	342
Dental.....	2	3	9
Casts.....	20	17	128
Minors.....	62	67	426
Majors.....	66	47	380
Vital Statistics			
Deaths.....	1	7	35
Deliveries.....	83	73	463
Stillborn.....	3	0	5

1221404

MEDICAL DIVISION

JUNE 1949

Physiotherapy Treatments	May 1949	June 1949	Year to date
Clinic	130	112	640
Hospital	36	34	317
Industrial - Plant	225	132	1700
Personal	75	55	367
Total	466	333	3124
Pharmacy			
Number of prescriptions filled	2913	2374	21379
Patient Meals			
Regulars	2853	2307	23509
Lights	40	136	916
Softs	1181	789	8516
Surgical Liquids	100	80	590
Tonsils & Adenoids	123	194	833
Specials	1010	1017	6898
Liquids	224	159	1416
Total	5531	4682	42678
Cafeteria Meals			
Noon	2322	2310	14831
Night	320	302	1927
Total	2642	2612	16758
Nursing Personnel			
First Aid Nurses	38	38	
Clinic Nurses	17	16	
Public Health Nurses	13	13	
Hospital General Nurses	71	72	
Aides & Orderlies	52	52	
Total	191	191	

Public Health Section

General

All types of morbidity, chief among which were measles and chicken pox, decreased during the month with a resultant drop of 50% in the number of home nursing visits.

The policy and procedure manual for school health nursing service is in process of preparation. The pre-school roundup for children entering school for the first time was completed this month with 320 children being examined.

1221405

General (Public Health) continued

Special arrangements were worked out with the recreation leaders in the community activities division for cooperative efforts in adjusting socially inadept children to group activities.

The temporary sewage disposal plant in North Richland has been taken out of service following eighteen months of operation, and all sewage flow is now entering the new plant in Richland.

Bacteriological samples of milk and water indicate all supplies to be of satisfactory quality. A chlorination and copper sulphate treatment is being used at North Richland percolation reservoir for algae control.

Administration	May 1949	June 1949	Year to date
Newspaper Articles	15	10	123
Committee Meetings	3	0	48
Attendance	50	0	650
Staff Meetings	1	2	12
Lectures & Talks	2	1	23
Attendance	150	20	2699
Conferences	20	10	228
Attendance	70	50	920
Radio Broadcasts	0	0	3
Immunizations			
Cholera	0	0	3
Diphtheria	199	70	1571
Influenza	0	0	5
Rocky Mt. Spotted Fever	29	19	52
Small Pox	18	6	737
Tetanus	3	1	15
Typhoid	3	10	24
Whooping Cough	0	0	2
Vollmer Patch Test	1	0	7
Total	253	106	2416
Social Service			
Cases carried over	93	100	515
Cases admitted	19	15	139
Total	112	115	654
Cases closed	12	26	129
Remaining case load	100	89	525
Sources of referral:			
Public Health	1	1	24
Doctors	6	4	57
Hospital	0	2	2
Interested Person	2	1	11
School	2	0	5
Personnel Office	0	0	1
Personal Application	1	0	14
Housing	1	0	2

8

MEDICAL DIVISION

JUNE 1949

Sources of Referral (continued)	May 1949	June 1949	Year to date
Industrial relations	0	0	0
Other agency	4	5	12
Miscellaneous	2	2	12
Total	19	15	139

Sanitation

Inspections made	263	218	1944

Bacteriological Laboratory

Treated water samples	190	221	1186
Milk samples (Inc. cream & ice cream)	123	151	797
Other bacteriological tests	202	184	1736
Total	515	556	3719

Communicable Diseases

Amoebic Dysentery	0	1	2
Chicken Pox	81	40	501
German Measles	34	13	168
Gonorrhea	3	1	27
Impetigo	0	1	3
Influenza	0	1	9
Measles	195	68	330
Meningococcic Meningitis	0	0	3
Mumps	0	0	25
Pediculosis	10	0	12
Pinkeye	8	0	33
Poliomyelitis	0	1	1
Ringworm	1	0	13
Scabies	0	0	8
Scarlet Fever	2	0	12
Syphilis	1	3	74
Tuberculosis	0	0	5
Vincent's Infection	0	0	2
Whooping Cough	3	1	4
Total	338	130	1242

Dental Section

General

Total dental visits decreased 9% over the previous month, but were approximately the same as a year ago. A large part of the current decrease was due to vacations.

Patients treated	2635	2423	18255

1221407

MEDICAL DIVISION

PERSONNEL SUMMARY June 30, 1949

	1100 Area					3000 Area					
	Div. Admin.	Industrial	Clinic	Hospital	Public Health	Admin.	Industrial	Clinic	Hospital	Public Health	Sub-total
Physicians	2	3	17.4	3	1		3	4			33.4
Dentists			9					2			11
Nurses	2	12	13	70	10		2	3		3	115
Nurse Aides		1	4	33	1			1			40
Orderlies				7				1			8
Ambulance Drivers		4									4
Techn - Dent. Hyg.			2								2
Techn - Clin. Lab.				14.8			1				15.8
Techn - X-Ray Lab.				5			2				7
Techn - Bact. Lab.				1							1
Techn - Phys. Therapy				1							1
Accountants	2					1					3
Secretaries	2										2
Cler. Work. Leaders	1			1							2
Steno. & Typists	1		1	5	2					1	10
Off. Mch. & Tel. Opr.	6	1				1					8
Gen'l Clerks	20	15	9	12	1	2	11	2			72
Pharmacists				4							4
Dietitian				1							1
Cooks				7							7
Kitchen Workers				12							12
Soc. Serv. Counselors					3						3
Sanitarians					3						3
Health Educator					1						1
Dental Assistants	1		8					2			11
Janitors	15			2		7					24
Bacteriologists				2							2
Records, Supervisors	2										2
Jr. Engineer	1										1
Acctg. Supervisors	3										3
Admin. & Assts.	3										3
Others			3	6	2						11
Total	61	36	66.4	186.8	24	11	19	15	0	4	423.2

10 Medical Division personnel located in outlying areas are shown on next page.

1221408

MEDICAL DIVISION

PERSONNEL SUMMARY

June 30, 1949

	Outlying Areas															
	Sub-Total	100-DR	100-H	234-5	White Bluffs	Pasco	101	100-B	100-D	100-F	200-E	200-W	300	241-BY	Plant General	Grand Total
Physicians	33.4		.25		.25			.1	.1	.1	.2	.4	.2			35
Dentists	11															11
Nurses	115		4		1			1	2	4	4	5	2	1		139
Nurse Aides	40															40
Orderlies	8															8
Ambul.Driver	4															4
Tech.Den.Hyg.	2															2
Tech.Clin.Lab.	15.8							.4	.4	.4	.4	.8	.8			19
Tech.X-Ray Lab.	7															7
Tech. Bact.	1															1
" Phys.Ther.	1															1
Accountants	3															3
Secretaries	2															2
Cler.Wk.Ldr	2															2
Steno.& Typ.	10															10
Off.Mch.& Tel.	8															8
Gen'l Clerks	72		1					.5	.5	1	.5	.5	1			77
Pharmacists	4															4
Dietitian	1															1
Cooks	7															7
Kit. Workers	12															12
Soc.Ser.Couns.	3															3
Sanitarians	3															3
Health Educ.	1															1
Dent. Assts.	11															11
Janitors	24															24
Bacteriol.	2															2
Records Supv.	2															2
Jr.Engineer	1															1
Acctg. Supv.	3															3
Adm. & Assts.	3															3
Others	11															11
Total	423.2	0	5.25	0	1.25	0	0	2	3	5.5	5.1	6.7	4	1	0	457.0

Number of employees on payroll:

Beginning of month	461
End of month	457
Net decrease	4

1221409

[redacted]

DECLASSIFIED

HEALTH INSTRUMENT DIVISIONS

JUNE 1949

Summary

The force increased by one. There were three Special Hazards Incidents, all without serious consequences.

Health Instrument Operational Division findings were generally normal. Conditions were improved in the T and B Plant canyons. In the Concentration Buildings, better measurements of the escape of plutonium through the roof vents indicated the need for corrective action.

Control results from the Development Division were normal. Tests on thin window ion chambers with field sources of beta radiation again pointed up the unsuitability of many commercial meters for such measurements.

Biology Division control monitoring showed no exceptional result.

[redacted]

1221410

[redacted]

Health Instrument Divisions

DECLASSIFIED

HEALTH INSTRUMENT DIVISIONS

JUNE 1949

Organization

The composition and distribution of the force as of 6/30/49 was as follows:

	100-B	100-D	100-F	200-W	200-E	300	700	P.G.	Total
Supervisors	1	1	3	11	3	14	8	0	41
Engineers	5	4	12	22	9	7	1	0	60
Clerical	0	0	1	2	0	4	5	0	12
Others	7	11	21	67	30	50	9	5	200
Total	13	16	37	102	42	75	23	5	313

Number of Employees on Payroll	June 1949
Beginning of Month	312
End of Month	313
Net Increase	1

Added to the roll were 3 engineers, 2 technical graduates, and a technologist. Removed were one engineer, a laboratory assistant, and three general clerks.

General

The reported plutonium deposition case now appears adequately confirmed at the originally reported daily elimination rate of about 2 dis/min. If the plutonium burden was received prior to September 1946, this implies a deposition of about 3 μg Pu.

Considerable progress made in the correction of sub-standard conditions in the T and B Plant canyons.

Building of the Experimental Animal Farm has progressed smoothly. However, the Biology Laboratory has not yet received final approval. It has not been fully emphasized that the farm will be inoperable without the laboratory. In the original plans, a laboratory facility was incorporated in the farm, and this was transferred to the main laboratory for economy.

Three Class I Special Hazards Incidents were investigated. They concerned: (1) using improper equipment in sampling; (2) removal of contaminated material

3

[redacted]

1221411

[redacted]

DECLASSIFIED

contrary to Special Work Permit specifications; and (3) handling of unduly active material with the gloved hand. In none of these was a significant exposure to personnel incurred.

In the International talks at Chalk River, the conservatism of the British on permissible exposures was again emphasized. Some reconciliation has been made by sharp downward revision of the U.S. estimates. For example, for Sr^{90} in drinking water the British limit is 4×10^{-5} uc/liter. The published U.S. value is 0.28 uc/liter (K.Z. Morgan), but the current revision is to 10^{-4} uc/liter or less. For Pu^{239} in drinking water, the British limit is 2.5×10^{-6} ug/liter, compared with the Hanford limit of 10^{-3} ug/liter, reduced this year from 10^{-2} ug/liter. There is no drinking water at Hanford contaminated to the British limit for plutonium. An international conference is to be held in September to resolve present discrepancies.

Steps are being taken to condense the Health Instrument Divisions monthly report. Detailed tabulations that regularly appear in other formal reports will be progressively eliminated. Readers who wish access to such data will be directed to alternative reports upon enquiry.

The following trips were reported:

PL Eisenacher - Scintillation counter conference - Oak Ridge.
CC Gamertsfelder - Joint British, Canadian and USA talks on permissible Exposures and Waste Disposal - Chalk River, Canada.
HM Parker - Chalk River and Schenectady; University of Washington.
FP Seymour - Schenectady, Brookhaven, Argonne Laboratories.
GH Whipple - Computation conference. U.C.L.A.

Visitors included Drs. Biddulph, Ensminger and Higinbotham (Washington State; and Dr. Hicks (ANSCO).

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]

4

Health Instrument Divisions

DECLASSIFIED

OPERATIONAL DIVISION

100 Areas

General Statistics

	May				June				1949
	B	D	F	Total	B	D	F	Total	To Date
Special Work Permits	575	717	581	1873	532	696	488	1716	11861
Routine & Special Surveys	516	481	550	1547	465	486	549	1500	9788
107 Effluent Surveys	102	96	93	291	89	94	90	273	1733
Air Monitoring Samples	111	110	105	326	116	179	102	397	1910

Retention Basin Effluent

The activity of the water leaving the retention basin was as follows:

	100-B	100-D	100-F
Power level (MW)	275	290-305	275
Average beta dosage-rate (mrep/hr)	1.1	0.9	0.9
Average gamma dosage-rate (mr/hr)	2.0	2.3	2.2
Average total dosage-rate (mrep/hr)	3.1	3.2	3.1
Average integrated dose in 24 hours (mrep)	74	77	74
Maximum integrated dose in 24 hours (mrep)	84	98	86
Maximum integrated dose in 24 hours (mrep) (1949)	108	132	106

100-B Area

Unusually high gas activity was noted during soap testing of the drier shell in the #2 cell, due to a broken connection on top of the condenser. Personnel was immediately evacuated, and no overexposure was indicated. Investigation disclosed the line was broken in order to erect a scaffold.

Following segmental discharge of a tube, it was discovered upon entry into the discharge area that the gripper slug and the lead shielding piece were on the tip-off.

Particles of uranium were found on the floor and around boxes of process tubes in the metal storage building. Source of such contamination was assumed to be a bucket of uranium chips stored there by the P-10 operating group. The area was cleaned.

P-10 Operations - 108 Building

Analysis of urine samples taken periodically from all personnel directly assoc-

5

[redacted]

DECLASSIFIED

icted with processing of LiF showed positive results for all personnel except supervision. Individual results for tritium oxide showed a maximum of 7.1 microcuries per liter. Successive resampling indicated that tritium oxide was readily eliminated from the body. Several samples taken in the process hoods further proved that tritium oxide was formed in the process, and was a likely breathing hazard in the atmosphere at times.

Metallurgical Operations - 111 Building

Surface dosage-rates up to 11.2 r/hr as determined with dental film were obtained from rod guides and tips mounted for polishing. All sections were handled remotely without undue exposure. A dosage-rate of 5 r/hr was reported during removal of sections of a process tube from the truck used to transport them to the building. The samples were stored in individual shields along the west wall of the work area, and a maximum dosage-rate of 40 mr/hr was obtained three feet from them. The dosage-rate through the wall at the outside of the building was 1.2 r/hr and a temporary Danger Zone was set up 20 feet from the building.

100-D Area

A new type of clear, water-soluble oil was tested in several process tubes during discharge operations, and survey results compared with contamination experience in the use of Calol. Contamination on tip-offs was increased by a factor of two. However, reduced trough readings indicated the new oil was not adhering to the sides. Comparison of oil samples collected on the discharge face revealed 5.4×10^{-4} microcuries per ml for Calol, and 1.4×10^{-2} microcuries per ml for the new type water-soluble oil. Personnel contamination occurred when clouds of rust emerged from vertical safety rod thimbles as they were vacuumed, but was easily removed. Air samples taken immediately after clouds of such dust arose showed a maximum activity of 1.9×10^{-5} microcuries per liter of air. Waste material in the burial trench was observed piled above the ground level. A general radiation level of 250 mr/hr was found along the edge of the trench, and a maximum of 300 mr/hr at the east end. Plans were immediately started to excavate a new trench. The power level was again increased 15 MW to 305 MW during the month. No unusual changes in gamma radiation readings were observed except for the beam at the top far edge which increased to 1.4 r/hr. Neutron surveys at the #4 seam of the far top edge at different power levels has shown a linear increase in flux for both thermal neutrons and fast neutrons. The estimated total neutron dosage-rate in the beam was 570 mrem/hr. The gamma-ray beam found at the 50-ft. far roof now extends the entire length of the roof and is approximately 2-1/2 ft. wide. The maximum dosage-rate observed was 40 mr/hr at a point corresponding to the #4 seam.

[redacted]

6

1221414

[redacted]

Health Instrument Divisions

DECLASSIFIED

100-F Area

Unusual amounts of contamination encountered during discharge operations gave rise to considerable glove contamination, and some hand contamination occurred when gloves were handled improperly. Decontamination efforts, however, were successful in all cases.

A black cloud of dust blew out from hole 1884 during tube replacement. The condition was corrected when the division valves between the pile building and the gas circulation building were closed. All personnel involved were wearing assault masks, and no skin contamination was revealed during personnel surveys.

High exposure rates were again encountered on the experimental level when a sample from "B" hole jammed, and could not be drawn into the receiving cask. Repairs to "E" experimental hole were completed, and the thimble was cleaned and vacuumed. Evidence of air contamination was found during work on the "A" experimental hole.

Facial contamination occurred during repairs to the vertical safety rods when the respiratory protection was adjusted while wearing contaminated protective clothes. Decontamination of personnel was successful. The intensity of the gamma beam at the top far edge of the pile apparently reached a maximum, as no change was observed during the latter part of the month. Neutron surveys of this beam on the 50-ft. far roof indicate the presence of both fast and slow neutrons but at a very low flux.

Film surveys of tubes on the front face of the pile showed a slight circular beam of radiation escaping from those tubes in the center of the pile containing only two end supported dummies. The dosage-rates are quite low, but it is interesting to note that tubes containing the full dummy train in the same location show no beam of radiation. To date, use of the end supported dummies has produced three hazardous situations: (1) the inadvertent omission of the end supported dummies; (2) the aforementioned slight circular beams on the front face; and (3) presence of metal on the tip-off after charging the tube.

7

[redacted]

[redacted]

Health Instrument Divisions

DECLASSIFIED

200 Areas T and B Plants

General Statistics

	May			June			1949
	T	B	Total	T	B	Total	To Date
Special Work Permits	394	430	824	340	368	708	4,939
Routine & Special Surveys	521	536	1057	506	569	1075	6,463
Air Monitoring Samples	322	685	1007	398	800	1198	6,923
Thyroid Checks	94	73	167	84	98	182	1,277

Canyon Buildings

In the T Plant, considerable effort was devoted toward decontamination of the canyon deck and equipment. Surface dosage-rates up to 15 rep/hr were reported on equipment, 23 rep/hr on deck spots, and 3.4 rep/hr on the protective paper. Eight of the canyon entrance stairwells were surveyed, and all except R-13 were found generally contaminated, with a maximum of 715 mrep/hr at the surface found in the R-3 stairwell. Three cases of personnel shoe contamination were cleaned, and were attributed to the use of the contaminated stairwells. A contaminated floor spot was again found in the 271-T locker room and showed 250,000 d/m Pu, and a shoe with 10,000 d/m Pu was also reported. As was the case the preceding month, when similar contamination was found, the cause was not determined. Three 13-4 samples required H.I. monitor due to high level exposure-rates. Three items of contaminated protective clothing were found in the crane cab and were disposed of. The crane cab air filter was changed when a dosage-rate of 80 mrep/hr was found on the surface of the inlet side. A total of 110 canyon air samples showed significant concentrations, with a maximum of 1.2×10^{-5} microcuries f.p./liter, and 7.5×10^{-10} micrograms Pu/cc, reported.

In the B Plant, contamination occurred in the train tunnel, on ties and tracks in the burial ground, and on the surface of a flatcar, when liquid leaked from agitators being removed to the burial ground through the box in which they were placed. Most of this contamination was successfully removed by month end.

Canyon contamination conditions were improved considerably during the month as a result of an extensive canyon cleanup campaign. A total of 38 canyon air samples showed significant concentrations with a maximum of 1.8×10^{-5} microcuries f.p./liter reported during impacting in cell 6-L.

Control Laboratories

In the T Plant, a complete survey of room 7 was made, and many spots of contamination defined for cleaning. The maximum of 40,000 c/m was found in a drawer.

8

[redacted]

[redacted]

Health Instrument Divisions'

DECLASSIFIED

In the B Plant, 224 items not regulated with respect to handling were found contaminated on surveys by Control and H.I. personnel. Forty contaminated floor locations were reported. Four cases of product and two of fission product hand contamination were reported and successfully cleaned. A laboratory assistant received a hand exposure of about 750 mrep when a doorstop insert was held in the hand for about 30 seconds. The incident was formally investigated.

Concentrations Buildings

In the T Plant, routine surveys of cells A through E indicated the presence of about 130 micrograms of plutonium, of which an estimated 107 micrograms was in A cell. Smears of roof fans showed contamination present on all fans, with a maximum of 25,000 d/m plutonium, and 9,000 c/m f.p. reported. Surveys of the sample truck showed spots of contamination up to 15,000 d/m and some decontamination was done.

In the B Plant, cell exhaust air from the A, B, and D roof vents was sampled continuously since May 24, 1949. In the period of May 24 through June 5, an estimated 160 micrograms Plutonium/24 hours was released to the atmosphere through these three vents. In the period of June 6 through June 18 when production was at a lower rate, an estimated 70 micrograms Plutonium/24 hours was released. Continuous air samples taken inside of these cells showed contamination of about the same order of magnitude as that exhausted through the roof vents.

Stack Areas

In the T Plant, surveys of the new ductwork to the sand filter showed a maximum dosage-rate of 1 r/hr at the inlet elbow. Flexible lines to the sand filter water seal were installed in order to disconnect these seals from the sanitary water line.

In the B Plant, the effluent line from the 292-B building was tied in to the 222-B crib, in order to provide a place for disposal of contaminated waste.

Waste Disposal Areas

In the T Plant, the removal of contaminated ground in the industrial burial ground was continued. Attempts to obtain a 25-gallon sample of first cycle supernate from the 105-T tank were discontinued, due to unusually high dosage-rates encountered during sampling. About 10 gallons of solution was removed, and was later returned to the tank without incident. Similar samples were obtained from the 109-T tank, and showed no unusual dosage-rates, and were successfully shielded and crated for shipment.

[redacted]

9

1221417

[redacted]

DECLASSIFIED

North Areas

Unusual readings were found by S Division personnel on a survey of empty cask car #45. H.I. surveys confirmed this and found high level dosage-rates on the top of the cask, on the inside wall of the well, and at the side of the cask. Similar results observed in the 100 Areas last month, when samples were taken and analyzed by the H.I. Methods Group, showed the contamination to be fission products and plutonium.

Plant Laundry

A total of 39 continuous and 66 spot air samples was taken during laundry operation, and showed a maximum concentration of 5.8×10^{-6} micrograms Uranium/cc during the processing of 300 Area clothing. A contaminated drier drum was removed and buried.

The Isolation Building

General Statistics

	May	June	1949 to Date
Special Work Permits	34	39	224
Routine & Special Surveys	310	324	1881
Air Monitoring Samples	511	529	2686

Operating Cells

A total of 11 items not regulated with respect to handling was found contaminated on surveys by H.I. personnel. Two of these were above 20,000 d/m. A spot of about 0.04 micrograms Pu was found on the corridor B floor and was cleaned. No incident of skin contamination was reported.

The rock wool filter over the A leg exhaust of Cell 2 was replaced with CWS type 6 paper. Samples of the filtered air after filter replacement showed a maximum concentration of 8×10^{-11} micrograms Pu/cc as compared to 4.6×10^{-9} micrograms Pu/cc previously. Tests of the air passed by the rock wool filter on the A leg of Cell 4 were concluded after 8 weeks as only 2 of the 36 samples showed significant concentrations, with a maximum of 2.2×10^{-11} micrograms Pu/cc reported.

The 13 continuous samples of the 903 exhaust air showed a maximum concentration of 10^{-11} micrograms Pu/cc. Ten of these samples were taken subsequent to the CWS type 6 filter installation in the Cell 2 exhaust, and showed a maximum concentration of 2.2×10^{-12} micrograms Pu/cc. Maximum gamma-radiation levels encountered were 17 mr/hr on PR containers, 4 mr/hr at process hoods, and 5 mr/hr on SC's.

10

[redacted]

1221418

[redacted]

Health Instrument Divisions

DECLASSIFIED

Control Laboratories

A total of 261 items not regulated with respect to handling was found contaminated on surveys by Control and H.I. personnel. Ten of these were above 20,000 d/m, and three above 80,000 d/m.

One instance of hand contamination occurred when a laboratory assistant put on rubber gloves inside out after having previously used them and not surveying them when removed. Two other instances of skin contamination were reported, and all three were successfully cleaned. In one instance, 16 spots of floor contamination were found in rooms 33, 34, and 35, on a survey by Technical personnel. In addition, 6 other incidents of floor contamination were reported, and all were successfully cleaned.

Technical Development Laboratories

Six items not regulated with respect to handling were found contaminated on H.I. surveys, and three of these were above 20,000 d/m. There were 5 incidents of floor contamination reported, and one incident of skin contamination, all successfully cleaned.

[redacted]

[redacted]

Health Instrument Divisions

DECLASSIFIED

The 300 Area

General Statistics

	May	June	1949 to Date
Special Work Permits	238	178	1217
Routine & Special Surveys	175	162	1022
Air Monitoring Samples	108	203	694

Metal Fabrication Plant

Twenty-three of 35 air samples taken were above 5×10^{-5} micrograms U/cc as follows:

Location	Number Taken	Number above 5×10^{-5} µg U/cc	Maximum Conc. µg U/cc	Conditions
Chip Recovery	15	7	2.6×10^{-4}	By chip hopper
Machining	5	1	1.0×10^{-4}	By #11 facing lathe
314 Building	8	8	2.9×10^{-3}	Rod straightener
Graphite burning	6	6	7.0×10^{-4}	Unloading ashes
Railroad car	1	1	1.2×10^{-4}	Loading billets

A special survey of leather gloves used in handling bare uranium reconfirmed a maximum wearing time of 4 hours under present operating conditions. Use of handling tongs would most likely increase the wearing time of the leather gloves.

Some difficulty was encountered in limiting individual exposures of Melt Plant personnel below the recommended permissible exposure level of 300 mrep/week. Further rotation of personnel was started. The possibility of heat effects on the film worn by the Melt Plant operators is under investigation.

100 Areas Associated Laboratories

During a test run in the 305 Building, an irradiated slug was inadvertently handled with gloved hands. A surface dosage-rate of 1.5 rep/hr was reported on the slug, and the exposure time was estimated as under 30 seconds. Work on masonite rings from the shaft of the vertical step plug and the removal and burial of a contaminated lathe from the 3741 Building were performed without incident.

Technical Building

A procedure was established for delivery of samples from the 200 Areas and the return of active liquid wastes from the 3706 Building.

A spill of about 1 microgram of Pu occurred in a hood in room 96. Decontam-

12

[redacted]

1221420

[redacted]

DECLASSIFIED

ination was successful and no skin contamination was found. At another time, a dissolver solution spill occurred in room 98 which was also successfully cleaned, and no personnel contamination was encountered.

Cold Semi-Works Building

An operator was sprayed with UNH solution due to a leaky gasket in a feed line flange. No skin contamination was reported after showering. A total of about 872 lbs. of uranium has been discharged to the 300 Area waste ponds through June 27, 1949, of which about 210 lbs. were added in June. The total uranium in waste solution to the 300 North crib through June 27, 1949 is reported as about 63 lbs., with no additions during June.

Hand Score Summary

A total of 28,104 alpha, and 34,042 beta hand scores, was recorded. About 0.17% of the alpha and about 0.07% of the beta scores were high. No attempted reduction was recorded for 6 high alpha scores and 17 high beta scores all in the 300 Area. Where decontamination was attempted, it was successful in all cases.

PERSONNEL METERS

Pencils	100-B	100-D	100-F	E&N 200	200-W	300	Total	1949 To date
Pencils read	9,583	11,018	13,820	25,301	40,911	38,396	139,029	916,033
Single readings (100 to 280 mr)	9	32	21	23	76	47	208	1,578
Paired readings (100 to 280+ mr)	0	1	2	0	1	0	4	13
Single Readings (Over 280 mr)	19	33	25	22	81	85	265	1,635
Paired readings (over 280 mr)	0	0	1	1	1	0	3	17
Paired readings lost	2	1	2	0	4	1	10	42

No significant pencil result was confirmed by the badge result. Investigation of lost readings showed no possibility of an overexposure.

13

[redacted]

1221421

[redacted]

Health Instrument Divisions

DECLASSIFIED

Badge Resume, Construction Areas

	105-DR	241-TX	384	241-BY	Total	1949 To Date
Badges Processed	559	1,572	154	914	3,199	60,807
No. of Readings (100 to 500 mrep)	3	2	0	29	34	203
No. of Readings (Over 500 mrep)	0	0	0	0	0	19
Lost Readings	0	1	0	1	2	52

Both lost readings were due to lost badges.

Badges

	100-B	100-D	100-F	200-E	R.R T. 200-N	200-W	300	Total	1949 To Date
Badges Processed	2,514	1,873	2,097	2,062	556	3,193	5,853	18,148	120,555
Number readings (100 to 500 mrep)	10	32	55	9	0	4	171	281	1,647
Number readings (Over 500 mrep)	0	0	0	1	0	0	2	3	10
Lost Readings	19	1	1	1	2	2	7	33	121

The result above 500 mrep in the 200-East Area was on a recovered lost badge, and was attributed to heat. The two results above 500 mrep in the 300 Area were both due to contaminated badges.

Lost readings occurred as follows:

Sensitive film not packaged	18
Defective film	7
Lost in processing	3
Badge lost in area	2
Badge dropped in water	2
No packet in badge	1

Investigation of lost readings showed no possibility of an overexposure.

Badges processed, 1949, -	Operations	120,555
	Construction	60,807
	Total	181,362

In addition, 2,786 items of non-routine nature were processed. The 1949 total to date is 16,418.

[redacted]

14

Health Instrument Divisions

DECLASSIFIED

CONTROL AND DEVELOPMENT DIVISION

Control Functions

Water sampling was continued on a routine basis and the results were essentially no different than is normal. Drinking water samples were all very low. The maximum beta activity in a river sample was about 700 microcuries per liter. Mud samples from the Columbia River had about 90 millimicrocuries per kilogram in good agreement with previous values.

Atmospheric monitoring with Integrons, "C" Chambers, Air filters, and rain collection, indicated only normal levels aside from some instrument faults at Hanford, and the 3000 Area. Vegetation contamination was also normal, - the maximum being 70 millimicrocuries of I^{131} per kilogram, and 76 millimicrocuries of non-volatile beta emitters per kilogram at the 200-West Gate.

Geology

Activity in the water samples from wells 361-B-1 and 3, near the reverse well in the 200-East Area, is following the curves of decreasing activity previously reported. Activity levels in 361-B1 are expected to be at or below the significant level during July if the present trend continues. Increased sampling of well 361-B-9 has established a definite trend of activity which more nearly parallels the decay surve for ruthenium than do wells 361-B-1 and 3. Samples from the bottom of well 361-B-9 show higher levels of activity than do samples taken at the water surface.

Beta-gamma activity in the 108-B wells is below the significant level as a result of water table rise caused by the rise of the river. The level of activity in the 300 Area wells located between the retention ponds and the river has not changed appreciably, even though the river has dropped more than 2 feet per week during the month of June.

Meteorology

June 1949 was the windiest month since the beginning of records at 622 building. Average speed at the 400-ft. level was 16.2 mph. The previous windiest month at this station was June of 1945, when the average 400-ft. level speed was 15.7 mph.

In spite of the record average windspeed during the past month, there were no severe windstorms, and no dust storms occurred. The peak gust was one of 56 mph from the WNW at the 400-ft. level on the 23rd.

The diurnal range in wind velocity during the past month was large -- the speed varying uniformly from an average of only 9.0 mph (at the 400-ft.level)

15

1221423

DECLASSIFIED

between the hours of 0900 and 1000, up to an average of 26.1 mph (at the 400-ft. level) between the hours of 2100 and 2200. The prevailing NW direction occurred only 21% of the time between the hours of 0800 and 1600, but occurred 53% of the time between the hours of 1600 and 0800.

The past month was dry in the extreme. Total precipitation was only 0.01 of an inch, and there were no thunderstorms. This was in sharp contrast to June of 1948, when precipitation totaled 1.47 inches, and one or more thunderstorms were observed on eight different days.

Temperature during the past month averaged 69.4°, which is exactly normal for June. An abnormal aspect, however, was that the first part of the month was the warmest, while the last part was the coolest. During the heatwave from the 4th to the 14th, temperatures averaged 76°, or about 8° above the seasonal normal. During the cool wave from the 25th to the 30th, temperatures averaged only 62°, or about 11° below the seasonal normal. The variation in temperature was from a high of 102° on the 6th, to a record-breaking seasonal low mark of 42° on the 30th.

Forecasts	Number	Percent Reliability
8-hour Production	90	85.5
24-hour General	60	85.0
Special	24	87.5

Biology

Four hundred and thirty-three urine samples were analyzed for plutonium during the month. The blank samples averaged 0.06 d/m, and the overall yields are 90%. No resamples were necessary because of high values on urine samples.

The resample necessitated last month has been taken and analyzed with results below the significant level. The man previously reported as positive for plutonium was hospitalized for two days and two separate 24-hour samples obtained. The results confirmed the previous conclusions of about 2 dis/min of plutonium excreted per day.

One hundred and forty-three urine samples were analyzed for uranium on the fluorophotometer. The uranium content of these samples was:

Job	Maximum µg U/liter Urine	Average µg U/liter Urine
Melt Plant	30	18
Material Handling	23	11
Machining	15	6
Canning and Dipping	4	3
Inspection	8	4
305 Building	4	3
Other Areas on Plant	4	1

16

[redacted]

DECLASSIFIED

Methods Development

Analyses of urine samples from personnel in the P-10 Area have continued with all values decreasing markedly after cessation of work. Other air samples, etc. have been examined and found to contain tritium oxide. Attempts to use resin columns for the separation of fission products in urine have continued with difficulties due to certain reagents used in the plutonium analysis. The electrodeposition of plutonium for urine analysis and general sample analysis shows considerable promise with yields of 90 to 100% obtained on levels of 1.0 to 6.0 dis/min. The possibility of using alpha film as a sensitive alternate to counting methods and counting tracks under 430 times magnification has been shown to be quite definite. Preliminary investigation of fission film as another alternate has shown negligible interference from the expected gamma radiation incident to the proposed pile irradiation.

A study of the placement of the absorber for extrapolation of the result through the counter window has indicated the need for further study. Performance tests are being run on the Berkeley Decade scaler, a Keleket alpha counter, a resistance quenched counter tube, low background alpha counter, and with an Argon-filled chamber. Comparison tests between the fluorophotometer and the ether extraction procedure have indicated possible errors ($\sim$ 20%) in both procedures for uranium determinations. Attempts to count tritium by the use of acetylene mixtures with other gases in proportional counters have shown that positive counting rates above background may be obtained although in general performance characteristics are poor. Comparisons between I^{131} measured by aliquots, on the coincidence counter, and in a vacuum collimating counter are beginning to show agreement ($\sim \pm 5\%$). Further work is planned to check the reproducibility.

Methods Control

Sample Type	Number
Alpha emitters	3,478
Beta emitters	6,074
Decay curves	520
Absorption curves	30
Fluorophotometer	564
Control Points	2,744

Physics

The fast neutron counter was used to make some field measurements around the 100-F pile. A measurement on the open "B" hole beam indicated a flux equivalent to 2×10^5 Po-Be neutrons/cm^2/sec at a time when the pile was operating at full power. The characteristics of the counter are not yet well enough known to do more than make a comparison with the results obtained with a Po-Be source. There is some indication of sensitivity to slow neutrons which was observed as a reduction of counting rate when the slow neutrons were removed by the insertion of cadmium sheets in the beam.

17

1221425

DECLASSIFIED

The C.P. meter sensitivity to fast neutrons has been determined and the result as given in HW-13658 is that 100 Po-Be neutrons/cm^2/sec gives 0.084 $\pm$ 0.007 times the current produced by 12.5 mr/hr of gamma radiation.

The conventional C.P. meter has a chamber window of 36 mg/cm^2. Field tests of such a meter modified to a 6.6 mg/cm^2 window have re-emphasized the desirability of making beta ray measurements with the thinner window, which approximates the natural filter of the dead outer layer of skin. In most cases, the thinner window gave a dose-rate approximately three times higher than the normal (erroneous) C.P. meter reading. Exceptionally, as in the Pile Area drier room, the reading was enhanced 800 times.

Industrial Hygiene

Air sampling for particle size measurements is still in progress in the Melt Plant. The previous difficulty experienced with the high temperatures in the oxide burner room was overcome by adding shielding and dry ice cooling to the thermal precipitator. Some specimens of uranium oxide have been mounted for photomicrography to be done by the Rochester Group in the near future.

A program of continuous sampling to determine the general atmospheric dustiness is in progress in the 292-U Building.

A study of trichlorethylene degreasing operations was conducted in the 105-H Building. Two degreasers are in use during construction for the purpose of cleaning small metal parts. A report of this study will be issued shortly.

Instrument Development

The redesigned ion chambers for the "Neut" neutron meter which afford a better guard system for the collecting electrode and better gasketing have been tested with gas pressures approximating those used in Chang and Eng. The sensitivity of two sets of chambers came to within 10% of the sensitivity of Chang and Eng. Presumably this better operation is due largely to partial elimination of the wall effect because of the greater pressures.

The scintillation counter which was built in Schenectady is giving better results after the relatively thick layer of phosphor was replaced by a much thinner one which just succeeds in stopping all the alpha particles. Besides improving the response the background was also reduced appreciably by use of the thinner phosphor.

Results obtained with the pulse analyzer indicated that the ion chamber being used was not adequate because of improper electrical field distribution. A new chamber to correct these faults has been designed, and is to be constructed by the Instrument Division.

A circuit is being designed for use with an electromagnetically modulated

18

1221426

DECLASSIFIED

miniature electrometer tube for use in a highly sensitive portable special survey meter.

Calibration of the water curtain beta monitor has been delayed because of mechanical trouble with rust in the solenoid valves and to water and power outages.

Calibrations

The routine calibrations were:

	Number of Calibrations	
RADIUM CALIBRATIONS	May	June
Fixed Instruments		
Gamma	441	341
Portable Instruments:		
Alpha	177	205
Beta	425	343
Gamma (Radium)	668	614
X-ray Scanning	35	52
Neutron	15	10
Total	1,320	1,224
Personnel Meters:		
Beta	1,124	1,085
Gamma (Radium)	8,842	7,858
X-ray	5,068	6,264
Neutron	13	0
Total	15,047	15,207
GRAND TOTAL	16,808	16,772

1221427

Health Instrument Divisions

DECLASSIFIED

BIOLOGY DIVISION

Aquatic Biology

1. Effect of Pile Effluent on Aquatic Life

Young chinook salmon now making up the monitoring tests are approaching a size and age at which they should migrate to sea, and will need to be liberated next month. Water temperatures are above the optimum range for these fish in concentrations of 10 percent or more of area effluent water and consequently are contributing to increased mortality rates. This effect is also becoming noticeable at the 5 percent level. Chemical toxicity still predominates as the cause of adverse effect of the pile effluent water on salmonoid fish.

The activity accumulated in young salmon and trout reared in greater than 5 percent effluent water remains at some 30 to 50 times that of the water.

2. Biological Chains

The last of the trout which had been fed active crayfish was sampled after being on the diet for 240 days. Its activity was somewhat less than those sacrificed last month. In trout feeding upon active algae or carp the activity remained about the same as last month. Trout formerly on a diet of active snails lost their activity at a rate corresponding to a 12-day half-life; most tissues required about 100 days to reach background levels again. Activity persisted in bone slightly longer than in other tissues.

The activity in shiners held in pile effluent water has fluctuated over a considerable range, but has generally increased during the past three months to attain the level of activity reached last November. Activity in shiners fed active snails remains at about the same level observed in April.

3. Radiobiological Survey

High water levels in the river continued to restrict field sampling during June, but routine sampling will again be possible in July. The number of planktonic organisms per unit volume of river water decreased for a time during the middle of the month which lowered the average to about 60 percent of that found last month. The activity of the plankton decreased slightly in spite of increasing activity in the water which has resulted from reduced river flow. Activity in the fish remained about the same as found last month, a maximum of 0.23 beta μc/kg being found in the scales of a sucker. Large hatches of caddis flies have been emerging from the river, and have shown an average activity of about 0.01 beta μc/kg.

20

[redacted]

Health Instrument Divisions

DECLASSIFIED

ZOOLOGY

1. Toxicology of I^{131} in Stock Animals

Histological preparation of control thyroids has continued with no unusual variations from the normal observed.

A 16-month lamb on a low iodine diet of alfalfa hay has been shown to accumulate in the thyroid in excess of 50 percent of a single 50 μc dose of carrier-free I^{131} administered orally. The uptake was noticeable within 30 minutes, and reached a maximum at about 20 hours, then leveled off for the next 34 hours. The biological half-life will be determined during the month of July.

2. Biological Monitoring

Three new monitoring stations have been established by planting Pekin ducks at 200-N and 300 Area, and by planting pheasants, Canada geese, and mallard ducks, at Hanford.

Four age-groups of Pekin ducks were sampled from the 100-F Station for comparative uptake rates. Younger birds were considerably higher, presumably due to the more rapid phosphorous turnover. Bone samples best demonstrated the difference. Bone in a 4-week and 6-week old ducklings had activity 0.4 beta μc/kg; while a 8-week bird had 0.2 beta μc/kg, and a 2-year drake had less than 0.01 μc/kg.

Two jackrabbits from near the 200-E Area had thyroid activity of 25 and 40 beta μc/kg on 6-6-9 (the MPL is about 4 beta uc/kg.).

Botany

1. Agricultural Field Station

The rapid drop of the Columbia River level has caused considerable difficulty in maintaining a supply of irrigation water. The activity of the soil for the month averaged 0.022 beta μc/kg. Activity on cherries, apricots, and plums, was never above background. In the sample of each of these fruits a composite of the entire fruit was made, and, in addition, the epidermis, flesh, and seed were sampled separately. Late potatoes were planted June 30, 1949.

2. Separation Area Control

Samples of second year growth of alfalfa in the 200-E Plot had an average short-lived activity of less than 0.001 beta μc/kg, possibly due to I^{131}. Longer-lived activity was less than 0.002 beta μc/kg.

Samples of both Russian Thistle and alfalfa collected from the R-3 Danger Zone showed no increase of activity during the month. Plants in this area have been severely damaged by the use of 2-4-D in the weed control program of the 200-E Area.

[redacted]

[redacted]

Health Instrument Divisions

DECLASSIFIED

3. Use of Algae for Removal of Radioactivity from Pile Effluent

The green algae have not been satisfactory as practical agents for decontamination. Work is being continued with other algae and procedures.

Biochemistry Group

1. Collection and Analyses of Active Particles

A trial run was made to prepare for total alpha and beta activity determination in particles previously collected. Preliminary data indicate about 4×10^6 alpha d/m/g (uncorrected), and 0.5 beta mc/g.

2. Exposure of Rabbits to Active Particles

Work continues on the exposure of rabbits to stack gas. Techniques are being developed for histological study of lungs, radioautography, and the use of the phase microscope.

3. Percutaneous Absorption of Plutonium

The study of plutonium assay in biological materials continues.

GENERAL ACCOUNTING DIVISION

JUNE 1949

DECLASSIFIED

GENERAL

Hanford Works and Nucleonics Department Financial Statements were completed on June 17 and June 20, 1949 respectively. General Divisions' Operating Reports were completed on June 15, 1949.

On June 1, the new procedure covering AEC reimbursements and the financing of the GE operation of Hanford Works was made effective. The advance from AEC as of May 31, 1949 in the amount of $25 000 000 was reduced during the month to $749 924. This reduction was accomplished through the submission to AEC of non-payment Public Vouchers totaling $14 915 651, and transferring $9 334 425 to the current advance account. In addition to transfers from the original advance account, additional advances of $6 500 000 and $987 101 were booked in the current advance account in June. After June liquidations, balances in the advance accounts at the end of the month totaled $8 000 000. These balances consist of:

Cash in Banks		$ 5 537 975
Contract Accounts	$ 5 482 975	
Salary Accounts	55 000	
Travel Advance Funds		50 000
Cash in Transit		987 101
Advances to Subcontractors		675 000
Original Advance - Unliquidated Portion		749 924
		$ 8 000 000

CPFF Subcontract No. G-1012 with the Morrison-Knudsen Company for plant railroad track maintenance expired on June 30, 1949. The AEC Audit Branch has approved the payment of salaries to the three remaining employees who will remain for an estimated four to six weeks.

A change in the procedure for delivering salary checks to employees by supervision in the areas was made effective June 9. Checks are now delivered to patrolmen on Thursdays at the area gate houses and are picked up for delivery by authorized personnel from each division for distribution to employees during their regular work shift. This change has resulted in (1) delivery of checks by supervision during regular work shift, and (2) more stringent control in distributing checks.

Work in connection with 1950 and 1951 Budget Estimates continued in June. Revisions in original budgets were made and considerable additional information was furnished as requested by AEC.

DECLASSIFIED

General Accounting Division

STATISTICS

Employees and Payroll	Total	Monthly Payroll	Weekly Payroll
Employees on Payroll at beginning of month	7 396	1 652	5 744
Additions and transfers in	176	11	165
Removals and transfers out	(169)	(26)	(143)
Transfers from Weekly to Monthly Payroll	--	5	(5)
Transfers from Monthly to Weekly Payroll	--	(6)	6
Employees on Payroll at end of month	7 403	1 636	5 767

Employees on Payroll at end of month	May	June
Manufacturing	2 923	2 995
Design and Construction	782	716
Community	746	755
Other	2 945	2 937
Total	7 396	7 403

Overtime Payments		
Weekly Paid Employees	$30 699	$28 420
Monthly Paid Employees	3 100	1 768
Total	$33 799	$30 188

Number of changes in Salary Rates and Job Classifications	649	441

Gross Amount of Payroll		
Manufacturing	$1 006 284	$1 214 955
Design and Construction	282 385	282 410
Community	226 079	271 224
Other	905 771	1 045 810
Total	$2 420 519*	$2 814 399**

Annual Going Rate of Payroll		
Manufacturing	$12 647 820	$12 776 145
Design and Construction	3 316 534	3 052 322
Community	2 826 241	2 831 956
Other	11 391 989	11 216 577
Total	$30 182 584	$29 877 000

Average Salary Rate Per Hour***	May			June		
	Weekly	Monthly	Total	Weekly	Monthly	Total
Manufacturing	$1.953	$2.608	$2.066	$1.952	$2.595	$2.062
Design and Construction	1.515	2.651	1.933	1.534	2.628	1.967
Community	1.706	2.301	1.823	1.700	2.309	1.819
Other	1.590	2.503	1.804	1.589	2.498	1.803
Total	$1.746	$2.544	$1.923	$1.751	$2.534	$1.924

*Includes four weeks in case of weekly paid employees.
**Includes five weeks in case of weekly paid employees
***Includes shift differential, isolation pay, and du Pont employees on loan to General Electric Company. Excludes overtime premiums, commissions, Suggestion Awards, etc.

1221432

General Accounting Division

Employee Plans

Pension Plan

	May	June
Number participating at beginning of month	6 369	6 411
New participants and transfers in	107	109
Removals and transfers out	(65)	(49)
Number participating at end of month	6 411	6 471
% of eligible employees participating	92.6%	92.0%

Employees Retired	June	Total to Date
Number	9	82
Aggregate Annual Pensions including Supplemental Payments	$2 532	$18 718*
Amounts contributed by employees retired	$ 954	$ 6 374

*Amount before commutation of pensions in those cases of employees who received lump sum settlement

Group Life Insurance

	May	June
Number participating at beginning of month	6 159	6 104
New participants and transfers in	57	47
Cancellations	(42)	(192)
Removals and transfers out	(70)	(69)
Number participating at end of month	6 104	5 890
% of eligible employees participating	78.6%	78.1%

Insurance Claims	June	Total to Date
Number of deaths	1	28
Amount of insurance	$4 300	$140 143
Premiums paid by employees who died	$ 89	$ 1 767

Group Disability Insurance - Personal

	May	June
Number participating at beginning of month	6 744	6 625
New participants and transfers in	58	43
Cancellations	(10)	(4)
Removals and transfers out	(167)	(123)
Number participating at end of month	6 625	6 541
% of eligible employees participating	89.4%	89.3%

Group Disability Insurance - Dependent

Number participating at beginning of month	4 073	4 028
Additions and transfers in	25	32
Cancellations	(6)	(7)
Removals and transfers out	(64)	(51)
Number participating at end of month	4 028	4 002

1221433

General Accounting Division

Employee Plans (continued)

Group Disability Claims	May	June
Number of claims paid by insurance company:		
Employee Benefits	109	75
Daily Hospital Expense Benefits	106	93
Special Hospital Services	115	90
Surgical Operations Benefits	85	76
Dependent Benefits Paid		
Daily Hospital Expense Benefits	126	88
Special Hospital Services	125	86
Amount of claims paid by insurance company:		
Employee Benefits	$13 304	$12 218
Dependent Benefits	4 215	2 852
Total	$17 519	$15 070

Group Disability Insurance - Premiums		
Personal - Employee Portion	$11 394	$11 297
- Company Portion	7 200	6 960
- Total	$18 594	$18 257
Dependent- Employee Portion	$ 3 643	$ 3 633
- Company Portion	451	414
- Total	$ 4 094	$ 4 047
Grand Total	$22 688	$22 304

Annuity Certificates (For du Pont Service)	June	Total to Date
Number issued	3	65

U. S. Savings Bonds	Mfg.	D & C	Comm'y	Other	Total
Number participating at beginning of month	1 899	381	375	1 546	4 201
New Authorizations	12	6	6	19	43
Voluntary Cancellations	(45)	(6)	(8)	(29)	(88)
Removals and transfers out	(10)	(47)	(2)	(18)	(77)
Transfers in	7	1	-	18	26
Number participating at month end	1 863	335	371	1 536	4 105
% participating	62.2%	47.3%	49.1%	52.3%	55.5%
Bonds issued					
Maturity Value	$108 350	$21 025	$18 650	$84 100	$232 125
Number	1 937	347	346	1 490	4 120
Refunds issued	51	26	9	42	128
Revisions in authorizations	12	4	8	35	59
Annual going rate of deductions					
New Plan	$ 805 048	$138 993	$138 185	$616 992	$1 699 218
Old Plan	221 389	36 932	33 140	150 326	441 787
Total	$1 026 437	$175 925	$171 325	$767 318	$2 141 005

Suggestion Awards	June	Total to Date
Number of Awards	2	350
Total Amount of Awards	$180	$3 820

4.

General Accounting Division

Employee Plans (continued)

Employee Sales Plan

	June		
	Total	Major Appliances	Traffic Appliances
Certificates Issued	252	63	189
Certificates Voided	4	3	1

Salary Checks Deposited	May	June
Monthly	869	861
Weekly	893	892
Total	1 762	1 753

Special Absence Allowance Requests		
Number submitted to Pension Board	14	10

Absenteeism (Weekly Paid Employees)		
January 1 to June 26	1948 2.42%	1949 2.51%

PERSONNEL AND ORGANIZATION - GENERAL ACCOUNTING	May	June
Number of Employees		
On Payroll at beginning of month	172	167
Removals and transfers out	(6)	(6)
Additions and transfers in	1	3
Number at end of month	167	164
Net increase (or decrease) during month	(5)	(3)
% of terminations and transfers out	3.5%	3.6%
% of absenteeism	4.2%	3.4%

Changes by division in number of Accounting Division employees during June were as follows:

General Accounting - General: No Change

Accounts Payable: Decrease of one employee

One return from Leave of Absence
One transfer to Weekly Payroll
One termination

Cost: No Change:

General Accounts: No Change

Plant Accounting: Decrease of one employee

One on Leave of Absence

Weekly Payroll: Decrease of three employees

One transfer from Accounts Payable
One transfer to Monthly Payroll
Two removals due to Illness
One termination

1221435

PERSONNEL AND ORGANIZATION - GENERAL ACCOUNTING (continued)

Monthly Payroll: Increase of two employees

One transfer from Weekly Payroll
One transfer from North Richland Realty
One new hire
One termination

Special Assignments: No Change

Injuries	May	June
Major	0	0
Sub-major	0	0
Minor	0	0

Number of Accounting Division employees as of June 30, 1949, were as follows:

	Number of Employees		
	Non-Exempt	Exempt	Total
General Accounting - General	2	3	5
Accounts Payable	24	1	25*
Cost	9	1	10
General Accounts	16	1	17
Plant Accounting	21	3	24
Weekly Payroll	60	5	65
Monthly Payroll	13	1	14
Special Assignments	0	4	4
Total	145	19	164

*Includes 4 employees working on Special Assignments in connection with Construction Accounting.

Non-Exempt employees may be summarized as follows:

Classification	Number as of 5-31-49	Number as of 6-30-49
Accounting B	3	3
Accounting C	1	0
Accounting D	4	4
Clerical Working Leader	6	6
Cost Clerk A	1	1
Cost Clerk B	1	1
Cost Clerk D	2	2
Field Clerk C	3	3
General Clerk A	29	28
General Clerk B	33	32
General Clerk C	24	21
General Clerk D	13	14
General Clerk E	2	2
Office Machine Operator B	14	15
Secretary B	1	1
Steno-Typist A	1	1
Steno-Typist B	3	4
Steno-Typist C	1	1
Steno-Typist D	6	6
Total	148	145

1221436

General Accounting Division

PERSONNEL AND ORGANIZATION - GENERAL ACCOUNTING (continued)

Open employment requests as of June 30, 1949, were as follows:

General Clerk E	1
Office Machine Operator B	1
Total	2

7.

General Accounting Divisions

	May	June
Accounts Payable*		
Balance at Beginning of Month	$ 22 899	$ 177
Vouchers Entered	999 263	3 775 581 **
Cash Disbursements	1 109 893 Dr.	3 722 655 Dr.**
Cash Receipts	18 488	798
Miscellaneous Credits	69 420	-0-
Balance at end of month	$ 177	$ 53 901
Number of Vouchers Entered	1 582	1 176
Number of Checks Issued	1 264	794
Number of Freight Bills Paid	208	160
Amount of Freight Bills Paid	$ 5 241	$ 1 892
Number of Purchase Orders Received	625	569
Value of Purchase Orders Received	$ 98 025	$ 51 895
Public Vouchers (1034) Submitted to AEC		
Not Reimbursed at Beginning of Month	$ 7,261 177	$ 9 739 453
Submitted During the Month	9 004 308	4 786 290
Sub Total	16 265 485	14 525 743
Reimbursements During the month	6 526 032	14 525 743
Not Reimbursed at End of Month	$ 9 739 453	$ -0-
Public Vouchers (1034) Submitted to AEC		
Not Reimbursed at Beginning of Month	276	362
Submitted During the Month	388	169
Sub Total	664	531
Reimbursements During the Month	302	531
Not Reimbursed at End of Month	362	-0-

* General Divisions Only.

** Includes $3 000 000 liquidation of AEC Advances

1221438

General Accounting Divisions

	May	June
Pre-Audit Vouchers (1035) Submitted to AEC		
Not Yet Approved		
Community	$ 11 639	$ 7 313
Design & Construction	1 425 912	52 793
General	822 592	118 393
Manufacturing	41 329	498
Sub Total	$ 2 301 472	$ 178 997
Not Submitted to AEC on Pre-Audit Vouchers		
Community	$ 79 069 Cr.	$ 169
Design & Construction	2 237 172	389 925
General	643 375	139 096
Manufacturing	178 113	41 737
Sub Total	$ 2 979 591	$ 570 927
Total Unbilled Items	$ 5 281 063	$ 749 924
Bank Balances at End of Month		
Chemical Bank & Trust Company		
Contract Account	$ 6 404 463	$ 5 227 725
Seattle First National Bank - Richland		
Contract Account	2 000 566	255 250
Salary Account No. 1	20 000	20 000
Salary Account No. 2	30 000	30 000
U. S. Savings Bonds Account	151 564	14 067
Seattle First National Bank - Seattle		
Salary Account No. 3	5 000	5 000
Escrow Account	59 806	59 806
Travel Advance Account	-0-	30 443
	$ 8 671 399	$ 5 642 291
Cash Disbursements		
Community	$ 56 660	55 236
Design & Construction	4 968 280	3 714 571
General	2 791 395	5 610 798
Manufacturing	522 350	541 117
Total	$ 8 338 685	$ 9 921 722*
Material and Freight	$ 6 415 484	$ 997 557
Lump Sum and Unit Price Subcontracts		125 596
CPFF Subcontracts		
Labor	Segregation	2 281 266
Others	not	936 463
Advances, Deposits, etc.	readily	25 604
Accounts Receivable Refunds	available	2 458
Miscellaneous		690 182
Payrolls (net)	1 681 501	1 658 826
U. S. Savings Bonds	241 700	203 770
Liquidation of Advance		3 000 000
Total	$ 8 338 685	$ 9 921 722

* Includes liquidation of $3,000,000 advance

1221439

General Accounting Divisions

	May	June
Number of Checks Written		
Community	250	222
Design & Construction	633	527
General	1 264	794
Manufacturing	432	388
Total	2 579	1 931
Cash Receipts		
Community	$ 94 204	$ 117 713
Design & Construction	89 807	245 578
General	6 729 282	6 623 158
Manufacturing	15 545	13 220
Total	$ 6 928 838	$ 6 999 669
Detail of Cash Receipts*		
U. S. Government	$ 6 526 032	$ -0-
Hospital	69 420	58 211
Scrap Sales	14 026	5 448
Miscellaneous Accounts Receivable	663	684
Educational Program	149	31
Employee Sales	1 044	824
Refunds from Vendors	3 259	798
All Other	114 689	57 162
Advances to G. E.	-0-	6 500 000
	$ 6 729 282	$ 6 623 158
Travel Advances and Expense Accounts		
Cash Advance balance at end of month*	$ 7 881	$ 9 026
Cash advance balance outstanding over one month*	1 058	1 181
Traveling and Living Expenses:		
Paid Employees	10 535	10 545
Billed to Government	10 171	10 757
Balance in Variation Account at end of month	2 100 Cr.	1 774 Cr.
Hospital Accounting		
Balance at Beginning of Month	$ 112 325	$ 105 526
Invoices Issued	90 319	80 308
Refunds	352	760
Cash Receipts	(69 420)	(58 211)
Payroll Deductions	(28 050)	(20 862)
Balance at End of Month	$ 105 526	$ 107 521

* General Divisions Only

General Accounting Divisions

	May	June
PLANT ACCOUNTING		
Number of Transfer Notices Received	594	423
Number of Items Affected	2 692	891
Number of Receiving Reports Classified	3 458	4 002
Number of Items Tagged at beginning of month	90 805	90 827
Number of Items Tagged this month -- Metal	438	496
Number of Items dropped from record	(416)	(384)
	90 827	90 939
Number of Items Recorded in quantity only at beginning of month	13 529	13 531
Items added to record during month	2	1
Dropped from record during month	-0-	(55)
Total Items Recorded in Quantity	13 531	13 477
Total Items on Record	104 358	104 416

122144

General Accounting Divisions

ACCOUNTS PAYABLE

The number of accounts payable vouchers entered in June, as well as the number of checks written, decreased more than 25 per cent from the previous month. Freight bills handled also showed a considerable decrease. Purchase orders received during the month decreased in number from 625 in May to 569 in June and decreased in amount from $98,025 to $51,895.

Total vouchers on hand at the end of June which required additional supporting data before they can be considered complete was 691 amounting to $96,112.47, compared to 503 in May amounting to $124,070.00. Of the 691 vouchers on hand, 171 were paid and 520 were unpaid (or uncollected credit vouchers).

During the week of June 6 through June 10 transfer cases containing old accounts payable records have been transferred from the vault to hutment 712 A.

As a result of a continued decrease in volume of work to be handled in this section, it was possible to render assistance to the Design and Construction Accounting Division and five employees were loaned that Division for the entire month.

Work continued on the audit of old accounts payable and purchase order files. By June 30, all files and transactions up to October 1, 1948 had been audited and transferred to separate files.

COST

General Divisions Operating Reports for the month of May were issued on June 15, 1949.

During the month practically all the assessment studies were reviewed and, where necessary, revisions in assessment rates were made. Substantial adjustments were made in assessments to Design and Construction Divisions and Purchasing and Stores Divisions; and in assessments from the 700 Area General Account.

Considerable time was spent in assisting with the revision of the Cost Code Book which also contains cost codes used by the Manufacturing Divisions. A new Code Book was issued incorporating all code changes to date.

Summaries for the period April 26 through May 25 of charges by the Manufacturing Divisions applicable to work orders were distributed to the various general divisions on June 17. This will afford the division heads a current record of charges made against work orders which originated in their divisions. Similar tabulations will be forwarded monthly in the future.

1221442

General Accounting Division

COST (Cont.)

The Technical and Health Instrument Divisions were requested to furnish detailed breakdowns for each Research and Development Account applicable to their respective division. Each sub-account within each major Research and Development Account is being assigned an identifying code number, and that number will be used in charging applied labor and material costs as well as other costs to these sub-accounts. Preparatory work was completed in drafting a proposed Instruction Letter and in issuing other instructions in connection with the Research and Development authorization procedures which will become effective as soon as additional details have been completed.

GENERAL ACCOUNTS

The first month's operation under the new Financing procedure has past. Generally, the system has worked satisfactorily and controls appear to be adequate. Within a short time after cash disbursements and receipts were closed, the open balance of ADVANCES RECEIVED FROM A. E. C. was reconciled in detail. In discussion with the A. E. C. Finance Branch it was determined that, of total net disbursements during June in the amount of $6,571,450, we would apply $5,584,349 against "Advances Received" and request cash reimbursement in the amount of $987,101. This latter amount was booked during June as "Cash in Transit" and adjusted the balance of Government advances to Hanford Works to $8,000,000.

Prior to June 1, 1949, the A. E. C. had advanced as a revolving fund, a total of twenty five million dollars. The monthly accounting report for the period ended May 31, 1949 mentioned that complete reconciliation of this account was assured for early June. The reconciliation complete with itemized detail was completed by June 3, 1949 and was discussed with the Atomic Energy Commission. With their approval, a total of $9,334,424.88 was transferred by journal entry from the Advance Account of $25,000,000.00 to a new General Ledger Account titled Current Advances to G. E. This consisted of ~~(a) Cash in~~ Bank (b) Cash Advanced to Employees (c) Travel Variation Account and (d) Advances to Subcontractors.

The balance of $15,665,575.12 is to be liquidated through non-payment Public voucher. Of this balance only $749,924 remained open as of June 30, 1949.

During June, the General Accounts Section assumed responsibility for the preparation of ~~several additional~~ accounting reports. Included in these are (1) Consolidated Hanford Works Inventories (2) Report on Excess Materials (3) Consolidated Hanford Works Government Cost Transfers.

General Ledger Trial Balances for May were received on June 17, 1949. A Consolidated Hanford Works Trial Balance was prepared on that date. Hanford Works Financial Statements were completed June 17, 1949 and the Consolidated Nucleonics Department Financial Statements were completed on June 20, 1949.

1221443

General Accounting Division

MEDICAL ACCOUNTING

Operating Reports for the month of May were issued on June 15, 1949. Revised cost code books containing account descriptions and incorporating all previous account revisions were issued on June 30, 1949.

Due to the reduced demand for services at North Richland and, as a result of the consolidation of much of that work with work at Kadlec Hospital, North Richland accounting personnel has been reduced to one employee, and three employees have recently been made available to other divisions.

Total invoices issued numbered 11,122 divided between 7,554 cash invoices and 3,568 charge invoices. Cash invoices amounted to $38,155 and charge invoices amounted to $42,153. The accounts receivable balance on June 30, 1949 was $107,521.

PLANT ACCOUNTING

The work in connection with the plant appraisal is nearing completion. All field work has been completed for several weeks and plant and equipment inventories have been valued. Forms for recording property record units have been prepared and the work of entering uninstalled equipment (formerly Class "B" Property) is underway. Installed facilities will be set up on detailed records at a later date but will be entered on the books as of June 30, 1949.

A suggested schedule of accounts and a preliminary catalog of Property record units has been prepared by the A. E. C. and is being reviewed by the consultant accountants and representatives of this company.

SPECIAL ASSIGNMENTS

Special assignments during the month of June consisted of:

1. Assistance with the development and follow-up of new AEC financing procedure which became effective June 1.

2. Drafting an accounts payable voucher system for possible short cuts in operation of new financing procedure.

3. Continued assistance to Design and Construction Accounting Division.

4. Completion of temporary cost code book and continued work on the issuance of a permanent loose leaf-type cost code book.

5. Review of the accounting procedures of the Accountability Section (S. F. Materials Accountability).

1221444

General Accounting Divisions

PAYROLLS

During June there were 169 removals from payroll, of which 43 were removals due to lack of work.

In accordance with the revised financing procedure effective June 1, 1949, the following changes were made in the billing and auditing of weekly and monthly payrolls:

a. Monthly Payroll discontinued the billing of payrolls to AEC and the issuance of Form 1035A.
b. Original copies of the Monthly and Weekly Payroll Journals are to be held until requested by the AEC Audit Section for audit.
c. AEC Audit Section will give Monthly and Weekly Payroll an acceptance receipt for the original copy of the payroll when audit is completed.
d. Bank reconciliations are to be held until requested by AEC for audit purpose.

Weekly Salary and Vacation Payrolls to and including the week ended June 19, 1949 (paid on June 24) and Monthly Salary Payroll to and including June 30, 1949, have been reported by the General Accounting Division to the Government on the Report of Disbursements.

Effective with the pay day of June 10, 1949, weekly salary checks for employees in the 100, 200, and 300 Areas, White Bluffs, and Riverland, were delivered to Patrolmen in the gate houses in the areas before 2:00 P.M. on Thursday, the day preceding pay day. The salary checks were picked up by authorized representatives of the divisions after 2:00 P.M., on Thursday, for distribution to employees. The new method of delivering salary checks to employees in the areas has resulted in:

1. Distribution of checks to employees during their regular work shift.
2. Control of salary checks which have been issued is maintained by the use of receipts which are signed by Patrolmen at the gate houses and by authorized representatives of the divisions.
3. Elimination of approximately 25 man hours per week which was necessary to pay off at the bus terminal.
4. Conformity with Company wide practice of distributing salary checks through Supervision.

Arrangements were made with the Richland Branch of the National Bank of Commerce for direct deposit of salary checks for those employees who authorize such deposit. Authorizations from employees will be accepted to become effective on or after July 8, 1949.

There were 234 late time cards received late by payroll during June.

U. S. Savings Bonds and Custody Receipts for U. S. Savings Bonds purchased by employees through payroll deductions in May were delivered to employees on June 24, 1949. During June, 146 employees participating in the Stock Bonus Plan withdrew from the Plan 644 U. S. Savings Bonds with a maturity value of $30,250.

PAYROLLS (continued)

Approximately 40,300 items were addressographed in June for Service, Employee and Community Relations, and Community Divisions.

In connection with calculation of the shift premium of 15¢ per hour for the 1st shift and 10¢ per hour for the 3rd shift, retroactive to April 11, 1949, cards have been prepared for all shift workers showing the number of shift hours worked during the period April 11, 1949, to June 19, 1949, inclusive. These cards will be submitted to the various divisions who will indicate on the card the shift (1st or 3rd) worked by the employee each week, and these will be used in calculating retroactive adjustment when union agreement is approved by the AEC.

Contract G-1012 with Morrison-Knudsen Company, Inc. expired on June 30, 1949. Three employees (Office Manager, Timekeeper, and Bookkeeper) remain on the payroll at June 30, 1949. These three employees will remain on the payroll for an estimated four to six weeks to complete final inventories, reconciliations, billings, etc. AEC Audit Section has advised that it is in order to continue payment of salaries to these three employees. Request for authorization to cover the extension of the contract for these three employees is in process. Twenty-one employees, (20 trackmen and 1 track foreman) formerly employed by Morrison-Knudsen, have been added to General Electric Company payroll at their former salary rate with Morrison-Knudsen. In the case of the 20 trackmen this salary rate ($58.00) is two progression steps below the job rate ($62.00).

As of June 30, 1949, the number of du Pont employees on loan to General Electric Company had been reduced to seven.

1221446

PLANT SECURITY AND SERVICES DIVISIONS

MONTHLY REPORT - JUNE 1949

SUMMARY

Hanford Works completed its second consecutive month without a lost-time injury, further reducing the frequency rate for the year to 0.87.

There were 23 fire alarms in the Industrial Areas with a property damage of $40.

Organization of the Records Control Division which began in May has been completed and the work progressing satisfactorily. Record surveys were completed in the Purchasing and Stores Divisions and the Plant Security and Services Divisions.

1221447

PLANT SECURITY AND SERVICES DIVISIONS

MONTHLY REPORT - JUNE 1949

ORGANIZATION AND PERSONNEL

Number of employees on payroll:

	Beginning of Month	End of Month	Increase	Decrease
Staff	3	3		
Patrol and Security	578	582	4 (a)	
Safety and Fire Protection	147	147		
Office Services (General Services, Clerical Services, & Records Control)	250	261	11 (b)	
TOTALS	978	993	15	

NET INCREASE: 15

(a) - Patrol and Security
5 - New Hires, re-engaged (Patrol)
1 - Returned from Leave of Absence (Patrol)
2 - Transferred from Construction Safety (Patrol)
3 - Terminations (Patrol)
1 - Retired (Patrol)

(b) - General Services:
4 - Rehired
1 - Returned from Leave of Absence
1 - Termination
1 - Removed from Roll due to Leave of Absence

Clerical Services:
17 -New Hires
6 - Terminations
3 - Transfers to other Divisions
2 - Transferred to Records Control Division
1 - Removed from Roll due to Leave of Absence

Records Control Division:
1 - Transferred from Employee and Community Relations
2 - Transferred from Clerical Division

1221448

DECLASSIFIED
WITH DELETIONS

SAFETY AND FIRE PROTECTION

Injury Statistics

Days since last Major Injury	67
Accumulated Exposure Hours since last Major Injury	2,617,744*
Major Injury Frequency Rate (start-up to date)	0.869

* Last month's figure should have been 1,499,624 instead of 1,449,624.

	May	June	Year to Date
Major Injuries	0	0	7
Sub-Major Injuries	4*	3	18
Minor Injuries	303	347	2260
Exposure Hours	1,251,058	1,118,120	8,030,614
Major Injury Frequency Rate	0.0	0.0	0.87
Major Injury Severity Rate	0.0	0.0	0.04
Minor Injury Frequency Rate	2.42	3.10	2.81

* The following injuries were classified too late to be registered for the May Report: Sub-Major Injury No. 142½ retroactive to May 2, 1949
Sub-Major Injury No. 144 retroactive to May 31, 1949

Sub-Major Injury No. 142½

May 2, 1949, at 11:45 a.m., , an employee of the "S" Division, 200-West Area, incurred a contusion to left lower chest and two fractured ribs when he lost his footing and fell against the sharp end of a stairway guard rail. Injured was connecting an unloading line to a railroad tank car.

Sub-Major Injury No. 144

May 31, 1949, at 10:55 a.m., an employee of the Maintenance Division in the 200 West Area incurred a fracture of the proximal phalanx of the left little toe while carrying one end of a bank of shelves through a doorway. After injured had backed through the doorway, spring tension that normally holds the door closed caused the door to strike the shelves knocking them out of his hand and onto his left foot resulting in the injury.

Sub-Major Injury No. 145

June 7, 1949, at 8:50 a.m., -MM, a painter in the Maintenance Division, 200-East Area, incurred a fracture of navicular bone in the right wrist while draining paint thinner from a 50-gallon drum. Injured tilted the barrel from its rack to further drain the barrel. Thinking the barrel might slip from the rack, he awkwardly put up his right hand striking it on the chime of the barrel causing the injury.

Sub-Major Injury No. 146

June 15, 1949, at approximately 9:00 a.m., , an employee of the Transportation Division, 1100 Area, incurred contusion, laceration, and a comminuted fracture of the distal phalanx, right ring finger while tightening the bumper bolts on a K-6 International truck. The wrench being used slipped allowing injured's hand to strike a front spring shackle causing the injury.

DECLASSIFIED
WITH DELETIONS

160

122149

DECLASSIFIED
WITH DELETIONS

Sub-Major Injury No. 147

June 17, 1949, at 10:00 a.m., an employee of the Village Labor Division, 1100 Area, incurred contusion and comminuted fracture of entire terminal phalanx of the left great toe while removing a manhole cover. Injured lost his grip, and the cover fell striking left great toe causing the injury.

Safety Meetings

There were 704 Safety Meetings held during the period of June 1 through June 30, 1949, with a total attendance of 7,158.

Safety Spectacles

There were 38 pairs of prescription safety spectacles ordered during the period of June 1 through June 30, 1949; 60 pairs of prescription safety spectacles were checked, received, and fitted; and 144 adjustments and repairs were made to all types of safety spectacles.

100 Areas Activities

The Area Accident Prevention Committee has been quite active during the month, and a number of suggestions for the correction of unsafe practices or conditions were submitted for attention of supervision involved.

The Area Council has voted to issue a safety souvenir booklet depicting events which took place during their fourth injury-free year. These illustrated pamphlets will be distributed to all employees of the 100-B Area in lieu of a safety celebration. Pictures, programs, and other safety events, plus letters of commendation from the Managers of General Electric and the AEC are being compiled into the booklet.

Attended a meeting with the Technical P-10 Group to determine a suitable type of respiratory protection against contamination in 108-B Building. An air-supplied half-mask type respirator was determined to be satisfactory from the standpoint of Safety, Health Instrument, and Technical Divisions.

The problem of removing dust-laden air from a sand blast operation in a confined pit was studied, and adequate equipment could not be located to do the job properly. On previous occasions, this same problem has arisen and make-shifts have been used to take care of the job. It is recommended that several sections of collapsible 6" and 10" in diameter "Ventube" be made available for jobs throughout the Plant.

The 100-D Area Accident Prevention Committee is still progressing exceptionally well. A new Committee has been formed and will function for the next five weeks. It is agreed by the Area Council that this particular type of representation by one employee from each Division has resulted in excellent participation and interest.

The "P" Division in the 100-F Area held a contest to suggest the most appropriate name for the dummy which had been fabricated by the Maintenance Division. The winning name "Lowcount Louie" was selected, and the employee who submitted it was awarded a pair of safety shoes.

DECLASSIFIED
WITH DELETIONS

1221450

Plant Security and Services Divisions

Progress is being made on the animal farm and most of the buildings are now above ground. The Maintenance, M.C. Division has found it necessary to set up a restricted area for hard hats and safety glasses.

An investigation was held on a near-searious accident at Riverland involving a collision of two locomotives.

Power Division, 100-H Area has been advised that facilities for servicing spot light on top of 181-H guard tower is lacking, and it was recommended that action be taken to provide same.

Other items in area which required a change to comply with safety regulation are ladder treds in 181 Building, valve arrangement at CO_2 tank house, door stops in 181 and 182 buildings and numerous valve locations in 105 Building. Satisfactory progress is being made in these corrections.

200 Areas Activities

Special attention was given the 222 B Lab. in the 200-East Area in the form of an investigation into a near-serious accident, Number 49-13.

Measures are being taken to improve housekeeping in the labs.

Several inspections were made in the 234-5 Area in the 200-West Area by the Safety Engineer, and recommendations for improvement of some conditions were forwarded to those in charge of the building. This building was scheduled to start operation on June 27, 1949.

The Safety records of the 200-East and 200-West Areas are being revised to conform with the Plant Safety records and statistics. This revision will provide a true picture of the safety activities and the injury experience of both areas.

An interesting quiz program was submitted to the Area Maintenance Engineer for the purpose of stimulating interest in Maintenance Safety Meetings in both the 200-East and 200-West Areas.

300 Area Activities

Arrangements have been made to discuss and establish an area safety group at the next Area Council meeting early in July.

The Area Safety Report has been changed and shortened for the purpose of time conservation and also for uniformity with the other Areas.

A group of questions was developed for the use of the Maintenance and Transportation Divisions Safety Meetings.

Part of the area just north of the Badge House has been fenced out for the purpose of construction by outside contractors. This has caused additional problems with traffic, etc.

The procedure used at the Acenapthene Carbon Tetrachloride spray booth has been re-examined and, although it is not a closed system, no harmful conditions have been observed or experienced with the procedure during the approximately four years it has been in use.

Suggestions were made to the Health Instrument Division for the correction of a hazardous traffic condition in front of the 3746 and 3745 A Buildings. No corrective action was agreed upon. It will be taken up in the Area Council Meeting in a discussion relative to designating definite roadways in the area.

700-1100 Area Activities

Inspection was made on several pieces of equipment before being placed in service. Recommendations were given for necessary revisions for safety.

Recommendations were made to Stores Division on acid storage and handling, safety showers, compressed gas handling and storage, volatile storage and safeguarding, and standards on safety cans; a study is being made of the problems in handling sheets of stainless steel.

Steps have been taken to eliminate hazards at sewage disposal relative to guarding openings in floor, pits, etc.

Corrections in electrical switch installations at new sewage disposal plant have been requested to provide a means of locking out motors for repairs, oiling, and inspection. At present there is no means of locking out units--only oil disconnects are provided. It was recommended that in all cases, until means of locking are provided, that an extra man be assigned to the job to guard disconnect while work is performed.

Gas masks and use of same were discussed with and demonstrated to members of Village Utilities group to assure standard practice.

A safety display was set up and manned for Village Public Works picnic on June 4, 1949. There was much favorable comment and considerable interest shown by those in attendance.

In June, the 700 Area passed 5,000,000 exposure hours without a major injury for a total of 528 days to date.

General

A follow-up inspection of conditions previously reported in and about the 703, 760, 761, 762, and 720 Buildings has been made. Major items reported have been corrected, and new hazards have been noted and will be processed.

Records of the safety experience of the new Purchasing and Stores Divisions have been set up.

A work order has been written to add the newly organized Purchasing and Stores Divisions to the Safety Record Board in front of the 703 Building and at the Richland Barricade.

New kitchen equipment at the Kadlec Hospital has been inspected and safety rules governing its operation established.

Contest Material for use in stimulating interest in the Maintenance Division's Safety Meetings has been prepared.

The competitive safety program started by the Security Patrol Division has produced continued improvement in their accident frequency rate. The program is to continue for an undetermined period of time.

SAFETY DIVISION - INJURY AND ACTIVITY STATISTICS

	100-B Area	100-D Area	100-F Area	200-E Area	200-W Area	300 Area	700 Area	1100 Area	3000 Area	Pasco Area	101 Area	Misc. Area	TOTAL
Minor Injuries	28	18	36	39	44	83	22	40	16	5	8	8	347
Sub-Major Injuries	0	0	0	1	0	0	0	2	0	0	0	0	3
Major Injuries	0	0	0	0	0	0	0	0	0	0	0	0	0
Days since last Tabulatable Major Injury	400	168	192	184	87	67	528	134	290	700	91	119	
Days since last Sub-Major Injury	363	149	130	23	30	59	199	14	245	168	91	266	
Days without a minor Injury	16	16	10	12	11	7	16	11	19	25	23	22	
Safety Meetings Conducted	63	62	55	101	103	78	52	92	19	23	12	44	704
Number in Attendance	308	384	351	1057	961	1002	710	1504	190	97	294	300	7158
Safety Spectacles Delivered	4	5	6	4	11	13	8	5	0	0	0	4	60
Safety Spectacles Serviced	18	22	25	15	30	18	10	6	0	0	0	0	144

MONTHLY INJURY ANALYSIS

JUNE

Minor Injuries

	Burns	Abrasions	Contusions	Lacerations	Punctures	Splinters	Strains & Sprains	Foreign Body	Blisters	Unclassified	TOTAL JUNE	TOTAL LAST MONTH
GENERAL	0	0	0	1	0	0	0	0	0	0	1	0
"P" DIVISION	7	2	5	2	2	1	3	2	1	0	25	11
"S" DIVISION	1	5	0	3	1	0	1	1	1	0	13	14
POWER	3	2	2	3	0	1	0	2	3	3	19	11
MAINTENANCE	6	15	11	31	4	8	6	4	3	5	93	82
PROJECT ENGINEERING	0	0	0	0	0	1	0	0	0	0	1	0
ELECTRICAL	1	8	1	6	2	1	2	2	1	1	25	18
INSTRUMENT	1	3	2	7	2	0	0	0	2	0	17	12
TRANSPORTATION	0	10	5	8	0	3	3	1	2	3	35	23
COMMUNITY	2	5	1	8	0	2	1	2	0	5	26	33
ACCOUNTING	0	0	0	0	0	0	0	0	0	0	0	0
TECHNICAL	6	4	5	10	1	1	0	0	1	1	28	30
MEDICAL	2	2	0	5	1	0	4	1	0	1	16	14
HEALTH INSTRUMENT	1	1	3	5	1	2	0	0	0	1	14	19
SECURITY & SERVICES	1	4	2	4	2	1	2	0	0	0	16	22
PURCHASING & STORES	0	0	4	1	0	0	0	0	0	0	5	—
EMPLOYEE AND COMMUNITY RELATIONS	0	0	0	0	0	0	0	0	0	0	0	2
DESIGN AND CONSTRUCTION	0	2	1	1	0	0	3	2	0	3	12	12
TOTAL	31	63	42	95	16	21	25	17	14	23	347	
LAST MONTH	33	51	35	73	20	16	18	26	10	21		303

1221454

Plant Security and Services Divisions

FIRE PROTECTION

	Number of Fires		Estimated Damage	
	May	June	May	June
Industrial	21	19	$ 17.00	$ 40.00
Construction	5	4	15.00	0.00
Community	17	8	0.00	0.00
A. E. C.	0	0	0.00	0.00

Routine Duties

Fire Extinguishers

Inspected	2,842
Installed & Relocated	91
Refilled	89
Resealed & Repaired	230
Salvage	8

Gas Masks

Inspected	538
Serviced	16

Fire Drills and Lectures

Outside	86
Inside	79
Auxiliary Brigade	132
Safety Meetings	29

All fire alarm boxes in the Industrial Areas were tested.

All fire hose houses, hydrants, and lines in Plant Areas were inspected.

OFFICE SERVICES DIVISION

General Services

Laundering volumes were as follows:

	May	June
Plant Laundry (Building 2723)		
Coveralls - Pieces	27,726	26,612
Towels - Pieces	7,781	8,369
Miscellaneous - Pieces	59,880	58,470
Total Pieces	95,387	93,451
Total Dry Weight - Lbs.	135,849	131,776

Plant Security and Services Divisions

Richland Laundry (Building 723)	May	June
Flatwork - Pieces	88,226	88,362
Rough Dry - Pieces	53,061	41,127
Finished - Pieces	4,496	4,054
Total Pieces	145,783	133,543
Total Dry Weight - Lbs.	94,759	86,803
Monitoring Section (Building 2723-W)		
Poppy Check - Pieces	63,880	58,770
Scaler Check - Pieces	88,471	89,231
Total Pieces	152,351	148,001

Clerical Services

Telephone Exchange

The new telephone books were delivered in their entirety during the month of June.

Work has been started on the new dial directory and the new information racks for the dial system. These must be in the hands of the printer by August 15 in order for the new directory to be issued by October 1, 1949.

We have now been advised by the Electrical Division that Richland, White Bluffs, 100-D and 100-H Areas will be cut to dial on October 1, 1949; 100-F 200-E and 200-W will follow at a later date.

Traffic counts during the month were as follows: 27,729 and 26,329.

	May		June	
Lines working as 1 - 0 Lines	625		629	
2 - 0	100		51	
0 - PBX	31		31	
1 - N	26		26	
2 - N	8		4	
2-0-R Combination	2		1	
Total Official Lines		792		742
Lines working as 1 - F Lines	102		110	
2 - F	26		22	
F - PBX	7		7	
1 - R	8		8	
2 - R	2137		1184	
2 - RF	180		85	
3 - RF	6		1	
Total Non-Official Lines		2467		1417
Vacant Lines		57		41
Total Lines in Multiple Bank		2200		2200

1221456

Mail Room

Two employees were transferred to the new Records Control Division and replacements received.

	May	June
Pieces of Internal Mail Handled		191,224
Pieces of Postal Mail Handled	30,020	49,924
Pieces of Registered Mail Handled	497	1,051
Pieces of Insured Mail Handled		179
Pieces of Special Delivery Mail Handled	129	106
Total Mail Handled	30,646	242,484
Total Amount of Postage Used	$ 2,304.88	$ 1,295.11
Teletypes sent out	329	667
Teletypes Received	329	622
Total Teletypes Handled	658	1,289

Office Equipment

Purchase requisitions were placed for approximately $50,000 worth of needed office equipment items. This is one-third of the total budget amount asked for during the year 1950. A definite training schedule for all mechanics was established during the month.

	May	June
Office Machines repaired in shop	209	227
Office Machine Service Calls	195	239
Total machines serviced	404	466

Printing

	May	June
Multilith Orders received	204	220
Multilith Orders completed	182	220
Multilith Orders on hand at month end	44	44
Mimeograph Orders received	2531	1747
Mimeograph Orders completed	2629	1767
Mimeograph Orders on hand at month end	20	0
Ditto Orders received	1919	1690
Ditto Orders completed	1919	1690
Ditto Orders on hand at month end	0	0

Stenographic Services

Four girls were transferred from this section during the month and partial replacements received.

Volume of requests for girls for vacation relief, special work, etc. continues to be exceptionally heavy.

1221457

	June	
	Hours	Quantity
Dictation and Transcription	0	0
Machine Transcription	21:40	44
Letters	46:05	87
Manual and Procedures	29:30	94
Duplicating - Stencils and Dittos	271:45	676
Special	324:25	809
Total Hours	693:15	

Records Control Division

Record surveys were made of the Morrison-Knudsen Company's contracts, numbers G-160, G-222 and G-1012. Record surveys were completed of the Purchasing and Stores Divisions and Plant Security and Services Divisions.

Additional surveys were made of vital records as described in the AEC Bulletin GM-113, to determine the amount of work involved in the microfilming of documents covered by this bulletin.

Summary of Records Received and Processed:

Accounting Division	25	# 1 Oxford Files
Accounting Division	21	# 5 Oxford Files
Accounting Division	11	# 13 Oxford Files
Maintenance Division	1	# 1 Oxford File
Medical Division	3	# 1 Oxford Files
Service Divisions	2	# 1 Oxford Files
Stores Division	33	# 1 Oxford Files
Transportation Division	6	# 1 Oxford Files
Total:	102	Oxford Files

Subcontractors Record Section was set up in Building 712-B, front section. The records of John L. Hudson, Contract G-142, was the first subcontractors records stored in this section. A register was set up to cover pre-numbered transfer cases issued to sub-contractors. A separate index section was established and all procedures set up in Sub-contractors Procedure #2 are being followed.

Installation of a fire alarm system in Building 712-A and B was started by the Electrical Section.

PATROL AND SECURITY

General

Effective June 2, 1949, a Patrolman will be posted at the 105 Tube Shop (White Bluffs) from 8:00 a.m. to 4:30 p.m., or until work is completed at the end of the day.

Shift Commanders will make frequent inspections of area fences checking for breaks, broken fence posts, and weeds, beginning July 2, 1949. This is in addition to the routine Patrol inspections.

Entrance to Room 166, 234-5 Building, was excluded to all persons June 3 except those bearing authorization forms signed by authorized personnel.

On June 3, 1949, a temporary Patrol Post was established at Room 166 in the 234-5 Building with a Patrolman on duty 24 hours.

Beginning June 6, 1949, the Classification Yard post will be covered by one Patrolman on the No. 1 and No. 3 shifts, Monday through Friday, and one Patrolman 24 hours Saturday, Sunday and Holidays.

Effective June 6, 1949, a key to lock on South Center Gate, 700 Area, was issued to certain Office Services Division personnel to make office equipment deliveries into the 700 Area. All persons opening this gate will be challenged to see if they are properly authorized.

HW Instructions Letter No. 1, revised June 7, 1949, regarding correspondence and stenographic practices was issued to all Operations personnel.

Patrol assumed responsibility for distribution of Salary Checks in the areas on June 7, 1949, in accordance with HW Instructions Letter No. 120.

HW Instructions Letter No. 2 - revised June 8, 1949, regarding teletypes and telegrams to other installations, was issued to all Operations personnel.

The following G. E. Security Bulletins were issued during the period covered by this report: No. 37 - "Security Requires Teamwork" and No. 38 - "Perimeter Barricade Security".

On June 14, 1949, two memorandums were issued to all Patrol personnel regarding the publicizing of protection data. General Order No. 36 entitled "Security Maintenance" was issued June 14, and a letter to be read and signed by each member of Patrol was issued June 7, 1949.

Scientific Law Enforcement School conducted by the Federal Bureau of Investigation was completed June 20, 1949; 102 personnel attended the classes.

A revised procedure was issued June 23, 1949, to all Patrol personnel concerning the checking of employees going through the barricades.

A revised procedure for the operation of the Patrol Laundry Section was effective June 27, 1949, making possible a reduction in force of two Patrolmen who were assigned to existing vacancies in the areas.

Effective June 20, 1949, the 272-Z Badge House Post was discontinued on the No. 1 and No. 3 shifts.

A Kardex file system was inaugurated in the 303 Exclusion Area at 12:01 a.m., June 27, 1949.

PATROL

The 200 Areas handled 504 process escorts between the areas.

There were 724 requests handled which consisted mainly of opening doors and gates and providing escorts for employees of other departments.

1221459

Plant Security and Services

A total of 96 Unusual Incident Reports were received, consisting mainly of lost badges and pencils, contrabands picked up at barricades, traffic accidents, and fires.

Classified escorts totaling 25 were handled during the month.

Practice evacuations were held as follows:

100-B Area	6/28/49	1:08 p.m.
100-F Area	6/8/49	2:37 p.m.
100-D Area	6/2/49	10:26 a.m.

Arrest Summary

	May	June
Citation tickets issued	0	0

Accident Summary

	May	June
Total Accidents	7	3
Government permits revoked	1	0
Warning tickets issued	0	2
Verbal warning given	0	0
Citation tickets issued (traffic only)	0	0

Training

The courses received at the Training School this month were: Pistol-2½ hours, Machine Gun-1½ hours, Laws of Arrest-1 hour, Ambulance Procedure-1 hour, Rail-Road Crossing-½ hour, Safety Topic "Minor Injuries"-½ hour, Security Topic, "Film on Security from Oak Ridge"-½ hour, Health Talk on Mosquitos-½ hour.

The Competetive Safety Program is being continued.

SECURITY

Operations Section

There were 324 Security Meetings held and attended by 4,914 General Electric employees.

Employee Clearance

Class "Q" clearances received on old employees this month	2
Class "Q" clearances received on old employees to date	4,453
Class "Q" clearances received on new employees this month	33
Class "Q" clearances received on new employees to date	5,904
Class "Q" clearances received on both old and new employees since February 17, 1947:	10,357
Formal "P" clearances awaiting change to "Q"	39
Authorization Clearances issued this month	26

1221460

Plant Security and Services

Statistical Summary of Outstanding Area Badges

May

	A	B	C	Total
100-B	630	1517	508	2655
100-D	691	1518	550	2759
100-F	659	1528	495	2682
200-E	954	1627	384	2965*
200-W	1338	1546	378	3262
200-N	49	846	137	1032
300	1338	1580	267	3185
234-5	3141	249		3390
241-BY	409	109		518

*Includes 42 "A" badges at Riverland Yards

June

	A	B	C	Total
100-B	656	1580	486	2722
100-D	710	751	546	2007
100-F	721	1555	499	2775
200-E	966	1668	377	3011*
200-W	1377	1585	367	3329
200-N	50	870	129	1049
300	1363	1589	254	3206
234-5	Closed June 20, 1949------			
241-BY	285	109		285

*Includes 43 "A" badges at Riverland Yards

Visitors or Temporary Badges

Area	May	June
100-B	352	365
100-D	591	644
100-F	608	643
200-E	530	551
200-W	277	385
200-N	905	914
300	1071	1145
234-5	167	Closed
241-BY	101	111
Total	4602	4758

Special Clearance Section

Following is a statistical summary of clearance status of vendor and consultant vendor companies:

Total companies forwarded to AEC this month:	6	Personnel:	20
Total companies forwarded to AEC last month:	9		27
Total companies forwarded to AEC to date:	201		2,082
Total companies cleared for restricted data this month:	5		5
Total companies cleared for restricted data last month:	7		21

New companies forwarded to the Atomic Energy Commission this month:

Scientific Supplies Company
Seattle, Washington

Ohio Crankshaft Company
Los Angeles 36, California

Diamond Power Speciality Company
Detroit 31, Michigan

1221461

Plant Security and Services

Number and type of clearance granted by the Atomic Energy Commission this month to vendors and consultants:

Formal "Q"	5
Formal "P"	23
Emergency "Q"	0

Three emergency clearances were requested this month:

Bernard B. Lane
James A. Good
Madison Cawein

"Q" clearance card issued this month to vendor-consultant: 1

1221452

[redacted]

HANFORD WORKS
General Electric Company
Richland, Washington

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	6-20-49	6-21-49	X		
II. Visits to other Installations							
D. H. Eckles to: Tumor Institute Swedish Hospital Seattle, Washington	Medical consultation	S. T. Cantril	6-30-49	7-1-49	X		
CONSTRUCTION DIVISION							
I. Visitors to this Works							
E. H. Weil Lincoln Electric Company Portland, Oregon	Inspect welding machines in White Bluffs Area	J. W. Mercke	6-9-49	6-9-49		X	
R. L. Howerton Lincoln Electric Company Portland, Oregon	Inspect welding machines in White Bluffs Area	J.W. Mercke	6-9-49	6-9-49		X	
B. Dickinson Industrial Engineers & Contractors Portland, Oregon	Inspection work in 184-H Bldg. of contract work of his Company	J. W. Mercke	6-7-49	6-7-49		X	100-H

DECLASSIFIED

[redacted]

122145

[redacted]

Name - Organization	Purpose of Visit	Person Contacted	Arrival	Departure	Restricted Data Class.	Restricted Data Unclass.	Areas
R. C. Robin Nucleonics Department General Electric Company Schenectady, New York	Review of history	J. W. Mercke	6-13-49	6-17-49	X		
G. R. Rede General Electric Company Schenectady, New York	Design consultation	V. D. Nixon	6-13-49	6-22-49	X		100-H
DESIGN DIVISION							
I. Visitors to this Works							
H. Lang J.E. Hasseltine Company Seattle, Washington	Welding information	W. W. McIntosh M. J. Rutherford	6-7-49	6-7-49		X	
A. Dammon Bumstead-Woolford Company Seattle, Washington	Discuss instruments	C. O. Clementson	6-14-49	6-14-49		X	
E. P. Haquette Pratt & Whitney Company San Francisco, California	Discuss machine tools and gauges	G. H. Syrovy	6-20-49	6-20-49		X	
C. E. Goudge Gladding McBean and Company Seattle, Washington	Discussion of pipe materials	W. B. Webster	6-21-49	6-21-49		X	
S. W. Williams Brown Instrument Company Portland, Oregon	Instrumentation	C. O. Clementson E. Hilgeman	6-22-49	6-22-49		X	
F. A. Burns L.H. Butcher Company Seattle, Washington	Discuss rectoplater	J. A. Carlen	6-23-49	6-23-49		X	

VISITS TO OTHER INSTALLSTIONS

[redacted]

DECLASSIFIED

[redacted]

Name - Organization	Purpose of Visit	Person Contacted	Arrival	Departure	Restricted Data Class.	Restricted Data Unclass.	Areas
D. D. Streid to: Atomic Energy Commission Washington, D. C.	Consultation on 234-5 Program	A. E. C.	6-13-49	6-18-49	X		
W. E. Johnson to: Atomic Energy Commission Washington, D. C.	Consultation on 234-5 Program	A. E. C.	6-13-49	6-18-49	X		
H. S. Isbin to: Radiation Laboratory Berkeley, California	Attend Heat Transfer Institute	M. Sommerfield F. Gunther	6-21-49	6-25-49		X	
J. B. Medlin to: City Galvanizer Company Portland, Oregon	Contact prospective vendor on galvanized nozzles	H. Williams	6-22-49	6-25-49		X	
J. B. Medlin to: Galvanizers Company Portland, Oregon	Contact prospective vendor on falvanized nozzles	Mr. Redmond	6-22-49	6-25-49		X	
W R. McKenna to: City Galvanizer Company Portland, Oregon	Contact prospective vendor on galvanized nozzles	H. Williams	6-22-49	6-25-49		X	
W. R. McKenna to: City Galvanizer Company Portland, Oregon	Contact prospective vendor on galvanized nozzles	Mr. Redmond	6-22-49	6-25-49		X	
J. B. Medlin to: Bremerton Navy Yard Bremerton, Washington	Discuss fabrication of equipment	S. A. Allison	6-28-49	6-30-49	X		
W. R. McKenna to: Bremerton Navy Yard Bremerton, Washington	Discuss fabrication of equipment	S. A. Allison	6-28-49	6-30-49	X		
R. F. Klein to: Garlock Packing Company Palmyra, New York	Consult in regard to packing and rubber seals	W. W. Jones	6-11-49	6-24-49		X	

[redacted]

DECLASSIFIED

[redacted]

Name - Organization	Purpose of Visit	Person Contacted	Arrival	Departure	Restricted Data Class.	Restricted Data Unclass	Areas
R. F. Klein to: E. F. Houghton & Company Philadelphia, Pennsylvania	Consult in regard to packing and rubber seals	H. C. Matheis	6-11-49	6-24-49		X	
R. F. Klein to: Anchor Packing Company Philadelphia, Pennsylvania	Consult in regard to packing and rubber seals	Mr. Leonard	6-11-49	6-24-49		X	
R. F. Klein to: E. I. du Pont de Nemours Wilmington, Delaware	Consult in regard to packing and rubber seals	R. W. Malcolmson	6-11-49	6-24-49		X	
R. F. Klein to: B. F. Goodrich Company Brecksville, Ohio	Consult in regard to packing and rubber seals	W. L. Davidson Dr. Printz	6-11-49	6-24-49		X	
R. F. Klein to: Firestone Ind. Prod. Co. Akron, Ohio	Consult in regard to packing and rubber seals	J. J. Allen	6-11-49	6-24-49		X	
R. F. Klein to: Goodyear Tire & Rubber Co. Akron, Ohio	Consult in regard to packing and rubber seals	Dr. Dinsmore	6-11-49	6-24-49		X	
R. F. Klein to: Crane Packing Company Chicago, Illinois	Consult in regard to packing and rubber seals	Mr. Martin	6-11-49	6-24-49		X	
I. Visitors to this Works (cont'd)							
F. P. Robinson General Electric Company Seattle, Washington	Design consultation	V. D. Nixon	6-21-49	7-22-49	X		100-H Exc. 100-D 105

HEALTH INSTRUMENT DIVISION

I. Visitors to this Works

[redacted]

DECLASSIFIED

[redacted]

Name - Organization	Purpose of Visit	Person Contacted	Arrival	Departure	Restricted Data Class.	Restricted Data Unclass.	Areas
O. N. Biddulph Washington State College Pullman, Washington	Discuss health instrument problems	H. A. Kornberg	6-3-49	6-4-49	X		200-W
N. Higinbotham Washington State College Pullman, Washington	Discuss health instrument problems	H. M. Parker	6-3-49	6-4-49	X		200-W
R. E. Zirkle Argonne National Laboratory Chicago, Illinois	Health instrument consultation	H. M. Parker	6-1-49	6-3-49	X		200-W 100-F 300
M. E. Ensminger Washington State College Pullman, Washington	Health instrument consultation	H. A. Kornberg	6-10-49	6-11-49	X		300
F. W. Test Argonne National Laboratory Chicago, Illinois	re: inventions	H. M. Parker	6-22-49	6-22-49	X		300
A. F. York Argonne National Laboratory Chicago, Illinois	re: inventions	H. M. Parker	6-22-49	6-22-49	X		300
J. R. Huffman Argonne National Laboratory Chicago, Illinois	Consultation	C. M. Patterson	6-9-49	6-9-49	X		
S. McLain Argonne National Laboratory Chicago, Illinois	Consultation	C. M. Patterson	6-9-49	6-9-49	X		
L. E. Link Argonne National Laboratory Chicago, Illinois	Consultation	C. M. Patterson	6-9-49	6-9-49	X		
W. Hicks Ansco Binghamton, New York	Consultation	P. L. Eisenacher	6-16-49	6-16-49		X	

[redacted]

DECLASSIFIED

[redacted]

Name - Organization	Purpose of Visit	Person Contacted	Arrival	Departure	Restricted Data Class	Restricted Data Unclass	Areas
R. G. Lorraine General Electric Company Schenectady, New York	Study Hanford operations	C. M. Patterson	6-10-49	6-10-49	X		
II. Visits to other Installations							
F. P. Seymour to: General Electric Company Schenectady, New York	Consultation on health physics	L. L. German	6-14-49	6-14-49	X		
F. P. Seymour Brookhaven National Laboratory New York, New York	Consultation on health physics	F. P. Cowan	5-28-49	6-24-49	X		
F. P. Seymour to: Argonne National Lab. Chicago, Illinois	Consultation on health physics	J. E. Rose	5-28-49	6-24-49	X		
P. L. Eisenacher to: Oak Ridge National Lab. Oak Ridge, Tennessee	At end Scintillation Counter Conference	-	6-3-49	6-4-49	X		
C. C. Gamertsfelder to: Chalk River Ontario, Canada	Attend conference	C. A. Nelson	6-16-49	6-17-49	X		
H. M. Parker to: Chalk River Ontario, Canada	Attend conference	C. A. Nelson	6-16-49	6-17-49	X		
H. M. Parker to: General Electric Company Schenectady, New York	Consultation on health problems	L. L. German D. H. Marquis	6-14-49	6-14-49	X		
H. M. Parker to: Atomic Energy Commission Washington, D. C.	Consultation	A. E. C.	6-15-49	6-15-49	X		

[redacted]

DECLASSIFIED

[redacted]

Name - Organization	Purpose of Visit	Person Contacted	Arrival	Departure	Restricted Data Class.	Restricted Data Unclass	Areas
I. Visitors to this Works (cont'd)							
A. E. Gorman Staff Engineers Atomic Energy Commission Washington, D. C.	Consultation	H. M Parker	6-8-49	6-9-49	X		
INSTRUMENT DIVISION							
I. Visitors to this Works							
E. M. Bendig Panellit Company, Incorporated Chicago, Illinois	Repair instrument gauges	E. Hilgeman E. Hilgeman	6-1-49 6-13-49	6-10-49 6-18-49	X X		100-H 100-H (Exc. for both visits
K. E. Atwood Bailey Meter Company Seattle, Washington	Inspect instrument installations	E. Hilgeman	6-27-49	6-30-49	X		100-H Exc.
II. Visits to other Installations							
W. M. Mathis to: Knolls Atomic Power Lab. Schenectady, New York	Discuss instrument problems	M. A. Edwards	6-10-49	6-10-49	X		
W. M. Mathis to: Knolls Atomic Power Lab. Schenectady, New York	Discuss instrument problems	C. A. Hansen, Jr.	6-8-49	6-11-49	X		
W. M. Mathis to: Electronics Department General Electric Company Syracuse, New York	Discuss instrument problems	G. Metcalf	6-8-49	6-11-49	X		
W. M. Mathis to: Apparatus Department General Electric Company West Lynn, Massachusetts	Discuss instrument problems	M. A. Princi	6-8-49	6-11-49	X		

[redacted]

DECLASSIFIED

[redacted]

Name - Organization	Purpose of Visit	Person Contacted	Arrival	Departure	Restricted Data Class.	Restricted Data Unclass	Areas
MANAGEMENT							
I. Visitors to this Works							
F. C Ruling General Electric Company Washington, D. C.	Inspection and consultation	G. R. Prout T. G. LaFollette J. R. Rue	6-17-49	6-17-49	X		100-F 200-W 300
II. Visits to other Installations							
F. E. Baker to: Atomic Energy Commission Washington, D. C.	Consultation on 234-5 Project	A. E. C.	6-13-49	6-17-49	X		
F. Ellis Johnson to: General Research Laboratory Schenectady, New York	Consultation on education program	K. H. Kingdon	6-16-49	6-17-49	X		
F. Ellis Johnson to: Knolls Atomic Power Lab. Schenectady, New York	Consultation on education program	H. H. Race	6-16-49	6-17-49	X		
F. Ellis Johnson to: Troy, New York	Attend A.I.E.E. Meeting	K. H. Kingdon and others	6-18-49	6-19-49		X	
A. B. Greninger to: Atomic Energy Commission Washington, D. C.	AEC General Advisory Committee Meeting	J. R. Oppenheimer	6-1-49	6-4-49	X		
C. N. Gross to: Atomic Energy Commission Washington, D. C.	AEC General Advisory Committee Meeting	J. R. Oppenheimer	6-1-49	6-4-49	X		
O. H. Greager to: Atomic Energy Commission Washington, D. C.	AEC General Advisory Committee Meeting	J. R. Oppenheimer	6-1-49	6-4-49	X		

[redacted]

DECLASSIFIED

— 22 — 4 — 10

Name - Organization	Purpose of Visit	Person Contacted	Arrival	Departure	Restricted Data Class.	Restricted Data Unclass.	Areas
I. Visitors to this Works (cont'd)							
L. Hartmann General Electric Company Schenectady, New York	Attend meeting of Nucleonics Department Records	W. I. Patnode	6-5-49	6-9-49	X		100-D 200-W 300
R. C. Robin General Electric Company Schenectady, New York	Attend meeting of Nucleonics Department Records	W. I. Patnode	6-5-49	6-9-49	X		100-D 200-W 300
R. G. Lorraine General Electric Company Schenectady, New York	Study Hanford Operations as they bear on problem of power production	W. I. Patnode	6-5-49	6-5-49	X		100-D 200-W 300
F. W. Test Argonne National Laboratory AEC Chicago, Illinois	In connection with Invention Report system	W. I. Patnode	6-20-49	6-25-49	X		300
A. F. York Argonne National Laboratory AEC Chicago, Illinois	In connection with Invention Report system	W. I. Patnode	6-20-49	6-25-49	X		300
MANUFACTURING DIVISION MANAGEMENT							
I. Visitors to this Works							
S. McLain Argonne National Laboratory Chicago, Illinois	Operating aspects of Material Test Reactor Program	C. N. Gross	6-8-49	6-10-49	X		100-D 300 200-W
J. R. Huffman Argonne National Laboratory Chicago, Illinois	Operating aspects of Material Test Reactor Program	C. N. Gross	6-8-49	6-10-49	X		100-D 300 200-W
L. E. Link Argonne National Laboratory Chicago, Illinois	Operating aspects of Material Test Reactor Program	C. N. Gross	6-8-49	6-10-49	X		100-D 300 200-W

[redacted]

DECLASSIFIED

[redacted]

Name - Organization	Purpose of Visit	Person Contacted	Arrival	Departure	Restricted Data Class.	Restricted Data Unclass	Areas
G. R. Rede General Electric Company Schenectady, New York	Tool Dolly for 100 Areas	C. N. Gross E. P. Lee J. S. McMahon	6-16-49	6-17-49	X		
"P" DIVISION							
I Visitors to this Works							
G. R. Rede General Electric Company Schenectady, New York	Tool Dolly for 100 Areas	E. P. Lee	6-16-49	6-17-49	X		
II. Visits to other Installations							
P. E. Lowe to: Green Bay Foundry and Machine Works Green Bay, Wisconsin	Inspection of filter plant facilities for possible use in 100 Area Operation	W. P. Cristman	6-27-49	6-27-49		X	
P. E. Lowe to: Northern Paper Company Green Bay, Wisconsin	Inspection of filter plant facilities for possible use in 100 Area Operation	Mr. Malcobe	6-27-49	6-27-49		X	
P. E. Lowe to: Menasha City Water Treatment Plant Menasha, Wisconsin	Inspection of filter plant facilities for possible use in 100 Area Operation	Mr. Marks	6-28-49	6-28-49		X	
PURCHASING AND STORES DIVISION							
I. Visitors to this Works							
H. S. Mickey Harry Mickey General Hauling Co. Sumner, Washington	Haul posts to areas for new fencing	H. O. Monson D. P. O'Leary	5-17-49	6-17-49		X	200-E100-B 200-W100-D 300 100-F
L. F. Schneider Harry Mickey General Hauling Co. Sumner, Washington	Haul posts to areas for new fencing	H. O. Monson D. P. O'Leary	5-17-49	6-3-49		X	200-E 100-B 200-W 100-D 300 100-F

[redacted]

DECLASSIFIED

2211412

[redacted]

Name - Organization	Purpose of Visit	Person Contacted	Arrival	Departure	Restricted Data Class	Restricted Data Unclass	Areas
PLANT SECURITY AND SERVICES DIVISION							
I. Visits to other Installations							
T. G. Stanfield to: Seattle, Washington	Visit display of micro-film equipment and various establishments using micro-filming equipment.		6-9-49	6-12-49		X	
TECHNICAL DIVISIONS							
I. Visitors to this Works							
J. R. Humphreys Argonne National Laboratory Chicago, Illinois	Consultation on proposed Special Irradiation Program	W. K. Woods	6-17-49	6-17-49	X		300 100-F
H. Haaland Western Precipitation Company Los Angeles, California	Service Precitator	B. Weidenbaum	6-6-49	6-10-49	X		200-E
W. A. Bain Kellex Corporation New York, New York	Consultation on metal recovery process development	R. H. Beaton	6-29-49	6-30-49	X		200-W
R. O. Hill Kellex Corporation New York, New York	Consultation on metal recovery process development	R. H. Beaton	6-29-49	6-30-49	X		200-W
J. E. Whitney Kellex Corporation New York, New York	Consultation on metal recovery process development	R. H. Beaton	6-29-49	6-30-49	X		200-W
P. R. McGinnis Mass. Institute Technology Cambridge, Massachusetts	Obtain metallurgical specimens	C. E. Lacy	6-6-49	6-11-49	X		300 100-B 100-F

[redacted]

DECLASSIFIED

[redacted]

Name - Organization	Purpose of Visit	Person Contacted	Arrival	Departure	Restricted Data Class	Restricted Data Unclass	Areas
J. L. Klein Mass. Institute Technology Cambridge, Massachusetts	Obtain metallurgical speciments	C. E. Lacy	6-6-49	6-11-49	X		100-B 100-F 300
II. Visits to Other Installations							
C. S. Lowe to: Argonne National Laboratory Chicago, Illinois	Redox conference	H. H. Hyman	5-31-49	6-1-49	X		
C. S. Lowe to: Oak Ridge National Laboratory Oak Ridge, Tennessee	Redox conference	D. G. Reid	6-1-49	6-3-49	X		
W. H. Reas to: Argonne National Laboratory Chicago, Illinois	Redox conference	H. H. Hyman	5-31-49	6-1-49	X		
W. H. Reas to: Oak Ridge National Laboratory Oak Ridge, Tennessee	Redox conference	D. G. Reid	6-1-49	6-3-49	X		
C. M. Slansky to: Argonne National Laboratory Chicago, Illinois	Redox conference	H. H. Hyman	5-31-49	6-1-49	X		
C. M. Slansky to: Oak Ridge National Laboratory Oak Ridge, Tennessee	Redox conference	D. G. Reid	6-1-49	6-3-49	X		
W. H. Reas to: Knolls Atomic Power Laboratory Schenectady, New York	Redox consultation	J. Marsden L. B. Pragg	6-6-49	6-7-49	X		
C. M. Slansky to: Knolls Atomic Power Laboratory Schenectady, New York	Redox consultation	J. Marsden	6-6-49	6-7-49	X		

[redacted]

DECLASSIFIED

[redacted]

Name - Organization	Purpose of Visit	Person Contacted	Arrival	Departure	Restricted Data Class	Restricted Data Unclass	Areas
R. H. Beaton to: Atomic Energy Commission Washington, D. C.	AEC Advisory Committee Meeting	J. R. Oppenheimer	6-1-49	6-4-49	X		
R. H. Beaton to: Oak Ridge National Lab. Oak Ridge, Tennessee	Redox Steering Committee Meeting	M. D. Peterson	6-6-49	6-7-49	X		
R. H. Beaton to: Argonne National Laboratory Chicago, Illinois	Redox consultation	S. Lawroski	6-8-49	6-9-49	X		
J. T. Stringer to: Gen. Eng. & Cons. Lab. Schenectady, New York	Redox technical consultation	D. E. Garr	6-13-49	6-14-49	X		
J. T. Stringer to: Knolls Atomic Power Lab. Schenectady, New York	Redox technical consultation	L. B. Bragg	6-15-49	6-16-49	X		
J. T. Stringer to: Fischer & Porter Company Foxboro, Pennsylvanie	Discussion of flow control problems	Mr. Diement	6-17-49	6-17-49		X	
F. W. Albaugh to: Chalk River Ontario, Canada	Conference on waste gas disposal problems	C. A. Nelson	6-15-49	6-17-49	X		
R. B. Richards to: Chalk River Ontario, Canada	Conference on waste gas disposal problems	C.A. Nelson	6-15-49	6-17-49	X		
F. W. Albaugh to: Knolls Atomic Power Lab. Schenectady, New York	Redox consultation	J. Marsden	6-14-49	6-14-49	X		
J. B. Work to: Gen. Eng. & Consulting Lab. Schenectady	234-5 consultation	D. H. Marquis	6-13-49	6-14-49	X		

[redacted]

DECLASSIFIED

[redacted]

Name --Organization	Purpose of Visit	Person Contacted	Arrival	Departure	Restricted Data Class	Restricted Data Unclass	Areas
J. B. Work to: Atomic Energy Commission Washington, D. C.	AEC Meeting	-	6-15-49	6-15-49	X		
J. B. Work to: Chalk River Ontario, Canada	Conference on waste gas disposal problems	C. A. Nelson	6-16-49	6-17-49	X		
J. B. Work to: Oak Ridge National Laboratory Oak Ridge, Tennessee	Conference on stack gas	C. E. Winters	6-20-49	6-22-49	X		
J. F. Gifford to: General Mills Research Lab. Minneapolis, Minnesota	Inspect and discuss laboratory equipment	F. Jewett T. R. James	6-27-49	6-28-49	X		
J. F. Gifford to: Argonne National Lab. Chicago, Illinois	Inspect and discuss laboratory equipment	W. M. Manning R. Goertz	6-29-49	6-30-49	X		
C. M. Slansky to: Radiation Laboratory Berkeley, California	Inspection of laboratory facilities	G. T. Seaborg	6-28-49	6-29-49	X		
B. Weidenbaum to: Gen. Eng. & Cons. Lab. Schenectady, New York	Technical consultation	D. H. Marquis	6-13-49	6-14-49	X		
C. G. Stevenson to: Knolls Atomic Power Lab. Schenectady, New York	Attend meeting of Technical Informationpanel	J. P. Howe	6-8-49	6-10-49	X		
C. G. Stevenson to: Research Laboratory Schenectady, New York	Study library, files and publication practices	J. P. Howe	6-8-49	6-10-49	X		
C. G. Stevenson to: Argonne National Laboratory Chicago, Illinois	Study library, files and publication practices	H. D. Young	6-13-49	6-13-49	X		

[redacted]

DECLASSIFIED

[redacted]

Name - Organization	Purpose of Visit	Person Contacted	Arrival	Departure	Restricted Data Class	Restricted Data Unclass	Areas
H. R. Schmidt to: Oak Ridge National Lab. Oak Ridge, Tennessee	Consultation on analytical methods	F. W. Hurd M. T. Kelley	6-7-49	6-9-49	X		
S. A. Hays to: Oak Ridge National Lab. Oak Ridge, Tennessee	Consultation on analytical methods	F. W. Hurd M. T. Kelley	6-7-49	6-9-49	X		
H. R. Schmidt to: Knolls Atomic Power Lab. Schenectady, New York	Consultation on analytical methods	J. I. Flagg	6-9-49	6-10-49	X		
S. A. Hays to: Knolls Atomic Power Lab. Schenectady, New York	Consultation on analytical methods	J. I. Flagg	6-9-49	6-10-49	X		
J. K. Figenshau to: Leupold-Stevens Instrument Co. Portland, Oregon	Inspection of equipment on order from this firm	M. Leopold	6-10-49	6-10-49		X	
A. E. Eckert * Battelle Memorial Institute Columbus, Ohio	Technical consultation	T. W. Hauff A. H. Bushey	6-6-49	6-6-49	X		300
P. F. Gast to: Atomic Energy Commission Washington, D. C.	Serve on subcommittee on reactors	C. L. Marshall	6-2-49	6-2-49	X		
P. F. Gast to: Atomic Energy Commission Washington, D. C.	Attend General Advisory Committee Meeting	J. H. Hanley	6-2-49	6-3-49	X		
P. F. Gast to: Argonne National Laboratory Chicago, Illinois	Consultation on graphite	N. H. Hilberry	6-6-49	6-6-49	X		

*Should be under visitors to this Works for Technical Divisions

[redacted]

DECLASSIFIED

LI 2 1 1 1

[redacted]

Name - Organization	Purpose of Visit	Person Contacted	Arrival	Departure	Restricted Data Class	Restricted Data Unclass	Areas
C. W. Botsford to: Midland, Michigan	Consultation on use of magnesium alloys	J. C. McDonald	6-8-49	6-11-49		X	
J. B. Lambert to: Oak Ridge National Laboratory Oak Ridge, Tennessee	Assistance with the elevated temperature Reactor Test Channel Program	L. W. Fromm	6-12-49	6-16-49	X		
CONSTRUCTION PURCHASING DIVISION							
I. Visitors to this Works							
F. B. Chamberlain Arthur Forsyth Company Seattle, Washington	Inspect equipment installed in 100-H Area on order HWC 6671	H. A. Hauser	6-13-49	6-13-49		X	
Z. Thomas Johnson Service Company Seattle, Washington	Check instruments and equipment 200-W Area on order HWC5684	H. A. Hauser	6-13-49	6-13-49		X	
L. Wellington Refinite Company Omaha, Nebraska	Supervise and check installation of equipment on order HWC 1836	H.A. Hauser	6-20-49	6-20-49		X	
C. Cunha Fairbanks, Morse Company Portland, Oregon	Check installation of equipment on order HWC 5458	H.A. Hauser	6-21-49	6-21-49		X	
A. H. Y. Hedner Travellers Insurance Company Portland, Oregon	Inspect boilers 100-Areas	H. A. Hauser	6-22-49	6-22-49		X	
H. E. Jenseth General Electric Company Seattle, Washington	Check equipment installed on order HWC 5459	H. A. Hauser	6-22-49	6-22-49		X	
Mr. Alyea Johnson Service Company Milwaukee, Wisconsin	Check equipment installed on order HWC 5684	H. A. Hauser	6-24-49	6-24-49		X	

[redacted]

DECLASSIFIED

1221718

[redacted]

Name - Organization	Purpose of Visit	Person Contacted	Arrival	Departure	Restricted Data Class	Restricted Data Unclass	Areas
H. A. Michel General Electric Company Seattle, Washington	Inspection of equipment installed 200-W Area on order HWC 7104	H. A. Hauser L. B. Brinkman	6-28-49	6-28-49		X	
II. Visits to other Installations							
L. G. Jones to: City Galvanizer Company Portland, Oregon	Study prospective of galvanizing inlet nozzles for pile unit	H. Williams	6-22-49	6-24-49		X	
L. G. Jones to: Galvanizers Company Portland, Oregon	Study prospective of galvanizing inlet nozzles for pile unit	Mr. Hinsdale	6-22-49	6-24-49		X	
L. G. Jones to: Bremerton Navy Yard Bremerton, Washington	Study prospective of galvanizing inlet nozzles for pile unit	S. F. Allison	6-28-49	6-30-49	X		

[redacted]

DECLASSIFIED

PURCHASING AND STORES DIVISIONS
SUMMARY
JUNE, 1949

The personnel of the Purchasing and Stores Divisions was further reduced as indicated by the tabulation below:

	Total Personnel as of 5-31-49	Total Personnel as of 6-30-49	Net Change
Exempt	52	45	Minus 7
Non-Exempt	185	185	0
TOTALS	237	230	Minus 7

The New York office of the Purchasing and Stores Divisions was closed during the month. Our last representative, Mr. R. J. Carpenter, returned to his former assignment at General Electric Company, Schenectady, New York. The five remaining HWN purchase orders are being followed for cancellation by this Division working in conjunction with the Kellex Corporation Buying Group.

An agreement was reached during the month with the Redox Committee which will permit this Division to do the purchasing for the Redox Program here at Hanford Works rather than at New York as previously planned.

In general the work load of the Purchasing and Stores Divisions shows little change over the preceding month. Activity in the Surplus, Salvage and Scrap Section of the Stores Division does, however, continue to be on the increase. The total disbursements to date is $1,424,484.24.

The duties of Receiving Clerks B have been restudied and new job assignments made so that no individual is performing duties outside the framework of his job writeup as accepted by the Union. In conjunction with this study, new Stockroom Keeper B assignments have been recognized in our Pasco warehouses and the over-all is far more equitable and lends flexibility to our Stores responsibilities. As a result of the above outlined changes, there is some rumored unrest among our employees, but all changes have been affected in strict accordance with the Union contract and in consultation with the Labor Relations group.

Savings in the amount of $12,051.73 on freight charges were reflected during the month as a result of rate reductions obtained from carriers.

An agreement was reached with members of the Manufacturing Division to write requests for material on Minor Construction jobs on purchase requisitions in order that this Division may more effectively control inventories.

A meeting was scheduled with members of the Transportation Division organization to study possible ways and means of eliminating duplicate Stores setups and excess inventories of automotive spare parts.

1221480

PURCHASING AND STORES DIVISIONS
PURCHASING DIVISION
JUNE, 1949

GENERAL

There was little change in the work load during the month. 960 purchase orders were placed as compared to 937 placed in May. 1,347 purchase requisitions were received as compared to 1,499 received during May. Requisitions on hand at month end totaled 406 as compared with 385 at the end of the previous month.

During the month twenty-two additional orders were placed for Project P-10-A and deliveries are continuing to meet requirement schedules.

Considerable time and effort was expended in attempting to locate a galvanizing plant capable of performing satisfactory work in galvanizing special stainless steel nozzles. Of four firms contacted, only two were willing to undertake the job. Representatives of our Inspection Section and Design Division took samples of the nozzles to each of the plants and watched the actual attempts to galvanize the nozzles. It was their opinion that only one of the firms was capable of performing acceptable work and because of this, it is felt that an attempt should be made to avail ourselves of the services of the Puget Sound Naval Shipyard. Near the end of the month a similar field trip was arranged for visiting the Shipyard. In our next report we shall outline results of this trip and hope to be able to summarize a satisfactory solution to the entire problem.

The thirty cars of coal purchased from Reynolds-Updike Company for test purposes have been received and all analyses have been completed. These analyses show that the quality of the coal received was far below the analysis promised in the original proposal and we had no alternative but to disqualify their bid. Other arrangements are going forward to supply the remainder of our coal requirements.

An offer to supply any part or all of our coal requirements was received from the Big Horn Coal Company who formerly held a contract for part of our requirements. Their offer was based on their supplying coal from a new field which they are developing and their quoted representative analysis indicated their offer to be slightly more favorable than our two present contracts. Since their offer was from an entirely new field, it was felt that we should place an order for thirty cars, each of which would be analyzed in our own laboratory to determine the "as received" analysis rather than accepting their quoted average analysis at its face value. Upon contacting them, we were advised that their mine was not now operating and they were instructed to advise us when they would be able to load thirty cars for shipment. Their offer is being held in obeyance pending receipt of the coal here and the completion of the analyses.

An annual contract for our requirements of ammonium silicofluoride was awarded to the American Agricultural Chemical Company.

PERSONNEL

	Total Personnel as of 5-31-49	Total Personnel as of 6-30-49	Net Change
Exempt	29	24	Minus 5
Non-Exempt	22	25	Plus 3
TOTALS	51	49	Minus 2

PURCHASING AND STORES DIVISIONS
PURCHASING DIVISION

SAFETY AND SECURITY

Safety and Security Meetings Scheduled	1
Number of Employees attending	50
Minor Injuries	1

STATISTICS

	G	D	Total
Requisitions on hand 6-1-49 (includes 40 assigned to Govt.)	359	26	385
Requisitions received during June	1,206	141	1,347
Requisitions placed during June	1,191	135	1,326
Requisitions on hand 6-30-49 (includes 61 assigned to Govt.)	374	32	406

	Number	Value
HW Orders Placed	848	$201,974.76
HW Alterations issued	72	30,762.34 DR.
Total:	920	$232,737.10 DR.
HWC Orders Placed	112	$139,548.84
HWC Alterations issued	49	602,404.47 CR.
	161	$462,955.63 CR.
AEC Orders Placed	70	$ 14,666.28
DC Orders Placed	3	1,993.08

	OR	ORC	Total
Government Transfers	4	0	4

Number of new orders requiring inspection during month	19
Number of completed orders requiring inspection during month	19
Number of orders outstanding requiring inspection at close of month	56
Orders expedited (special request)	162
Orders expedited (routine)	219

PURCHASING AND STORES DIVISIONS
STORES DIVISION
JUNE, 1949

GENERAL

During June, 1949, general Stores inventories reflect a decrease from $2,964,697.48 as of the close of May to $2,720,378.68 as of the close of June. Materials totaling $203,246.83 were declared excess during the month.

Basic ground work to develop a new control system for the handling of automotive caption 903-11 has been started with the cooperation of the Transportation Division.

Excess Lists Numbers 111 through 129, a total of nineteen, were transmitted to the Atomic Energy Commission during the month. Twenty-eight field lists were circulated throughout the Project. Twenty-three lists were approved as excess and five lists are pending.

Twelve representatives of Government agencies and private businesses were escorted through our warehouses and scrap yards for the purpose of negotiating the purchase of scrap and transfer of excess property. In addition, numerous individuals and groups of individuals interested in the purchase of tract houses and shacks were escorted through the Project.

320 truckloads of material and/or equipment were received and warehoused in Pasco General Depot during the month.

The sale of the first group of condemned tract houses has been almost completed. Bids have been opened on the second group and awards will be made as soon as approval is secured from the Atomic Energy Commission.

Bids on all scrap lumber now in the Richland area will be opened Monday, July 8, 1949 and the successful bidder selected.

Building 722-C has been assigned to us for the storage of acid and existing stocks have been moved from Pasco to the 700 Area.

The Warehousing, Disbursing and Receiving Section of the Stores Division operated the past month in all locations without a single minor injury.

PURCHASING AND STORES DIVISIONS
STORES DIVISION

PERSONNEL

	Total Personnel as of 5-31-49	Total Personnel as of 6-30-49	Net Change
Exempt	18	18	0
Non-Exempt	152	150	Minus 2
TOTALS	170	168	Minus 2

SAFETY AND SECURITY

Inventory Control	
Safety and Security Meetings Scheduled	2
Number of Employees Attending	30
Minor Injuries	0
Receiving, Warehousing & Disbursing	—
Safety and Security Meetings Scheduled	6
Number of Employees Attending	53
Minor Injuries	0
Surplus, Salvage & Scrap	
Safety and Security Meetings Scheduled	5
Number of Employees Attending	58
Minor Injuries	4

STATISTICS

Inventory Control

Number of items added to Stores stock	202
Number of items deleted from Stores stock	97
Items in Stores stock at month end	50,018
Store Orders filled	15,625
Inventory valuation (903-all captions, 906 & 912)	$2,720,378.68
Inventory valuation (Spare Parts) at month end	1,573,539.23
Total value inventories at month end, including Spare Parts	4,293,917.91
Value of Disbursements, not including cash sale items	172,930.15 *
Value of Cash Sales	720.37

PURCHASING AND STORES DIVISIONS
STORES DIVISION

Inventory Control (Continued)

Value of transfers from Excess and Salvage to Stores	$3,308.41
Value of materials declared excess and removed from Stores stock	173,374.41
Value of materials returned to Stores stock for Credit	1,594.77

* Includes $9,850.67 disbursed to Construction and CPFF subcontractors.

Receiving, Warehousing & Disbursing

Receiving Reports issued	3,196
Emergency Store Orders filled	9
Returnable containers on hand at month end	5,411
Returnable containers on hand over six months	1,500
Shipments processed (containers and material) during this month	179

PURCHASING AND STORES DIVISIONS
STORES DIVISION

Surplus, Salvage & Scrap.

Excess Account #10.10 Balance 5-25-49		$5,660,117.94
Receipts 5-26-49 to 6-25-49		
Lumber	$ 4,612.47	
*Automotive Equipment	1,926,780.42	
Machine Tools & Equipment	32,661.04	
Office Furniture, Machines	5,461.75	
Household Furniture	153.45	
Material & Supplies	124,723.87	
Miscellaneous Equipment	36,545.44	
*(Includes depreciation adjustment of $409,397.74)	$2,130,938.44	2,130,938.44
		$7,791,056.38
Disbursements 5-26-49 to 6-25-49		
On Project:		
Lumber	698.19	
Automotive Equipment	22,386.88	
Office Furniture, Machines	165.27	
Material & Supplies	20,486.46	
Miscellaneous Equipment	792.11	
Off Project:		
Lumber	31,796.50	
Automotive Equipment	383,793.81	
Office Furniture, Machines	3,015.63	
Household Furniture	158.00	
Material & Supplies	29,546.86	
Miscellaneous Equipment	3,519.95	
	$ 496,359.66	496,359.66
Balance of Account #10.10 as of 6-25-49 (See attached list for breakdown of materials in this account by classifications)		$7,294,696.72
Total Receipts to Date		$8,719,180.96
Total Disbursements to Date		$1,424,484.24
Scrap and Salvage Disbursed		
Scrap Sales Completed	10	
Scrap Sales in Process	8	
Scrap Sale Revenue for the month		$ 6,855.83
Total Scrap Sale Revenue to date		$65,921.63

PURCHASING AND STORES DIVISIONS
STORES DIVISION

RECAPITULATION BY CLASSIFICATION OF ACCOUNT 10.10

Class	Description	Monetary Value
1	Gun Emplacements, Fire Control Instruments	$ 1.25
2	Small Arms	784.52
3	Lethal Device Equipment	10.00
4	Ammunition	1,032.98
5	Flags, Bunting, Pennants, etc.	201.71
7	Fuel	10.34
8	Motor Vehicles: Electric trucks, tires, tubes	213,083.52
10	Outboard Motors and all accessories	298.00
11	Pumps and Pump Parts	82,659.48
12	Marine Hardware	174.72
13	Engine and Fireroom Fittings	116.32
14	Lubricants	3,870.12
15	Electric Cable and Insulated Wire	14,164.02
16	Radio and Sound Signal Apparatus	17,944.92
17	Electric Apparatus	762,516.60
18	Instruments of Precision & Photographic Equipment	25,024.86
19	Blocks	4,485.08
21	Cordage: Hemp, Jute, Oakum, Twine, etc.	222.56
22	Wire Rope, Bare Wire, etc.	4,589.65
24	Canvas, Duck, Tentage, etc.	173.90
26	Furniture	97,391.36
27	Textiles: Thread, Findings, Floor Coverings	25,223.48
29	Toilet Articles	24.38
30	Bathroom and Toilet Fixtures	4,524.43
31	Non-Electric Lighting Apparatus	2.40
32	Fire-Surfacing and Heat Insulating Materials	27,964.51
33	Gaskets, Hose, Packing, Sheet and Strip Rubber, Hose Fittings, Flexible Tubing	10,198.65
34	Belting, Harness, (Leather) etc.	201.40
36	Music and Musical Instruments	8.50
37	Special Wearing Apparel and Athletic Equipment	13,672.84
38	Brooms and Brushes	17.30
39	Lumber	1,877,971.05
40	Machine Tools	122,610.09
41	Hand Tools	31,738.28
42	Builders and General Hardware	22,585.64
43	Bolts, Nuts, Rivets, Screws, Washers, etc.	21,875.20
44	Pipe and Non-flexible Tubes and Tubing	156,643.22
45	Pipe Fittings	245,048.42
46	Metal in Bars: Including Flat, Hexagon, etc.	11,375.42
47	Metal in Plates and Sheets	412.74
48	Metal in Shapes and Structural	398.58
51	Acids, Chemicals, etc.	13,748.73

1221487

PURCHASING AND STORES DIVISIONS
STORES DIVISION

RECAPITULATION BY CLASSIFICATION OF ACCOUNT 10.10 (cont.)

Class	Description	Monetary Value
52	Paints and Paint Ingredients	$ 57,870.24
53	Pens, Pencils, Paper, Drafting Room and Printers' Supplies	21,189.75
54	Office Equipment	27,215.75
55	Clothing	1,729.67
57	Laboratory Equipment	31,820.14
58	Fire Fighting Apparatus: Railway Equipment, Prefabricating Buildings, etc.	139,723.30
59	Building Materials: Asphalt, Brick, etc.	31,547.19
60	Boilers and Power Plants	1,292.40
63	Tableware	7,806.33
64	Kitchen Utensils and Apparatus	67,954.33
65	Ovens, Ranges, Stoves, etc.	25,024.73
66	Machinery: Pneumatic Tools, etc.	46,802.00
69	Animal and Hand-Drawn Vehicles	3,877.43
70	Agricultural Implements	1,969.07
73	Caps, Hats, Gloves, etc.	354.64
74	Infantry and Landing Force Equipment	512.62
78	Motorized Equipment & Heavy Construction Equipment	3,012,950.96
83	Airplane Accessories, Equipment and Parts	55.00
	Total Account 10.10	$7,294,696.72

PURCHASING AND STORES DIVISIONS
TRAFFIC SECTION
JUNE, 1949

GENERAL

On June 15, 1949, Mr. George Mullins from the Bureau of the Budget, Washington,D.C., together with representatives of the Commission's Transportation Branch, met with Mr. J. A. McSwigan for the purpose of discussing various phases of our traffic work and determining whether our practices and policies were adequate to protect the Government's interests. Mr. Mullins expressed satisfaction with the manner in which the Traffic Section was functioning.

On June 22, 1949, Mr. W. L. Rice, Chief of Field Operations, Division of Finance, United States Atomic Energy Commission, Washington, D.C., visited this Section in order to obtain first-hand knowledge of our traffic practices and policies, and complete information was furnished him regarding all phases of our work.

On August 15, 1948, we were advised by our Purchasing Division that a portion of our future requirements of Ferric Sulphate from Lockland, Ohio and East Point, Georgia would move in bulk in covered hopper cars, minimum weight at least 120,000 pounds. As a result of this information, on August 24, 1948 we submitted, through The Milwaukee Road, to the Transcontinental Freight Bureau, a proposal to reduce the freight rates on this commodity to Hanford, Washington.

Our proposal met with strong opposition from the Eastern Lines and was declined twice, and it was deemed advisable to present our further views personally before the Freight Traffic Managers' Committee. Accordingly, Mr. J. A. McSwigan appeared before this Committee in Chicago on February 11, 1949. As a result, on May 27, 1949, the carriers approved for publication on statutory notice rates of $1.60 and $1.51 per cwt. from East Point, Georgia and Lockland, Ohio to Hanford, Washington, subject to Ex Parte 168 increase, minimum 80,000 pounds, sacked, or in bulk in covered hopper cars.

We immediately requested both the Southern and Eastern Lines to petition the Interstate Commerce Commission for authority to publish these rates on short notice. The Southern Lines complied with our request and were granted permission to publish the rate of $1.60 from East Point, Georgia effective June 13, 1949. As a result, savings of 90.3¢ per cwt. on shipments in bulk, or approximately $1,083 per car, and 27.3¢ per cwt. on shipments in bags, or $218 per car, are now being effected on all shipments of Ferric Sulphate from East Point, Georgia. Publication of the rate of $1.51 from Lockland, Ohio will be made on statutory notice and will result in savings of 93.4¢ per cwt. on shipments in bulk, or approximately $1,120 per car, and 28.3¢ per cwt. on shipments in bags, or $226 per car.

As a result of rate reductions obtained from the carriers, there was a total savings in freight charges for the month of June amounting to $12,051.73. This makes a total savings to date of $1,097,502.33.

PERSONNEL

	Total Personnel as of 5-31-49	Total Personnel as of 6-30-49	Net Change
Exempt	3	1	Minus 2
Non-Exempt	10	9	Minus 1
TOTALS	13	10	Minus 3

1221420

PURCHASING AND STORES DIVISIONS
TRAFFIC SECTION

SAFETY AND SECURITY

Safety and Security Meetings Scheduled	1
Number of employees attending	9
Minor Injuries	0

STATISTICS

Savings Report

The following are savings made through June, 1949 resulting from:

1. Rate reductions obtained from the carriers:

Commodity	Origin	Savings for June	Savings thru May	Total Savings to Date
Liners, Furnace	Morganton, N.C.	$ 7,157.00		
Soda, Caustic	Tacoma, Wash.	171.20		
Sulphate, Ferric	East Point, Ga.	3,970.97		
Sulphate, Ferric	Lockland, Ohio	752.56		
		$ 12,051.73	$1,085,450.60	$1,097,502.33
2. Freight Bill Audit		365.59*	44,966.90	45,332.49**
3. Loss, Damage & Overcharge Claims		1,879.61	69,502.78	71,382.39
4. Ticket Refund Claims		304.85	5,587.77	5,892.62
5. Household Goods Claims		259.59	13,571.29	13,830.88
		$ 14,861.37	$1,219,079.34	$1,233,940.71

* Includes $16.89 for the AEC
** Includes $19,183.57 for the AEC

Work Volume Report

Reservations Made	Rail	38
	Air	90
	Hotel	42
Expense Accounts Checked		140
Household Goods and Automobiles		
	Movements arranged inbound	10
	Movements arranged outbound	5
	Shipments traced	19
	Storage bills approved	8
	Insurance riders issued	4
	Insurance bills approved	5

1221490

PURCHASING AND STORES DIVISIONS
TRAFFIC SECTION

STATISTICS (Cont.)

Work Volume Report (Cont.)

		Claims filed	9
		Claims Collected - number	5
		Claims Collected - amount	$259.59
Ticket Refund Claims			
		Filed	15
		Collected - number	16
		Collected - amount	$304.85
Freight Claims			
		Filed	15
		Collected - number	24
		Collected - amount	$1879.61
Freight Bill Audit Savings			
		GE	$348.70
		AEC	16.89
Freight Shipments Traced			57
Quotations			
		Freight Rates	142
		Routes	56
Bills Approved			
		Air Freight - GE	1
		AEC	1
		Carloading - GE	103
		AEC	5
		Express - GE	91
		AEC	76
		Rail - GE	1172
		AEC	14
		Truck - GE	213
		AEC	80
Carload Shipments			
		Inbound	1052
		Outbound	78

Report of Carloads Received

Atkinson & Jones Construction Co.			
	Roofing	2	2
Bonneville Power Administration			
	Insulators	2	
	Steel	5	
	Switches	1	8

12

122491

PURCHASING AND STORES DIVISIONS
TRAFFIC SECTION

STATISTICS (Cont.)

Report of Carloads Received

Richland Concrete Company			
	Cement	1	1
General Electric Company			
	Asphalt	3	
	Bichromate of Soda	2	
	Caustic Soda	2	
	Cement	22	
	Chemicals	4	
	Chlorine	3	
	Coal	938	
	Express	2	
	Ferric Sulphate	7	
	Filters	1	
	Furnace Liners	10	
	Gas	1	
	Lime	1	
	Merchandise	8	
	Nitric Acid	9	
	Phosphoric Acid	2	
	Pipe	1	
	Salt	1	
	Sand	13	
	Soda Ash	3	
	Steel	3	
	Sulphuric Acid	1	
	Track Material	1	
	Transformers	1	
	Valves	2	1041
Total Entire Project			1052

1221492

EMPLOYEE AND COMMUNITY RELATIONS DIVISION

SUMMARY - JUNE, 1949

The last set of questions and answers was distributed to all supervisors participating in the 9-Point Job Improvement Program.

Open requisitions for additional non-technical personnel increased from 177 at the beginning of the month to 182 at the end of the month. Total plant roll increased by 11 employees during June. Turn-over rate including terminations due to lack of work during June was 2.31%. Turn-over rate exclusive of terminations due to lack of work was 1.69%.

Seven employees retired during June, five of whom were on an optional retirement basis. Two employee deaths occurred. There were no suggestion awards approved during June as circumstances prevented the Committee members from convening. A code designation schedule of job titles was received from R. C. Stratton, Home Office Life Underwriters Association's representative, who conducted a recent survey here. It has been agreed that the new schedule is a vast improvement over the previous one.

Scheduled meetings were held in all areas during June with supervisors by the Training and Program Development Group for the purpose of discussing highlights of the H. W. Agreement with the H.A.M.T.C. A total of 21 meetings were held during the month with 570 supervisors attending. Additional sessions will follow. The Supervisors' 40-Hour Training Program was again presented on a plant-wide basis. A total of 37 supervisors attended these meetings during June. This Program will be discontinued during the remainder of the vacation period, and will probably be resumed in September.

The activities of the Labor Relations and Wage Rate Division during the month of June have been directed toward the handling of post negotiation arrangements, processing grievances, preparation of reimbursement authorizations directly and indirectly applying to the G.E. - H.A.M.T.C. contract and the mechanics of completing the necessary records to convert the classifications and wage rates of employees involved in accordance with such requested changes in the wage rate system. Several meetings were held with the Council Grievance Committee in which contract application procedure and grievances were reviewed. Company seniority proposals were developed and submitted to the Union. A survey was started for the purpose of ascertaining the effect of recent notice of change of rental rates in the city of Richland. Two formal hearings were held with the N.L.R.B. with regard to the petition requesting bargaining rates for Hanford Guard Local No. 21, which resulted in the matter being referred to the Washington, D.C. office of the N.L.R.B.

1221493

Maintaining close contact with newspapers concerning the statements coming out of Washington, D.C., as a result of the investigation of the Atomic Energy Commission's activities by the Joint Committee on Atomic Energy was an important and time consuming function during the month of June. Many inquiries were received from both the local and Northwest newspapers during the course of the investigation. They were replied to insofar as such action was proper in view of the nature of the subject matter.

On June 21, the movie "By Their Works" was introduced with appropriate remarks and presented at the noon luncheon meeting of Kennewick Kiwanis Club. On June 26, the Nucleonics Department General Manager spoke at the Kennewick Kiwanis Club meeting.

The Speakers' Bureau function was also active outside of the Tri-City area during the month. The Employee and Community Relations Manager addressed employees of the Iglehart Brothers Milling Company in Pendleton, Oregon, as the featured speaker on the occasion of a dinner meeting presented in connection with a safety program just completed in that company. The talk given was of a general informative nature concerning Hanford Works.

Twenty-one informative releases were made to newspapers on the G.E. Nucleonics Department News Bureau "Local List" during the month of June, and 17 releases were made to the 41 leading daily newspapers, radio stations, and wire services included on the "General Newspaper List".

The month of June provided Community Relations an opportunity to enter more actively into the field of radio programing in the Tri-City area. The transcription of an interview based on information given by C. P. Cabell before the Butte and Great Falls, Montana, Chapters of the A.I.E.E. was broadcast by radio station KWIE on June 26.

The promotion activities of the Kadlec Hospital's Open House, held during May, were compiled into a complete report during the month of June. The report included reproductions of clippings from the various local newspapers, as well as samples of the letters and souvenir booklets which were distributed in advance of and during the Open House. Sufficient copies of the report were prepared to provide one to each Employee and Community Relations Division Manager in the various departments and manufacturing plants, thus affording an opportunity to make activities of the Nucleonics Department more widely known among others in General Electric Company. Additional copies of the report were prepared for distribution to Kadlec Hospital for record purposes, to the Atomic Energy Commission, and to the public school system in Richland.

1221494

EMPLOYEE AND COMMUNITY RELATIONS DIVISION

JUNE, 1949

ORGANIZATION AND PERSONNEL

Employee Relations

Employment:

Effective June 1, 1949, D. G. Dayton, Section Supervisor, was transferred from the Procedures and Sign-Up Group to the Training and Program Development Group as a Staff Assistant. Coincidental with this transfer the Procedures and Sign-Up Group was consolidated with the Procurement Group.

Effective June 6, 1949, a General Clerk "D" was returned to the Investigations and Files Section following a leave of absence.

Effective June 7, 1949, a Messenger was engaged and assigned to the Investigations and Files Section.

Effective June 10, 1949, a Stenographer-Typist "C" was engaged and assigned to the Procurement and Procedures Section.

Effective June 17, 1949, a General Clerk "D" attached to the Investigations and Files Section resigned.

Effective June 22, 1949, a General Clerk "D" was engaged and assigned to the Procurement and Procedures Section.

Employee Services:

Effective June 13, 1949, J. B. Thompson, Counselor, was transferred to the Records Control Group of the Plant Security and Services Division.

Effective June 23, 1949, S. E. Linter, Section Supervisor, was reassigned to the Wage Rates and Labor Relations Division.

Training and Program Development:

Effective June 1, 1949, D. G. Dayton was transferred from the Employment Group to the Training and Program Development Group as Staff Assistant.

1221495

Employee and Community Relations Division

Labor Relations and Wage Rates

During the month of June two General Clerks B were added to the Labor Relations and Wage Rates Division, one effective June 8, and the other effective June 20.

Effective June 23, 1949, S. E. Linter, Section Supervisor, was transferred temporarily from the Employee Relations Division to the Labor Relations and Wage Rates Division.

Community Relations

No organization changes were made in the Community Relations Division during June.

1221496

Employee and Community Relations Division

ACTIVITIES

Employee Relations

General:

The last group of questions and answers, which arose during the 9-Point Job Improvement Program, were distributed during the month of June.

Employment:

	May, 1949	June, 1949
Applicants interviewed	603	1,534
Open requisitions		
Exempt	2	2
Nonexempt	175	180

Of the 175 nonexempt, nontechnical open requisitions at the beginning of the month, 88 were covered by interim commitments. At the end of the month, of the 180 open requisitions for nonexempt, nontechnical personnel, 111 were covered by interim commitments. At the beginning of the month, there were 2 open requisitions for exempt, nontechnical personnel, and both were covered by interim commitments. At the month end the total number remained unchanged, however, only one was covered by an interim commitment.

	May, 1949	June, 1949
Employees added to the rolls	53	182
Employees removed from the rolls	189	171
Net gain or loss	-136	+ 11

The turn-over rate for the month of May, including those who were terminated due to lack of work, was 2.54 %, as compared with a turn-over rate of 2.31 % in June. The turn-over rate of employees, exclusive of those who were removed due to lack of work, was 1.88 % in May, as compared with 1.69 % in June.

During the month, 64 new requests for inter-Divisional transfers were received and reviewed by the Employment Office. As a result of these requests, 5 transfers were effected. In addition, during June, 20 transfers were effected for employees who had received notice of termination due to lack of work.

Employee Services:

During the month of June, the Counselor assigned to the 200 Areas was reassigned to the Richland Office. Also during the month, the Counselor was

1221497

removed from the 100 areas, and transferred to the Plant Security and Services Division. These changes were in line with previously indicated plans to remove the Counselors from outer areas with Employee Services work in the areas being handled directly out of the 700 area through periodic visits by members of the staff.

There were 68 re-engaged employees and 93 new employees given orientation during the month of June. Of this number 60% elected to participate in the Group Life Insurance Plan, and 68% elected to participate in the Group Disability Insurance Plan.

The following employees retired during the month of June:

George D. Fish, Plant Security and Services Division, (Optional);
George E. Scott, North Richland Realty Division, (Optional);
Ben Edwards, North Richland Realty Division, (Optional);
Earl S. Wise, North Richland Realty Division, (Optional);
Guy M. Luscombe, Purchasing and Stores Division;
Mary C. Weiss, North Richland Realty Division, (Optional);
G. W. Hefley, Purchasing and Stores Division.

The above named employees were all participating in the Pension Plan, and all were interviewed prior to their retirement and fully informed as to the benefits each would receive under this Plan.

Two employee deaths occurred during the month of June, namely:

Design Division;
Village Public Works Division.

In each of these cases, the employees' families were contacted and arrangements relative to insurance benefits, social security forms, and pension refunds, were furnished at that time. In addition, salary checks for these employees were delivered to their families.

Five salary checks were delivered to employees absent during the month of June due to illness.

Suggestion System:

At the end of June, the volume of work in the Office of the Secretary of the Suggestion System was as follows:

	May, 1949	June, 1949	Total since 7-15-1947
Suggestions received	58	78	3,604
Investigation Reports completed	65	97	3,429
Awards granted by Suggestion Committee	22	0	352
Cash awards	$ 395	0	$ 3,830

PRIVACY ACT MATERIAL REMOVED

1221498

Employee and Community Relations Division

No suggestion awards were made during June as the Committee was unable to convene.

Life Insurance:

Code information for use by insurance companies in issuing insurance to employees of this Works was furnished to 36 insurance companies and investigating agencies during the month of June.

A code designation schedule of job titles was received from R. C. Stratton, Home Office Life Underwriters Association's representative, who conducted a recent survey here. A conference was held between C. M. Patterson, Health Instrument Division, R. E. Curtis, Technical Division, and W. D. Smyth, Insurance and Compensation Section, for the purpose of analyzing the schedule. It was agreed that the new schedule is a vast improvement over the previous one, and that due to this considered opinion the number of complaints from personnel applying for life insurance should result in an appreciable improvement.

Workmen's Compensation:

Claim No. not as yet assigned -- alleged that he is now totally disabled due to radiation exposure while employed by the du Pont Company as a maintenance mechanic in the 100-D Area. W. D. Smyth, representing the Company, and John Warner, representing the Atomic Energy Commission, visited the Office of the Director of the Department of Labor and Industries, to counsel with state officials as to the method for handling cases involving alleged radiation exposure. Department officials agreed to appoint R. J. McLean, Chief Claim Agent, to process this and other similar claims and to report all information pertaining thereto to the Company for transmittal to the Atomic Energy Commission. The Atomic Energy Commission will thereafter advise the Company as to what course of action they desire us to follow.

Training and Program Development:

On June 1 and 2, a uniform one-hour presentation was made to supervisors for the purpose of outlining the Company's philosophy in operating under a union contract. A total of 32 meetings were held, including 8 meetings in the 700-1100 Areas, and 4 in each of the outer Areas. A total of 628 employees attended this particular Program. It highlighted a recorded talk by Mr. G. H. Pfeif to members of the Management Staff at the Hanford Works.

Training and Program Development Staff Assistants together with the Supervisor of Training presented a Program in all Areas to supervisors to explain in detail the spirit and intent of the articles of the Agreement between the Company and the H.A.M.T.C. The material presented was compiled after numerous conferences with those who were present during the negotiations. Meetings have been scheduled over a four-week period to allow all exempt personnel an opportunity to attend a meeting. During the month of June, 21

PRIVACY ACT MATERIAL REMOVED

1221499

meetings were held with a total of 570 employees in attendance. Special bulletins are being prepared by the Training and Program Development staff for distribution to all Hanford Works exempt personnel giving answers to all questions, which arose during these meetings, and were not answered on the spot. One special bulletin had been issued by the end of the month, others will follow.

During the week of June 20-24, the Supervisors' 40-Hour Training Program was again presented on a plant wide basis. A total of 37 supervisors attended this Program and again it was met with a great deal of favor by those in attendance. It is anticipated that the next such Program will not be offerred until after the vacation period.

STATISTICS

Number of employees on Rolls	5-31-1949	6-30-1949
Exempt	1, 637	1, 623
Nonexempt	5, 745	5, 770
Totals	7, 382	7, 393

ADDITIONS

	Exempt	Nonexempt	Total
New Hires	7	85	92
Re-engaged	0	68	68
Re-activations	2	16	18
Transfers from other Plants	3	1	4
Actual additions	12	170	182
Payroll Exchanges	5*	6**	11
Gross Additions	17	176	193

TERMINATIONS

Actual Terminations	22	122	144
Removals from Roll	3	24	27
Payroll Exchanges	6***	5****	11
Gross Terminations	31	151	182

*Transferred from Weekly Salary Roll
**Transferred from Monthly Salary Roll
***Transferred to Weekly Salary Roll
****Transferred to Monthly Salary Roll

Approximately 68% of all terminations were on a voluntary basis, and most of these were for the following reasons: (a) Personal Reasons (b) Another Job.

1221500

Employee and Community Relations Division

GENERAL

	5-31-1949	6-30-1949
Applicants interviewed	603	1,534
Photographs processed	3,621	3,411
Fingerprint impressions taken (in duplicate)	283	281
Procurement letters written	342	326

ABSENTEEISM STATISTICS
(Weekly Salary Roll)*

Male	1.72 %	1.58 %
Female	3.52 %	2.92 %
Total Plant Average	2.20 %	1.93 %

INVESTIGATIONS STATISTICS

Cases at beginning of month	748	822
Cases received during the month	200	292
Cases closed	126	173
Cases pending at month end	822	941
Number found satisfactory for employment	93	244
Number found unsatisfactory for employment	0	1
Cases closed before investigation completed	0	2
Special investigations conducted	14	3

Insurance and Compensation

	5-1949	6-1949	Total since 9-1-1946
Claims received and reported to the Department of Labor and Industries	126	135**	2,803
Claims received and reported to the Travelers Insurance Company	14	7	328

*Statistics furnished by Weekly Payroll Division
**This total includes 14 broken glass claims which were forwarded direct to the Department of Labor and Industries by the optometrist.

1221501

Labor Relations and Wage Rates

Labor Relations

The activities of this division relative to Labor Relations have been primarily concerned with handling post negotiation arrangements on the H.A.M. T.C. contract and grievances.

The G.E. - H.A.M.T.C. contract was countersigned by a number of international officers of the associated unions in a meeting held June 7, 1949.

Meetings were held with supervision of all divisions who had employees in the bargaining unit for the purpose of developing logical seniority groups in accordance with Article No. 13 of the G.E. - H.A.M. T.C. contract. Such groupings were submitted to the Council in proposal form on June 23, 1949.

In compliance with the request of the Council as to the status of Council members in light of the recent notice of housing rental adjustment in the city of Richland, this division is conducting a survey which will result in a report showing the effect of such adjustment on all employees within the bargaining unit.

A number of meetings were held during the month with representatives of various unions for the purpose of discussing the application of the contract to the specific groups.

A formal hearing was held by the N.L.R.B. in regard to the pending petition requesting bargaining rights for certain employees engaged in guard work at this Works by the H.A.M.T.C. Guard Union, Local No. 21. The N.L.R.B. granted an extention requested by the Company and rescheduled the hearing for June 29, 1949. On June 29, 1949 the Company and the Union stated their cases and the matter was referred to the National Labor Relations Board in Washington, D.C.

A meeting was held with representatives of the Accounting Division in which those articles of the contract that were not deemed to be clear as to interpretation by the Accounting Division were discussed.

Several meetings were held between the Council Grievance Committee and the Company Negotiating Committee as follows:

June 13, 1949 - Topics:

General discussion involving administrative procedures required and proper execution of the contract.

June 23, 1949 - Topics:

1. Grievance procedure and forms
2. Check-off procedure
3. Temporary upgrading
4. Distribution of agreement booklets
5. Seniority groupings
6. Job content distribution
7. Three grievances settled of six scheduled for review

1221502

Employee and Community Relations

June 30, 1949 - Topics:

1. Seniority status of unit to non-unit transferrees and vice versa
2. Check-off procedure
3. Temporary upgrade procedure
4. Agreement booklet distribution
5. Additional (third) weeks vacation procedure
6. Submission of Company seniority grouping proposal
7. One grievance settled of eight scheduled for review

On June 23, 1949 the Company Negotiating Committee met for the purpose of reviewing grievances on the docket for the meeting with the Council Grievance Committee scheduled for later that day.

Grievance Statistics

Ten "Employee Contact Reports" were received during the month, bringing the total received to date to forty-eight.

Mfg. Instrument	2
Mfg. "S"	1
Mfg. Maintenance	1
Mfg. Transportation	4
Village Maintenance	2
Total	10

Employee contact reports are regarding the following subjects:

Absence	1
Jurisdiction	2
Specialists	2
Work Assignments	5
Total	10

Wage Rates

The activities of this division relative to Wage Rates has been concerned with the preparation of Reimbursement Authorizations directly and indirectly applying to the G.E. - H.A.M.T.C. contract and the mechanics of completing the necessary records to convert the classifications and wage rates of employees involved in accordance with such requested changes in the wage rate system.

Wage rate conversion data has been developed for all unit and non-unit employees involved and meetings held with supervision for the purpose of discussing the mechanics and effect of the conversion. Also, rates of pay for employees who are to be frozen in accordance with Article No. 20 of the contract were discussed.

The following Reimbursement Authorizations which have been submitted to the A.E.C. are pending approval:

1221503

Request for reimbursable items agreed to in negotiations between the General Electric Company and the Hanford Atomic Metal Trades Council, submitted June 6, 1949.

Request for non-union employees to receive all benefits accruing as a result of the recently executed agreement between the General Electric Company and the H.A.M.T.C. and to be effective on April 11, 1949, submitted June 23, 1949.

Three other Reimbursement Authorization requests for additional classifications were submitted for A.E.C. approval during the month.

In addition to the above, a number of job reviews have been made together with the day-to-day handling of terminations and transfers, etc.

STATISTICS

Transfers from Weekly to Monthly Payroll	5
Transfers Approved	40
Job Reclassifications Approved	158
Automatic Increases	155
Merit Increases	38

1221504

Employee and Community Relations Division

Community Relations

It was necessary to strengthen and maintain even closer contact with newspapers concerning the statements coming out of Washington, D.C. as a result of the investigation of the Atomic Energy Commission's activities by the Joint Committee on Atomic Energy during the month of June. Many inquiries were received from both the local and Northwest newspapers during the course of the investigation. These were replied to insofar as such action was proper in view of the nature of the subject matter, and insofar as such action by Community Relations people at Hanford was consistent with steps taken by General Electric and Atomic Energy Commission Public Relations people in Washington, D.C., and in New York City.

Relationships with key organizations in the Tri-City Area received attention during the month. Two meetings were scheduled with the Kennewick, Washington Kiwanis Club. In both instances the programs were supplied to that organization by General Electric Company through Community Relations.

On June 21, the movie "By Their Works" was introduced with appropriate remarks and presented at the noon luncheon meeting of Kennewick Kiwanis Club. On June 26, the Nucleonics Department General Manager spoke at the Kennewick Kiwanis Club meeting. Response of the membership to both programs was excellent, and it is believed that a considerable amount of good community relations was brought about through these two programs.

The Speakers' Bureau function was also active outside of the Tri-City Area during the month. The Employee and Community Relations Manager addressed employees of the Iglehart Brothers Milling Company in Pendleton, Oregon as the featured speaker on the occasion of a dinner meeting presented in connection with a safety program just completed in that Company. The talk given was of a general informative nature concerning Hanford Works.

"Public Information" - Community

Informative newspaper releases made during the month to the "Local List" of newspapers and radio stations served, which includes the VILLAGER, TRI-CITY HERALD, SPOKANE CHRONCILE, HANFORD WORKS NEWS, WALLA WALLA UNION-BULLETIN, PASCO EMPIRE, PASCO HERALD, YAKIMA MORNING HERALD, LIND LEADER, radio stations KPKW, KIT, KWIE, including release dates were as follows: (A large number of both local and general news releases are being sent out for immediate release. In such cases the date on which the release was sent from this office is indicated below).

6/1 An informative release was distributed stating that a Richland Toastmistress would speak over KPKW on June 7 as part of the summer campaign to prevent juvenille accidents in Richland.

6/1 Announcement was made by the Community Safety Division Head that a concentrated summer safety program would be undertaken in Richland. P.T.A. associations, Richland Safety Division, the Community Activities Division, Richland. Patrol, Fire Department and Boy Scouts will participate in this program.

Employee and Community Relations Division

6/7 The Traffic Section of Community Patrol announced completion of two years without a traffic fatality in Richland.

6/8 A news release quoting A. E. Barron on the cause of traffic accidents involving Children was released as part of the summer safety campaign.

6/9 The Superintendent of the Electrical Division announced a power outage scheduled for June 14.

6/9 Glossy prints showing a poster distributed by local Boy Scouts in connection with the summer safety program were sent to local media.

6/9 Another article urging care on the highways during the summer was distributed, quoting the Supervisor of Community Patrol Traffic Section.

6/10 W. K. Woods of the Hanford Works Technical Division addressed the graduating class of the Yakima Valley Junior College on the subject of the characterists of a good employee, according to this local news release.

6/13 A photograph of three Richland Boy Scouts distributing posters to Richland business houses in connection with the town's safe-summer-for-children campaign was given exclusively to the TRI-CITY HERALD.

6/15 It was announced that F. E. Johnson of the School of Nuclear Engineering would take a prominent part in a joint meeting of the American Association of Physics Teachers and the American Society of Engineer Education at Troy, New York. He spoke on the subject, "The Graduate School of Nuclear Engineering."

6/17 The National Bank of Commerce of Seattle opened temporary quarters in Frank Berry's Sporting Goods store on June 20, according to the manager of the new branch.

6/21 P. O. Crowder of the Richland Commercial Safety Division was scheduled to discuss the safe use of fireworks over KWIE on June 27, according to this release.

6/21 A black and white sketch of the new business district showing parking areas, sidewalks, lawns and commercial sites was prepared by the Division artist. The location of businesses in operation, buildings under construction and lots that have been leased were indicated. This sketch was sent to 6 selected papers included in the local list.

6/22 A coming electrical outage was announced by the Superintendent of the Electrical Division.

6/23 It was announced that because of lower than normal humidity extraordinary care was necessary in Richland and vicinity in order to prevent grass fires.

Employee and Community Relations Division

6/24 The completion of 40 years' service with General Electric Company by W. E. Mathias was marked by a ceremony and presentation of a certificate at Hanford Works. An informative release and photos of the ceremony were sent to the local media.

6/26 It was announced that the transcription of an address given by C. P. Cabell over station KFBB in Great Falls, Montana would be rebroadcast over KWIE. Slightly different versions of this story were given to the VILLAGER and WORKS NEWS, station KWIE, and the TRI-CITY HERALD for release on different dates.

6/28 The superintendent of the Community Housing Division announced that a new housing procedure had been established whereby Richland residents can move to different types of houses.

6/28 A power outage scheduled for Richland on June 30 was announced.

6/29 The successful bidder for the operation of the cafeteria located at Goethals Drive and Knight Street was C. D. Newland of Coulee Dam, Washington, according to an announcement by the Superintendent of the Commercial Facilities Division.

6/30 A news story based on the remarks made by the Supervisor of the Community Safety Division over KWIE concerning safe handling of fire works was distributed.

"Public Information" - General

Informative newspaper releases were sent to 41 of the leading daily newspapers, wire services and radio stations in the Pacific Northwest during the month. The release date is given for each story, and they are as follows:

6/1 The award of a long term ground lease for the operation of a Richland Branch of the National Bank of Commerce of Seattle in the new business district was announced.

6/10 J. A. Terteling and Sons, Inc. of Boise, Idaho was revealed as the apparent low bidder on a contract for paving, earthwork, sewers, water lines, and related work in Richland.

6/10 An informative release stated that the opening of bids on the Union Pacific rail connection with Richland had been deferred until June 22.

6/12 An informative release based on C. P. Cabell's speech before the American Institute of Electrical Engineers at both Butte and Great Falls, Montana on the subject, "Eight Hours a Day with the Atom," was distributed.

6/15 J. W. Mercke's appointment as Manager of the Company's Construction Division at Hanford Works was announced.

Employee and Community Relations Division

6/15 Richland's Community Manager announced the formation of a 6 man town planning board to coordinate and formulate plans for the future expansion of the town.

6/16 It was announced that two fuel dealers had been awarded ground leases for sites in Richland upon which to operate coal and oil sales outlets.

6/16 Ten glossy prints of J. W. Mercke were sent to 10 selected newspapers to mark his appointment as Manager of the Construction Division.

6/17 An informative news release stated that F. K. McCune of Schenectady had been appointed Assistant General Manager of the Nucleonics Department.

6/20 Ten glossy prints of F. K. McCune, new Assistant Manager of the Nucleonics Department, were distributed to papers selected from the general release list.

6/22 The manager of the Design and Construction Divisions stated that invitations to bid on certain electrical construction work in Richland were issued recently.

6/24 J. A. Terteling and Sons, Inc. was revealed as the apparent low bidder for the contract to construct a rail connection between Richland and the main line of the Union Pacific Railway.

6/29 The beginning of construction on the Davis Furniture Company $80,000 building in the new business district was announced.

6/29 Five photographs and captions showing the progress of construction of the building that will house Davis Furniture Company were distributed.

6/30 It was announced that the construction of a supermarket food store near the corner of Swift and Wright was under way.

6/30 An informative news release stated that the opening of bids on electrical construction work had been postponed until July 12.

6/30 Parcell's Automotive Service will be open for business about the first of August. The new building is in the new neighborhood shopping district on the corner of Swift and Wright, according to the informative release.

Other "Public Information"

The G-E film "Clean Waters" was shown to different groups at Hanford Works on June 2, 6, 15 and 16. The film "Light of Your Life" was presented to a group of employees on June 2.

A letter was sent to all media on the local, daily and weekly lists for the purpose of encouraging inquiries for requests for information.

1221508

Employee and Community Relations Division

The correct address and office telephone numbers of the Community Relations Division Head and the News Bureau Supervisor were listed, as well as their home addresses and telephone numbers.

Arrangements were completed during the month for receiving 1,000 copies each of two new General Electric booklets, "Edison and Electricity," and "Atomic Energy in Our Time" on a "no charge" basis. These booklets will be stocked in the five information racks maintained by this office and a supply will be maintained for persons who write in for information.

Early in the month W. L. Worden, a free lance writer who places a considerable number of articles with the SATURDAY EVENING POST, spent two days in Richland investigating the possibility of writing a factual article concerning Richland for the SATURDAY EVENING POST. During the two-day period, Community Relations people escorted Mr. Worden for several interviews with key personnel. Answers to those questions which were not readily available while Mr. Worden was here were sent on to him by letter.

The month of June provided Community Relations an opportunity to enter more actively into the field of radio programing in the Tri-City Area. It was learned early during the month that both radio stations in the Tri-City Area are anxious to obtain special programs from Richland and Hanford Works for presentation, and attention was focused on a method whereby such programs could be provided. The transcription of an interview based on information given by C. P. Cabell before the Butte and Great Falls, Montana, Chapters of the A.I.E.E. was broadcast by radio station KWIE on June 26.

"Employee Information" - Special Programs

Special Programs promotion of the child safety campaign, which was inaugurated during June by the Community Safety Supervisor, included the use of news stories, and pictures with captions. To stress the need for safe handling of fireworks by children, a seven minute interview-type radio script was prepared. It was broadcast as a portion of the radio program "Headlines in Chemistry" over radio station KWIE on Monday, June 27, at 7:15 p.m. DST. Reports of this portion of the broadcast, as well as advance notices, were released locally. Safe driving over the Fourth of July week end was also stressed during the broadcast with the slogan, "Be Alive on the Fifth." A display utilizing this slogan was prepared and posted in the Municipal Building display case.

Special Programs assisted in preparing a proposal which was presented to the Safety Program Committee. The proposal involved the preparation and use of a number of safety booklets, each of which would apply to a specific job breakdown or classification. The proposal was presented in response to frequent requests by the chairman of the Safety Program Committee that members of the committee present ideas for promoting safety at Hanford Works. It was discussed by members of the committee during the June meeting, and was referred to the various divisional Safety Program committees for consideration. The proposal will be discussed during the July meeting of the Safety Program Committee.

1221509

Employee and Community Relations Division

Special Programs also assisted in preparing three suggested safety topic of the month posters which were presented to the Safety Program Committee for consideration during the June meeting. Color visuals of the posters were prepared by the Community Relations Division. Two of three posters were accepted by the Program Committee, with the decision on the use of the third being held in abeyance until the July meeting.

During June, Special Programs prepared a report on the promotion activities for the second annual Kadlec Hospital Open House which was held during May. The report included photostats of published news releases, photographs taken during the Open House, and a written explanation of the various promotional and hospital activities. Purpose of the report was to explain how the Open House was handled both publicity-wise and from the hospital's standpoint.

Sufficient copies of the report were prepared to provide one to each Employee and Community Relations Division Manager in the various departments and manufacturing plants, thus affording an opportunity to make activities of the Nucleonics Department more widely known among others in General Electric Company. Additional copies of the report were prepared for distribution to Kadlec Hospital for record purposes, to the Atomic Energy Commission, and to the public school system in Richland.

To establish a hospital photograph file for Kadlec Hospital, Special Programs arranged for copies of Open House publicity photographs to be sent to the hospital administrator.

Special Programs prepared a covering letter to Richland ministers and educators which accompanied copies of the 1948 G.E. Annual Report.

During June, arrangements were made to have 20 large easels, 2 small easels and three window shade charts returned to the various Works from which they were borrowed. These previously were used in presenting the nine-point job program.

Special Programs promotion of "Adventures Ahead", the G-E magazine for teen-age children, was started during June. A year's free subscription to the magazine is being offered to teen-age children of G-E employees at Hanford Works. Promotion to date includes stories and pictures in the Works NEWS, and plant posters. A complete report of this Special Programs activity will be made in a later monthly report.

"Employee Information" - Hanford Works NEWS

Hanford Works NEWS printing was materially improved during the month as a result of a change in management, and a reduction in the volume of newspaper printing work being done at the plant in which Hanford Works NEWS is presently being published. Improved accommodations to the editor were provided, and personnel assigned to the composition and printing of the paper evidenced their intention to do everything possible to provide a high-quality product for Hanford Works.

Four issues of the Works NEWS were published in June and the COMMENTATOR, containing an account of negotiations with UE, was inserted in the June 25 issue. The "Candid Camera" scheduled for this same issue was [illegible]

over to be inserted the following week. During the month the quantity was cut from 8,000 to 7,900.

A story announcing the highest suggestion award winner since the suggestion system was first inaugurated at Hanford Works was published in the June 3 issue.

Two women's pages appeared in four issues of the plant paper during the month of June.

Every week a column appears in the Works NEWS listing rides or riders seeking transportation to various week-end and vacation spots. Many calls were received during the month of June for rides or riders to the following destinations: Seattle, Portland, Spokane, Yakima, Chicago, Detroit, Tennessee, Alabama, Missouri, California, Indiana, Iowa, Minnesota.

1221511

COMMUNITY DIVISIONS

SUMMARY - JUNE, 1949

ORGANIZATION AND PERSONNEL

Number of employees on roll:	Beg. of Month	End of Month
Community Administration	6	6
Community Accounting	27	27
Community Public Works	424	429
Community Safety	3	3
Community Commercial Facilities	16	16
Community Housing	37	38
Community Fire	139	137
Community Patrol	84	84
Community Activities	12	18
	748	758

Changes in the force of the Community Divisions during the month of June, 1949, were as follows:

	Reduced	Increased
Community Administration	-	-
Community Accounting	-	-
Community Public Works	-	5
Community Safety	-	-
Community Commercial Facilities	-	-
Community Housing	-	1
Community Fire	2	-
Community Patrol	-	-
Community Activities	-	6
	2	12

TOTAL INCREASE, June, 1949 = 10.

GENERAL

Notification was released to house lessees of a rental adjustment to be effective August 1, 1949.

Sales of basic items show the usual seasonal trends. Considerable progress is being made in the establishment of additional commercial facilities.

Activities in all Community Divisions were generally routine during the month of June, 1949.

MTB/jak

1221512

COMMUNITY DIVISIONS
PUBLIC WORKS DIVISION
JUNE 1949

ORGANIZATION & PERSONNEL

Number of employees on payroll:	Exempt	Non-exempt	Total
May 31, 1949	57	367	424
June 30, 1949	56	373	429

Personnel changes made during the month:

New employees		14
Transfers: To Power Division		1
To Maintenance Division		1
Terminations	1	8
Returned from leave		2

GENERAL

On June 20, 1949, the river elevation became low enough to discontinue pumping operations from the drainage ditch and the dike was removed sufficiently to allow natural drainage. Most of the fill was allowed to remain as it will be used in the final diking operation. The pumping was successful in preventing any known settlement due to high water in the new commercial area.

The absence of any extended periods of hot weather has kept water consumption within the ability of the present system to supply. However, it is expected that July and August requirements will exceed the present capacity. It is hoped authorization will be received to develop another well to meet the increased demand of the next two months.

The Sewage Disposal plant has been completed and accepted with certain further work to be done at a later date. Operation has been normal up to the present time. However, the digesters have not been in operation a sufficient time to furnish gas for digerters heating system and it has been necessary to supply the required additional heat by the use of propane gas. It is expected this will be unnecessary by the middle of July when the plantwill be self-sustaining. Some gas leaks in the digester dome have been observed.

In order to reduce manpower requirements to the minimum the mowers have been raised to a cutting length of approximately two inches. This results in the grass roots being shaded making it necessary to use less water on the grassed areas. Present schedules call for watering three times a week and mowing once a week.

The fuel yard has been cleaned up and slack coal removed to the 784 Steam Plant. The fuel tanks have been reset and the area put in order for the coming of the new fuel dealers who take over July 1.

224

1221513

Community Public Works Division

General (Continued)

Seven and eight tenths miles of the Horn Rapids road was seal coated. Considerable difficulty is being encountered in keeping Geo. Washington Way in proper condition due to the fact that an improper mix was used in surfacing. This results in corduroying whenever weather becomes warm.

PROJECTS

C-146 - Extension to present irrigation system. This job was completed by June 30, 1949, and the closing notice was issued.

164 - Expansion of Parking Compounds: Request to close project has been written.

C-253 - Part II, North Storage Reservoir: Final inspection has been made on this project. A request to close the project was written 6-30-49.

C-274 - Central Fuel Oil Storage: Field release issued 6-9-49

C-282 - Rev. Dust and Pollen Control Program: All new grass areas seeded by the sub-contract were given a final inspection on June 24 in order to facilitate the closing of this contract by the end of June. This will complete 30.3 acres seeded to grass under project 282-R by this sub-contract.

C-288-D - Neighborhood Shopping Area: Construction work orders were requested for electrical service hook-up and removal of trees in preparation of site for the Mobilgas Service Station.

C-288-A - Expansion of General Business District: A construction work order was requested for construction of a sidewalk between Mickey Shoe Renewal and Sowell's Fountain Lunch.

ENGINEERING SECTION

Organization & Personnel

Number of employees on payroll:	Exempt	Non-exempt	Total
May 31, 1949	17	13	30
June 30, 1949	16	11	27
Personnel changes made during the month			
Transferred to Power Division		1	
Terminations	1	1	

General

The following routine items were processed during the month:

Requisitions	51
Store Stock Requests	11
Store Stock Adjustments	7
Purchase Orders Expedited	12

1221514

Procedure for procurement for ready-mixed concrete was worked out with Construction Division and Purchasing Division. To date this method has proven very efficient where small amounts of concrete are needed on short notice.

Leased area plot plans and descriptions were completed for the following:

Plot #35, Rev. #1 - American Lumber Company
" #36, Rev. #1 - Northwestern Fuel Company
" #39 - Richland Plumbing & Heating
" #40 - Re-organized Church of Jesus Christ of Latter Day Saints.

A group of students from the University of Idaho, Division of Landscape Architecture and City Planning visited Richland to study and discuss the City Planning and City Problems. Field trips and discussions were conducted by G. W. Wickstead and R. L. Brown.

M. B. Nelson attended the meeting of the Washington Chapter of the Pacific Coast Building Officials Conference in Spokane, Washington, June 11, 1949.

The following Engineering Service Requests were completed:

Job. No.	Description	Remarks
11-CH	Watt-Hour Metering, Richland	Comp. 6-30-49 Proposal to A&B Committee.
74-CA	Recreational Facilities - Equipment for Schools and Public Parks	Comp. 6-10-49
81-CA	Relocation of Castle Club	Comp. 6-15-49
87-CA	Installing dishwasher in Lewis & Clark School	Comp. 6-29-49
200-SS	Enclosure outside stairway - Cut doors for vaults in North side of building 703	Comp. 6-29-49
208-PW	1-H, Equipping well 1100-8 1-M, Additional water supply wells 1100-8 and 3000-F.	Prepared by G. A. Huff
210-CH	Specs to guide tenant electrical alterations	Comp. 6-21-49
215-CA	Bleachers - Softball field	Comp. 6-6-49
216-PW	Rehabilitation of Irrigation Ditch	Comp. 6-22-49 Field release issued
217-PW	Steam line to multiple apartments	Comp. 6-27-49 Reason sheet prepared and sent to E. S. Baker.

1221515

Community Public Works Division

ENGINEERING SECTION (Continued)

226-CF Cafeteria Layout - Richland Comp. 6-15-49

219-CA Community Pool fill line Comp. 6-13-49

The status of facility sponsored construction is as follows:

FACILITY	PRELIMINARY PLAN REVIEW	DET. SPECS & PLANS REVIEWED	BLDG. PERMITS ISSUED	CONST. STARTED
Block's Shoe Store ESR #124-CF	Approved 3-15-49	Approved 4-21-49	4-21-49	4-21-49 75% complete
Carlston & Hanson ERS 164-CF	Approved 3-18-49	Approved 5-11-49	5-18-49	5-18-49 25% complete
Morning Sun Dairy ER 145-CF	Approved 3-9-49	Detailed plans and specifications reviewed - awaiting resubmittal.		
Denson's Drug ESR #163-CF	Approved 3-15 49	Approved 5-11-49	6-22-49	6-22-49
Theater ESR #160-CF	Approved	(Awaiting award of contract)		
House Dry Cleaners ERS #157-CF	Approved 3-9-49	(Awaiting resubmittal of plans and specifications)		
Anderson Motors ESR #119-CF	Approved 5-23-49	(Redesigned plans and specifications being reviewed		
Shell Service Statn. ESR #123-CF	Approved 2-17-49	Approved 3-23-49	4-13-49	4-13-49 60% complete
Sowell's Fountain ESR #135-CF	Approved 3-21-49	Approved 4-5-49	4-19-49	4-20-49 95% compete
Yakima Tent & Awning ESR #122-CF	Approved 2-1-49	Approved 3-4-49	3-8-49	3-9-49 99% complete
Mickey's Shoe Renew ESR #128-CF	Approved 6-1-49	Approved 6-7-49	6-38-49	
Dawson & Richards ESR #120-CF	Approved 1-29-49	Approved 3-7-49	3-8-49	3-9-49 95% complete
Mobiloil Serv. ESR #121-CF	Approved 2-23-49	Approved 4-12-49	6-21-49	6-21-49
Davis Furniture ESR #156-CF	Approved	Approved	6-8-49	6-8-49 15% complete

4.

1221516

Community Public Works Division

ENGINEERING SECTION (Continued)

FACILITY	PRELIMINATY PLAN REVIEW	DET. SPECS. & PLANS REVIEWED	BLDG. PERMITS ISSUED	CONST. STARTED
Morgan's Whse. ESR #155-CF	Approved 3-25-49	Approved 3-30-49	3-30-49	3-31-49 95% complete
Washington Investment ESR #167-CF	Approved 4-21-49	Approved 5-11-49	5-24-49	5-24-49 60% Complete
Nat'l Bank of Comm. ESR #165-CF	Approved 4-5-49	Approved 5-16-49	Awaiting award of contract	
Standard Serv. ESR #171-CF	Approved 1-25-49	Approved 2-9-49	3-31-49	4-1-49 50% complete
Hanson Barber Shop ESR #172-CF	Approved 4-27-49	Approved 6-17-49	6-21-49	6-21-49
Union Oil Serv. ESR #101-CF	Approved 3-9-49	Approved 4-28-49	4-28-49	5-2-49 20% complete
NW Fuel & American Lumber, ESR #201-CF	Approved 6-1-49	Approved 6-7-49	6-30-49	
Davis & Walker Auto Parts, ESR # 212-CF	Approved 5-26-49	Awaiting resubmittal of plans and specs.		
Bozo's Drive In ESR #223-CF	Preliminary plans being reviewed.			
L. D. S. Church ESR #180-CA	Approved 1-20-49	Approved 1-28-49	1-28-49	2-5-49 15% complete
S.S.U.P. Church ESR #177-CA	Approved 10-28-48	Approved 11-2-48	11-2-48	11-5-48 95% complete
Richland Baptist ESR #183-CA	Approved 11-10-48	Approved 11-18-48	11-22-48	11-27-48 95% complete
Assembly of God ESR #181-CA	Approved	Awaiting resubmittal of plans.		
Church of Nazerene ESR #179-CA	Approved 3-2-49	Approved 4-5-49	4-12-49	4-12-49
Church of Christ ESR #184-CA	Approved 2-18-49	Awaiting detailed plans		
Richland Lutheran	4-7-49	Approved	4-8-49	4-8-49 50% complete

Community Public Works Division

ENGINEERING SECTION (Continued)

Alteration Permit Progress Report

FACILITY	DESCRIPTION	APPROVED	REMARKS
Robley L. Johnson Studio ESR #118-CF	Extend front porch	3-23-49	95% comp.
Village Pharmacy ESR #118-CF	Cut opening for refrigerator	3-9-49	Complete 6-29-49
Safeway Store ESR #118-CF	Additional floor space	3-11-49	95% comp.
Richland Laundry ESR #118	Construct small box	3-15-49	Construction not yet started
Seattle First Nat'l. Bank. ESR #118-CF	Repaint interior and exterior and various adjustments	5-18-49	
Seattle 1st Nat. ESR #118-CF	Relocate drinking fountain	5-31-49	
Seattle Tent & Awning ESR #118-CE	Install neon signs (Different sizes)	5-19-49	Complete 6-29-49
Seattle Tent & Awning ESR #118-CF	Install neon signs	5-23-49	
Seattle Tent & Awning ESR #118-CF	Install neon sign for flower shop	6- 5-49	Complete 6-29-49
Desert Inn ESR #133	Install banquet room & var	5-23-49	Complete 6-30-49

Stakes were set for the following:

Water line take off for swimming pool
Block #1 in North Commercial Area
Set offset stakes for yellow no-pass line on Horn Rapids Road
Surface water drain at Symons & Geo. Washington Way,
Lot for National Bank of Commerce
Lot for Waecher service station
Lot for Hansen's Barber Shop
Lot for Midstate Amunsement Corpn.
Lot for Northwestern Fuel Corpn.
Lot for American Lumber Co.

The Horn Rapids Road was seal coated from George Washington Way to, and including, both "Y's" near the Dam, approximately 7.8 miles.

Community Public Works Division

MAINTENANCE SECTION

Organization and Personnel

Number of employees of payroll:	Exempt	Non-Exempt	Total
May 31, 1949	18	157	175
June 30, 1949	18	154	172

Personnel changes made during the month:

New Employees	1
Transfers: To maintenance	1
Terminations	5
Returned from leaves	2

General

During the month 60 renovations were completed, of which 39 were permanent type houses and 21 were prefabs. Four of the permanent type houses were complete paint jobs, 20 were partially painted, and 15 were cleaned only. Seven of the prefab renovations were complete paint jobs, 10 were partially painted and 4 were cleaned only. There were on hand at the end of the month 20 orders for renovations not completed.

On the exterior and interior paint program 80 houses were repaired before painting, 73 were primed with the first coat, and 63 were sprayed (shakes). Thirty-five bath rooms were caulked and enameled. Eight units were completely painted on the interior. The swimming pool was completely painted.

Three hundred and five panes of glass were replaced.

Laundry trays were replaced in 26 homes, 1 bath tub, 14 household sinks, 3 hot water heaters, 3 drinking fountains, 3 wash basins and 3 toilets were replaced. Four drinking fountains, 3 wash basins, and 3 toilets were installed.

Irrigation lines were installed and repaired. Installation of new bearings on Number 2 and Number 4 irrigation pumps were completed. A filter box for Number 3 irrigation pump was made ready for installation. One multi-port valve was repaired.

Sand in the water lines has caused considerable trouble on patrol calls and will damage plumbing fixtures in the future if the condition is not corrected.

Domestic water service to Tract Houses L-865 and L-894 was installed.

Three boilers were completely overhauled.

A weekly inspection schedule for the Bailey Bridge was established.

The moving of the carpenter shop from 722-C to 722 hanger was completed.

1221519

Community Public Works Division

MAINTENANCE SECTION (Continued)

The repairs to fire damage at 650 Chestnut were completed.

There were 1470 electrical patrol order calls completed during the month. One hundred and eighteen of these calls were on household refrigerators and 118 were on hot water heaters. There were 91 calls where the tenant was not at home when the first call was made.

A summary of work performed in the furniture and upholstery shop and the carpenter shop is as follows: 22 screen windows, 110 screen doors, 4 chairs, 7 tables, and 1 desk was repaired; 16 chairs were recovered; 1 daveno and 1 rocker repaired and recovered, and linoleum was repaired around 58 sinks.

The recovering of the floor of the village pharmacy with asphalt tile was completed.

UTILITIES SECTION

Organization & Personnel

Number of employees on payroll:	Exempt	Non-exempt	Total
May 31, 1949	9	61	70
June 30, 1949	9	65	74

Personnel changes made during the month:

New employees	5
Deceased	1

General

Operations at 784 boiler plant were normal throughout the month.

Overhaul work on #1 boiler was completed during the month. A total of 32 boiler tubes were replaced on #1 boiler. The boiler was Hydrostatically tested at 175 p.s.i. and did not reveal any leakage. #3 boiler was taken out of service for inspection and overhaul on June 22.

All valves on steam distribution system, except those requiring a complete shutdown, were overhauled and repacked during the month.

Domestic Water operations were normal throughout the month. Some difficulty was encountered because of sand in the water distribution system. Several tests were made, and it was indicated that sand was being pumped into the system from both Columbia field and the 3000 area well system. A routine blowing off of water main blow offs and fire hydrants in areas affected by sand in the system has relieved the situation considerably.

On June 8 feeding copper sulphate at .25 p.p.m. was started at Columbia field percolation pit for algae growth control. Observation of percolation pit at the 3000 Area and at the Columbia field indicates that algae growth is being practically eliminated by the copper sulphate.

UTILITIES SECTION (Continued)

On June 6 the "C" well pump was pulled to replace a broken shaft section. The broken shaft section and all column cutless bearings were replaced and the well pump was returned to service. Three leaks on well collection header on Wellsian Way were repaired during the month. On June 23 a six inch water service connection at Long Avenue and Swift Blvd. was made for domestic water service to the new swimming pool.

Operations at the disposal plant have been somewhat abnormal because of digesters of the new plant being started up.

On June 10, 1949, all the contractors' exceptions at the new plant had been corrected and all equipment of the new plant was accepted for operation. On June 14, the new primary and secondary digesters were filled and put in operation. Seeded sludge from old plant digester was transferred to new digesters to aid in starting digestion. The heating units of the new plant have been put in service using bottled propane gas as a fuel. At the end of the month some gas is being produced from the new digesters, and it is expected that gas production will be sufficient to operate heating system very soon.

Several pieces of equipment at the new plant have needed maintenance and adjustment of a routine nature. A small gas leak was found and repaired in the dome of the secondary digester.

Operations of the irrigation systems have been normal throughout the month. Only routine maintenance to the distribution system and the pumping stations has been necessary.

Operations in Pasco Warehouse Area were normal throughout the month.

It has been necessary to excavate, remove and re-install several fire hydrants in the "F" housing area. These hydrants had been improperly backfilled during original installation and would not drain.

1221521

Community Public Works Division

MONTHLY REPORT OF UTILITY OPERATIONS
700, 1100 AREAS & NORTH RICHLAND

Period from June 1, 1949 to June 30, 1949

STEAM

784 Building	Total M. Gal.	Total M. Lbs.	Rate	Unit
Water Softened	1702.6	14,200.	39.37	G.P.M.
Steam to Auxiliaries		2,029.	2818.	Lbs./Hr.
Boiler Feedwater		16,229.	22540	"
Steam Generated		13,026.	18092	"
Blowdown		3,203.	19.74	Percent
Steam Leaving Plant		10,997.	15274	Lbs./Hr.
Coal Consumed		2,172.	3017	"
Coal Received		4,350.6		
Coal in Storage		10,137.8		
B.Y.U./Lb. Dry Coal		11,795		
Evaporation/Lb. Coal		6.0		
Average CO_2 - %		6.5		
Salt Used, Lbs.		2,625		
Sulphuric Acid Used, Lbs.		5,607		
Phosphate Used, Lbs.		205		
Sulphite Used, Lbs.		50		

WATER ANALYSIS - PPM	Raw Avg.	Soft Avg.	Boiler Maximum	Boiler Minimum
Phenolphthalein Alkalinity	--	--	245	65
Methyl Orange Alkalinity	188	27	270	105
Chlorides	17	18	170	55
Hardness	140	--	--	--
Phosphate	---	--	90	3
Sulphite	---	--	70	0

RICHLAND AND NORTH RICHLAND DOMESTIC WATER (PRODUCTION)

	Richland	North Richland	Combined
Total Pumpage, Million Gals.	143.830.7	192.7140	407.4395
Avg. Daily Flow, Million G.P.D.	4.794	6.424	13.581
Rate of Flow, G.P,M.	3329	4461.	9431.
Water to 300 Area	28.7255 Million gallons		
Chlorine Used	1434	5842	
Avg. Chlorine Residual, PPM	0.25	0.75	

SEWAGE DISPOSAL PLANT

Sewage Flow: 97.200 M.G. Total 3.240 Million G.P.D. Avg.
Sewage Flow: 2250 G.P.M. Average
Chlorine Used 3788 Lbs. Lime Used 1500 Lbs.
Chlorine Residual, Average:

Average B.O.D. 157 Raw Sewage 18 Final Effluent
Avg. Suspended Solids 131 Raw Sewage 13 Final Effluent.

/s/ Harold N. Petty - Supervisor

1221522

Community Public Works Division

LABOR SECTION

Organization & Personnel

Number of employees on payroll:	Exempt	Non-Exempt	Total
May 31, 1949	11	134	145
June 30, 1949	11	141	152

During the month the following personnel changes were made:

New Employees	8
Terminations	1

General

Ten lots of personal furniture were handled during June. Two men were used in handling government furniture and fixtures. This group is utilized during any slack period for lawn irrigation.

Approximately 35 work orders on miscellaneous excavations have been completed during the month, several orders are partially completed. The largest job this month was the excavation of the new moat around the oil storage tanks, approximately 600 yards of earth being moved. Long Avenue was crossed with ditch for six inch water line to new swimming pool location.

The mower shop is behind on mower repair. We are busy repairing our own machines and so far have been unable to do any repair work to mowers coming in from the manufacturing division.

The weeds in the irrigation canal are heavy enough to retard the flow, and due to excessive amount of water needed in the ditch, concern is felt about the ditch washing out. Treatment will be started early in July with a new water weed killer.

Garbage and trash collection continued on the usual basis, 5 days a week with the exception of eating facilities which require a Saturday pick up.

Public areas and parks were watered and mowed during the month.

FUEL INVENTORY

COAL:	Beginning Inventory	1,082,000	
	Receipts	1,136,900	
	Houses		300
	Pennywise Drug		3,000
	3000 Area		1,043,900
	White Bluffs		93,000
	Ending Inventory	1,078,800 Lbs.	
OIL:	Beginning Inventory	2,541 gallons	
	Houses		630
	Ending Inventory	1,911	

1221523

COMMUNITY DIVISIONS

COMMUNITY ADMINISTRATION

JUNE, 1949

ORGANIZATION AND PERSONNEL

Number of employees on payroll:	June
Beginning of month	6
End of month	6

GENERAL

Following is a summary of Appropriation requests processed during the month:

5-A Project C-203-Part III, Water Supply and Distribution and Sewage Treatment and Collection Facilities, Richland Village and North Richland Construction Camp-Construction, approved and project proposal forwarded to AEC.

49-R Project C-235, Part II, Additions to Lewis and Clark Elementary School, approved by A & B Committee and project proposal forwarded to AEC.

50-R Project C-234, Part II, Additions to Marcus Whitman Elementary School, approved by A & B Committee and project proposal forwarded to AEC.

53-R Project C-233, Part II, Spalding School, approved by A & B Committee and project proposal forwarded to AEC.

55-R Project C-336-R, Water Supply Facilities, Richland, approved by A & B Committee and project proposal forwarded to AEC.

57 Auxiliary Fire Station, Richland, approved by A & B Committee and letter request forwarded to AEC.

58 Additions to Fire Station - North Richland, approved by A & B Committee and letter request forwarded to AEC.

59 C-232, Part II, Carmichael Junior High School, approved by A & B Committee and project proposal forwarded to AEC.

60 Additions and Alterations to Central Fire Station-Richland, approved by A & B Committee and letter request forwarded to AEC.

61 Maintenance of Prefab Roofs-Extension of Present Subcontract, approved by A & B Committee and letter request forwarded to AEC.

A total of twenty-one part time business permits were issued during the month of June, 1949.

MTB/jak

1221524

COMMUNITY COMMERCIAL FACILITIES DIVISION

June, 1949

ORGANIZATION AND PERSONNEL	JUNE
Number of employees on payroll:	
Beginning of month	16
End of month	16
Net decrease	0

COMMERCIAL FACILITIES

The following figures indicate trends in commercial activities as related to various basic items:

	May	June
Cafeteria meal customers	56,164	50,674
Percent of room-day occupancy - Desert Inn	66%	63%
Gallons of ice cream sold	7,226	6,069
Carnation milk and cream deliveries	81,325	71,964
Darigold milk & cream deliveries	3,069	3,027
Morning Sun Dairy milk and cream deliveries (Units)	29,564	34,148
Theater customer count	41,806	48,957
Gallons of gasoline sold	111,323	131,326

Total number of Commercial Facilities Operators' employees, full and part-time as of June 30, 1949 - 1,002. This shows a net increase of 4 over last month's 998.

National Bank of Commerce opened for business June 20, in temporary quarters located in Frank Berry's Building, New Central Commercial Area.

Mickey's Shoe Renewing was issued a building permit on June 29, to alter and modernize the Government-owned building at his expense, to allow for increased luggage and allied line sales.

The following routine items were processed:

Work Orders	7
Patrol Orders	76
Back Charges	5

Current inventory was taken of Government-owned equipment located in the Veterans' Administration Building, and a final inventory of the Government-owned equipment in the Desert Inn was taken during the month of June preparatory to the purchase of this equipment by Vance Properties.

1221525

COMMUNITY COMMERCIAL FACILITIES DIVISION

The sale of Government-owned equipment and fixtures was completed for the following facilities: Village Pharmacy, Pennywise and Thrifty Drugs, Diamond 5¢ to $1.00 Stores, Elite Shop, Groceteria and Shoe Salon.

CONTRACTS AND NEGOTIATIONS

Supplemental Agreement #1, dated May 1, 1949, was entered into between General Electric Company and Cahoon Motors Company, covering the revision of the description of ground space allotted to Cahoon Motors Company.

Supplemental Agreement #1, dated June 8, 1949, was entered into between General Electric Company and Bedri J. Saad, covering the improvement and modernization of The Richland Shoe Salon, at operator's expense.

Seattle Tent and Awning Company (Frank Berry) was authorized to construct an addition, approximately 15 feet deep and 32 feet wide, to the rear of the original building, to provide additional space for storage and for repair of outboard motors, lawn mowers, etc.

L. C. Foisy, Operator of Richland Recreation Building, was granted permission to apply for an off-sale beer license.

Commercial Facility Leases were entered into between General Electric and the following firms for the construction of buildings and operation of businesses as outlined below:

C&H Foods (Gus Carlston and Lynn W. Hansen) - Food Store and Delicatessen. Lease dated May 15, 1949.

Wilmot's Morning Sun Dairy, Inc. - Milk and Ice Cream Depot. Lease dated May 25, 1949.

A. J. Anderson - Automobile Dealership, Repair Garage and Service Station. Lease dated April 15, 1949.

Northwestern Fuel Company - Coal and Fuel Oil Dealership. Lease dated May 23, 1949.

Elmer J. Hanson - Barber Shop, with additional space to sublet to persons, upon conditions approved by Lessor. Lease dated May 1, 1949.

New City Cleaners - Dry Cleaning Plant. Lease dated May 1, 1949.

Construction was started on the following facility buildings:

Wascher's Service Station - George Washington Way and McMurray Road - Construction started June 24, 1949.

Densow's Drug Store - Swift and Wright Streets - Construction started June 23, 1949.

Johnny's Minute-Man Service Station (John F. Gerdes) - North Central District - Construction started June 13, 1949.

COMMUNITY COMMERCIAL FACILITIES DIVISION

Northwestern Fuel Company Building - Light Industrial Area - Construction started June 29, 1949.

Hanson's Barber Shop - North Central District - Construction started June 23, 1949.

Davis Furniture Store - North Central District - Construction started June 9, 1949.

Invitations to Bid were mailed for the operation of a Cafeteria and/or Restaurant in the Government-owned building, located at Goethals Drive and Knight Street.

Letters requesting formal proposals were mailed on a Photographic Studio to be established in the New Central Commercial Area.

Bids were received on the following listed prospective facilities to be established in Richland:

Beverage Store - New Central Commercial District. (Only one bid was received, and it was rejected.)

Food Store - George Washington Way and McMurray Road.

Drugstore - George Washington Way and McMurray Road.

Food Store - Duportail Street and Wright Avenue.

Cafeteria - Goethals Drive and Knight Street.

Locations were awarded to the following persons for facilities to be established in Richland:

Food and Drugstore, George Washington Way and McMurray Road: Robert Kaiser, 412 South 1st Street, Dayton, Washington; and Robert Johnson, Dayton Drug, Dayton, Washington.

Food Store, Duportail Street and Wright Avenue: Conrad Diettrich, General Delivery, North Richland, Washington.

Cafeteria, Goethals Drive and Knight Street: C. D. Newland, Coulee Dam, Washington.

Drugstore, New Central Commercial Area: Morgan and Oldberg, Richland, Washington.

REQUESTS FOR ESTABLISHMENT OF BUSINESSES IN RICHLAND

A number of individuals and firms, the majority of which were not interested in constructing their own buildings, expressed a desire during the month to

establish and operate businesses in Richland. The types of establishments desired are shown in the following list:

Auto Agency	Finance Office
Attorney's Office	General Business
Camera Shop	Jewelry Store
Candy & Cigarette Vending Machines	Malt Shop & Ice Cream
Children's Clothes, Homemade	Photographic Studio
Drugstore	Real Estate
	Service Bureau, General

1221528

COMMUNITY DIVISIONS

COMMUNITY HOUSING DIVISION

June, 1949

ORGANIZATION AND PERSONNEL

NUMBER OF EMPLOYEES ON PAYROLL	June
Beginning of month	37
End of Month	38
Increase	1

RICHLAND HOUSING

Housing Utilization as of Month End

Houses Occupied by Family Groups	Conventional	Block	T	Pre-Cut	Ranch	Pre-fab	Apt.	Tract	Total
Operations	2180	257		380	865	1098	60	41	4881
Facilities	144	5		20	57	116	2	10	354
Government	103	32		11	22	31	4	4	207
Kellex Corporation		7		2		2	1		12
Morrison-Knudsen	3			1			1		5
Atkinson-Jones	18	18		11	18	10	2		77
J. Gordon Turnbull	1	2		3	4	13			23
Giffels & Vallet	2			2	7	10			21
J. A. Terteling & Sons	1		8	1		1			11
McNeil Construction Co.	2			2		3			7
Newberry Neon Electric	1	2		2		1			6
Urban, Smythe & Warren	2	1		1		2	1		8
Robert's Filter	1								1
Graysport Construction				1				8	9
Newport-Kern Kibbe								1	1
Vernita Orchards								5	5
Scott Buttner						1			1
TOTAL HOUSES OCCUPIED	2458	324	8	437	974	1288	71	*69	5629
Houses utilized for special purp.								1	1
Houses assigned (leases written)	14	2		3	9	9	1	1	39
Houses assigned - awaiting tenants	28	7	2	10	17	35	2		101
Government houses - unassigned								**35	35
TOTAL HOUSES	2500	333	10	450	1000	1332	74	106	5805

* Occupancy figure includes 4 houses occupied by Bonneville Power in Priest Rapids and White Bluffs.

** This includes 31 tract houses boarded up for salvage.

1221529

COMMUNITY HOUSING DIVISION

Housing Turnover During Month	Begin Month	Moved In	Moved Out	Month End	Difference
Conventional Type	2463	53	58	2458	Minus 5
Block type	326	5	7	324	Minus 2
T type	10	0	2	8	Minus 2
Precut type	440	14	17	437	Minus 3
Ranch type	975	39	40	974	Minus 1
Prefab type	1294	49	55	1288	Minus 6
Apartments	73	3	5	71	Minus 2
Tract	68	2	1	69	Plus 1
Total	5649	165	185	5629	Minus 20

Dormitory Statistics

Dormitories		Occupants	Vacancies	Total Beds
Men - Occupied	14	470	86	556
Men - Unoccupied				
Women - Occupied	14	*476	116	592
Women - Unoccupied				

Women's Dormitories occupied by:

G. E. Office	1
Education	1
Apartments	1
	31

* This includes space of 6 beds in W-9 being used for Supply Rooms and Dormitory offices.

GENERAL

	Allocation Section Statistics
Total houses allocated to new tenants	110
Exchanged houses	38
Moves (within the Village)	28
Total new leases signed	165
Turnovers	21
Houses sent to renovation	64
Houses assigned "As Is"	77
Terminations	133
Total cancellations	185

A letter announcing the rental adjustment was sent to all tenants in the Village on June 15th. It was necessary to borrow three girls from the typing pool to accomplish this assignment.

As a result of the rental adjustment, over three hundred letters were received requesting permission to move to other houses, for various reasons. From these letters, lists were compiled. All assistance

COMMUNITY HOUSING DIVISION

General

possible is being goven to those wishing to trade houses.

Tradt house L-906 was rented on June 23, 1949.

TENANT RELATIONS

The processing of Patrol Orders and Work Orders during the month is as follows:

	Incomplete 5-27-49	Issued Dur. June	Incomplete 6-30-49	Issued Prev. Mo.
Patrol Orders - Days	816	3526	1178	2300
Patrol Orders - Off Shift Elect.	0	363	0	462
Patrol Orders - Off Shift Maint.	0	411	0	498
Regular Work Orders	307	209	253	135
Backcharges	22	66	6	58

8 Conventional type houses were painted by Project Forces as compared to 110 the previous month. (Interiors).

73 Conventional type houses were painted with exterior prime coat.

63 Conventional type house exteriors sprayed shakes.

44 Conventional type house exteriors painted complete.

492 Home Fire Inspections were reported and processed. 761 homes were visited.

6,659 pounds of grass seed were issued during the month of June. 20,451 pounds of seed were issued during the month of May.

ITEMS OF INTEREST

	Total Outstanding	Outstanding in June	Outstanding Previous Month
Window glass	241	167	129
Laundry tubs	35	25	0
Bathroom Painting	33	14	13
Bath tub replacements	56	3	0
Faucets	62	54	34
Sink Linoleum Replacements	85	47	27
Miscellaneous	790	614	463

Alteration permits issued during the month of June, 1949, totaled 326 as compared to 340 during the month of May.

Automatic Washers	10	Awnings	1
Air Conditioners	136	Backdoor	2
Cooling Pads	10	Fireplace	1
Patio	6	Driveway	7

TENANT RELATIONS

Fence	26	Construction of concrete strip	1
Partitioning Basement	1	Sanding Floors	7
Basement Excavation	2	Move Laundry Tubs	1
Install Aerial	1	Humidifier	1
Raise Threshold	1	Sprinkler System	1
Trellis	1	Construction of Shelving	1
Arbor	2	Installation of 12 guage wire	1
Clothes Poles	5	Glazing Sunporch	1

945 Inspections were made during the month of June. A breakdown of the inspections shows the following distribution:

Grass Seed	176
Linoleum	109
Sidewalks	54
Lot Line	53
Recaulk bath tubs	31
Walls	29
Floorboards	26
Leaking Basements	8
Miscellaneous	380
Shades	90

In addition to the above, field clerks also covered calls on interior painting, contacting tenants in regard to watering of inner-block areas, and made calls on tenants who are parking on lawns and driving on seeded areas.

M. S. Warehouse Monthly Report for June, 1949.

Orders handled for June, 1949		Items
Recall Orders	15	143
Delivery Orders	12	102
Range & Refrigerator Orders to new houses	0	0
Dormitory Exchange Orders	16	42
Total Orders	43	287
Received from Maintenance		35
Sent to Maintenance		58
Three-burner Ranges Exchanged in Village		7
Refrigerators exchanged in Village		10
Trips to Pasco		5

Tenant Relations Store:

Orders Disbursed	430
Items Disbursed	1677
Value	$13,826.16
Items Received	1945
Value	$15,167.05

TOTAL M. S. WAREHOUSE INVENTORY $65,214.96

1221532

TENANT RELATIONS

M. S. Warehouse Monthly report for June, 1949

Note: New units in refrigerators and ranges, leaving M. S. Warehouse for delivery are all being tested for proper temperature control.

DORMITORY PROGRESS REPORT FOR MONTH OF JUNE, 1949.

Direction signs were placed on the northwest corner of W-3 to prevent private cars from parking in dead-end street here. In the past, such parking was a recognized fire hazard.

A complete survey of dormitory grounds indicates some improvement. However, a definite and progressive plan for future improvement is now in the making.

Floor maintenance experts are now cooperating with Dormitory Management in a program for the preservation and improvement of all dormitory floors.

1221533

COMMUNITY SAFETY DIVISION
JUNE 1949

ORGANIZATION AND PERSONNEL

Number of employees on Payroll	June
Beginning of month	3
End of Month	3

GENERAL

Child Safety Campaign is well publicized in the Tri-City papers and local Richland papers. One fifteen minute program has been carried by the Pasco Radio Station. The address was given by a member of the Toast Mistress Club. A seven minute program on Safety and Fireworks has been given on the "Headlines in Chemistry" program over the Kennewick Station, June the 27th. The theme "Be Alive July the 5th" has been carried out in the Village and will be carried in the local newspapers on July the 2nd.

Regarding Fire Prevention, one furnace room in the Ranch Type houses has been painted with "ALBR" flame resisting paint, for the purpose of determining the feasibility of painting all the one thousand Ranch Type houses with this material to eliminate the fire hazards we have relative to hot ashes in ash cans in the small furnace rooms.

Evaluation check lists and Testimoniols were prepared for signature approvals of school officials covering the following schools:

Columbia High
Jefferson Grade School
Lewis and Clark Grade School
Marcus Whitman Grade School
Sacajawea Grade School
John Ball Grade School

Following signature approvals these papers will be submitted to the School and College Division of the National Safety Council for Honor-Roll listing.

COMMUNITY FIRE DIVISION

June 1949

Organization and Personnel

Number of employees on payroll	June
Beginning of the month	139
Terminations	3
Return from leave of absence	1
End of the month	137

	Richland	North Richland
Response To Alarms	20	7
Fire Loss (Estimated)		
Hanford Works	00	0
Personal	$50.00 *	$71.55 **
Investigation of minor fires and incidents	5	1
Safety Meetings Held	16	8
Inside Drills	75	35
Outside Drills	61	32
Alarm Boxes Tested	171	90

* Damage to a motorcycle.
** $53.00 damage to two personal automobiles.

Miscellaneous Fire Department Activities:

1. At request of 1131 Garage, tested newly installed pump on Area Fire Department fire truck.

2. Accounting Department personnel visited Station No. 1 for Safety meeting. Apparatus, equipment and alarm system explained to group.

3. Cub Scout group visited Station No. 1 to have fire apparatus and equipment explained.

4. Pressurized sprinkler system in 703 Building.

5. Community Fire Division was host, June 19th, to Central Washington Firemen's Association. Eighty firemen, representing fire departments from Cle Elum to Pasco were conducted on a tour of Richland and North Richland, participated in competitive hose evolutions using Community Fire Division apparatus and listened to an informative program on local fire protection education.

6. Continuing the program begun in May when a firehydrant was found inoperative, all hydrants in the upper and lower "A" Area were tested.

1221535

COMMUNITY FIRE DIVISION

Fire Prevention

1. Fire Inspections

700 Area Buildings	122
1100 Area Buildings	124
Government Airport Buildings	10
Commercial Facility Buildings (Gov't Owned)	98
Schools, Churches and Clubs	47
Homes	492
Dormitories	30
Total	923

2. Fire Extinguishers

Inspected	1343
Installed	20
Recharged	12
Relocated	9

Miscellaneous Fire Prevention Activities:

1. Inspection in the old conventional homes, (Type A, B, H, etc.) revealed that about 20% of the furnace smoke pipes had rusted through. This information was telephoned to Housing.

2. Approximately 90% of the recent inspection reports sent to Housing on Ranch House furnaces reveal that most of the controls were out of adjustment, in most cases the limit controls set improperly.

3. Instances where Ranch House tenants had extension cords burned in two without tripping circuit breakers were referred to Community Maintenance.

4. Door bell transformers in some Ranch style homes were found to be dangerously hot. These cases were also reported to Community Maintenance.

5. Demonstrations, Drills, etc.:

Approximately 40 people of the Kadlec Hospital first aid and clerical staffs were given a demonstration in the use of fire extinguishers.

A fire drill was conducted by Fire Marshal's staff in 760 Building.

Fire Prevention Engineer held a meeting with all fire wardens in the 703 Building. A fire drill in the near future was recommended.

Fire Inspector conducted a gas mask demonstration for swimming pool life guards, reviewing upon request first aid practices.

1221536

COMMUNITY FIRE DIVISION

6. Tests:

Sprinkler systems in Kadlec Hospital, Public Health and 703 Building were tested each Monday. Slight leaks were encountered in the Hospital and 703 Building. Work orders for necessary repairs instigated by Fire Marshal.

Desert Inn alarm system tested twice during month. Tests satisfactory.

7. Installed "No Smoking" signs in storage rooms of Desert Inn.

8. Recommended to Hospital Adminstrator that 250 degree sprinkler heads replace 135 degree heads in Surgical Wing of Kadlec Hospital where new autoclaves were recently installed.

9. Hazardous weeds and grass around buildings in and near Richland were reported to personnel responsible for these buildings.

10. Recommended a master fire alarm box be installed for the Clinic Building so as to separate this alarm system from Kadlec Hospital.

COMMUNITY DIVISIONS

COMMUNITY PATROL

JUNE 1949

ORGANIZATION AND PERSONNEL	June
Number of employees on payroll:	
Beginning of month	84
End of month	84

GENERAL

Effective June 3, 1949, patrolling of the dike was discontinued.

Effective June 7, 1949, occasional checks were begun of the reservoir located near the Graysport construction offices to prevent persons using it for a swimming pool.

Effective June 11, 1949, the Richland Park swimming pool was added to the list of locations to be checked in routine motor patrol operations. Care of the floodlights illuminating the pool was also included.

Effective June 16, 1949, an hourly check was begun during the nocturnal hours with the C. A. P. Airport by phone. Failure to make contact by phone required personal contact by patrol car.

At 12:01 A. M., Saturday, June 18, 1949, shift change time at North Richland Patrol Headquarters was changed to five minutes after the hour instead of on the hour. This gives the shift supervisor an extra five minutes at the beginning of the shift to discuss police problems before going on duty.

During the month of June, 19 prisoners were processed through the Richland Jail.

During the month of June, 53 gun registrations were taken by Richland Patrol.

During the month of June, a total of 48 Unusual Incident Reports were received, which consisted mainly of Public Intoxications, Assaults, and Public Nuisances. Regular Traffic Violation and Offense Statistics are presented in separate tables attached to this report.

TRAFFIC

On June 7, 1949, Richland completed two full years without a traffic fatality.

On June 20, 1949, 130 School Boy Patrol jackets were received. Purchase of these jackets was made possible by donations from various organizations in Richland.

1221538

TRAINING

Subjects covered in the lieutenant's training classes for the month of June were as follows:

Search and Seizure
Techniques and Mechanics of Arrest
Human Relations
Arrest Procedure
Handling of Prisoners
Radio Traffic
Public Relations

Advance training for Community Patrol members at the Small Arms Range for the period June 1, 1949, to June 30, 1949, inclusive, was divided into field instruction as follows:

Pistol	2 1/2 hr.
Machine Gun	1 1/2 hr.

Progress of scores and qualifications on the Army-L Course:

	April		May		June	
	No.	Percent	No.	Percent	No.	Percent
Unqualified	3	4%	2	6%	7	10%
Marksman	13	18%	4	11%	9	13%
Sharpshooter	11	16%	7	20%	7	10%
Expert	44	62%	22	63%	46	67%

No scores were kept on the Machine Gun Course. Each man, however, fired practice shots and received the regular instructions on the handling and firing of the weapon.

On June 22, 1949, the F. B. I. Training Course, which has been in progress since May 17, 1949, was concluded.

1221539

Community Patrol Division - Continued

ACTIVITIES AND SERVICES (RICHLAND)

	April	May	June
Check on absentees	5	8	8
*Persons assisted	290	266	270
Doors & windows found open in commercial facilities	33	24	67
Lost children found	27	15	16
Ambulance runs	50	29	19
Lost dogs reported	5	5	3
Dog & cat complaints	55	51	37
Persons injured by dogs	6	14	14
Bank escorts & details	41	37	38
Fires investigated	34	30	23
Miscellaneous escorts	34	27	40
Complaints investigated	126	148	132
Missing persons reported	3	0	5
Totals	709	654	672

*Includes: Persons admitted to residence; delivery of messages to residents who have no telephones; relay of messages; handling of requests of out of town police; miscellaneous aids to private parties; and opening trailer parking lot for individuals.

ACTIVITIES AND SERVICES (NORTH RICHLAND)

	April	May	June
Check on absentees	3	0	2
*Persons assisted	219	251	196
Doors & windows found open in commercial facilities	70	45	9
Lost children found	5	2	4
Ambulance runs	2	6	0
Lost dogs reported	0	0	0
Persons injured by dogs	0	1	0
Dog & cat complaints	16	6	7
Bank escorts & details	40	54	41
Fires investigated	14	8	6
Miscellaneous escorts	52	10	20
Complaints investigated	27	15	12
Missing persons reported	0	0	0
Totals	448	398	297

*Includes: Admitting persons totheir rooms; contacting parties on long distance calls; issuing rooms and bedding; locating persons wanted for various reasons; relaying messages; assisting outside police agencies; assisting other departments; aiding private persons, etc.

COMMUNITY PATROL DIVISION

FORCE REPORT

JUNE 1949

Patrol		Entire Patrol 5-31-49	Entire Patrol 6-30-49
Patrol Supervisor		1	1
Captains		5	5
Lieutenants		8	8
Sergeants		11	11
Patrolmen		55	55
	Total	80	80
Clerical			
Steno-Typists	Total	4	4
	Grand Total	84	84

1221541

COMMUNITY PATROL DIVISION
RICHLAND JUSTICE COURT CASES
JUNE 1949

VIOLATION	NO. OF CASES	NO. OF CONVICTIONS	TOTAL FINES	TOTAL SUSP.	SENTENCED TO JAIL	SENTENCE SUSP.	LICENSE REVOKED	AVERAGE FINE PAID	CASES DISMISSED	WARRANTS ISSUED
Drunken Driving	5*	5	$362.50	0	0	0	5	$72.50	0	0
Reckless Driving	3*	3	$117.50	0	0	0	3	$39.16	0	0
Negligent Driving	11**	10	$260.00	$77.50	0	0	0	$23.64	1	0
Speeding	31***	31	$325.50	$12.50	0	0	0	$10.50	0	2
F.T.Y.R.O.W.	2****	2	$30.00	$12.50	0	0	0	$15.00	0	0
Stop Sign	13*****	13	$83.50	$7.50	0	0	0	$6.42	0	0
Drivers License	9	9	$41.00	$18.50	0	0	0	$4.56	0	3
Imp. Passing	2	2	$7.50	0	0	0	0	$3.75	0	1
Imp. Parking	7	7	$17.50	$7.00	0	0	0	$2.50	0	2
Hit & Run	1******	0	$2.50	0	0	0	0	$2.50	1	0
Public Intoxication	5	5	$72.50	0	0	0	0	$14.50	0	0
Public Nuisance	2	2	$35.00	0	0	0	0	$17.50	0	0
Drunk & Disorderly	1	1	$17.50	0	0	0	0	$17.50	0	0
Third Degree Assault	3*******	2	$27.50	0	1	0	0	$9.16	1	0
	95	93	$1,400.00	$135.00	1	0	8	$221.69	3	10

Total Fined.....$1,400.00
Less Suspensions.... $135.00
Total Fined Received$1,265.00

* 2 cases reduced to Negligent Driving.
** 1 case included with other violation.
** 1 case dismissed due to insufficient evidence upon motion of defendants attorney
* 1 case reduced to Reckless Driving.
*** 3 cases included with other violations.
**** 1 case included with other violation.
***** 3 cases included with other violations.
****** 1 case dismissed at request of complainant.
******* 1 case in lieu of payment of fine, was committed to jail.
******* 1 case dismissed on request of complainant.

Lewdness & Indecent Exposure - 1 case taken to Prosser, Wn., to await trial in Superior Court.

PATROL DIVISION - TRAFFIC CONTROL STATISTICS
June - 1949

MOTOR VEHICLE ACCIDENTS

	Total Number		Fatalities		Major Injuries		Minor Injuries	
	May	June	May	June	May	June	May	June
Richland	16	14	0	0	1	0	4	2
North Richland	11	6	0	0	0	0	3	0
Totals	27	20	0	0	1	0	7	2

ACCIDENT CAUSES

	Negligent Driving		Failure to Yield Right of Way		Reckless & Drunken Driving		Other Causes	
	May	June	May	June	May	June	May	June
Richland	1	7	8	4	0	0	7	3
North Richland	2	0	4	4	0	0	5	2
Totals	3	7	12	8	0	0	12	5

PLANT WARNING TRAFFIC TICKETS ISSUED

	Speeding		"Stop" Sign		Parking		Imp. License		Def. Equip.		Other Violations		Totals	
	May	June	May	June	May	June	May	June	May	June	May	June	May	June
Richland	1	2	0	0	25	70	1	1	1	7	2	1	30	81
North Rich.	0	0	0	1	64	36	2	0	12	3	0	1	78	41
Totals	1	2	0	1	89	106	3	1	13	10	2	2	108	122

COURT CITATION TRAFFIC TICKETS ISSUED

	Speeding		"Stop" Sign		Drunken Dr.		Reckless Dr.		Right of Way V.		Neg. Dr.		Parking V.		Other V.		Totals	
	May	June	May	June	May	June	May	June	May	June	May	June	May	June	May	June	May	June
Richland	18	30	2	11	0	2	2	2	7	1	6	7	4	6	12	15	51	74
N. Rich.	6	3	3	2	0	5	0	2	4	0	5	3	0	0	2	1	20	16
Totals	24	33	5	13	0	7	2	4	11	1	11	10	4	6	14	16	71	90

TRAFFIC VOLUME: Average 24-hour Traffic Volume Count for week ending on June 20, 1949, Goethals Drive, just north of Knight Street, 5,913 Cars.

Community Patrol Division

CRIME PREVENTION SECTION
MONTHLY REPORT
JUNE, 1949

Classification of Offenses	Offenses Known or Reported to Patrol	Offenses Unfounded	Actual Offenses May	Actual Offenses June	Offenses Cleared By Arrest	Offenses Cleared By Other Action	Perpetrators Involved
Assault	3	0	3	3	3	0	3
Breaking and Entering	2	0	0	2	0	0	u
Larceny (Except Auto & Bike).							
Over $50.00	8	2	6	6	0	1	1
Under $50.00	15	0	18	15	0	3	4 (a)
Auto Theft	0	0	1	0	0	0	0
Bike Theft	17	0	13	17	0	10	u
Destruction of Personal Prop.	2	0	2	2	0	0	u
Destruction of Gov't. Prop.	3	0	5	3	0	2	2 (b)
Loss or Theft of Gov't. Prop.	4	0	4	4	0	2	2 (c)
Disorderly Conduct	1	0	3	1	1	0	1
Drunkenness	5	0	12	5	5	0	5
Disturbance	4	0	0	4	0	4	5
Forgery	0	0	1	0	0	0	0
Narcotics	1	0	0	1	0	1	1
Missing Persons	6	0	2	6	0	4	6 (d)
Offense Against Family & Children	2	0	4	2	0	2	4
Prowlers	1	0	3	1	0	1	1 (e)
Public Nuisance	2	0	5	2	2	0	2
Mental Case	1	0	0	1	0	1	1
Co-Habitation	0	0	1	0	0	0	0
Lewdness	1	0	0	1	1	0	1
Vagrancy	0	0	5	0	0	0	0
Vandalism	7	1	2	6	0	4	7 (f)
Impersonation	1	0	0	1	0	1	1
Miscellaneous	7	0	8	7	0	7	6 (g)
Juveniles (Other than Above).	1	0	4	1	0	1	2 (h)
Malicious Mischief	1	0	0	1	0	1	1 (i)
TOTAL OFFENSES	95	3	102	92	12	45	56 x

(a) 1 Case Perp. by 1 Juv. Age 16.
1 Case Perp. by 2 Juv. Ages 13 & 14.
(b) 1 Case Perp. by 1 Juv. Age 9.
(c) 1 Case Perp. by 1 Juv. Age 9.
(d) 1 Case Perp. by 1 Juv. Age 14.

(d) 1 Case Perp. by 1 Juv. Age 8.
(e) 1 Case Perp. by 1 Juv. Age 16.
(f) 1 Case Perp. by 1 Juv. Age 8.
1 Case Perp. by 2 Juv. Ages 15.
1 Case Perp. by 2 Juv. Ages 12 & 13.

(g) 1 Case Perp. by 1 Juv. Age 6.
(h) 1 Case Perp. by 2 Juv. Ages 17 & 19.
(i) 1 Case Perp. by 1 Juv. Age 6.

u—Represents Unknown.
x—10 are Colored. Prop. Rec.$327.04.

122154

Number of offenses known to police per 10,000 inhabitants, in cities between 10,000 and 25,000 inhabitants:

	Wash. Oregon & Calif.		Richland and North Richland		
Classification	Six Months (Jan-June 1948)	One Month Average	Six Months (Jan-June 1948)	May 1949	June 1949
Murder	181	.031	0	0	0
Robbery	3.47	.58	1.00	0	0
Aggravated Assault	1.75	.29	6.66	2.66	2.00
Burglary	35.69	5.95	4.63	0	1.33
Larceny	127.06	21.18	47.16	16.0	20.0
Auto Theft	15.56	2.59	3.10	.66	0

Number of offenses known to police per 10,000 inhabitants regardless of whether offenses occurred in cities or rural districts:

	State of Washington		Richland and North Richland		
Classification	Six Months (Jan-June 1948)	One Month Average	Six Months (Jan-June 1948)	May 1949	June 1949
Murder	.140	.023	0	0	0
Robbery	4.90	.82	0	0	0
Aggravated Assault	.78	.13	6.66	2.66	2.00
Burglary	36.91	6.15	4.63	0	1.33
Larceny	92.22	15.37	47.16	16.0	20.00
Auto Theft	18.15	3.03	3.10	.66	0

The portion of offenses committed by persons under the age of 25 years, is shown by the following figures:

	National Average	Richland and North Richland		
Classification	Six Months (Jan-June 1948)	Six Months (Jan-June 1948)	May 1949	June 1949
Robbery	55.5	0	0	0
Burglarly	59.9	8%	0	0
Larceny	45.2	13%	35%	10%
Auto Theft	71.6	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 arrest records is doubtless incomplete in the lower age groups because of the practice of some jurisdictions not to fingerprint youthful offenders."

1221545

256

COMMUNITY DIVISIONS

COMMUNITY-ACTIVITIES DIVISION

June, 1949

ORGANIZATION AND PERSONNEL

Number of employees on roll		
Beginning of month		12
Additions (full-time)	1	
(part-time)*	7	
Terminations	-2	
End of month		18

*Summer recreation employees.

SCHOOLS

Representatives of Fire Protection and Activities Division inspected the coal bin in Spalding Grade School. This coal had become very hot due to internal combustion. It was determined that the hot coal could be burned out without being a hazard if it was closely watched. These inspections were made on June 1 and 2.

On June 6, representatives of Public Health and the Activities Division inspected all school kitchens for the purpose of instructing kitchen personnel in the proper spraying and cleaning up process for summer closing.

On June 7, the Activities Division made arrangements with the McNeil Construction Company to contact the refrigeration company that installed the Carmichael walk-in refrigerator. The refrigerator was not freezing and it was determined that a new compressor seal was needed. This seal was installed on June 9.

Two hundred six seniors, the largest graduation class of Columbia High School, were graduated at exercises held on June 7.

On June 7, all Richland schools were dismissed for summer vacation. September 6, is the date for fall opening of the schools.

On June 8, the annual health roundup of pre-school children began. These examinations were held throughout the week in the various school buildings.

It was announced on June 8, that playground equipment valued at $700 was installed at Lewis and Clark Grade School. This equipment was a gift from the Lewis and Clark Parent-Teachers Association and was installed by the Community-Activities Division.

Five juniors at Columbia High School were named to attend the Legion-sponsored Boys State at Central Washington College at Ellensburg, Washington.

1221546

On June 8, it was announced the nursery school fee will be reduced from $2.00 to $1.50 per day. This deduction in rate is possible due to greater subsidies from the State Board of Education.

Two hundred Richland Public School children were commended on June 30 for their perfect attendance for one year.

There is a total enrollment decrease since September 7, 1948, of 41 pupils, with 11 additional pupils at the grade schools and a decrease of 52 at the high school. During the month there was a decrease of 123 pupils in the grade schools and no increase or decrease in enrollment at the high school.

CHURCHES

The following is a tabulation of full-time paid personnel, as of June 30, 1949:

	Ministers	Staff	Total
Assembly of God	1	0	1
Catholic	2	2	4
Central United Protestant	2	2	4
Church of Christ	1	0	1
Church of God	1	0	1
Episcopal Church	1	0	1
Free Methodist	1	0	1
Mission Baptist	1	0	1
Mo. Synod Lutheran (Redeemer)	1	1	2
National Lutheran	1	2	3
Nazarene	1	0	1
Regular Baptist	1	0	1
United Protestant - North Richland	1	0	1
United Protestant - West Side	1	0	1
United Protestant - South Side	1	0	1
United Protestant - Northwest	1	0	1
	18	7	25

The United Protestant Church School began on June 13, and was completed on June 24. Classes were held from 9:00 to 11:00 AM in all grade schools. Children from the age of 5 to 15 were eligible to attend. Eight Hundred thirty five attended the first week of school.

On June 13, the Richland Baptist Bible School opened and continued through June 24. The school was held in the newly constructed Richland Baptist Church on George Washington Way.

The West Side United Protestant Church was formally organized by the Presbytery of Walla Walla on June 14. The west side church is the fourth United Protestant church to be organized in Richland. The church site is at the corner of Lee Blvd. and Wright.

On June 9, the Richland Lutheran Senior Choir presented the oratorio, "Holy City" by Gaul, at Grandview.

1221547

Starting on June 13, the Richland Lutheran Church Bible School for primary age children continued until June 24 with the intermediate groups continuing for an extra week. The last day of school was completed with a picnic. Two hundred seventy students have been enrolled.

The vacation bible school of the Redeemer Lutheran Church began on June 20, and will continue through July 2, Monday through Friday from 9:00 to 11:00. Classes will be held in the church located on Goethals Drive.

The All Saints Episcopal Church held its annual picnic in Richland Park and presented its school awards on Sunday, June 12.

Christ the King Church had an enrollment of 420 children in their vacation school of religious instruction which began June 13 and ran through June 25.

The Richland Assembly of God Church began construction work on their new church which is located on Stevens Drive between Kadlec Hospital and the Central United Protestant Church.

On June 27, the Church of Christ began moving in lumber and materials for the construction of their church. This church site is at the corner of Swift Blvd. and Thayer Drive.

COMMUNITY

As of June 30, 1949, organizational personnel included:

Villagers, Inc.	7
American Legion	2
Coordinate Club	1
Youth Council	1
Boy Scouts	1
Camp Fire Girls	2
Hi-Spot Club	1
Red Cross	3
Castle Club	1
Post Office	62
Veterans Administration	2
Girl Scouts	2
	85

It was announced on June 3, that the community wide celebration to be held on August 12 - 14 will be known as the "Second Annual Atomic Frontier Days."

The Orthopedic Hospital Guild Benefit Dance was held at Playland on June 1.

The annual School Boy Patrol picnic, sponsored by the American Legion - Patrol and Community-Activities Division, was held in the Richland Park on June 3.

It was announced on June 5, by the Blue Mountain Council, Boys Scouts of America, that effective September 1, important changes in the age requirements for boys enrolling in the program will be made. Boys 8 years of age will then be eligible for the Cubbing program instead of the nine year requirement now observed. A

1221048

boy may now join the Boy Scouts at the age of eleven instead of twelve, and the present Senior Scouting program will assume new importance as the Explorer program, with special interests subdivided into land, sea, and air exploring. The age for this program will now be fourteen, replacing the present requirement of fifteen.

Enrollment in the Richland program is as follows:

	December 31, 1948	May 31, 1949
Cubs	391	515
Scouts	218	267
Seniors	33	27

On June 7, the Hottentots Colored Softball team played the Richland American Legion Softball team.

On June 9, the Richland DeMolay Chapter held their eleventh installation of officers.

The Fraternal Order of Eagles held installation of officers at the Coordinate Club on June 9.

The Richland Swimming Pool, operated by the Community-Activities Division, opened on June 11 at 12:45 PM. Pool hours are as follows: Boys 12:45 - 1:45 PM; Girls 1:45 - 2:45 PM; Mixed 2:45 - 6:45 PM. Saturday, Sunday, and holidays 12:45 - 6:45 PM mixed. Wading Pool open daily from 9:30 AM to 6:45 PM.

On June 13, an Air Force party from McChord field visited the 463rd Composite Squadron to acquaint the "reservists" with the new Air Reserve Training Program.

On June 14, the regular monthly meeting of the Recreation Advisory Committee was held. New organizations requesting approval include: Druck Private Play School, Duplicate Bridge Club, Richland Lions Club, and United World Federalists of Richland. These organizations were approved by the Atomic Energy Commission June 29, 1949. The minutes of the May 17, 1949, meeting were approved June 13, 1949, by the Atomic Energy Commission.

The number and types of organizations presently served by the Activities Division include 13 business and professional clubs, 24 churches and church organizations, 5 civic organizations, 16 fraternal organizations, 8 music and art associations, 10 private instructors, 44 recreation and hobby groups, 8 schools and 8 parent teachers associations, 2 social clubs and organizations, 11 veteran and military organizations, 5 welfare organizations, 19 Boy Scout troops, 15 Camp Fire Girl troops, 42 Girl Scout troops, 8 other youth groups, and 11 miscellaneous organizations.

On June 15, the Duplicate Bridge Club was formed. Tournaments are now being planned.

The new Richland Concert Band is now being formed. This was announced on June 15.

1221549

Community - Activities Division

Arrangements are being made through the Community-Activities Division by the American Legion for the big 4th of July celebration to be held here. The 9th Infantry Band from Ft. Lewis will be the entertaining band along with a drum corp from Yakima.

Swimming classes under the sponsorship of the American Red Cross and the Community-Activities Division are being held in the mornings from 9:30 to 12:00 noon on Monday, Tuesday, Thursday, Friday, and Saturday. These classes began on June 13, for advanced and beginner swimmers. Classes started on June 21, for advanced and beginner swimmers, over the age of 15, on Tuesday and Thursday nights from 7:00 to 8:00 PM.

On June 14, sixty-one blood contributions were given to the Bloodmobile.

On June 14 and 15 representatives of the Fire Protection Division and Community-Activities Division inspected all clubs and organization buildings. The following inspections were made: American Legion, Civil Air Patrol, Villagers, Inc., and Village Library, Riders Club, Veterans Administration, Youth Council, Junior Chamber of Commerce, Castle Club, Rod and Gun Club, Sacajawea Rifle and Pistol Club, Coordinate Club, and Youth Handicraft Center.

"Headlines in Chemistry", a radio broadcast over KWIE in cooperation with the Richland Section of the American Chemical Society was first broadcast on June 30 and will be a weekly feature over KWIE every Monday at 6:15 PM.

The Richland Lions Club held its charter night banquet on June 25 in the Jefferson School cafeteria.

The Sacajawea Rifle and Pistol Club is sponsoring a youth night to be held every Wednesday evening at 7:00. Any youngsters from 12 to 18 years of age are eligible to attend.

New officers of the Junior Chamber of Commerce were installed at the annual installation ceremony. This years installation was held on June 24.

The Allied Arts Association presented Dr. Ward T. Fairbanks, noted sculpturer, June 27, in the Columbia High School auditorium.

On June 28, it was announced that two mail deliveries a day will begin on July 5. The communitys present 13 and 1/2 routes will be increased to 18. This will employ five additional carriers. No deliveries will be made on Saturday afternoons, Sundays or holidays.

Arrangements have been made to have a parking lot for approximately 200 cars, graded and graveled, at the Castle Club.

On June 28, a construction shed was purchased by the Richland Yacht and Boat Club and delivered from North Richland on a backcharge basis. All arrangements were made through the Activities Division office.

The Swimming Pool Fund Drive netted only $5,640.00 and has been considered a failure. This drive has been in process during the month of June.

1221550

Community - Activities Division

A new Glider Group was formed in Richland during this past month.

Lois Rathvon School of the Dance held its annual dance recital in the Columbia High School auditorium on June 23, before a packed house.

On June 24, a check for $2971.43 representing 143% of the quota was turned over to the American Cancer Society to complete the annual drive.

It was announced on June 30, that the Villager will assist college students in seeking summer jobs.

The Diggers and Cutters Gardennaires Beautiful Home Grounds contest ended on June 30. The winners will be announced in the near future.

Fourteen Richland Air Cadets won honors in the drill-down held at Ellensburg on Sunday, June 26. These 14 cadets will be part of a 36 boy drill team from the state and will leave for San Francisco on July 3 for a regional drill down.

RECREATION

The summer playground program opened June 13, at the Village Park, Jefferson, and Marcus Whitman Grade Schools. Attendance averages for the first two weeks show the following children serviced:

Village Park - 5,121
Marcus Whitman - 2,165
Jefferson - 187

During these two weeks the gym was not made available at Jefferson due to the refinishing of the floor. This undoubtably effected the attendance. The very young children were much in evidence at both schools.

Effective June 27, two leaders spent one day at each elementary school. If this program is justifiable the program will continue.

During the following months attendance should increase. With better weather and religious vacation schools completed arrangements have been made to expand the program to accommodate more children.

A further breakdown of the Park shows the following attendance and participation for the first two weeks:

	First Week	Second Week
Athletics and games	1292	2049
Handicraft	218	262
Dramatics, Storytelling	232	240
Wading Pool	418	410
	2160	2961
Boys	1165	1572
Girls	800	1169
16 or over	195	220

1221551

On June 29, a "Make Believe Costume Parade Day" was held at the village park. One hundred children were costumed and twenty excellent books were given as prizes through funds made available by Villagers, Inc. A Patrol escorted parade was held after the judging for those children old enough to march.

Total attendance at the swimming pool during June was 13,168. The peak attendance was on June 15 with 1,030 using pool facilities and the low attendance, due to cold weather, was 10 on June 16.

The Recreation Section supplied supervision and equipment for games and special events for the Public Works Division picnic held on June 14.

On June 4 the junior baseball league began. This league was originated through the efforts of the Richland Baseball Association and the Recreation Section of the Community-Activities Division. Six teams are playing and learning the basic fundamentals of this national pasttime. To start the league a Jamboree was held on Saturday, June 11, for the 6 teams entered.

The "300 League" for older men began on June 7. This league is sponsored by the Recreation Section of the Community-Activities Division. Six teams were in the original formation of the league with two more teams entering on June 28. This provides recreation for 114 men.

On June 18, the Recreation Section supplied the supervision and equipment for games and special events for the Project Engineering Division picnic.

On June 13 the Red Cross Learn to Swim program began with a full house each day for junior swimmers from 9:00 - 12:00 AM Monday through Friday. The adults learning classes are held on Tuesday and Thursday nights. Life saving classes will be formed in the near future.

On June 20, a complete program was prepared and submitted to the American Legion for assistance in preparing a field event day for the youth on July 4. This program is being held as part of the big celebration planned by the Legion.

On June 26 an archery exhibition at the lighted softball park was presented to publicize the archery school for children which will be sponsored by the Recreation Section and is scheduled to begin on July 11. Instruction will be provided by the Tri-City Archery Association.

Due to the fire hazard existing at the lighted softball field, because of the accumulation of paper and trash underneath the bleachers, arrangements were made to have all paper and trash removed from underneath the bleachers on June 1, and the open area sealed.

On June 1, arrangements were made to ready the swimming pool in the village park for the operation for summer. This work was completed on June 10.

On June 9, two new bulletin boards were installed in the park. These were necessary due to the increased activities in the village park.

With the increased interest in the park permanent recreation facilities in the form of 4 tether ball posts and 2 volleyball sets were installed on June 14.

Community - Activities Division.

Two temporary floodlights were installed at the Columbia High School tennis courts. This will facilitate the use of the courts for outdoor dances, and special parties by community organizations.

An 8' x 13' shed was moved from North Richland to the Village Park for use as a storage shed for recreation equipment.

The Activities Division made arrangements to procure 200 feet of 7' cyclone fencing and metal posts from Salvage. This fence was installed by the members of the Richland Yacht and Boat Club along the east perimiter of the Village Park from the swimming pool north.

A fence was installed around the park wading pool and four sand boxes provided within the enclosure.

Money for recreation has been made available by the Youth Council ($200.00) and Villagers, Inc. ($100.00) to underwrite cost of materials and awards for the summer recreation program.

A copy of "Playground Equipment of the Home-made Style" is now available for the residents of the community. It is complete instructions and diagrams of easy to make equipment. It is approved by the Safety Council of the National Recreation Association. Copies of this may be obtained from the Recreation Section located in the 720 building.

MAJOR ACTIVITIES DURING THE MONTH

June	4	Community-Public Works annual picnic	Richland Park
	7	Columbia High School graduation - boys gym	Columbia High School
	11	Park swimming pool open	Richland Park
	13	Opening day of summer play ground program	Richland Park & schools
	21	Swimming classes start	Park pool
	25	Richland Lions Club Charter Night	Jefferson Grade School

1221553

Community - Activities Division

RICHLAND PUBLIC SCHOOLS PERSONNEL AND ENROLLMENT REPORT

The following is a tabulation of full-time school district paid personnel, as of June 24, 1949:

Administration	4
Clerical	15
Principals and Supervisors	14
Teachers	183
Building Custodians	45
Cooks	29
Nursery School Ex. D. C.	17
Bus Drivers	2
Total	309

On June 24, 1949, there were 54 children enrolled in the Richland Nursery School with an average attendance of 35. There was no increase or decrease in enrollment during the month. On this day there were 17 children enrolled in the Extended Day Care program of the Nursery with an average attendance for the month of 9. There was an increase in enrollment during the month of 2.

COLUMBIA HIGH SCHOOL

	Boys	Girls	Total
Freshman (9th grade)	163	170	333
Sophomore (10th grade)	150	158	308
Junior (11th grade)	109	91	200
Senior (12th grade)	97	93	190
	519	512	1031

GRADE SCHOOLS

	Carmichael Jr. Hi.	Jefferson	John Ball	Lewis and Clark	Marcus Whitman	Sacajawea	Spalding
Kind.		*(3) 82	*(4) 71	*(4) 107	*(4) 83	*(2) 68	*(4) 126
1st		(3) 96	(5) 87	(5) 130	(4) 116	(4) 115	(4) 121
2nd		(3) 81	(4) 82	(4) 110	(3) 86	(4) 103	(3) 89
3rd		(2) 69	(4) 78	(4) 109	(3) 82	(3) 106	(3) 90
4th		(3) 85	(3) 76	(3) 100	(3) 94	(4) 100	(3) 86
5th		(2) 63	(3) 48	(3) 93	(3) 80	(3) 98	(3) 104
6th		(2) 56	(3) 71	(3) 75	(2) 73	(3) 88	(2) 54
7th	(8) 233			(3) 85	(3) 96		
8th	(12) 344						
	577	532	513	809	710	678	670

Totals by grades

Kindergarten	537
First grade	665
Second grade	551
Third grade	534
Fourth grade	541
Fifth grade	486
Sixth grade	417
Seventh grade	414
Eighth grade	344
Total	4489

*Half days
() Number of classes

1221554

GENERAL ELECTRIC COMPANY
HANFORD WORKS
COMMUNITY ACCOUNTING DIVISION

MONTHLY REPORT FOR JUNE, 1949

ORGANIZATION

Employees - Beginning of Month	27	Exempt	6	Male	10
Terminations	-1	Non Exempt	21	Female	17
New Employees	1	Total	27	Total	27
Total	27				

One employee terminated to leave with her husband who was laid off for lack of work. She was replaced by an employee secured by transfer from Clerical and Services Division.

ACCOUNTS RECEIVABLE

RENTS

	JUNE	MAY
New Leases	161	142
Modifications	1	0
Cancellations	168	163
Active total house leases	5654	5661

DORMITORY

Assignments	99	79
Removals	156	115
Total occupancy	949	1006

Rental revenue was as follows:

Equipment	$ 104.21	$ 117.74
Houses	241,536.11	241,856.16
Dormitories	13,402.47	14,094.90
Facilities	32,140.07	45,289.76
Total	$287,182.86	$301,358.56
Unoccupied house revenue loss	$ 3,882.83	$ 3,169.49
Unoccupied dorm revenue loss	2,395.03	1,702.65

Seventeen facilities still have equipment on a rental basis.

We have begun the large task of revising our rental records so to be in accord with the new rate structure which goes into effect on August 1, and for which we will collect rent in advance from the Monthly payroll in July and the first weekly payroll in August.

1221555

Community Accounting Division

TELEPHONE

	JUNE	MAY
Number of work orders handled	169	149
Number of working phones	2542	2526
Revenue including services	$5055	$4976

MISCELLANEOUS

There were 90 invoices issued during June accounting for $918.55. Revenue from dog licenses amounted to $9.00.

The following building permits were issued:

LESSEE	AMOUNT
L.R. Davis	$ 193.35
P.G. Wascher	87.15
E.J. Hanson	118.10
Densow & Drumheller	207.10
Total June fees	605.70
Previously reported	2,061.41
Total fees to date	$2,667.11

Government owned equipment located in the respective facilities was sold during June to the following at an agreed-upon price:

Diamond Stores	$ 5,607.90	
Greyhound Posthouses	2,404.45	
Mid-State Amusement	4,889.67	(Richland Theatre)
Mid-State Amusement	4,849.31	(Village Theatre)
Pennywise Drug Store	1,818.15	
Richland Thrifty Drug Store	2,273.96	
Village Pharmacy	865.04	
	$22,708.48	
Previous Sales	48,989.01	
Total to date	$71,697.49	

Eighteen collection letters were written resulting in the payment of twelve accounts totaling $1,014.63.

ACCOUNTS PAYABLE

STATISTICS

	JUNE	MAY
Accounts Payable vouchers processed	235	298
Freight bills processed	33	63
Purchase orders received	42	21
Net amount of purchase orders	$5,854	$8,088 Cr.
Receiving reports received	73	98
Total net amount disbursed	$55,236.10	$56,702.45

1221556

Since coal shipments constituted a large volume of our payable work and they have now been discontinued, the statistics reflects an increase in other material purchases since our volume of purchase orders received has increased.

GENERAL

The new financing procedure has been in operation for one month and appears as far as we are concerned to be satisfactory. Our estimated disbursements for July amount to $63,200 while receipts for July are estimated at $108,500.

Payments made to subcontractors in June were $12,000 more than in May. We made our first payment to the Richland Maintenance Company for dormitory maid service and paid Greeley and Hansen in full for refuse collection and disposal consultant services on Subcontract G-233.

The status of active subcontracts for which the Community Division is responsible is as follows:

Subcontractors	Subcontract Number	Amount Awarded	June Payments	Amount Paid	Amount Retained
Richland Maintenance	None Applied	*$ 7,395.90	$ 7,395.90	$ 7,395.90	$ -0-
Graysport Constr.Co.	G-187	20,500.00		18,450.00	2,050.00
Puyallup Gardens	G-216	* 119,077.18	4,815.91	85,409.63	9,392.66
West Coast Painters	G-219	46,449.19		18,640.97	2,071.22
Lone Pine Roofing	G-227	7,500.00		6,750.00	** 750.00
Graysport Constr.Co.	G-231	* 43,270.00	14,035.80	42,309.64	2,226.82
Greeley & Hansen	G-233	2,496.76	2,496.76	2,496.76	-0-
		$246,689.03	$28,744.37	$181,452.90	$16,490.70

* Total amount of contract will be total of the estimates as submitted. Contract is based on unit price award.

** Work completed but contract terms provides for final payment on July 1, 1949.

COST

REPORTS

The May Cost report was completed and distributed on June 16, 1949.

Our assessments to other divisions, generally estimated and submitted on the last day of each month are being held in order to insure as accurate a figure as possible for June plus asjustments which will provide the best possible cost figures for the fiscal year ending June 30, 1949.

1221557

Community Accounting Division

The April Utility report was distributed on June 14th after being delayed for want of information from the Results Engineer who was busy on the appraisal program at the time. The May Utility report was completed and released on June 30, 1949.

The Comptroller's Appropriation and Project report for May was issued on June 17, 1949.

BUDGET

A record of the budget estimate versus actual expenditures from January 1 through May 31, 1949 is as follows:

Month	Actual Expenditures	Budget Estimates	Monthly Over-Under	To-date Over-Under
January	$268,209	$182,608	$85,601 (over)	$ 85,601 (over)
February	239,405	172,610	66,795 (over)	152,396 (over)
March	188,200	158,548	29,652 (over)	182,048 (over)
April	75,908	151,722	75,814 (under)	106,234 (over)
May	69,994	154,225	84,231 (under)	22,003 (over)
June		154,225		

As indicated above we are now only $22,003 over our budget which is a gain of $84,231 for the month of May. We have, therefore, a real budget of $132,222 for the month of June.

Both the Operation and the Construction phase of the 1950 and 1951 budget estimates are being reviewed and adjustments made when necessary.

The 1950 budget estimate has been pro-rated by months for cost report purposes.

GENERAL

The domestic coal and fuel oil located in homes will be written-off to cost and considered consumed so as to appear as a 1949 fiscal year cost item. This will amount to approximately $65,000. The remaining inventory of domestic coal and fuel oil will be utilized where possible for project purposes since coal and oil will no longer be supplied tenants after July 1, 1949.

Effective July 1, 1949 patrol or service orders will be "costed" in accordance with a procedure we have established in cooperation with the Public Works Division.

We have opened two new section codes during June. One, Section Code 03 for the Safety Division, and the other, Section Code 33, for Churches.

1221558

Community Accounting Division

WORK ORDERS

	MAY	JUNE	NET CHANGE
Active Routine Orders	494	518	+ 24
Active Normal Orders	737	718	- 19
Total Active Orders	1231	1236	+ 5

We received 435 regular or normal work orders in June and have 518 routine orders opened. In May we received 483 regular or normal work orders and had 494 routine orders opened. This reflects a small decrease in the volume of work received, although in completed normal orders there were 430 in June and 388 in May.

SPECIAL COST STUDIES

Water and sewage disposal cost per capita were computed and a report submitted for use in arriving at charges to be made to the impending Army installation.

There was a cost study concerning the Recreation Hall and one concerning the Laundry for the purpose of analyzing revenue return in comparison with project operational cost.

GENERAL LEDGER

The May trial balance and supporting financial statements were forwarded to the General Division for consolidation on June 15, 1949

STATISTICS

	NO.	AMOUNT
Second Class Invoices Received	100	$22,539,158
Second Class Invoices Issued	21	100,382
*Public Vouchers forwarded for Government billing	5	11,576

* Involves items prior to June 1, 1949.

1221559

DESIGN DIVISION

JUNE, 1949

DECLASSIFIED

ORGANIZATION AND PERSONNEL

During the month of June, the following personnel changes were effective:

Additions

1 Assistant Division Engineer
1 Designer I
1 General Clerk D
1 Steno-Typist B
1 Consultant on loan from Schenectady
1 Senior Engineer on loan from Construction Division

Separations

1 Principal Engineer
1 Draftsman I
2 General Clerks C
1 Steno-Typist B
1 Instrument Engineer on loan from Instrument Division

Classification Changes

7 Junior Engineer to Senior Engineer
1 Designer II to Designer I
2 Designer III to Designer II
2 Draftsman II to Draftsman I
1 Steno-Typist A to Secretary B
1 Steno-Typist B to Steno-Typist A
1 General Clerk C to General Clerk B
1 General Clerk D to General Clerk C

Total Number of Employees on Payroll

	Beginning of Month	End of Month	Net Increase Or Decrease
Design Division	249	248	-1
On Loan to Design Division	8	9	+1
	257	257	0

PILE AREA "G" - PROJECT C-300

The Project Proposal requesting funds to carry on this work during the fiscal year of 1950 is now being prepared. Of the original $250,000, approximately $100,000 is available to support this project during the months of July and August.

The emphasis of the design program is being placed upon heat transfer studies, development of a suitable third safety device, development of a sheet rod control system, and the evaluation of new materials and metals for the "G" reactor.

A tentative program for initial work on materials and metals has been outlined. The purpose of this study is to assimilate information on the properties and costs of various materials and metals which may be applied in "G" development work.

Process tube flow calibration tests have been completed and a report issued (HDC 1255). The design and construction for equipment to experimentally measure pressure drops under conditions of mixed steam and water flow is 90% complete. Negotiations are being conducted with the General Engineering and Consulting Laboratory for the development of a heating element for full-scale process tube heat transfer tests.

With the exception of the stainless steel sheet, fabrication of all components necessary for the preliminary tests of the sheet rod have been completed. Delivery is expected about July 15th.

Construction of test equipment to measure radial creep of the presently used aluminum process tubes is complete, and initial tests have begun.

First results to determine the correlation between gas velocity and the water transfer rate from graphite to gas were erratic, These tests are to be repeated.

Instrumentation has been accumulated for simulated down-stream slug condition tests and is now being installed in the 100-F Area flow laboratory.

PILE AREA "H" - PROJECT C-165-A

Heavy equipment charges against this project have been revised downward by $3,399,836.39. The total estimated cost of the "H" project is now $78,409,000.

Eighty-five of the estimated eighty-nine acceptance test procedures have been issued to the field. The galvanizing of stainless steel nozzles has been delayed by difficulties encountered in meeting galvanizing specifications. Techniques are being developed at Bremerton Navy Yard for the application of coatings of .0025" thickness.

The fabrication of quartz insulated ionization ~~chambers~~ is complete and tests will be run shortly to determine their acceptability for octant monitoring.

The primary substation for the 100-H Area, Building 151-H, was energized for the first time on June 13, 1949. During the period of testing prior to, and following, this energization, the Design Division assisted by giving technical information and advice.

SIMULTANEOUS OPERATION OF "D" AND "DR" REACTORS - STUDY GEO-3

This study has been cancelled. The Contract Section is negotiating with Giffels and Vallet, architect-engineering firm, for the establishment of a satisfactory fee for work performed in connection with this study.

DESIGN OF "DR" WATER PLANT - STUDY GEO-7

At the request of the Atomic Energy Commission, a project proposal which covered the design only of facilities required for simultaneous operation of "D" and "DR," was prepared and submitted July 1st. Design criteria sufficiently detailed to furnish a firm basis for layout design is being prepared.

The electrical specifications, drawings and descriptive information required for the preparation of a project proposal for the DR Water Plant were completed during the month.

As noted in Document HDC-1273, agreement was reached June 8, 1949 through the contact engineer as to the design basis for the expansion of the 184-D Power Plant to provide for 100-DR demands. Condensing operation of the turbines during an emergency was agreed upon, as well as the dropping of heating steam loads up to 5000 pounds per hour in case of emergency. Geared steam turbines are to be used for 100-DR process pump drives, thus effecting a decrease in steam demand of 42,000 pounds per hour. The addition of one (1) boiler of 100,000 pounds of steam per hour capacity to the 184-D power house was agreed upon. This will make a total of five (5) boilers of 100,000 pounds per hour capacity in this power house when it is enlarged.

Instrumentation flow diagrams and specifications were prepared for this Area. Pneumatic control with instrument components were specified for the filter plant effluent control system rather than the presently installed hydraulic self-regulating type of equipment. It is estimated a saving of some $25,000 will result due to this change in a 10 unit plant.

"G" WATER PLANT - STUDY GED-13

Giffels and Vallet submitted the final report June 5th. A report of comments and conclusions agreed upon by the divisions of the General Electric Company is being prepared for transmission to the Atomic Energy Commission.

ENLARGING 251 SUBSTATION - PROJECT C-295

A reduction in the scope of the project was requested by the Manufacturing Division after a discussion of changes in plans for the 200 Areas, and after considering the effects of less extensive changes to the substation on service dependability and cost. The Design Plan is now being changed, and data are being obtained on cancellation charges for equipment on order, preparatory to the writing of a new project proposal.

DECLASSIFIED

234-5 BUILDING PROGRAM - PROJECT C-198

As of the end of the month, Design Division personnel were working on the balancing of the ventilation system so that start-up could begin around July 1. The system was operating reasonably satisfactorily and it was apparent that there were no major defects in the design. Only minor adjustments such as balancing some of the hoods and rooms remained to be done. Visual and audible monitoring signals were planned for the air locks to warn personnel when it is safe to pass through a lock without upsetting the pressure differential between zones.

RALA PROGRAM - STUDY GET-12

The project proposal and cost estimate for the scope of work as now outlined was prepared and submitted for approvals on June 30, 1949. Preliminary work ranging from 5 to 25 percent of the required detailed design has been done on all items covered in the specification letters.

[redacted]

DECLASSIFIED

PROJECT AND RELATED PERSONNEL - JUNE 1949

GOVERNMENT EMPLOYEES	5-31-49		6-30-49	
Civilian Personnel - Atomic Energy Commission	333		330	
Civilian Personnel - G. A. O.	8		8	
Total		341		338
RICHLAND VILLAGE PERSONNEL				
Commercial Facilities (Includes No. Richland)	1,313		1,275	
Organizations, Clubs, Etc.,	97		85	
Schools	367		309	
Churches	24		25	
Total		1,801		1,694
MORRISON-KNUDSEN PERSONNEL (Columbia Camp)		151		
CONSTRUCTION SUB-CONTRACTORS				
Atkinson-Jones	3,345		2,705	
Newberry Neon	599		586	
Urban, Smyth, Warren Co.,	1,287		888	
J. P. Head Co.,	2		-	
Kellex Corp.,	310		310	
J. Gordon Turnbull	125		110	
Giffels & Vallet, Inc.,	184		182	
Morrison-Knudsen Co.,	264		25	
C. C. Moore	55		52	
Curtis Sand & Gravel	35		11	
National Carbon Co.,	300		298	
Trowbridge & Flynn Elect. Co.,	7		1	
J. A. Terteling & Son	159		16	
McNeil Construction Co.	38		18	
Haughton Elevator Co.	5		4	
E. J. Bartells Co.,	28		40	
Howard P. Foley Co.,	2		-	
Combustion Eng. Co.,	1		1	
Indust. Eng. & Contractors	12		1	
National Blower & Sheetmetal	14		3	
United Refractory & Construction	15		-	
Warsaw Elevator	3		3	
Scott-Buttner	-		13	
Jaggar-Sroufe Co.,	7		-	
Total		6,797		5,267
GENERAL ELECTRIC PERSONNEL		7,382		7,393
GRAND TOTAL		16,472		14,695

[redacted]