PRIVACY ACT MATERIAL REMOVED

DECLASSIFIED
WITH DELETIONS

HW 15843-DEL

REPOSITORY DOE

COLLECTION Atmospheric Releases

BOX No. N/A

FOLDER N/A

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 - W. E. Johnson
9 - Hanford Operations Office
Attention: F. C. Schlemmer, Manager

727714

#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 [redacted]
#15 - 700 File
#16 - 700 File
#17 - 700 File

[redacted]

Classification Cancelled (Change to
Declassified with deletions
By Authority of RLO 11-4
WA Snyder 5/23/91
or DJ Krupka 5/23/91
LM Lewis 5/23/91

February 20, 1950

HANFORD WORKS
MONTHLY REPORT
JANUARY 1950

[redacted]

THIS DOCUMENT IS PUBLICLY AVAILABLE

This Document Consists of
320 Pages. [redacted]

[redacted]

PRIVACY ACT MATERIAL REMOVED

1195055

DECLASSIFIED
WITH DELETIONS

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

DECLASSIFIED

TABLE OF CONTENTS

General Summary 3

Staff 13

Force Report 14

Personnel Distribution 15

Manufacturing Divisions 24
Plant Statistics 26
Production Divisions
P Division 30
S Division 41
Power Division 52

Mechanical Divisions
Instrument Division 59
Maintenance Division 65
Electrical Division 67
Transportation Division 71

Project Engineering Divisions 74

Technical Divisions 86
Pile Technology Division 89
Separations Technology Division 103
Technical Services Division 119

Medical Division 134

Health Instrument Division 145

General Accounting Division 171

Plant Security and Services Divisions 188

Purchasing and Stores Divisions 214

Employee and Community Relations Division 226

Community Divisions 257
Public Works 258
Commercial Facilities 271
Community Housing 274
Community Safety 278
Community Fire 279
Community Patrol 282
Community Activities 293
Community Accounting 299

Design and Construction Divisions 303

Project and Related Personnel 320

[redacted]

1195056

GENERAL SUMMARY

JANUARY 1950

MANUFACTURING DIVISIONS

Production Divisions

A total of 53.07 tons of metal was discharged at an average of 91.2% of the goal concentration. Approximately 3½ tons of metal were discharged at an average of 116% of the goal concentration. The operating efficiency was 87.7%. The operating levels were 275 MW at B, 305 MW at D and F, and 330 MW at H pile at month end.

A total of 86 tons of acceptable slugs was canned at a yield of 93.9%. This is the highest yield ever attained for one month's production.

The machining yield was 76.0%. The Melt Plant produced 19 tons of billets at a yield of 66.6%.

Seventy-five batches were started in the Canyon Buildings with 77 being processed through the Concentration Buildings and 76 through the Isolation Building. The average purity of completed batches from Isolation was 98.4 percent.

Mechanical Divisions

An all time peak demand of 84,600 KW for the entire electrical system occurred on January 16.

The backlog of work of the Electronics Shop and the Machine Shop in the 3717 Building has reached an all time low. This is due to failure of forecasted work to materialize in accordance with mid-year 1949 estimate.

The new and repair instrument work load in the 234-5 Building has been of such magnitude to date as to preclude routine and preventive maintenance work.

The Transportation Division exhibited a high degree of organization and competence in dealing with the unprecedented transportation problems effected by the recent inclement weather.

The recent 12" raw water main break in the 200-East Area emphasizes the need for retaining an inventory of insurance items which are not normally classified as spare parts.

Approximately $60,250 of miscellaneous stores stock material was declared excess to our needs.

1195057

DECLASSIFIED

DECLASSIFIED
WITH DELETIONS

General Summary

TECHNICAL DIVISIONS

Pile Technology Division

The power level of the F Pile was raised to 305 MW and that of the H Pile was raised to 330 MW without incident.

Sample tubes containing Group V material were discharged satisfactorily at 500 MD/ton. However, one Group V slug in addition to one Group IV slug was discharged with considerable difficulty during routine discharge at 400 MD/ton. Efforts to remove the Group IV slug caused rupture of the tube and leakage of water in the F Pile, but the temporary loss of 20 inhours of reactivity had been recovered by the end of the month.

Studies on the feasibility of large scale tritium production continued through the month. A feasibility report will be issued in February.

The IBM installation for tube-by-tube product accounting was completed at the H pile.

Erection of the sigma pile for use in the exponential pile experiments was completed.

Inspection revealed that one process tube made from 2S aluminum with no cladding material had deep pits which had penetrated more than half way through the tube wall. The normal 72S aluminum cladding is essential for proper corrosion protection.

of a Skull Recovery Unit for production operations.

t sand filter efficiency has continued to remain as low as
the special dissolving run with "short-cooled" material in
filtration efficiency studies have demon-

Laboratory investigations at Hanford and Battelle relative to design of the 300 Area rolling mill were essentially completed during the mon

Initial tests on substitution of a lead bath for the tin bath in the canning process were very promising. With favorable development this procedure would permit indefinite use of the Al-Si canning bath.

Laboratory studies indicate that uranium slugs quenched from the beta phase should have a grain structure independent of the temperature reach in the beta phase.

Separations Technology Division

Recent difficulties with erratic second-cycle by-product losses and incomplete tank heel removals in the Canyon Buildings at both plants are still being investigated. Production Test 224-T-13, aimed at shortening Concentration Building batching time cycles, has been successfully completed. An increase in the high-temperature boil-off "hold" time in Building 224-5 Casting operation has given preliminary promise of effect

1195058

DECLASSIFIED
WITH DELETIONS

HW 15343-Del

DECLASSIFIED

where demonstration sections of the remote control transport system have been assembled for study and adaptation to this new use. This entire design group started a 6-day work week, effective January 30.

A radiochemical technique for the determination of the fission product ruthenium has been developed as a replacement for the more cumbersome and time-consuming distillation method. Investigation has shown that many standard Redox methods may be applied with only minor modifications to TBP process samples although, in general, a decrease in precision is obtained.

Several statistical studies were concluded on the measurements of slugs exposed up to 475 MWD which indicate that completely transformed alpha-rolled uranium slugs possess good dimensional stability during increased pile exposure.

The Audit and Inventory Unit began working in the field on the inventory of classified documents in the office files of plant personnel. Initial operations tested the proposed procedures and completed the inventory of some 23 offices. A secondary result was a marked increase of Classified Files work volume, due to the reduction of classified document holdings by plant personnel in preparation of the inventory of their files.

HEALTH INSTRUMENT DIVISIONS

The force increased by four. Procurement of personnel did not meet our forecasted requirement. Only one Class I Special Hazards Incident was investigated.

In the Operational Division, survey results showed no major deviation from accepted standards.

Vegetation activity has shown a definite decrease since the "green run". Routine samples of air, water, and vegetation obtained by Development Division personnel showed the normal pattern of activity distribution. Bioassay of urine samples for plutonium showed no confirmed positive results. Twenty percent of the samples analyzed for tritium oxide were significantly higher than background.

In the Biology Division, specimens collected during the month in the biological monitoring program disclosed no unusual tissue activity. Phase II of the Animal Farm has not been accepted.

PLANT SECURITY AND SERVICES DIVISIONS

There were no lost-time injuries on the Works during the month.

There were seven fire alarms in the industrial areas with no fire loss involved.

Laundry volume continued to increase in both the 700 and 300 Area laundries.

1195059

[redacted]

General Summary

Mail volume has increased to the point where it is necessary to make physical rearrangements in order to handle the present and expected future increases in volume.

Printing volume has continued to increase. Changes in equipment and work space will be made in the near future in order to facilitate the work.

Records have been inventoried in all Divisions except Health Instrument and the Payroll Divisions of Accounting.

A Material and Package Pass Procedure was placed in effect for the removal of all S.F. material from 3706 and 321 exclusion areas to other exclusion areas within the 300 Area and to other exclusion areas within the perimeter barricade.

Patrol coverage of the P-11 Area began on January 30.

A procedure for emergency blackout of the 300 Area was placed in effect. Blackout procedures are now in effect for all areas except Richland and North Richland.

EMPLOYEE AND COMMUNITY RELATIONS DIVISION

Open requisitions decreased from 94 at the beginning of the month to 86 at the end of January. Total plant personnel increased from 7,405 to 7,431. Turnover rate including terminations due to lack of work was 1.02%. Turnover rate exclusive of terminations due to lack of work was 0.73%. A standard interview form for recording opinion of interviewer was prepared and placed into effect during January. Transfer of 6,840 inactive personnel files to the Record Storage Center was completed during January. Recruitment was conducted in Spokane, Washington; Portland, Oregon; and Denver, Colorado, for stenographers and typists with fair results. Advertising conducted in Seattle and Spokane, Washington, and Portland, Oregon, for draftsmen and designers resulted in 176 inquiries being received.

There were 149 visits made to employees off work because of illness. Three employees retired during January, and one employee death occurred during the month. The instruction letter entitled "Ratings -- Exempt Employees", was revised and issued during January. Rating forms for exempt employees were distributed to all Divisions during the past month. Twenty suggestion awards, totaling $405 and representing an estimated savings of $5,030, were granted to employees during the month. The Travelers Insurance Company made an offer of settlement of $25,000 in the case of the death which occurred recently at the Kadlec Hospital. This offer has been refused, and a counter offer of $65,000 was made. Negotiations are presently being conducted between the Travelers Insurance Company and the claimant's law firm. Two hearings were held on appeals made by the Company before the Washington State Department of Labor and Industries in connection with compensation cases.

Forty-three supervisors participated in the 40-Hour Supervisors Training Program during January. The economic program, which included the film, "This Is Our Problem", was exhibited to 66 additional employees who did not

General Summary

have the opportunity to participate in this program during December. The program outlining the exempt rating system and reviewing the instructions letter issued on this subject was held during the weeks of January 23 and January 30, with a total of 32 meetings being presented, at which 511 supervisors attended. A report on the 1949 Progress of the Training and Program Development Group, as well as a Prospectus outlining some of the 1950 programs, was distributed to all Superintendents, Division Heads, and Managers. Several discussions were held with respect to planning an Accountability Program for employees in those Divisions responsible for fissionable material.

The name of the Labor Relations and Wage Rates Division was changed to Union Relations and Wage Rates, with C. C. Tallman appointed Manager and J. N. Dupuy Assistant Manager. A representative of the Union Relations and Wage Rates Division attended a meeting of the Labor Relations Committee in Schenectady and met with Company Union Relations officials in New York City, and AEC officials in Washington, D. C. It was decided that there were no questions to be resolved by a formal hearing with regard to the unit appropriate for collective bargaining purposes in the matter of the Hanford Industrial Firemen's Petition. Preparations were made for the hearing in the case of the Technical Engineers and Architects Association. Several meetings were held with a committee appointed by the HAMTC for the purpose of discussing the upgrading of certain metal workers in June, 1949. A careful review of all articles of the HAMTC-GE Agreement is being made for the purpose of developing the Company's position in the event the Agreement is reopened for negotiations. Two meetings were held with the Council Grievance Committee. Work continued on the annual community rate survey. Additional meetings were held with project supervisors relative to the proposed rate and progression schedules for Draftsmen and Designers at the Hanford Works. Individual jobs were studied and classifications and rates were determined. A study was completed relative to the work for trainees in the automotive repair section of the Transportation Division.

Of particular significance among the varied activities of Community Relations during the month of January was the special auditorium production presented on January 25 which provided the Nucleonics Department General Manager with an opportunity to speak to all Hanford Works supervisors who could be accommodated in Carmichael Junior High School auditorium. The presentation included a stage skit which depicted the investigations conducted by the Joint Committee on Atomic Energy last summer. The skit was presented for the purpose of stimulating interest in the Source and Fissionable Materials Accountability Program which is being stepped up through a three-phase special program. The skit presentation was the first of the series.

The work of the Community Relations Public Information Supervisor was highlighted during the month by a meeting held with Columbia High School Student Counselors for the purpose of discussing the G. E. Educational Assistance Program.

In addition to producing a total of 3,591 prints of all sizes from the small application photographs up to the 8" x 10" glossy prints required by newspapers, the Hanford Works Photo House also assisted the Manufacturin

General Summary

Divisions during the month by taking motion pictures of a classified nature to fill a special need of the using Division.

Four issues of Hanford Works NEWS were produced during the month of January. The total number of copies of each week's issue continued at 7,900. The December 30 issue of "Candid Camera" was inserted in the January 6 issue of Hanford Works NEWS because of the necessity of inserting the new telephone numbers summary in the December 30 issue.

The Works NEWS performed a community service by publicizing the March of Dimes campaign to all Hanford Works employees. In addition, it served as a medium through which the General Manager could express his commendation to all employees for the excellent safety record accomplished in 1949.

Special Programs, acting in its capacity as public relations counsel for the Medical Divisions, assisted in arranging a press conference to announce that the decision had been made to place doctors and dentists on a private practice operating basis. In addition, a news story was prepared for distribution to all newspapers on the "Daily List" who could not have personal representatives at the press conference.

Included among the many other activities of Special Programs during the month of January was a special letter prepared for the General Manager's signature which complimented all Hanford Works employees on the safety record during 1949. The letter was sent to home addresses of all employees.

Classified advertising was prepared and placed in newspapers in those cities where it was thought that typists and stenographers, draftsmen and design draftsmen, and stenographers only could be recruited. In several instances, advertisements were run to announce the arrival in the city concerned of the recruiter from the Employment Division.

A total of 58 releases of information were made by the News Bureau during the month of January. Of this number 31 were sent to the "Local List", 9 to the "Daily List", and the others to individual media requesting special information.

An outstanding accomplishment of the News Bureau during the month of January was evidenced when the Yakima MORNING HERALD published a feature story together with pictures concerning Richland's churches. The story dominated an entire page in the newspaper.

PURCHASING AND STORES DIVISIONS

Following is a personnel summary indicating total number of employees of the Purchasing and Stores Divisions as of 12-31-49 and 1-31-50:

	Total Personnel as of 12-31-49	Total Personnel as of 1-31-50	Net Change
Exempt	53	53	0
Non-Exempt	232	234	plus 2
TOTALS	285	287	plus 2

1195062

DECLASSIFIED

General Summary

The number of orders placed for construction materials and equipment increased. The major portion of these orders were for the DR Water Plant. Although many quotations have been solicited for the MJ-1 Project, no actual orders had been placed at month end, pending release from the Manager, D&C Divisions.

Steps were taken to speed up the procedure for screening purchase requisitions against Project inventories.

On January 3, the Continental Coal Company advised that their Monarch Mines were shut down due to a strike. Not knowing how long the strike would last, a spot purchase of 50,000 tons of coal was made from the Big Horn Coal Company. On January 23, the Monarch Mines resumed operations on a three-day week basis. The net result of the work stoppage was a reduction in our stock pile of approximately 30,000 tons which is a little more than two days' consumption.

Materials valued at $341,181.62 were declared excess from Stores active inventories.

There were 1,155 purchase requisitions screened against project stocks with the result that 756 items were furnished out of inventories thus obviating the necessity for outside purchase.

The Stores Division assumed the custody of the special Graphite inventories located in the 101 Building as of January 1. The value of this inventory was established at $3,299,956.62.

The Commission directed that we move from the Pasco Base into storage on the project all the B Block tool and fabrication equipment. This equipment is to be held for possible future use.

As a result of rate reductions obtained from carriers, savings for the month in freight charges amounted to $4,400.98.

COMMUNITY DIVISIONS

As a result of the sub-normal temperatures, excessive freezing of water pipes, difficulty of supplying coal to the Power House operation, icy thoroughfares, and other similar circumstances were experienced during the month of January. Considerable overtime and other additional costs were necessary as a result.

Two new commercial facilities began operation during the month.

No appreciable changes were apparent in reported sales of basic items for January.

Housing applications increased from 176 to 197 during January.

MEDICAL DIVISIONS

The Medical Divisions' roll continued to decrease with a drop of 3 from 365 to 362.

General Summary

Final approval for private practice of medicine in Richland to become effective some time in 1950 was secured from the Atomic Energy Commission, and newspaper publicity of this fact was given. There was evidence of favorable acceptance of the proposed change by both the physicians and the public. Physicians have formed a clinic group to continue specialty coverage for Richland.

The recommendation that sub-contractor employees be allowed to work in "health restriction areas", pending completion of the laboratory phase of the pre-placement physical examination, was accepted, and an estimated saving of about $200,000 should be effected during the coming two year construction period.

Sickness absenteeism increased from 1.75% to 2.23%. Total absenteeism was up from 2.34% to 2.84%.

The net cost of operating the Medical Divisions (before assessments to other divisions) was $92,042, a decrease of $13,174 and $12,731 below the budget figure. The improvement was largely due to an increase in net revenue of $11,897.

GENERAL ACCOUNTING DIVISION

Consolidated Completed Project Cost Reports were improved and revised. Construction Work in Progress Reports were also revised and reconciled with Completed Project Reports.

Studies regarding various inventory procedures and controls in general were made during the month. Information gained is to be used in coming months when more intensive studies and investigations in this connection are to be made.

Independent auditors reviewed records regarding funds advanced by AEC. Favorable comment was made concerning the procedures in effect and the adequacy of control of these funds.

As of January 31, 1950, additional salary adjustments retroactive to April 11, 1949 in accordance with the Agreement Between Hanford Atomic Metal Trades Council and General Electric Company amounted to $1,997 bringing the gross payments to date to $229,635.

Withholding Statements for 1949, Form W-2, were delivered to monthly paid employees on January 6, 1950 and to weekly paid employees on January 13, 1950. The Collector's copies of Withholding Statements were forwarded to the General Office on January 11, 1950 for transmission to the Collector of Internal Revenue.

Considerable overtime was required in January in the Payroll Divisions in order to complete Federal Social Security Reports, Withholding Tax Reports, Returns of Information at the Source, Annual Report of Employee Contributions Under the Pension Plan, and various other year-end reports.

1195064

DECLASSIFIED

General Summary

Further discussion of the Check-off of Union Dues was held in a meeting on January 4 between representatives of Labor Relations and Payroll Divisions and G. A. Foster, President of Hanford Atomic Metal Trades Council. Decisions were reached with respect to a plan for administration of the Check-off, and procedures to be followed with respect to collection, reporting, and payment of dues to the Hanford Atomic Metal Trades Council.

Hanford Works and Nucleonics Department Financial Statements for the month of December were completed and distributed on January 18 and January 24, 1950 respectively. General Divisions Operating Reports covering December operating costs were completed on January 15, 1950.

Advances from AEC remained at $4,000,000 at the month end. Items comprising the balance in the advance account as of January 31, 1950 compared with those of December 31, 1949 are detailed below:

	December 31	January 31
Cash in Bank - Contract Accounts	$ 3,199,012	$ 3,178,952
Salary Accounts	55,000	55,000
Travel Advance Funds	50,000	50,000
Advances to Subcontractors	300,000	300,000
Cash in Transit	395,988	416,048
Total	$ 4,000,000	$ 4,000,000

[redacted]

HW 15843-DEL

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	W. E. Johnson
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

DECLASSIFIED

1195066

DECLASSIFIED

HW 15843-DEL

FORCE REPORT
JANUARY - 1950

	NON - EXEMPT		EXEMPT		TOTAL	
	12-30-49	1-31-50	12-30-49	1-31-50	12-30-49	1-31-50
GENERAL	19	23	15	17	34	40
LAW	2	3	3	3	5	6
DESIGN & CONST. DIV'S.						
Construction	26	27	9	8	35	35
Const. Acct'g.	53	56	8	8	61	64
Design	176	176	188	195	364	371
No. Richland Realty	56	65	14	16	70	81
MANUFACTURING DIV'S.						
General	4	4	11	11	15	15
Proj. Eng'r. Control	15	17	20	22	35	39
Proj. Eng'r. Design	67	65	42	42	109	107
Proj. Eng'r. Minor Const.	174	169	31	31	205	200
Mfg. Accounting	47	47	8	8	55	55
OPERATING DIV'S.						
"P"	275	275	66	65	341	340
"S"	296	296	78	83	374	379
Power	460	461	81	81	541	542
MECHANICAL DIV'S.						
Maintenance	329	311	56	52	385	363
Electrical	255	253	46	46	301	299
Instrument	189	192	47	48	236	240
Transportation	549	539	56	57	605	596
TECHNICAL DIV'S.						
General	2	2	4	3	6	5
Pile Technology	23	44	56	80	79	124
Separations Technology	61	59	96	94	157	153
Technical Services	333	343	124	105	457	448
MEDICAL DIVISION	282	279	83	83	365	362
H. I. DIVISIONS						
General	4	4	4	3	8	7
Operational	151	149	53	59	204	208
Development	68	69	26	25	94	94
Biology	29	28	21	20	50	48
ACCOUNTING DIVISIONS						
Gen. Acct'g. Payroll	77	77	8	8	85	85
Gen. Acct'g. Acct'g.	78	76	13	13	91	89
EMPLOYEE & COMMUNITY RELATIONS DIV	54	53	28	27	82	80
PLANT SECURITY & SERVICE DIV'S.						
Patrol & Security	519	515	57	57	576	572
Safety & Fire	115	115	35	35	150	150
Gen. & Off. Services	181	189	21	21	202	210
PURCHASING & STORES DIV'S.						
Purchasing	37	37	32	33	69	70
Stores	197	198	28	26	225	224
COMMUNITY DIVISIONS	588	585	146	145	734	730
GRAND TOTALS	5791	5801	1614	1630	7405	7431

1195067

[redacted]

PERSONNEL DISTRIBUTION - JANUARY 1950

	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											
Supervisors	-	-	-	-	-	-	-	-	-	17	17
Clerical	-	-	-	-	-	-	-	-	-	23	23
Total	-	-	-	-	-	-	-	-	-	40	40
LAW											
Supervisors	-	-	-	-	-	-	-	-	-	3	3
Clerical	-	-	-	-	-	-	-	-	-	3	3
Total	-	-	-	-	-	-	-	-	-	6	6
DESIGN & CONST. DIV'S.											
CONSTRUCTION											
Supervisors	-	-	-	-	-	-	-	-	8	-	8
Engineers & Inspectors	-	-	-	-	-	-	-	-	-	-	-
Clerical	-	-	-	-	-	-	-	-	18	9	27
Others	-	-	-	-	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	-	-	26	9	35
CONSTRUCTION ACCOUNTING											
Supervisors	-	-	-	-	-	-	-	-	7	1	8
Clerical	-	-	-	-	-	-	-	-	55	1	56
Others	-	-	-	-	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	-	-	62	2	64

DECLASSIFIED

HW 15543-DEC

1195868

	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. DIV'S.											
DESIGN											
Supervisors	-	-	-	-	-	-	-	-	8	30	38
Engineers & Estimators	-	-	-	-	-	-	-	-	4	135	139
Clerical	-	-	-	-	-	-	-	-	16	101	117
Others	-	-	-	-	-	-	-	-	10	67	77
Total	-	-	-	-	-	-	-	-	38	333	371
NO. RICHLAND REALTY											
Supervisors	-	-	-	-	-	-	-	-	16	-	16
Engineers	-	-	-	-	-	-	-	-	-	-	-
Clerical	-	-	-	-	-	-	-	-	12	-	12
Others	-	-	-	-	-	-	-	-	53	-	53
Total	-	-	-	-	-	-	-	-	81	-	81
MANUFACTURING DIV'S.											
GENERAL											
Supervisors	-	-	-	-	-	-	-	-	-	11	11
Clerical	-	-	-	-	-	-	-	-	-	4	4
Total	-	-	-	-	-	-	-	-	-	15	15
PROJ. ENG'R. CONTROL											
Supervisors	-	-	-	-	-	-	1	-	-	7	8
Engineers	-	-	1	-	-	-	1	-	-	12	14
Clerical	-	-	-	-	-	-	-	-	-	13	13
Others	-	-	-	-	-	-	-	1	-	3	4
Total	-	-	1	-	-	-	2	1	-	35	39
PROJ. ENG'R. DESIGN											
Supervisors	-	-	-	-	-	4	1	-	-	34	39
Engineers	-	-	-	-	-	-	-	-	-	3	3
Draftsmen	-	-	2	-	-	6	1	-	-	39	48
Clerical	-	-	-	-	-	-	-	-	-	6	6
Others	-	-	-	-	-	-	-	3	-	8	11
Total	-	-	2	-	-	10	2	3	-	90	107

DECLASSIFIED

1195069

HW-57343-DEL

	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 DIV'S.											
PROJ. ENG'R. MINOR CONST.											
Supervisors	-	-	-	-	-	-	-	26	-	2	28
Engineers	-	-	-	-	-	-	-	2	-	1	3
Clerical	-	-	-	-	-	-	-	12	-	1	13
Others	-	-	-	-	-	-	-	156	-	-	156
Total	-	-	-	-	-	-	-	196	-	4	200
MFG. ACCOUNTING											
Supervisors	-	-	-	-	-	-	-	-	-	8	8
Clerical	-	-	-	-	-	-	-	-	-	47	47
Total	-	-	-	-	-	-	-	-	-	55	55
OPERATING DIV'S.											
"P"											
Supervisors	9	11	9	10	-	-	13	-	-	2	54
Supv. in Trane.	-	-	2	1	-	-	-	-	-	-	3
Engineers	2	-	-	-	-	-	-	-	-	6	8
Operators	36	38	36	36	-	-	113	-	-	-	259
Clerical	2	2	2	2	-	-	5	-	-	3	16
Total	49	51	49	49	-	-	131	-	-	11	340
"S"											
Supervisors	-	-	-	-	15	34	-	-	-	3	52
Supv. in Trane.	-	-	-	-	5	5	-	-	-	-	10
Engineers	-	-	-	-	-	9	-	-	-	12	21
Operators	-	-	-	-	104	168	-	-	-	-	272
Clerical	-	-	-	-	5	14	-	-	-	5	24
Total	-	-	-	-	129	230	-	-	-	20	379

DECLASSIFIED

HW 15243-DEL

1195070

	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 DIV'S.											
POWER											
Supervisors	12	12	12	13	5	7	5	1	-	2	69
Technical	-	2	-	-	-	2	-	8	-	-	12
Operators	79	77	77	82	26	48	10	17	-	-	416
Clerical	1	1	1	1	-	1	-	4	-	2	11
Others	7	6	7	6	-	7	1	-	-	-	34
Total	99	98	97	102	31	65	16	30	-	4	542
MECHANICAL DIV.											
MAINTENANCE											
Supervisors	2	5	6	8	5	13	5	-	-	2	46
Engineers	-	-	-	-	-	-	-	-	-	6	6
Craftsmen	16	28	31	43	31	88	-	-	47	-	284
Clerical	-	-	2	2	2	2	2	-	-	1	11
Others	1	1	2	2	4	4	2	-	-	-	16
Total	19	34	41	55	42	107	9	-	47	9	363
ELECTRICAL											
Supervisors	1	2	2	3	1	5	2	17	-	8	41
Engineers	-	-	-	1	-	-	1	2	-	1	5
Craftsmen	12	12	14	15	10	15	11	68	-	31	188
Clerical	1	-	1	1	-	2	1	4	-	25	35
Others	4	4	4	5	-	1	-	11	-	1	30
Total	18	18	21	25	11	23	15	102	-	66	299
INSTRUMENT											
Supervisors	2	2	2	3	2	6	8	-	-	4	29
Engineers	-	1	-	-	-	2	10	1	-	5	19
Craftsmen	12	14	15	16	14	32	54	-	-	11	168
Clerical	-	1	1	1	1	2	6	2	-	3	17
Others	-	-	-	-	-	-	7	-	-	-	7
Total	14	18	18	20	17	42	85	3	-	23	240

DECLASSIFIED

1195071

HW 15843-DEC

	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 DIV'S.											
TRANSPORTATION											
Supervisors	2	3	1	1	2	1	1	7	-	34	52
Engineers	-	-	-	-	-	-	-	-	-	5	5
Drivers	-	-	-	-	-	-	-	-	-	164	164
Journeymen	3	3	3	5	1	6	-	12	-	67	100
Trainmen	-	-	-	-	-	-	-	24	-	-	24
Servicemen	1	10	3	2	3	4	5	4	-	17	49
Clerical	1	1	1	1	1	1	1	1	-	20	28
Others	14	20	5	6	15	12	6	30	-	66	174
Total	21	37	13	15	22	24	13	78	-	373	596
TECHNICAL DIV'S.											
TECHNICAL GENERAL											
Supervisors	-	-	-	-	-	-	-	-	-	3	3
Clerical	-	-	-	-	-	-	-	-	-	2	2
Total	-	-	-	-	-	-	-	-	-	5	5
PILE TECHNOLOGY											
Supervisors	2	-	-	1	-	-	12	-	-	-	15
Physicists-Technologists & Chemists	10	7	4	3	-	-	41	-	-	-	65
Tech. Grads.	1	-	1	-	-	-	2	-	-	-	4
Laboratory Assistants	9	4	4	1	-	-	8	-	-	-	26
Clerical	-	-	-	1	-	-	6	-	-	-	7
Others	3	-	-	-	-	-	4	-	-	-	7
Total	25	11	9	6	-	-	73	-	-	-	124
SEPARATIONS TECHNOLOGY											
Supervisors	-	-	-	-	1	4	15	-	-	1	21
Chemists & Engr's.	-	-	-	-	5	10	56	-	-	2	73
Tech. Grads.	-	-	-	-	-	2	2	-	-	-	4
Clerical	-	-	-	-	-	1	6	-	-	1	8
Others	-	-	-	-	-	1	46	-	-	-	47
Total	-	-	-	-	6	18	125	-	-	4	153

DECLASSIFIED

HW 15643 - DEL

1195072

	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 DIV'S.											
TECHNICAL SERVICES											
Supervisors	-	1	2	1	5	13	28	-	-	5	55
Chemists - Eng'r. & Metallurgists	1	1	7	-	-	3	35	-	-	3	50
Technologists & Tech. Grads.	-	-	2	3	7	24	28	-	-	-	64
Laboratory Assistants	-	1	-	4	28	61	67	-	-	-	161
Clerical	-	-	1	-	2	3	39	-	-	36	81
Others	-	-	22	-	-	-	15	-	-	-	37
Total	1	3	34	8	42	104	212	-	-	44	448
MEDICAL DIVISION											
Supervisors	-	-	-	-	-	-	-	-	-	34	34
Physicians	-	-	-	-	-	-	-	2	1	27	30
Dentists	-	-	-	-	-	-	-	-	1	9	10
Technicians	-	-	-	-	-	-	-	4	-	16	20
Nurses	1	4	4	1	4	5	2	-	2	66	89
Clerical	-	-	-	-	-	-	1	3	8	70	82
Others	-	-	-	-	-	-	-	-	1	96	97
Total	1	4	4	1	4	5	3	9	13	318	362
H. I. DIVISIONS											
GENERAL											
Supervisors	-	-	-	-	-	-	-	-	-	2	2
Engineers	-	-	-	-	-	-	-	-	-	1	1
Clerical	-	-	-	-	-	-	-	-	-	4	4
Total	-	-	-	-	-	-	-	-	-	7	7
H. I. OPERATIONAL											
Supervisors	1	1	1	2	3	4	8	-	-	1	21
Engineers	5	4	4	4	7	10	3	-	-	1	38
Clerical	-	-	-	1	1	-	1	-	-	-	3
Others	9	12	10	11	16	34	39	14	-	1	146
Total	15	17	15	18	27	48	51	14	-	3	208

DECLASSIFIED

1195073

	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
H. I. DIVISIONS											
H. I. DEVELOPMENT											
Supervisors	-	-	-	-	1	5	5	-	-	-	11
Engineers	-	-	-	-	3	4	6	-	-	1	14
Cleircal	-	-	-	-	1	1	2	-	-	-	4
Others	-	-	-	-	13	25	17	-	-	10	65
Total	-	-	-	-	18	35	30	-	-	11	94
H. I. BIOLOGY											
Supervisors	-	-	3	-	-	1	1	-	-	-	5
Engineers	-	-	9	-	-	4	1	-	-	1	15
Clerical	-	-	1	-	-	-	1	-	-	-	2
Others	-	-	22	-	-	4	-	-	-	-	26
Total	-	-	35	-	-	9	3	-	-	1	48
ACCOUNTING DIVISIONS											
GEN. ACCT'G. PAYROLLS											
Supervisors	-	-	-	-	-	-	-	-	-	8	8
Clerical	-	-	-	-	-	-	-	-	-	77	77
Total	-	-	-	-	-	-	-	-	-	85	85
GEN. ACCT'G. ACCT'G.											
Supervisors	-	-	-	-	-	-	-	-	-	13	13
Clerical	-	-	-	-	-	-	-	-	-	76	76
Total	-	-	-	-	-	-	-	-	-	89	89
EMPLOYEE & COMMUNITY RELATIONS											
Supervisors	-	-	-	-	-	-	-	-	-	20	20
Employee Rel. Counselor	-	-	-	-	-	-	-	-	-	1	1
Exempt Non Supervisor	-	-	-	-	-	-	-	-	-	6	6
Clerical	-	-	-	-	-	-	-	-	-	44	44
Others	-	-	-	-	-	-	-	-	-	9	9
Total	-	-	-	-	-	-	-	-	-	80	80

DECLASSIFIED

HW-15945-DEL

1195074

	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 & SERVICE DIV'S.											
PATROL & SECURITY											
Supervisors	5	6	6	5	5	9	7	10	-	4	57
Patrolmen	39	55	66	49	64	119	65	5	-	36	498
Clerical	-	-	-	-	-	-	-	13	-	2	15
Seamstress	-	-	-	-	-	-	-	2	-	-	2
Total	44	61	72	54	69	128	72	30	-	42	572
SAFETY & FIRE											
Supervisors	8	-	-	-	-	4	4	10	-	4	30
Firemen	45	-	8	-	-	14	14	-	-	14	95
Safety Eng'r.s	-	1	-	1	1	-	1	-	-	1	5
Inspectors	3	1	1	4	1	1	1	2	-	1	15
Clerical	-	1	-	1	1	-	-	-	-	2	5
Total	56	3	9	6	3	19	20	12	-	22	150
GEN. & OFF. SERVICES											
Supervisors	-	-	1	-	1	2	-	1	-	16	21
Laundry Operators	-	-	-	-	-	2	-	-	-	1	3
Janitors & Servicemen	5	6	7	7	4	15	13	-	-	35	92
Clerical	-	-	-	-	-	-	-	-	-	23	23
Others	-	-	-	-	-	31	-	-	-	40	71
Total	5	6	8	7	5	50	13	1	-	115	210
PURCHASING & STORES DIV'S.											
PURCHASING											
Supervisors	-	-	-	-	-	-	-	8	-	25	33
Clerical	-	-	-	-	-	-	-	-	-	37	37
Total	-	-	-	-	-	-	-	8	-	62	70
STORES											
Supervisors	7	-	-	-	-	-	-	-	5	14	26
Clerical	40	-	-	-	-	1	-	-	31	126	198
Total	47	-	-	-	-	1	-	-	36	140	224

DECLASSIFIED

HW 15243 - Dec

1195075

9.

	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
COMMUNITY DIV'S.											
Supervisors	-	-	-	-	-	-	-	-	21	124	145
Patrolmen	-	-	-	-	-	-	-	-	26	26	52
Firemen	-	-	-	-	-	-	-	-	43	53	96
Journeymen	-	-	-	-	-	-	-	-	-	181	181
Servicemen	-	-	-	-	-	-	-	-	-	37	37
Truck Drivers	-	-	-	-	-	-	-	-	-	36	36
Power Operators	-	-	-	-	-	-	-	-	-	45	45
Clerical	-	-	-	-	-	-	-	-	-	85	85
Others	-	-	-	-	-	-	-	-	-	53	53
Total									90	640	730
GRAND TOTALS	414	361	428	366	426	918	875	487	303	2853	7431

DECLASSIFIED

H.I 15543-DEC

1195076

23

[redacted]

MANUFACTURING DIVISIONS

JANUARY 1950

SUMMARY

Production Divisions

A total of 53.07 tons of metal was discharged at an average of 91.2% of the goal concentration. Approximately 3½ tons of metal were discharged at an average of 116% of the goal concentration. The operating efficiency was 87.7%. The operating levels were 275 MW at B, 305 MW at D and F, and 330 MW at H pile at month end.

A total of 86 tons of acceptable slugs was canned at a yield of 93.9%. This is the highest yield ever attained for one month's production.

The machining yield was 76.0%. The melt plant produced 19 tons of billets at a yield of 66.6%.

Seventy-five batches were started in the Canyon Buildings with 77 being processed through the Concentration Buildings and 76 through the Isolation Building. The average purity of completed batches from Isolation was 98.4%.

Mechanical Divisions

An all time peak demand of 84,600 KW for the entire electrical system occurred on January 16.

The backlog of work of the Electronics Shop and the Machine Shop in the 3717 Building has reached an all time low. This is due to failure of forecasted work to materialize in accordance with mid-year 1949 estimate.

The new and repair instrument work load in the 234-5 Building has been of such magnitude to date as to preclude routine and preventive maintenance work.

The Transportation Division exhibited a high degree of organization and competence in dealing with the unprecedented transportation problems effected by the recent inclement weather.

The recent 12" raw water main break in the 200-E Area emphasizes the need for retaining an inventory of insurance items which are not normally classified as spare parts.

Approximately $60,250 of miscellaneous stores stock material was declared excess to our needs.

1195077

C. N. Gross

C. N. GROSS, MANAGER
MANUFACTURING DIVISIONS

DECLASSIFIED

HW-15843-DEL

DECLASSIFIED

MANUFACTURING DIVISIONS

PATENT REPORT SUMMARY
FOR
MONTH OF JANUARY, 1950

Richland, Washington
February 9, 1950

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

INVENTOR	TITLE
N O N E	

C. N. GROSS

MANAGER, MANUFACTURING DIVISIONS

1195078

[redacted]

DECLASSIFIED
WITH DELETIONS

DECLASSIFIED
WITH DELETIONS

DECLASSIFIED
WITH DELETIONS

DECLASSIFIED
WITH DELETIONS

DECLASSIFIED
WITH DELETIONS

1195081

DECLASSIFIED
WITH DELETIONS

DECLASSIFIED
WITH DELETIONS

1195082

DECLASSIFIED
WITH DELETIONS

HW-15843-DEL

DECLASSIFIED

February 6, 1950

P DIVISION

JANUARY, 1950

I. GENERAL

The B, D, F and H piles operated throughout the month except for outages listed under Area Activities. Power levels were as follows: B pile - 275 MW, D pile - 305 MW, F pile - 275 MW increased to 305 MW during the month, and H pile - 275 MW increased to 330 MW during the month. The piles operated with a "time operated" efficiency of 88.8%.

A total of 53.07 tons of metal at an average of 91.2% of the current goal concentration was discharged from the piles during the month.

A new record canning yield of 93.9% for 4" canned slugs was established during January.

II. ORGANIZATION AND PERSONNEL

Number of Employees on Payroll - January	
Beginning of Month -	340
End of Month	340
Net Increase	-

E. J. Filip was promoted to Area Supervisor, effective January 1, 1950, replacing K. T. Perkins who assumed charge of the P Division Contact Engineer Group.

One clerk was hired to fill a vacancy in the 300 Area.

[redacted]

1195083

P Division

J. A. Cowan, Senior Supervisor, visited the Simonds Saw and Steel Company at Lockport, New York, on January 9 and 10 to observe the experimental rolling of billets preheated in a lead bath.

III. AREA ACTIVITIES

PILE SUMMARY	PILE B	PILE D	PILE F	PILE H
Time Operated (%)	87.3	94.3	80.0	93.8
Operating Efficiency (%)	86.1	92.7	78.9	93.2
*Power Level (MW)	275	305	305	330
*Inlet Water Temperature (°C)	4.0	4.5	4.1	2.2
*Outlet Water Temperature (Maximum °C., 10 tubes, largest orifice zone)	46.6	47.7	53.1	44.3
Number of Scrams	4	1	0	3
Number of Purges	1	0	1	1
CO_2 Consumption (cu. ft.)	55,080	61,608	21,983	41,810
Helium Consumption (cu. ft.)	21,655	81,863**	19,669	0
Metal Discharged (tons)	19.74	13.41	19.92	0
Inhours Gained (this month)	17	11	-5	38
*Inhours Poisoned	568	546	519	232
*Inhours in Rods	63	95	51	118

* Month end figures.
** Includes 15,500 cu. ft. for DR Pile.

PILE BUILDING

Outage Breakdown

Date of Outage	Scheduled: Metal Discharged	Scheduled: Maintenance	Unscheduled	Length of Outage (Hours)
(1) 1-2-50			B	0.2
(1) 1-3-50			B	0.2
1-4-50	D			20.8
1-5-50		H		18.5
(1) 1-6-50			B	0.1
* 1-10-50	F			101.9
(2) 1-11-50			H	0.9
* 1-12-50	B			32.0
(1) 1-16-50			B	0.2
1-17-50	D			21.5
1-19-50		B		20.0
(1) 1-19-50			D	0.2
(3) 1-22-50			H	9.7
* 1-24-50	B			42.0
* 1-25-50	F			47.7
1-26-50		H		17.2

* Includes time to discharge temporary poison.
(1) Unit scrammed when panellit alarm could not be reset.
(2) Scram caused by defective #2 Beckman.
(3) Two successive scrams caused by loss of DC power to safety rod clutch circuit.

DECLASSIFIED

P Division

Operating Experience

Production tests having operational significance are reported below:

105-31-P (Probe Tests of Top Central Tubes)
The tubes listed below successfully passed probes as indicated:

1.480"	1.485"		1.490"
4662-B	4570-B	4661-B	4571-B
4685-B	4572-B	4686-B	4574-D
	4575-B	4571-D	
	4576-B	4576-D	
	4577-B	4674-F	

105-103-P (Corrosion Rates at Elevated Temperatures, Supplement "A")
Thirty-two tubes in F pile continued to operate throughout the month with reduced water flow in accordance with the provisions of this test. No unusual conditions were noted.

105-114-P (Van Stone Corrosion Studies)
Zinc gaskets and cap-supported sacrificial dummy pieces were installed in the front nozzles of five process tubes during the month.

105-168-P (Replacement of Pile Atmosphere with Carbon Dioxide)
The B pile CO_2 concentration was maintained at 80% until January 30, at which time replacement of the remaining helium in the pile atmosphere was begun. CO_2 concentration at month end was 83%.

The D and F pile atmopsheres were maintained at 60% CO_2 concentration throughout the month. No unexpected changes in operating conditions were observed.

105-243-P (Determination of Pile Reactivity Coefficients)
A coefficient test was run at the B pile on January 4, 1950, and at the H pile on January 31, 1950.

105-278-P (Effect of Increased Enrichment Level)
Inspection of two tubes of Group V material discharged at 120% of current goal and of two tubes discharged at 126% of current goal did not reveal any unusual distortion.

105-286-P (Special Irradiation of URCL 100-105)
Six samples, which had been irradiated previously, were successfully charged into D pile on January 17. No unusual difficulties were encountered.

[redacted]

1195085

P Division

On January 5, the AC power source for the Beckman controllers at H pile was isolated from other power circuits. Since that time no unexplained Beckman surges have been noted.

Mechanical Experience

All horizontal and vertical safety rods are in satisfactory operating condition at month end except #24-B, #20-D, and #33-D. These rods are all binding in the guides. Repairs are scheduled for February.

During the month, "A" rod at F pile, reported inoperative earlier (see HW-15550-A) was repaired by replacing the tip with a "cut-down" tip section. The rod operates satisfactorily at month end.

Routine inspections of the F pile downcomer have indicated progressive deterioration of the internal baffle structure. Work was begun in January to brace and stiffen the baffle members.

Repairs to the far side effluent line at H pile, which were begun in December, are approximately 25% complete at month end.

During the month, a number of slugs and dummy pieces were recovered from the discharge chutes at B pile and the chute liners were repaired.

Gas Processing Buildings

Operation of these buildings was normal during the month.

Special Hazards

The intensity of the beams at the top far edges of the B and F piles did not change significantly during the period.

The installation of auxiliary shielding at the T seams on the experimental level at H pile continued.

Project Status

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

C-306 (Front Face Shielding Caps)
Thirty-nine of an order of 500 caps have been received. The balance of the order is expected in the near future, at which time a field evaluation of the design will be made and an order placed for the remainder of the required caps.

C-323 (Replacement of Vertical Rods and Guides)
This project is complete. A closing notice is expected early in February.

DECLASSIFIED

1195086[5]

P Division

105-283-P (H Pile Graphite Sampling)
Graphite sampling and tube channel measurements were successfully completed.

105-301-P (Increase in Power Level of F Pile)
In accordance with the provisions of this test, the nominal level of the F pile was increased from 275 MW to 290 MW on January 3 and to 305 on January 30. No unexpected changes in operating conditions were noted.

105-302-P (Power Level Increase of H Pile)
In accordance with the provisions of this test, the nominal level of the H pile was increased from 275 MW to 290 MW on January 10; to 305 MW on January 17; to 320 MW on January 24; and to 330 MW on January 31. No unexpected operating conditions were observed.

A total of 35.72 tons of Group V (alpha rolled, triple dipped, completely transformed) material was discharged during the month. Of this amount 31.83 tons had an average concentration of the current goal value and 3.39 tons were discharged at an average concentration of 116% of the current goal in accordance with the program of investigation of higher discharge concentrations.

During the month, the last of the Group III (alpha rolled, lead dipped) material was discharged from the piles.

During the outage of January 14, tube 1293-F, containing Group IV (alpha rolled, triple dipped, partially transformed) material was difficult to discharge. A severely warped slug stuck at the inner end of the rear gunbarrel and ruptured the tube, making necessary the replacement of the outlet ten feet of the process tube before discharge could be successfully completed. On January 25, tube 3184-F containing Group V material at a concentration of 115% of the current goal value was found to be stuck. Forces up to 6000 pounds failed to move the charge and it was necessary to remove the ribs from the downstream 24 feet of the tube in order to discharge the metal. Subsequent examination of the charge revealed a severely warped slug. Tube 0271-D, which contained Group IV material, required forces up to 2400 pounds for discharge on January 17.

Considerable difficulty was experienced with the panellit system at B pile during the month. Unexpected film accumulation in fringe tubes resulted in back pressure increases on these tubes. An immediate program of gauge replacement and recalibration was instituted, but on three occasions the pile was scrammed in accordance with operating procedure when trips occurred on gauges that had not been replaced. More frequent purges of the pile and completion of the gauge replacement program are expected to minimize this difficulty in the future.

1195087

P Division

C-330 (Improved Ventilation, Bldg. 313-314)
The Hershey bag filter installation is complete except for duct work which is being fabricated. Experiments with sand filters continue. Installation of a vacuum-type sweeper is awaiting receipt of attachments.

C-339 (300 Area Rolling Mill)
Preparation of this project is in progress. The recommendations of the consulting engineers are due in March, 1950.

C-347 (Nozzle Galvanizing and Replacement)
This project is approved and the outlet nozzles have been ordered. Bids are out for aluminum inlet nozzles and will be closed February 3, 1950.

C-355 (Pile Clearance, Near Side)
Approval has been received for this project. No work has been started.

M-711 (Experimental Algae Filter)
This project was closed out as of January 15, 1950. Test work will be initiated in the near future.

M-713 (Development of Flexible Vertical Rod)
Design work on four alternate types of rod has been completed.

M-715 (IBM Installation for Individual Tube Accounting)
Installation at H pile is complete. Further work will await trial runs on the H pile installation and receipt of materials on order.

M-721 (Restraining Clamps, Pile Shielding)
Installation at D and F piles is complete. Installation at B pile is not contemplated in the immediate future.

M-723 (Repairs to 107-B Basin)
Work is being delayed by extremely cold weather.

M-725 (300 Area Burial Ground)
Excavation work is complete. Erection of the perimeter fence is in progress.

300 AREA - METAL FABRICATION

Production Statistics

Production for the month of January was as follows:

Billets Produced	19 Tons
Rods Machined	134 Tons
Bare Pieces Machined	102 Tons
Acceptable Pieces Canned	86 Tons

1195088

DECLASSIFIED

P Division

Melt Plant

The casting yields were as follows:

	December	January
Billet	68.2	66.6
Solid Metal	86.0	87.1

Although the solid metal yield increased appreciably during January, the billet yield continued to be adversely effected by stopper rod breakage and improper seating. It is planned to evaluate side-pouring crucibles as a possible remedy for this problem.

On January 13 the production rate was increased 20% by increasing the amount of uranium scrap charged per crucible from 500 to 600 pounds. See "Development Section" for additional details.

Machining

Machining yields were as follows:

% Yield	
December	January
76.3	76.0

The slight decrease in yield for January resulted from the machining of old rod stock which contained many rods having longitudinal cracks and folds, ragged ends, and excessive diameters. All rods machined from current shipments continued to be of good quality.

Chip Recovery

The chip recovery yield was as follows:

Yield	
December	January
91.7	87.4

The entire chip recovery process was operated four shifts and the press was operated an additional nine shifts. All chips were pickled and 29,642 pounds of TXB were produced.

A decrease in yield resulted from efforts to improve TXB quality through reducing the amount of fines in this material. This was accomplished by using a coarser screen on the chip washer. The difference in yield was reflected in increased oxide yield.

P Division

On January 9 work was started on Production Test No. 313-11-M (Substitution of Calcium Nitrate for Calcium Chloride in the Chip Recovery Process).

Oxide Burning

The material burned was as follows:

	Weight Out - Pounds	
	December	January
	26,956	18,299

Operation was continued as necessary to burn raw oxides as they accumulated from process.

Oxide on Hand at Month End (Metal Content)

To be burned	00.0 lbs.
To be analyzed	9,950.9
To be shipped	41,328.6
Total	51,279.5

Canning Operation

The canning yield was as follows:

	% Yield	
	December	January
	92.7	93.9

Canning rejects, by cause, were:

	Per Cent	
	December	January
Non Seating	1.6	0.7
Marred Surface	2.2	2.0
Al-Si on Outside of Can	0.6	1.0
Frost Test	1.9	1.2
Bad Welds	0.5	0.3
Miscellaneous	1.2	0.9
	8.0	6.1

A record yield was established for the canning of 4" slugs during January. Non seating rejects were reduced appreciably through continued emphasis on the control of canning bath temperatures. A thorough study is being made of frost test rejects to isolate and eliminate possible causes. In addition the methods of crimping and operating techniques are being studied in an attempt to reduce Al-Si rejects to a minimum.

1195090

P Division

The following special request pieces were canned:

Request No.	Content	No. of Pieces
P-1C-A	Lithium Aluminum Alloy	524

In addition 56 papoose slugs, 50 receptacle slugs, and 3,743 bismuth slugs were canned.

Slug Recovery

	% Recovered	Average Wt. - Lbs.
	January	January
Z Slugs	82.4	3.903
X Slugs	14.6	3.859
Rejects	3.0	---
	100.0	

Inspection and Testing

Autoclave rejects were as follows:

December	January
.07/M	.06/M

There were three autoclave failures during January; two were found to be completely destroyed and one ruptured at the base of the cap.

None of the canned pieces tested during the month were penetrated within 0.015" of the outer can surface.

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

	% Usable	
	December	January
Aluminum Cans	87.0	94.4
Aluminum Caps	96.8	95.1
Steel Sleeves	*	95.2

* No new sleeves were inspected.

Material Handling

A total of 7½ tons of solid uranium scrap (UM & G) was shipped to Argonne National Laboratory. No other major shipments were made off plant or received during the month.

1195091

DECLASSIFIED

P Division

305 Test Pile

The test pile was operated 10 eight hour shifts. Twenty-two tests were run on canned slugs, 25 on billet eggs, and the following on special work requests:

Request No.		No. of Tests
115	To determine the precision of pile period measurements with a P. C. tube.	1
118	To measure absorption cross section of various glasses.	11
119	To measure absorption cross section of alloys containing aluminum, gadolinium, titanium, and vanadium.	22
121	To obtain tracks on Li photographic plates.	5
122	To measure relative neutron intensities in 305 pile.	1
123	To measure neutron absorption of SR-13 pieces.	10

During periods when the 305 test pile was not in operation, the personnel were assigned to other operations for training purposes.

Special Hazards

No unusual conditions developed during the month.

Development

On January 18, the weight of metal charged per crucible at the melt plant was increased from 500 to 600 pounds to reduce operating costs and increase casting capacity. This was accomplished by adapting a two inch extension to the top of each crucible. It is expected that the added capacity will be sufficient to maintain minimum backlogs on a one-shift operating schedule, with an annual savings of approximately $35,000.

A test was run to determine if cut-off tolerances for slugs could be decreased and thereby reduce turning scrap in the facing operation. The nominal length of slugs after cut-off has been 4.125". Through this test it was found that this length could be reduced to 4.091" while maintaining a finished length of 4.045" ± 0.010" after facing. All cut-off lathes were set to the closer tolerance beginning January 16. The annual savings in scrap processing costs will be approximately $25,000.

P Division

The usage of aluminum silicon in the canning baths has been extended to an average of two shifts. In some cases the tin content has been low enough to warrant further usage. This possibility is currently being evaluated.

Recovered flux has proven satisfactory for use in the bronze baths. All flux from the canning lines is being recovered through the EFC-6 process and about 50% is reclaimed for reuse. In addition, it is planned to use about 10,000 pounds of recovered flux held in storage for leaching. Results indicate that the annual material savings will be about $13,000.

In an attempt to extend the life of elements in the bronze furnace, small vent openings have been cut near the top of the furnaces to allow chloride fumes to escape. Air lines have been installed in the bottoms of 3A and 4A furnaces to allow continuous purging at the rate of 10 liters per minute. Beneficial results have been noted and no temperature problems have been encountered. To date it appears that element life may be extended as much as four times that normally expected.

DECLASSIFIED

1195093

DECLASSIFIED

February 7, 1950

S DIVISION

JANUARY, 1950

OPERATING SECTION

I. GENERAL

Seventy-five batches were started in the Canyon Buildings, seventy-seven batches were processed through the Concentration Buildings and seventy-six batches were completed through the Isolation Building. The average purity for completed batches was 98.4 percent.

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

	B Plant	T Plant	Combined
Number of charges started	36	39	75
Number of charges completed	39	37	76
For completed charges:			
Percentage of starting product in waste:			
This month	3.1(a)	3.1(a)	3.1
Last month	2.9(b)	2.9(b)	2.9
Cumulative to date	4.3(c)	4.0(c)	4.1
Percentage of starting product recovered:			
This month	93.3	92.8	93.1
Last month	92.2	96.3	94.1
Cumulative to date	97.0	95.5	96.3
Percentage of starting product accounted for:			
This month	96.4	95.9	96.2
Last month	95.1	99.2	97.0
Cumulative to date	101.3	99.5	100.4
Gamma decontamination factor (Log.)			
This month	7.36	7.52	7.43
Last month	7.32	7.30	7.31
Cumulative to date	7.36	7.36	7.36

(a), (b), (c): Include waste from processing recycle. The recycle wastes are estimated as: (a) 0.010%-T Plant; 0.008%-B Plant. (b) 0.010%-T Plant; 0.009%-B Plant. (c) 0.093%-T Plant; 0.009%-B Plant.

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

	% of Incoming Product				
	Prepared for Shipment	Recycle	Waste	Retained Samples	Material Balance
Average for this month	98.0	4.3[illegible]	0	0.037	102.4
Average for last month	97.2	4.36	0.10	0.037	101.7
Average to date	95.9	4.64	0.06	0.02	100.6

II. ORGANIZATION AND PERSONNEL

Number of employees on payroll:

Beginning of month	378
End of month	380
Net increase	2

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

2 transfers from other Divisions (monthly roll)

Changes in supervisory organization:

N. W. Hope was transferred from the H. I. Divisions January 1, 1950, as a Supervisor-in-Training.

N. E. Thompson was transferred from Management Staff on January 1, 1950, as a Supervisor-in-Training.

K. C. Vint was transferred from the Expansion Section to the Operations Section of the S Division as Chief Supervisor of T and U Plants. This move relieves T. Prudich of responsibilities for T and U Plants and he will now serve as Chief Supervisor of the 231 and 234-5 Operations.

R. C. Grant, Assistant Chief Supervisor, was transferred from the Operations Section to the Expansion Section of the S Division where he will act as Contact Engineer.

F. A. R. Stainken, Assistant Chief Supervisor, was moved from the 234-5 Building to a staff function as Administrative Assistant to the S Division Superintendent.

W. N. Mobley, Assistant Chief Supervisor, was moved from T Plant to a staff function as group leader of the Process Control Group.

D. McDonald was transferred from the Process Control Group to the 234-5 Building as Area Supervisor in charge of 235 Building operations.

L. I. Brecke, Area Supervisor, was transferred from 235 Building operations to 224-B Plant.

R. R. Hessick, Area Supervisor, was transferred from the 224-B Building to the 221-T Building.

A. P. Boston, Senior Supervisor, was transferred from the Isolation Building to the Redox Contact Engineer's Group.

D. C. Ashbaugh, Shift Supervisor, was transferred from the T Plant Operations Group to the Metal Recovery Contact Engineer's Group.

A. S. Mowry, Senior Supervisor, was transferred from assignment in the 234-5 Operations to the Isolation Building operations.

R. W. Waldsmith, Shift Supervisor, was transferred from B Plant Operations to the Rala Contact Engineer's Group.

M. E. Yates, A. Smith, and A. S. Withrow, Maintenance Division Shift Engineers, were transferred to the Expansion and Control Section on a loan basis and were assigned respectively to the Redox, Metal Recovery, and 234-5 Contact Engineer's Groups.

III. AREA ACTIVITIES

PRODUCTION PERFORMANCE

T and B Plants and 231 Building

Extraction Waste Losses - B and T Plants

The throw-away waste losses (after rework) for the extraction step increased another 0.10 percent during January, although the average MWD/T figure for exposed metal processed during January averaged 380 as compared to 397 in December. This anomaly does not, however, necessarily cast doubt on the conclusion that extraction waste losses have, in general, increased in direct proportion to the average MWD/T level of metal processed, for the average figures represent rather wide variations in MWD/T not only from push to push but in the actual exposure of individual slugs within each push.

	B PLANT		T PLANT	
	January	December	January	December
Original analysis	1.27	1.23	1.40	1.30
Throw-away loss	0.98	0.83	0.95	0.88
Average MWD	391	400	377	396

Second Cycle By-Product Cake Removal - B and T Plants

Since there has in recent months been a slight increase (0.05 percent) in losses from second decontamination cycle by-product waste in both T and B Plant Canyon process, an evaluation of by-product cake removal

from the Section 18 centrifuges in both plants by a method successfully used in the bismuth phosphate by-product centrifuges in the Concentration Buildings is being made. This method consists of adding the cake dissolving acid to the centrifuge bowl directly from the operating gallery chemical feed tank rather than adding it first to the precipitator and then jetting 330 pound portions to the centrifuge for cake slurry. The latter procedure was proven in the Concentration Building to contribute to the waste losses by the addition of small amounts of product picked up from heels in the precipitator by the cake dissolving acid. It is indicated for runs which have had the cake removed from the bowl by the direct acid addition method that the savings will be about 0.05 percent per run.

Reduced Metathesis Volumes - (Production Test 224-T-13) B and T Plants

As stated in previous reports, Production Test 224-T-13 is for the purpose of developing procedure changes in the metathesis process at the Concentration Buildings which will shorten the time cycle through this step to twelve hours or less. The test was completed in the T Plant Concentration Building during the month. A two hour reduction in the time cycle was accomplished (from fourteen to twelve hours); however, there was an average increase in waste losses of 0.02 percent indicated. A re-evaluation of the final phase of this test will be carried out in the B Plant Concentration Building during the coming month.

Metathesis Process Deviation - B Plant

Due to inadvertent skimming of the metathesized cake for Run D-24 in F Cell centrifuge at B Plant Concentration Building after the addition of the cake dissolving acid, 57 percent of the product was carried to the waste effluent. All but 0.40 percent of the product was recovered by rework of the effluent. Recycle from the Isolation Process for this run, which, due to high volumes, was processed in two parts, was abnormally high (0.37 percent).

WASTE DISPOSAL

Second Decontamination Cycle Waste Supernatant Cribbing - B Plant

Cribbing of second decontamination cycle waste supernatant from X-112-B tank in the 200 East Area was continued through the month with a total of 360,000 gallons being cribbed to date from that tank.

Metal Waste Storage - B and T Plants

The X-104-BX series of three metal waste tanks in the 200 East Area became completely full early in the month and overflowed to the X-104-BY series tanks. In order to add sludge to a settling tank which has been cooled longer than the X-104-BX tank, the metal waste was diverted to the full X-101-BX series on January 27, from whence it will flow to the X-101-BY series. Due to the increased activity contained in waste from 400 MWD/T metal, there is at present some question

as to whether or not all metal waste to be added to a series of six tanks can be settled in a single tank before cascading to the other tanks without reaching the boiling point in the settling tank. In order to study this condition in the X-101-BX tank, plans have been made to determine the sludge level in this tank frequently and to keep an accurate account of the temperature trends vs sludge depth in this tank.

The X-101-TX metal waste tank in the 200 West Area was filled and overflowed to X-102-TX tank, the second of four tanks in the cascade series. Radiation reading through the shielding on the 42" risers was 25 mr/hr for the filled tank, indicating that additional shielding will probably not be required for the risers.

Waste Status

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

B Plant

Bldg. 241 Tanks	Waste	Percentage Full				Reserve Capacity in Batches to Process				
		B	C	BX	BY	B	C	BX	BY	Total
x101,2,3	Metal	100	100	100	0	0	0	0	564	564
x104,5,6	Metal	-	100	100	99.5	-	0	0	561	561
x105,6,7,8	Metal	-	-	-	-	-	-	-	-	-
x201,2,3,4	Metal	-	100	-	-	-	0	-	-	0
x111,12	Metal	-	-	-	-	-	-	-	376	376
x104,5,6	1st Cycle	-	-	-	-	-	-	-	-	-
x107,8,9	1st Cycle	100	100	66.7	0	0	0	147	632	779
x110,111,12	1st Cycle	-	100	34.6	-	-	0	289	-	289
x110	1st Cycle	-	-	-	0	-	-	-	210	210
x104,5,6	2nd Cycle	80.5	-	-	-	124	-	-	-	124
x110,11,12	2nd Cycle	77.3	-	-	-	208	-	-	-	208

T Plant

Bldg. 241 Tanks	Waste	Percentage Full			Reserve Capacity in Batches to Process			
		T	U	TX	T	U	TX	Total
x101,2,3	Metal	100	100	-	0	0	-	0
x101,2,3,4	Metal	-	-	27.1	-	-	589	589
x104,5,6	Metal	-	100	-	-	0	-	0
x105,6,7,8	Metal	-	-	0	-	-	788	788
x201,2,3,4	Metal	-	-	-	-	-	-	-
x107,8,9	Metal	-	100	-	-	0	-	0
x104,5,6	1st Cycle	100	-	-	0	-	-	0
x107,8,9	1st Cycle	100	-	-	0	-	-	0
x109,10,11,12	1st Cycle	-	-	42.8	-	-	559	559
x110,111,112	1st Cycle	-	100	-	-	0	-	0
x115,118	1st Cycle	-	-	0	-	-	478	478
x110,11,12	2nd Cycle	76.2	-	-	134	-	-	134
x113,14,16,17	2nd Cycle	-	-	0	-	-	1074	1074

5

MECHANICAL PERFORMANCE

Canyon Equipment Failures - B and T Plants

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

a) The Section 7 extraction precipitator agitator in B Plant failed, presumably in the Phillie reduction gear, and was replaced. This agitator had been in service for only nine months.

b) Due to separation of the steam line from the wall connector head on the centrifuge to cake dissolving tank jet assembly in extraction Section 8 in T Plant, it was necessary to replace the assembly. This is the first failure of this type experienced for a connector assembly.

c) The Section 14 first decontamination cycle precipitator to centrifuge A jet assembly in T Plant failed at a wall connector and was replaced.

Underground Water Main Failure - T Plant

The raw water supply to T Plant was interrupted for approximately two days beginning January 16 to repair a broken main at a point approximately one hundred fifty yards southwest of the exclusion area badge house. This break was very close to underground waste lines running from 221-T and 224-T Buildings to the 241-T waste storage tank farm. Due to the extremely cold weather, only temporary repairs were effected.

Concentration Building Equipment Failures - B and T Plants

Process Equipment failures experienced in the Concentration Buildings are described below:

a) Five minute leaks which developed in the case of the lanthanum by-product centrifuge in B Plant were successfully repaired by peening.

b) Inspection of the bismuth phosphate by-product precipitator distributor in B Plant disclosed that the lower end of the dip tube was severely corroded. This distributor was the one originally installed in this tank and had been in service five years. It was replaced with a new distributor.

c) Inspection of the lanthanum fluoride by-product precipitator distributor in B Plant disclosed that corrosion had severed the dip tube at a point two inches above the spray slot. A new distributor was installed.

d) In T Plant the F-2 metathesis centrifuge was out of service most of the month due to failure of the upper (ball) bearing in the

1195099 DECLASSIFIED

drive head. The defective bearing was replaced and the lower bearing (roller) in the drive head was inspected and found in satisfactory condition. The F-22 centrifuge was operated satisfactorily during the outage of the F-2 centrifuge.

Extraction Centrifuge Skimmer Failure - B Plant

The left hand skimmer of the 7-2 extraction centrifuge in B Plant failed during the month due to a leak which developed on the neoprene hose in the hydraulic control system in the cell. Repairs cannot be made, but the centrifuge can continue in service, since there is a second skimmer available in this machine.

PROCESS CONTROL SECTION

Metal Waste Sludge Sampling

Several unsuccessful attempts were made early in the month to procure metal waste sludge samples using a sampling device provided by ORNL. Since these attempts, the equipment was altered by installation of a special trap door assembly designed and built in the area, and near the end of the month a five pound sample of sludge had been obtained using this assembly. Extremely adverse weather conditions have contributed quite appreciably to the extended period which is being required to obtain sludge samples.

Dissolver Off-Gas Filters (Project C-337)

Design of dissolver off-gas filters, with provision for by-passing the filters during decoating operation to prevent the formation of ammonium nitrate in the system, has been completed. Construction of one filter will be started when approval for the rescoped project is received. Investigations carried out recently by the Technical Divisions have shown conclusively that water flushing of Fiberglas filters cannot be considered as a method for removal of ammonium nitrate from the filter. Water on the Fiberglas medium results not only in severe increases of the pressure drop through the filter immediately following the flush, but causes severe channeling of the gas through the filter after it is again dried.

IV. EXPANSION AND CONTROL SECTION

Rala

General

Design progressed at an accelerated rate during the month due to an addition of one new design engineer to the Design Group, increased drafting personnel assigned, and newer personnel becoming more familiar with the job. Also, Design personnel assigned to Rala started a six-day work week effective the week ending January 29, 1950.

Scope design is estimated to be 50 percent complete and detailed

design five percent complete. The layouts of the dissolver cell and cell TA have been agreed upon. Preliminary construction work will start early in February.

A more detailed report of individual phases of the job follows.

Electrolytic Cell

The job of designing and developing the electrolytic cell has been given to the General Engineering and Consulting Laboratory on an "Assistance to Hanford" basis. Weekly Progress Reports from the GE & CL are expected to start being received early in February. The estimated cost for the work is $8,618.

Analytical

Specialized handling equipment for the proposed laboratory to be added to the existing 222-T laboratory is being designed by the Technical Divisions at Hanford. A six-day work week for those people concerned with this design is planned to start February 1, 1950.

The preliminary layout of the proposed laboratory has been given the Design Divisions for scope work on the building and facilities. This is expected to be made firm before February 15, 1950, with the issuance of a revised Specification Letter and approved layout proposals.

Dissolver

Since the dissolver charges will be one-half present dissolver charges, a five foot in diameter dissolver (present is 7') will be used. This will be installed in the present 3-5L dissolver position. A caustic scrubber system consisting of two towers and mutual catch tank will also be installed in Cell 5. The waste caustic from the scrubber will be sent to a crib via the existing 5-6 tank.

Preliminary Construction

Work which falls in this category consists of removal of existing equipment from the cells, decontamination work, reconditioning work, erection of barricade (ventilation) wall in canyon, cutting of access hole in canyon wall and provision of facilities for construction personnel.

Progress has been made in initial planning; some work orders have been written and work is expected to start on the above items about February 6, 1950.

Most of the equipment, e.g. tanks, centrifuge, dissolver and big jets, which will be removed, will be saved for use on other projects. About the only equipment to be actually discarded will be jumper piping with the small backwelded jets.

S Division

Off-Site Visitations

W. M. Harty of the Technical Divisions visited Los Alamos on January 5 and 6, 1950, to discuss product specifications. No firm specifications can be set at this time. The Atomic Energy Commission will transmit to General Electric in the near future a list of "target" specifications. Definite specifications will be established after start-up by mutual agreement between Hanford and Los Alamos.

W. M. Harty of the Technical Divisions and R. L. Lance of the S Division visited the Oak Ridge National Laboratory on January 9, 10, and 11 to discuss recent developments in the Rala operations. ORNL is presently developing an ion exchange column to handle the purification steps of the process. The reliability of such a process has not yet been fully demonstrated but work will be continued.

Waste Metal Recovery

Pending the receipt of a directive to cover the cost of the engineering work on the Tributyl Phosphate Process for metal recovery from stored metal wastes, the Manufacturing Divisions have authorized the Design and Construction Divisions to spend up to $5,000 on the preliminary phases of the design work.

The Engineer's Flow Sketch and Design Instruction for scoping of the system of removing waste metal from the storage tanks have been completed and submitted to the Separations Committee for approval. It is urgent that this phase of the program be completed and demonstrated as soon as possible at one tank farm.

A cell arrangement for installation of the process in the 221-U Canyon Building has been tentatively outlined and certain specific critical features are being studied from an equipment placement viewpoint to permit the utilization of the available space to the maximum advantage.

In the UNH conversion to UO_3 phase of the work, the Technical Divisions have been requested to determine the feasibility of using a continuous process since the continuous process offers many possible advantages, particularly in dust control, over the batch process now in use by the Mallinckrodt Company.

Redox

Location of Redox Plant

As the result of the activities of a committee formed to investigate the factors involved in Redox #1 Plant location, it has been decided that the #1 Plant will remain in the West Area. In anticipation of a possible East Area shutdown in the future, the 277S mock-up building, tentatively located in the 200 East Area as part of a plan for a centralized shop facility,

has been moved to 200 West Area adjacent to and west of the existing 272-W shop building.

Architectural Prints

A number of scope architectural prints, redrawn by Kollox, has been received and approved by the General Electric Company and the Atomic Energy Commission. Detailed architectural prints derived from the scope drawings are currently being received for comment and approval. Drawings of the structural steel in the canyon and service side roof areas have also been received.

Electrical Prints

The redrawn electrical one line diagram has been received and studied. Minor changes are being made prior to approval. Switchgear room layouts and lighting prints of a portion of the building have also been received.

Engineering Flow Diagram

The Kollox redrawings of the Engineering Flow Diagrams have been received and studied, and are undergoing minor alterations prior to approval. A portion of the Instrument Engineering Flow Diagrams is also being processed in the same manner.

Piping Drawings

"For Study" issues of equipment and piping layout drawings of the canyon operating and pipe galleries and the silo feed tank gallery have been received and studied. These drawings indicate a system which is considerably more complex than that of the existing buildings, and every effort is being made to recommend changes which will simplify the piping arrangement.

Outside Facilities

Engineering Flow Diagrams and descriptive literature of the 211-S, 276-S, 2726-S, and 284-W (emergency generator) buildings are being prepared by the Redox Section of the Design Division for use by the P & M Section of Design Division in detailed design of these facilities. The 211-S Area flow diagram includes the additional three months "emergency" ANN storage capacity which had been requested by the Manufacturing Divisions.

Connector Development

Drawings of the male portion of all connectors have been received and studied. Revisions resulting from this study are to be included in the drawings and these prints will then form the basis

DECLASSIFIED

for full scale production of these items. Drawings of the revised 1" and 2" plain connectors have been studied and certain minor revisions have been requested. One member of the group is currently attending meetings in Chicago with the Crane Company to inspect and approve the "principle" drawings of all female connector types. This approval is for the fabrication of test models only. Drawings of the Class 1, Group D electrical connector are being inspected on the same basis at the Pyle-National Company. Button samples of various types of stellite on 347 stainless steel were shipped from the Crane Company on January 31, 1950. These will be placed under corrosion test immediately upon receipt at Hanford Works. The stellite forms the hard surface coating on the face of the male connector nozzles.

ANN Market Survey

The results of the preliminary market survey have indicated a great deal of interest by various vendors in the ANN problem. Based on the preliminary bids received, and a study of the factors of freight, handling facilities, etc., it has been decided to request formal bids on the basis of a 72 percent ANN solution rather than the solid. The 211-S Area will include tankage for storage of the solution.

Laboratory Waste Disposal System

By arrangement with the Technical Divisions, the 222-S Building Contact Engineer is assuming the responsibility for the design of the laboratory waste disposal system. At present, there is again some consideration of the use of the 202-S Building neutralizer for laboratory waste neutralization. Consideration is also being given to the dual use of a crib facility for disposal of low level wastes from the 222-S Building and the 276-S Building.

First Cycle Waste Evaporation

The design phase has progressed to the point where sufficient information is available to prepare a Project Proposal. It is anticipated that the estimate and Project Proposal will be completed about February 23, 1950.

POWER DIVISION
JANUARY 1950

GENERAL

Unusually cold weather, which developed about January 13, continued unabated at the month's end with a minimum air temperature of -21° F., and water temperature of 32.5° F., reported on January 31, 1950. Considerable difficulty was experienced in unloading frozen coal, in the operation of barometric condensers, and in the operation of the various air conditioning and ventilating systems.

The lowest rates of coagulant feed since plant start-up were experienced in all the 100 Areas, with average rates of 4.0 ppm, 4.5 ppm, 5.0 ppm, and 7.5 ppm, reported in the 100 B, D, F, and H Areas, respectively.

PERSONNEL AND ORGANIZATION

As a result of the transfer of the 100 E Area Chief Supervisor to 100 DR field inspection work, one chief operator was promoted to shift supervisor, one shift supervisor to senior supervisor, one senior supervisor to area supervisor, and one area supervisor to assistant chief supervisor.

Because of the increased steam load, an additional boiler fireman on each shift was required throughout the month at the 101 Shops boiler house.

No. of employees	January
Beginning of month	542
End of month	543
Net increase	1

The indicated net increase is the result of the termination by death of one employee, and the transfer into the Division of two employees.

100 AREAS

To retard ice formation in the 182 Reservoir Pump House pump suction flumes, the re-use water systems were placed in service on January 16 in the F Area, and on January 17 in the B and D Areas. Additional steam nozzles were installed on the preheat steam line to 182-H Reservoir Pump House suction flume, and put into service as required to control icing hazard.

Other precautions taken to preclude the possibility of cold weather damage, included the running of some steam driven equipment at the 182 Reservoir Pump House, starting a flow of water through lines not normally used, and the installation of a hot auxiliary water supply to the chlorinators in the 183 Filter Plants.

1195105

DECLASSIFIED

Power Division

Pressure surges of short duration occurred on the export water system on January 5 as a result of an electrical trip-out test in the 100-H Area, and on January 14, when an export pump motor relayed out in the 100 B Area.

Work was started on the installation of deaerator by-passes in the 100 F Area on January 10, and in the 100 B Area on January 25. This work is being done on Project C-172, Deaerator Dismantling. Deaerator by-passes were previously installed in the 100 D Area in connection with DR construction.

On January 22, in the 100 D Area, the brine pit serving the 184 Boiler House water softeners was flooded when surface water, resulting from the rapid melting of snow, flowed into the pit. The two brine pump motors which were flooded were dried out and returned to service by January 27, temporary replacements having served in the meantime. The pit vent pipe has been extended to prevent a recurrence.

The steam turbine driven condenser pump which was removed from parallel service with the electric motor driven unit in the 100 B Area 182 Reservoir Pump House on December 29 was returned to parallel service on January 9, pending the development of further data from electrical trip out tests.

In the 100 F Area, the Fire and Sanitary elevated water storage tank was out of service from 3:00 a.m. to 3:10 p.m. on January 17, while repairs were being made to piping in the tank pit.

Simulated power failure tests were conducted in the 100 F Area on January 10 and January 24, and in the 100 H Area on January 5 and January 26, to obtain information on the performance of affected equipment.

In the 100 H Area, the No. 2 process water storage tank in the 190 Process Pump House was removed from service on January 23 for the purpose of replacing the 30-inch butterfly valve with a 14-inch butterfly valve. This work had not been completed at the month's end.

200 AREAS

As a result of vent condenser tube failure, the deaerating heater was taken out of service in the 284 Power House in the West Area on January 10. All tubes were replaced, and the unit returned to service on January 13.

The EM 4 exhaust fan in the 234-5 Building was out of service from January 11 to January 13, while repairs were made to the inboard fan bearing.

The 12-inch raw water line serving the 271 Canyon Building in the West Area was out of service from 5:15 p.m. on January 16 until

2:30 p.m. on January 18, while repairs were made to a broken section of pipe. The replacement section of pipe developed a small crack when pressure tested. Temporary repairs were made by installing a band around the cracked section. Permanent repairs will be made in the future on a scheduled shutdown of the production facility.

In order to increase the air supply in the 234-5 Building, the louvres located at the atmospheric exhaust of the ventilation supply plenum relief duct were removed and the control dampers readjusted, which has increased the capacity of the relief duct from 46,000 c.f.m. to 105,000 c.f.m.

An electrical power outage on all 440-volt circuits in the 271 Canyon Building occurred in the East Area from 6:10 p.m. until 8:15 p.m. on January 24. This outage is attributed to a bearing failure on No. 1 air compressor motor, resulting in locking the motor rotor and causing the main 440-volt breaker to open. The motor was replaced, and the compressor returned to service on January 26. Service air was supplied from 2300 volt equipment during the outage.

Repairs to the plugged sanitary sewage tile field, serving the 212-R Storage Basin in the 200 North Area, were completed January 6.

300 AREA

Insulation of the Nos. 1 and 2 boilers with plastic boiler coating is progressing satisfactorily.

101 SHOPS

The freezing of the pre-heat steam coils on the air conditioning units on the roof of the 101 Shops has required considerable repair work. Insulation of the ends of the pre-heat coils has helped materially in reducing the number of freeze ups.

The use of spray water in the air conditioning units has been discontinued until the weather moderates in order to prevent freezing damage to the water circulating systems.

WHITE BLUFFS

Two fire hydrants in the vicinity of the water system booster station were reported inoperative on January 24 because of frozen water lines. A fire hose connection has been installed at the booster station, which will give adequate fire protection in that area.

No ice was manufactured during the month.

1195107 DECLASSIFIED

Power Division

POWER ENGINEERING SECTION

A study of the 300 Area water supply system indicates the feasibility of doing additional experimental work on the pipe lines in the vicinity of the ground water storage tank with anticipated results of increasing the quantity of water which can be obtained from the 3000 Area.

A preliminary revision of safety valve and pressure vessel inspections has been completed.

Satisfactory progress on the revision of the standard operating manual was made during the month.

Studies in progress include comparative steam consumption of turbines in the 190 Process Pump Room, and possible pumping head reductions at the 181 River Pump House, and the 182 Reservoir Pump House.

Ferric sulfate from the new vendor, Stauffer Chemical Company, was used in the 100, B, D, and H Areas during the month. Laboratory and plant tests indicate the material to be superior to ferrifloc as a coagulant under properly controlled conditions. Expected savings, because of the increased efficiency of the new material should be substantial.

POWER DIVISION STATISTICS

From January 1, 1950

Thru January 31, 1950

			AREAS			
			100-B	100-D	100-F	100-H
RIVER PUMP HOUSE (Bldg 181)						
River state Feet above sea level		(max)	387.2	379.6	366.0	371.6
		(min)	385.5	378.4	365.0	370.3
		(avg)	386.7	379.3	365.5	371.1
River temperature	avg. F.		37.2	37.0	37.0	36.8
Water to Reservoir	gpm avg. rate		36897	41884	34156	47565
RESERVOIR (Bldg 182)						
Water to Filter Plant	gpm avg. rate		32586	37235	30490	43700
Water to Condenser System	gpm avg. rate		2933	3228	3165	3210
Water to Export System	gpm avg. rate		1378	1421	501	575
	gpm nor. rate		3875	3875	3875	3875
Chlorine added #1 inlet	pounds		6950	8550	6900	4000
FILTER PLANT (Bldg 183)						
Filtered water Power House	gpm avg. rate		283	346	316	274
Filtered water to Process	gpm avg. rate		30538	32316	27616	38405
Filtered water to Construction	gpm avg. rate			-		
Filtered water to DR Process	gpm avg. rate			-		
Filtered water Fire & San.	gpm avg. rate		169	198	135	230
Chlorine for Water Treatment	pounds		3650	2050	5000	8000
	ppm avg.		.81	.70	.98	.72
Lime for Water Treatment	pounds		7900	10040	7000	36000
	ppm avg.		.65	.72	.62	2.2
Coagulant Water Treatment	pounds		49500	62960	57000	123000
	ppm avg.		4.1	4.5	5.0	7.5
Raw Water pH	pH avg.		8.0	8.1	8.1	8.1
Finished Water pH	pH avg.		7.75	7.76	7.71	7.78
Alkalinity, M.O. - Raw	ppm avg.		61	60	60	62
Finished	ppm avg.		59	57	58	58
Residual Chl. - Settled	ppm avg.		.21	.15	.18	.19
Finished	ppm avg.		.14	.10	.14	.11
Iron - Raw	ppm avg.		.06	.06	.06	.07
North Clearwell	ppm avg.		.01	.02	.01	.01
South Clearwell	ppm avg.		.01	.01	.01	.01
Hardness - Finished	ppm avg.		78	70	68	62
Turbidity - Raw	ppm avg.		2.2	2.3	1.0	3.0
Filtered	ppm avg.		0	0	0	0

1195109

DECLASSIFIED

DECLASSIFIED

POWER DIVISION

From January 1, 1950

Thru January 31, 1950

			100-B	100-D	100-F	100-H
POWER HOUSE (Bldg 184)						
Maximum Steam Generated -lbs/hr			176,000	204,000	180900	195000
Steam generated - Total M pounds			108967	129215	115963	100464
Avg. rate lbs./hr.			146461	173676	155860	135032
225 psi Steam plant (est.) M pounds			91412	108582	97344	84201
15 psi Steam plant (est.) M pounds			992	992	992	992
Coal consumed	Tons		8416	9372	9159	7917
Coal in storage (est.)	Tons		19882	22153	19198	20731
DEAERATOR PLANT (Bldg 185) AND 190-H TANK ROOM						
Water flow	gpm avg. rate		30288	32066	27366	38155
Chemicals consumed:						
Dichromate	pounds		21600	23100	22000	31000
Sodium Silicate	pounds		0	0	0	0
Chemical Analysis:						
pH	pH avg.		7.65	7.67	7.65	7.65
Dichromate	ppm avg.		1.8	1.9	1.8	1.9
Silica	ppm avg.		-	-	-	-
Dissolved Iron	ppm avg.		.01	.01	.01	-
Free Chlorine	ppm avg.		.11	.10	No Anal.	-
PROCESS PUMP ROOM (Bldg 190)						
Total water pumped	gpm avg. rate		30113	31891	27191	37980
	gpm Nor. rate		31774	32557	30891	40100
Water temperature	avg. °F.		40.5	41.0	41.4	39.0
VALVE PIT (Bldg 105)						
Chemicals consumed:						
Solids	pounds		0	0	1700	2000
Chemical analysis:						
A, B, C & D Headers						
Standard Limits						
pH 7.5-7.8	pH	(max)	7.70	7.70	7.70	7.70
		(min)	7.60	7.65	7.65	7.60
		(avg)	7.63	7.65	7.65	7.65
S_1O_2	ppm	(max)	-	-	-	-
		(min)	-	-	-	-
		(avg)	-	-	-	-
$Na_2Cr_2O_7$ 1.8-2.2	ppm	(max)	2.0	2.0	2.0	2.1
		(min)	1.8	1.8	1.8	1.9
		(avg)	1.9	1.9	1.8	2.0
Iron	ppm	(max)	.02	.02	.02	.01
		(min)	.01	.01	.01	.01
		(avg)	.01	.01	.01	.01
Chlorides	ppm avg.		1.2	1.1	1.1	1.1

6

1195110

POWER DIVISION

From January 1, 1950

To January 31, 1950

	Unit	200 Areas	
		200-E	200-W
Reservoir (Building 282)			
Raw Water Pumped	gpm avg. rate	1839	2036
Filter Plant (Building 283)			
Filtered Water Pumped	gpm avg. rate	350.3	736
Chlorine Consumed	lb.	166	181
Alum Consumed	lb.	932	3742
Chlorine Residual - Sanitary Water	ppm	.8	.4
Power House (Building 284)			
Maximum Steam Generated	lbs/hr	52,000	147,000
Steam Generated - Total	M lb	28,773	74,260
Steam Generated - Ave. Rate	lb./hr	38,673	99,812
Coal Consumed (Est.)	tons	2,360	5,339
Coal in Storage (Est.)	tons	6,455	6,210

	Unit	300 Areas
		300 Area
Power House (Building 384)		
Maximum Steam Generated	lbs/hr	50,000
Steam Generated - Total	M lb	26,425
Steam Generated - Avg. Rate	lb./hr	35,517
Coal Consumed - Total (Est.)	tons	2,202
Coal in Storage (Est.)	tons	2,483
Sanitary and Fire System (300)		
Sanitary Water (From 3000 Area)	Gal	29,981,200
Well Water Pumped - Total	gal	378,500
Well Water Per Day	gal/day	979,345
Well Water	gpm avg. rate	680
Chlorine Residual	ppm	.28

MISCELLANEOUS AREAS

White Bluffs		
Ice Manufactured	lbs	0
101 Shops		
Coal Consumed	tons	1044

1195111

DECLASSIFIED

DECLASSIFIED

INSTRUMENT DIVISION MONTHLY REPORT

JANUARY, 1950

January 31, 1950

GENERAL

Personnel efficiency of the 3717-A and 301-A shops, 300 Area, has been low this month because of cold working conditions in these buildings. Room temperatures could not be maintained sufficiently high to prevent freezing of the inside traplines from the radiators in Bldg. 301-A. Broken radiators and pipes resulted in a 3-day loss of this shop facility.

100 AREAS

100-H Area

Two of 8 boron thermopiles have been found shorted. The galvanometer operated from these units wired in series is performing satisfactorily on the remaining 6 units.

The electric power tripout test of the pumping units in 190-H performed on January 5 was not completely satisfactory because of inadequate recording. The test was repeated on January 26 utilizing a 16 mm. moving picture camera to photograph operating panel instruments. Results were satisfactory. A special report on methods employed will be prepared and distributed. Similar tests are tentatively scheduled for 100-B, D and F.

Replacement of faulty gauges in the 105-H pressure monitor panel with factory repaired units is continuing at the approximate rate of 100 units per week. To date 1356 units have been returned to the factory and 650 received from them.

Shutdown Experience

The following controlled shutdowns were made by "P" Division operators following railure to isolate causes for pressure monitor alarms within the 20 seconds time allowance:

At 100-B Area Jan. 2, 10:15 A.M.
At 100-B Area Jan. 3, 7:29 A.M.
At 100-B Area Jan. 6, 9:18 A.M.
At 100-B Area Jan. 16, 4:42 P.M.
At 100-D Area Jan. 19, 1:33 A.M.

Cause for these alarms was not firmly established but, after the above experience, the jumper connections in all areas were rechecked and Maintenance Procedure (Spec. 100-21) revised in an effort to eliminate false alarms.

On January 11 at 4:30 P.M. the 100-H Area unit was scrammed. Annunciator tab indicated that No. 2 Beckman was the cause. The Beckman was replaced and placed on test to determine trouble.

During an attempt to discharge tube 1293 in 105-F on January 11 the tubing wall was ruptured and water leaked into the unit when pressure was applied. Dew point readings of unit gas were taken as directed by "P" Division. Results obtained revealed the approximate location of the leak.

Studies

In the pressure monitors of 100-B and 100-F Areas, a high percentage of the 50 p.s.i. range units installed in the .140 orifice zone are no longer considered adequate. Conversion of these units to 100 p.s.i. range has been recommended by the Instrument Division. This would require the purchase of approximately 350 new 100 p.s.i. units and conversion of approximately 450 units with parts available on the plant.

200 AREAS

200-Z Area

Hood #8. Fluorothene material for tubes and floats for one panel of rotameters has been received and an order placed for monel bodies. It is hoped that this will provide a measuring instrument panel that is resistant to HF gas corrosion. New time pattern cams are being cut for the furnace controllers to insure exact reproducibility on all units.

Hood #14. A leak developed in a thermocouple well. As helium is used as a purge gas in this process it was impossible to use the G. E. mass spectrometer leak detector to locate the leak without a time-consuming purge of the system. The possibility of using an inert gas purge in the process is being investigated so that future leaks may be more rapidly detected with existing equipment.

At time of start-up of Hood 14 the pressure range of the Miller gauges was changed from the original design. This change caused a discrepancy between the gauge and its recorder that could not be corrected at the time. As a result the automatic control of the furnace from the recorder was not used and manual control has been employed. A modification of the Miller gauge amplifier power supply has now corrected the calibration discrepancy and the circuit of the control system has been put in service as originally designed.

1195113 DECLASSIFIED

Hood #19. Thermocouples have been difficult to maintain due to handling a beaded thermocouple in an awkward position. An assembly was fabricated with an asbestos insulated thermocouple permanently mounted in a removable stainless steel well. It appears that thermocouple life will be considerably increased.

Hoods 25 & 26. Assistance has been given the Technical Division in temperature studies in Hood #26. Several special thermocouple assemblies were fabricated. Results obtained appear favorable to improving operation of these hoods. The M.S.A. panel for CO detection has given trouble due to intermittent failure of solenoid valves. Maintenance of this equipment is extremely difficult due to its being located so close to the wall. Consideration is being given to moving the panel out a short distance.

Health Instruments

Four-fold and poppy maintenance has improved significantly. Spare plug-in units and probes have been received which allows for better maintenance.

Ventilation System

A temporary control was installed on the supply plenum pressure relief damper in an attempt to provide smoother control of supply air pressure. A great improvement was noted in control when exhausting quantities of air equivalent to those encountered with normal weather conditions. The maximum capacity was not enough to handle high wind conditions, however. Subsequent tests indicated that excessive pressure loss was occurring across the rain louvers. With these removed, the duct will handle nearly the full capacity of one supply fan. A meeting is scheduled with the Design Division to determine the final installation requirements based on results of these tests.

The atmospheric pressure reference tip constructed to Design Division specifications has been completed. Installation has been delayed the past two weeks due to adverse weather conditions.

300 AREA

Manufacturing Sections

Work load of the Electronic Shop continues to be light, with practically no backlog. Incoming work for the Machine Shop was less than that reported for December.

[redacted]

C-333 - H.I. Operational Division Survey Instruments

Fabrication work on this project was suspended throughout the month, awaiting results of field tests being conducted by the H.I. Division.

MAINTENANCE SECTION

Victoreen 5803 tubes are being studied to determine optimum operating conditions for Juno circuit application. Raytheon CK571AX tubes will be used in the C.P. Survey Meters. By utilizing the products of two vendors in the Hanford Works application of electrometer tubes to portable instruments, we hope to avoid repetition of the inconveniences encountered when a vendor discontinues a tube.

Fifteen Raytheon CK512AX Electrometer tubes and accessories are being mounted on 4-prong sockets in an attempt to manufacture a suitable substitute for unavailable Beckman P-1 tubes. Preliminary shop tests appear favorable.

DEVELOPMENT SECTION

P-11 Project

Site installation of instrumentation is proceeding according to schedule. Most of the equipment has been tested and no unforeseen difficulties have arisen to date.

Slug Detector

The normal radiation background level at the 300 Area Badge House has been measured over a period of several days. Expected signal from a concealed slug is only 60 percent above this background. Objectional interference is expected from the 2 Mev. X-ray, which cannot be tested at this time. Investigations to date indicate the necessity of rather heavy shielding to insure adequate protection against present interference from the surrounding area. Tests are being continued.

Temperature Monitor - I.B.M. System

The 100-H Area installation for rapid differential temperature mapping was successfully operated on January 25. Experience to date will be analyzed and evaluated before proceeding with the work in other areas.

Miscellaneous

Operation of the Alpha Energy Analyzer is still somewhat unstable. A report on methods to improve the instrument has been requested by the Technical Division. Information from Oak Ridge indicates that they have found methods of correcting similar difficulties.

1195115 DECLASSIFIED

In an effort to standardize tube requirements for the plant, specifications have been prepared by the Instrument Development Section for operational and physical characteristics of thin End Window GM tubes. These have received preliminary approval of the Advisory Committee on Radiation Detection and Counting Instruments and have been sent to the field for comments.

STANDARDS SECTION

The chromel-alumel thermocouple used as a 300 Area secondary standard was calibrated against a Brown platinum rhodium thermocouple. In the range of 590 - 596°C it was found that the chromel-alumel couple read 4.1° C lower. As this couple and those matching it have given excellent canning results, two such couples have been sent to the Bureau of Standards for calibration. This should establish the correct temperature range for desired canning results.

DESIGN AND CONSTRUCTION SECTION

General

An estimate of the electrical and instrument wiring used in the 105-H, 224-T and 221-T buildings was completed in the early part of the month at the request of A. E. C.

100-H Area

All "as built" drawings are 100% complete. Changes made by Operations will be covered by the Project Engineering Division.

A review of the instrumentation used and continuations required for the Recirculating Test to be made in the 105-H "A" hole for the Argonne Laboratory is in progress. Recommendations have been made for the use in the safety circuit of a saturation type vapor pressure recording meter with high limit contacts to prevent boiling. A review of instruments available for this purpose has been initiated.

100-DR Area

100-DR instrumentation prints and requisitions are being reviewed as they are available.

100-G Area

Instrumentation studies and tests are proceeding normally.

MJ-2 Project

A trip was made to Schenectady for a two-way exchange of information on instrumentation in the RM and RG lines. A report covering the discussion is in preparation.

1195116 [redacted]

MJ-3 Project

Instrument Panel Layouts on Section 5 are complete and ready for approval. This includes three new panels for the caustic scrubber and one panel for caustic addition. Flow indicators and recorders for caustic addition are not to be panel mounted. Instrument flow diagrams for Section 5 are complete and ready for approval.

Drawings showing a complete Instrument Panel Layout for the equipment formerly in cell "TA" were not made by Du Pont. For study purposes such a layout has been made showing existing instruments, valves, etc., with functions and connector numbers. From this study a proposed Instrument Panel Layout for use on the MJ-3 process is now being made showing new piping connections and instrument functions.

An Instrument Panel Layout drawing has been made for the equipment formerly in cell TB. This is to facilitate study leading to the use of as much of this instrumentation as possible on MJ-3.

DECLASSIFIED

1195117

DECLASSIFIED

MAINTENANCE DIVISION
JANUARY, 1950

The Maintenance Division backlog of work at the close of the month was 6086 mandays, which represents a 1.5% increase over the past month.

100 AREAS

Specially developed milling equipment was set up in the transfer area of 105-F and utilized to remove 3/16" of metal from the top plates of a contaminated horizontal rod, which previously had been taken out of service because of binding in the thimble. This reworked rod was then installed in the "A" position of the "F" pile.

Process tube #1293 in the "F" pile was ruptured by a stuck slug twelve feet from the discharge end. In order to remove the loose slugs between the stuck piece and the discharge, a special vacuum cup retriever was developed. Because of the irregularities in the tube at the point of sticking, it was then necessary to cut off the tube, at that point, and insert a specially fabricated "U" section. The slug was then discharged through this "U" section and a new process tube was installed.

A stuck slug was found in process tube #3184 in the "F" pile twenty-four feet from the discharge end. Since the tube was not ruptured, water at 375 p.s.i. was used to float out the loose slugs between the slug and the discharge. To provide additional clearance in the process tube, special milling equipment was used to remove the internal ribs from the discharge end to the stuck slug. This slug was then pushed out through the enlarged section and a new process tube was installed.

In order to prevent freezing of process water in the 100-B,D, and F Areas, Building 183 basins during the recent extreme cold weather, it was necessary to restore to operating condition from layaway, the hot water recirculating pumps in the 190 Buildings. Hot water thus introduced in the 183 Building flumes, raised the temperature in the system to prevent icing. In 100-H Area, where no recirculating pumps are installed, the temperature of the water was raised by introducing steam into the 182 flumes. To do this it was necessary to build a 350' 4" steam line under emergency condition during sub-zero weather.

After several days of extreme cold weather the temperature of the river at 100-B Area was found to be 0.2°C. Water being taken into the 181 Building river pumps was showing signs of icing and #4 and 5 pumps in 100-D Area failed to start because of this ice formation. Therefore, two unit heaters were installed in the intake basin in each pump house and the openings to the outside were covered. The temperature of the intake basin was thus increased sufficiently to overcome surface icing. The stuck pumps were relieved by the use of live steam sparged into water of the pump intakes.

One knuckle jointed vertical safety rod was fabricated in the 100-F Area shops for installation in the "D" pile.

1195118

The stainless steel discharge chute liner to the "B" pile pulled loose and allowed process metal tc become lodged beneath it. The liner was loosened entirely from the concrete and all metal pieces were removed. The reconditioned liner was then reanchored to the concrete floor and wall with stainless steel anchors and an additional stainless steel retainer strip was installed along the upper edge to prevent recurrance.

In an attempt to overcome galling and sticking of the Fisher Turbine control valves from line scale in 190-H Building a valve was machined with a .030" relief on the skirt. This is on trial and will be evaluated on the basis of operating experience.

200 AREAS

The outboard bearing on #1 "T" Canyon exhaust fan was replaced due to failure which can be attributed to fracture of the roller retaining ring.

Due tc failure of the glass lining it was necessary to replace the 4" tee in the vapor line to Hood #30, 234-5 Building and a tee and "Y" to Hood #29 vapor line and fume line. The glass lined filter head tank in Hood #6 also failed and in order to make replacement, it was necessary to construct a special cocoon lined plywood shelter outside the hood to prevent the spread of contamination. While the hood was dismantled a special tantalum agitator was installed in the reactor tank to reduce the operating time cycle.

An investigation is being conducted to determine the cause of failure of inboard bearings #1 and #4 exhaust fans tc 234-5 Building located in 291-Z.

The 12" raw water supply main tc the "T" Canyon ruptured during the first sub-zero cold spell. Replacement was made immediately and service was restored with a minimum of production downtime. It is well to mention at this time that piping of this kind is used infrequently but should be retained in stores stock as an insurance item for future failures of this type.

300 AREA

Two unit space heaters were installed in the attic of 3702 Building and one in the new wing attic of 3706 Building to prevent freezing of the sprinkler system and laboratory service piping.

Hexone recovery equipment and piping is being installed in 321 Building to remove the solvent from the process equipment. This will permit revision to convert from MJ-1 developmental work to MJ-4 work.

1195119

DECLASSIFIED

[redacted]

ELECTRICAL DIVISION

JANUARY, 1950

GENERAL

The Divisional backlog of scheduled work at the month end was 9,858 mandays, an increase of 643 mandays during the month, mainly due to increases of backlog in the Telephone and in the Substation Maintenance groups.

The total Divisional personnel at month end was 300, a net decrease of one.

The double shift established in 100-H Area immediately after start-up has been reduced to a single shift, permitting transfer of two men to the Minor Construction Division, Project Engineering Divisions, and re-assignment of two Electricians elsewhere in the 100 Areas.

A series of discussions have been held with Technical, Design and Construction, and Project Engineering Divisions to establish power and telephone requirements for the proposed Technical Center adjacent to the 300 Area, and the addition of a Rolling Mill to the latter area. Separate projects for power and for telephone facilities are being developed. A duplicate 3750 KVA, 115 KV/2300 volt bank will be installed in the new 300 Area 115 KV substation, as well as new switch positions and feeders. Emergency power generation sufficient for the Technical Center as well as the requirements of the 300 Area, which have exceeded substantially the present emergency source, are under consideration.

A load analysis and economic study of the Richland electric distribution system was completed pursuant to request from the Atomic Energy Commission. This report will be transmitted to the Atomic Energy Commission within a few days.

The load chart for the peak day of the month, January 16, shows a peak of 84,600 KW for the entire system with a coincidental demand of 32,200 KW for the combined 115 KV and 66 KV systems. This is a further all-time peak demand in line with seasonal expectations. The 115 KV system peak demand occurred during the blizzard of January 13 as 35,640 KW, but because of curtailed operations in one of the work areas on this day, was not coincidental with the monthly peak.

AREA ACTIVITIES

Two electrical troubles were experienced with vertical safety rod circuits in 100-F. On start-up after scram on January 12, the vertical rods could not be raised due to a defective relay contact which had been found inadequate on original test. Magnetic blowout type was substituted. A defective breaker, since replaced, caused a scram (January 23) by opening the vertical safety rod clutch circuit.

During the January 13 blizzard, 107-D and DR feeders whipped together, tripping the area emergency feeder. Slack has since been pulled up after emergency repairs.

Project M-718 (Immersion Heaters for Evacuation Busses) is electrically complete in all 100 Areas and Riverland but not in the 200 Areas.

In the 200 Areas, all electrical work is normal and up to schedule.

In the 300 Area, four of seven dipping and canning furnace element failures were due to cracked crucibles permitting molten metal to short out the heating elements.

1195120 DECLASSIFIED

Electrical Division

Crucible life has now been established with sufficient accuracy to permit an eight week crucible schedule which has been established with the "P" Division.

TRANSMISSION AND DISTRIBUTION

Project C-322 (Osmose Treatment and Pole Replacement Program) was closed out as of December 31, 1949, work summary as follows:

	Total	Village	Areas
Treated	6,727	1,513	5,214
Replaced	989	223	766

An order has been issued to relocate or replace as necessary all guard structures at road crossings of the new 115 KV Bonneville Power Administration Benton No. 2 line.

The annual distribution transformer load check in Richland is in progress. Eight transformers (conventional housing) have been changed out because of sustained overload.

A final blackout procedure was agreed upon for the 300 Area. The entire load will be cut at the main substation in event of extreme emergency blackout and emergency circuit lighting will be blacked out by instructed area personnel.

Two conductor failures occurred to the old 66 KV line from Hanford to 300 Area due to blizzard conditions. This line is now stand-by for the 300 Area until the new 115 KV substation tie-in is complete. A third break occurred in the 66 KV system feeding White Bluffs. None resulted in service interruption of consequence. Despite some minor trouble, no interruption of important service occurred to either the 220 KV or 115 KV systems during the three day blizzard starting January 13.

TELEPHONE SYSTEM

Installation of customer service and telephone instruments in Richland continues at a high rate, using twelve temporary employees in an effort to complete by mid-April. New stations placed in service total 686 and 217 were removed. The cumulative average number of manhours per installation is 4.74.

Telephone service to various businesses in the uptown commercial area is being transferred from temporary cable to a new 100 pair cable installation received from Subcontractor.

[redacted]

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

ITEM	ENERGY - KW HRS. Dec.	ENERGY - KW HRS. Jan.	MAX. DEMAND - KW Dec.	MAX. DEMAND - KW Jan.	LOAD FACTOR - % Dec.	LOAD FACTOR - % Jan.
230 KV SYSTEM						
A-2 Out (100-B)	7,370	7,260	12,300	12,000	80.5	81.3
A-4 Out (100-D)	7,830	7,900	12,900	13,400	81.6	79.2
A-5 Out (100-H)	9,648	9,576	14,400	14,400	90.0	89.4
A-6 Out (100-F)	7,060	6,590	11,500	11,300	82.5	78.4
A-8 Out (200 Areas)	3,650	3,370	5,500	5,800	89.2	89.7
TOTAL OUT	35,558	35,196	56,600**	56,900**	84.4	83.1
MIDWAY IN	36,146	35,786	52,800*	55,200*	92.0	87.1
Transm. Loss	588	590				
Percent Loss	1.6	1.6				
115 KV SYSTEM						
B1-S4 Out (N.Richland)	1,339	1,584	2,362	2,765	76.2	77.0
B3-S4 Out (300 Area)	402	425	822	816	65.7	70.0
B3-S5 Out "	432	514	1,240	1,400	46.8	49.4
BB1-S1 Out (Richland)	6,596	8,864	14,220**	18,360**	62.3	64.9
BB1-S2 Out "	6,080	7,928	13,320**	17,100**	61.3	62,3
TOTAL OUT	14,849	19,315	31,964**	40,441**	62.4	64.2
Benton In	250	80	25,600*		13.1	
S. Richland In	13,680	17,736	28,620		64.2	
TOTAL IN	13,930	17,816	54,220**		34.5	
Transm. Loss	-919	-1,499				
Percent Loss	-6.6	-8.4				
66 KV SYSTEM						
B7-S10 Out (W.Bluffs)	234	300	653	765	48.2	52.7
Hanford Out	326	378	500	600	87.6	84.7
TOTAL OUT	560	678	1,153**	1,265**	65.3	72.0
Hanford In	578	'670	4,500*	1,500*	17.3	60.0
Transm. Loss	18	-8				
Percent Loss	3.1	-1.2				
PROJECT TOTAL						
230 KV Out	35,558	35,196	56,600**	56,900**	84.4	83.1
115 KV Out	14,849	19,315	31,964**	40,441**	62.4	64.2
66 KV Out	560	678	1,153**	1,265**	65.3	72.0
TOTAL OUT	50,967	55,189	89,717**	98,606**	76.4	75.2
230 KV In	36,146	35,786	52,800*	55,200*	92.0	87.1
115 KV In	13,930	17,816	54,220**		34.5	
66 KV In	578	670	4,500*	1,500*	17.3	60.0
TOTAL IN	50,654	54,272	78,600*	84,600**	86.6	
Transm. Loss	-313	-917				
Percent Loss	-.6	-1.7				

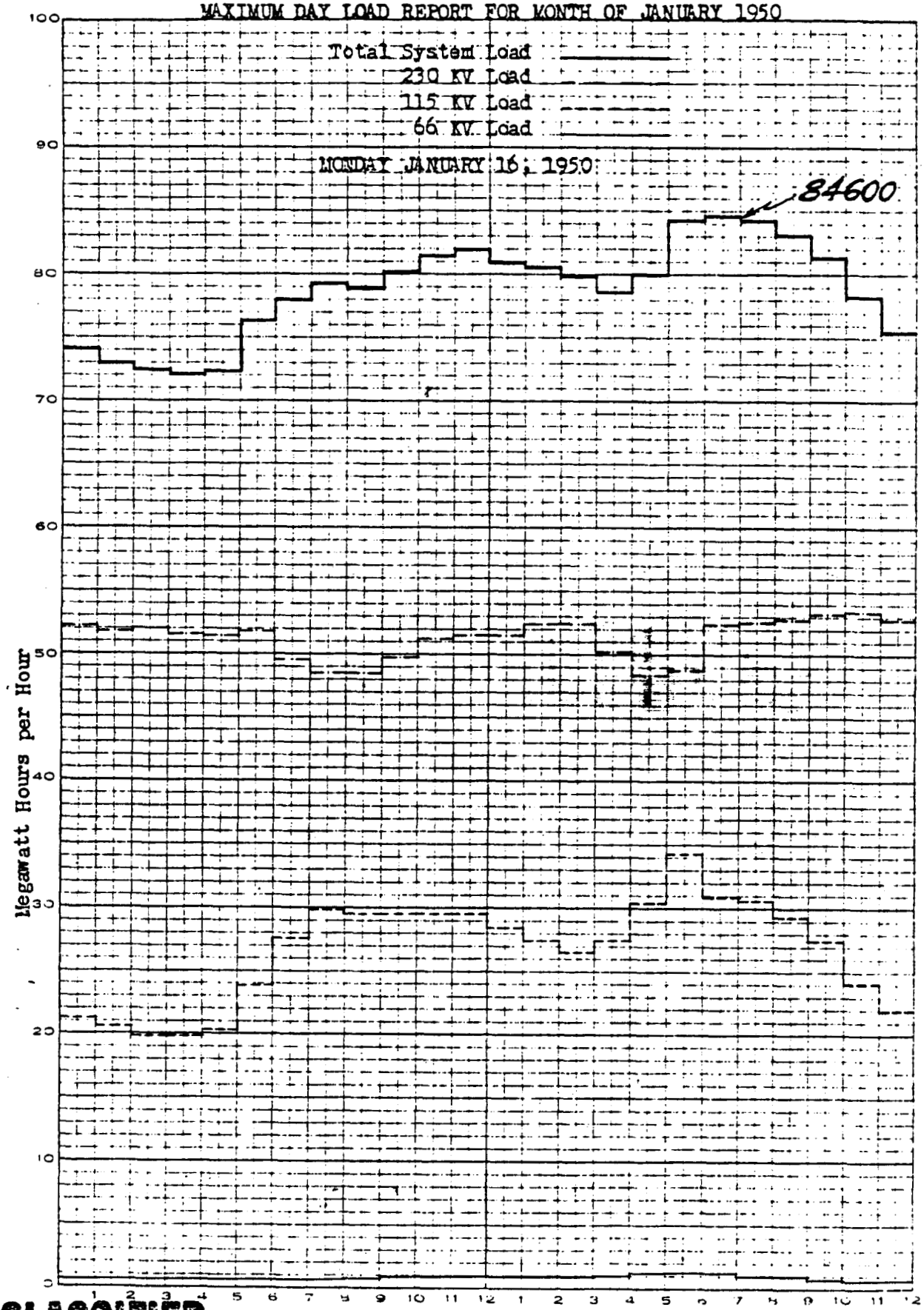
* Denotes Coincidental Demand — Average Power Factor - 230 KV System-96.2
** Denotes Non-Coincidental Demand — Average Power Factor - 115 KV System-96.6
' Denotes Metering out of Service — Average Power Factor - 66 KV System-94.2

DECLASSIFIED

DECLASSIFIED

ET 15843-DEL

H. W. PROJECT LOAD CHART



DECLASSIFIED

1195123

[redacted]
DECLASSIFIED

TRANSPORTATION DIVISION
MONTHLY REPORT
JANUARY 1950

[redacted]

GENERAL

Severe cold weather and snow, beginning with the blizzard on January 13 and continuing throughout the month, hampered most activities of the Division and created much additional work. Project roads were kept open by road maintenance crews and bus service was provided on a near normal schedule with a greatly increased passenger volume. Equipment maintenance personnel expended considerable time in the starting of HO equipment and installing tire chains. One hundred twenty-five sets were installed on emergency vehicles exhausting the supply on hand. Twenty-five sets of used chains were procured from Excess at the Pasco Base Depot and an additional 45 sets were procured from outside sources on an emergency purchase.

Transportation Division personnel and equipment, including an amphibious vehicle, were supplied to render assistance in the evacuation of one family about three miles above Twin Bridges; removal of feed, livestock and personal automotive equipment in the vicinity of Van Giesen Street Bridge where they were endangered by the backwater from the ice jammed Yakima River.

Transportation Division forces kept Yakima River ice conditions under surveillance throughout the month with special attention being given to the highway and the Northern Pacific-Union Pacific Connection railroad bridge, now under construction on Project C-185, where ice first formed on January 3 necessitating blasting operations on January 9. Lower temperatures throughout the remainder of the month kept the ice in check and relieved the bridge of immediate danger.

Transportation Division personnel forces were decreased by seven non-exempt employees during the month from 603 to 596 by 1 recall, 1 transfer in, 1 return to work - illness, 7 transfers out, 1 voluntary quit, 2 removals from roll-illness, and 1 removal from roll - leave of absence for one year under the HAMTC-GE Contract to conduct Council business.

RAILROAD ACTIVITIES

Commercial inbound tonnage decreased approximately 44% over December as the result of decreased Project activity requiring materials and reduced coal receipts resulting from strikes and inclement weather along connecting rail lines. Process service continued at a normal level with all movements being completed as scheduled.

The Riverland Roundhouse boiler was tested and placed in operation January 18 to provide heat for Diesel locomotives stored overnight in the Roundhouse. This boiler will be kept in continuous operation for approximately 12 weeks.

120-ton Diesel electric locomotive #39-3732 was returned to service on January 13 after being out of operation for major engine repairs since November. These repairs were necessary because of faulty workmanship at the factory.

[redacted]
DECLASSIFIED

DECLASSIFIED

Transportation Division

One 30-ton Plymouth locomotive was declared excess to Project needs on January 3.

The Milwaukee Railroad delivered four cars of coal which were burning when received at Riverland Yard. The fire which was promptly extinguished was caused by precipitation while the material was in transit. There was no damage to the cars and loss of material was negligible.

Major repairs to flat car 10-A-3614 are approximately 40% complete.

Railroad Track Maintenance continued on a near normal basis plus the removal of snow from switches and crossings throughout all five sections.

AUTOMOTIVE ACTIVITIES

Area and Village Bus Systems transported a total of 207,907 passengers in January which is an increase of 30,487 over December. This increase in passenger traffic was due largely to severe weather conditions.

The Village Bus System performed a public service of considerable magnitude by transporting approximately 700 school children on several of the colder mornings requiring a total of 170 booster runs for the period January 13 through January 31.

With the failure of the Snake River pontoon bridge on January 3, arrangements were made with the U. S. Army Corps of Engineers for ferry service at Umatilla for all HW vehicles making official business trips to Walla Walla and Pendleton. This ferry service, however, was interrupted with the sinking of the ferry tug on the Oregon Shore on January 28. On January 30 a smaller boat was substituted and service was resumed.

Painting of four Village passenger buses has been completed by an outside contractor. The remaining eleven buses to be painted are to be completed at the rate of one per week.

Engine heat thermostats were reset to a higher temperature on 55 of the GMC coaches in an effort to increase the heater output.

Completed installation of immersion type engine heaters in 41 Area evacuation buses. Necessary wiring for installing the connecting arrangement in each of the Areas is virtually complete.

The Planning and Methods Section initiated action to replace fifty-five ½-ton International pick-up trucks with ½-ton Ford pick-up trucks from Stores Excess Division which had been declared surplus by the Design and Construction Divisions. The Ford pick-ups are newer, the riding qualities are better, and maintenance cost is expected to be less.

Completed major overhaul of 6,000 pound fork lift 63-4078.

DECLASSIFIED

1195125

DECLASSIFIED

Transportation Division [redacted]

LABOR ACTIVITIES

Crushed and stockpiled 510 cubic yards of 5/8" crushed rock and 312 cubic yards of ¼" crushed rock. Crusher was shut down for five days because of weather conditions and then moved to the Richland Pit. Expended 1,761 manhours in maintaining Area roads which included sanding operations and removal of snow. Delivered 865 tons of coal to the 101 Building.

Routine Area maintenance plus sanding operations and snow removal was performed in all operating areas with labor and transportation facilities being furnished for Projects C-138, C-192, C-331, C-346, M-721 and Well Drilling Operations.

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

DECLASSIFIED [redacted]

[redacted]

CLASSIFIED

PROJECT ENGINEERING DIVISIONS
MID-MONTHLY STATUS REPORT
100 AREA PROJECTS

WORK PROGRESS DURING PERIOD
WORK PREVIOUSLY DONE

DATE JANUARY 15, 1950

ENG. REQ NO.	DATE RECEIVED	BLDG. OR AREA	DESCRIPTION OF WORK	DIVISION RESPONSIBLE	PROJECT NO.	ESTIMATED COST	ENGINEERING STATUS - PERCENT COMPLETE	PROJECT DATE	ROUTED FOR APPROVAL	APPROPRIATION REQUEST DATE	APPROVED A&B COMMITTEE	ROUTED TO GOVERNMENT	DIRECTIVE DATE	AUTHORIZATION RECEIVED	RELEASED TO FIELD	PHYSICAL COMP. & CLOSING NOTICE	FIELD WORK - PERCENT COMPLETE	REMARKS
A532	1-7	100F	BIOLOGICAL LABORATORY — AUTHORIZED UNDER PART IA & II; PROPOSED WORK TO BE INCLUDED IN PART III	h-1	C-192	121,000 (100,000)		3-31-49	4-1	4-1	4-1	4-1	3-10	3-18	3-18			work progressing
841	11-15	100F	EXPERIMENTAL ANIMAL FARM	h-1	C-184	335,900		3-31-49	3-31	4-1	4-1	4-1	4-20	5-3	5-5			work progressing
1034	5-28	1058DF	DISMANTLING OF EQUIPMENT IN THE DEMINERALIZING AND DE-AERATING PLANTS	POWER	C-172	985,000		7-11-47	7-11			7-11	8-19	9-6	10-23			REVISED PROJECT IN PREPARATION CERTAIN WORK TO BE SUBCONTRACTED
A1057	4-20	1058F	EFFLUENT DIVERSIONARY OUTLET (105 - 107 B & F)	P	C-321	153,000		1-12-49	1-12	1-14	1-26	1-26						POSTPONED UNTIL FISCAL YEAR 1951
A1046	6-14	105 D	NEUTRON SPECTROMETER	TECH.	C-290	17,490		9-5-48	9-5	9-9	9-14	9-14	10-4	10-11	10-11			INSTRUMENT BEING CALIBRATED
A1058	6-29	1008	INSTALL STEEL PROCESS SEWER 105-B - 107-B	P		(560,000)												PRESENT LINE BEING CHECKED FOR LEAKS
A1060	7-29	1008, D, F	INCREASED SHIELDING - FRONT NOZZLE CAPS	P	C-306	79,000		10-6-48	10-8	10-11	11-10	11-10	11-30	12-2				TRIAL ORDER PLACED FOR 900 PCS-REMAINING WORK HELD BECAUSE OF CHANGES UNDER C-342
A1068	10-29	105	DEVELOPMENT OF FLEXIBLE VERTICAL SAFETY RODS	P	H-713	18,500		5-10-49	5-12	5-18	5-27	5-27	7-19	7-22				DESIGNS PROGRESSING
A1075	1-7	1008, D, F	REPLACEMENT VSR & GUIDES IN 105 WORKS	P	C-323	280,600		2-14-49	2-14	2-14	2-18	2-16	2-10	3-15	3-17			WORK PROGRESSING
A1077	1-7	108B	P-10 ALLOY PREPARATION FACILITIES	TECH.	C-339	242,000		9-1-49	9-1	9-6	9-29	9-29	5-10	5-16	1-26			AWAITING DECISION ON ADDITIONAL WORK
A1086	2-4	100BDF	HIGH TEMP CONTROL VALVES	POWER		90,000												MADE UP BY HIGHER PRIORITY WORK
A1093	3-17	TRACT HOUSE	P-11 PROJECT	TECH.	C-340	328,000		5-23-49	5-23	5-20	6-1	6-1	6-20	7-1	7-12			WORK BEING RUSHED
A1078	2-24	107F	EXPERIMENTAL FILTER FOR ALGAE REMOVAL	P	H-711	13,000		9-28-49	9-28	9-28	9-6	9-9	6-4	6-9	7-1	1-10		COMPLETED
A1097	4-27	101	P-12 PROJECT	TECH.	C-346	391,000		8-1-49	8-1	8-16	8-17	8-17	10-31	11-3				WORK PROGRESSING
A1100	5-27	1058DF	NOZZLE GALVANIZING AND REPLACEMENT	P	C-347	775,000		8-15-49	8-25	8-15	10-12	10-12	12-28	1-6				MATERIAL BEING ORDERED
A1101	6-1	1058DF	IBM INSTALLATION FOR INDIVIDUAL PILE TUBE ACCOUNTING	P	H-715	13,400		8-15-49	8-16	8-15	9-6	8-7	8-14	9-15				WORK PROGRESSING IN H AREA
A1104	6-7	107H	REPAIRS TO 107 BASIN (IMMEDIATE PROGRAM ONLY)	P	H-723	18,100		7-15-49	7-15	7-15	10-12	10-12	10-28	10-27				WORKS TO BE SCHEDULED FOR WARMER WEATHER
A1106	7-21	1058DF	RESTRAINING CLAMPS - PILE SHIELDING	P	H-721	15,000		8-25-49	8-25	8-25	9-8	9-6	10-7	10-14	10-17			WORK PROGRESSING-TWO AREAS COMPLETED
A1110	7-21	1058DF	PILE CLEARANCE - INNER ROD ROOM WALLS 1058DF	P	C-355	90,600		8-26-49	8-26	8-26	12-13	12-14						AWAITING AEC AUTHORIZATION
A1118	9-30	111-B	HEALTH MONITORING AND STORAGE FACILITIES	TECH.		(20,000)												PROJECT IN PREPARATION
A1118	10-19	105	DOWNCOMER REPLACEMENT	P		(100,000)												DESIGNS IN PREPARATION
A1119	10-17	[illegible]	COAL METERING FACILITIES	POWER		(50,000)												PROJECT IN PREPARATION
A1122	11-9	100	DEVELOPMENT OF FLEXIBLE HORIZONTAL CONTROL RODS	P		(50,000)												STUDY IN PROGRESS
A565	11-6	100F	AQUATIC BIOLOGY LABORATORY — ENGINEERING; ENTIRE PROJECT	h-1		(28,000) (350,300)												DESIGNS IN PREPARATION
A1123	11-23	100F	P-13 PROJECT	TECH.		(25,000)												DESIGN IN PREPARATION

COMBINED TOTAL OF AUTHORIZED AND PENDING 100 AREA WORK = $ 5,589,500

1195127

DECLASSIFIED

PROJECT ENGINEERING DIVISIONS
MID-MONTHLY STATUS REPORT
200 AREA PROJECTS

▭ WORK PROGRESS DURING PERIOD
▬ WORK PREVIOUSLY DONE

DATE JANUARY 15, 1950 [?]

ENG. REQ. NO.	DATE RECEIVED	BLDG. OR AREA	DESCRIPTION OF WORK	DIVISION RESPONSIBLE	PROJECT NO.	ESTIMATED COST	ENGINEERING STATUS - PERCENT COMPLETE	PROJECT DATE	ROUTED FOR APPROVAL	APPROPRIATION REQUEST DATE	APPROVED A&B COMMITTEE	ROUTED TO GOVERNMENT	DIRECTIVE DATE	AUTHORIZATION RECEIVED	RELEASED TO FIELD	PHYSICAL COMP. & CLOSING NOTICE	FIELD WORK - PERCENT COMPLETE	REMARKS
2469	12-30	200	UNDERGROUND GEOLOGICAL & HYDROLOGICAL INVESTIGATION PROGRAM INCLUDING TEST WELLS & OTHER FACILITIES	H.I.	C-326	(95,000)												REVISED PROJECT BEING SUBMITTED. REMAINING WORK TO BE ASSIGNED TO U.S.G.S.
2460	12-23	221 TB	EQUIPMENT FOR DISSOLVER OFF GAS FILTRATION ($337,000 ORIGINALLY AUTHORIZED)	S	C-337	158,000		4-13-49	4-13	4-13	5-6	5-6	6-20	6-28				REVISED PROJECT SUBMITTED FOR REDUCED FUNDS A/C NEW DESIGNS PROPOSED
2490	5-13	221 TB	SILVER NITRATE REACTOR FOR RADIO-IODINE	S		(250,000)												NEW DESIGN BEING PREPARED
2461	5-27	200 EW	CONSTRUCTION OF ADDITIONAL SANITARY SEWER FACILITIES	POWER	C-268	81,000		6-10-49	6-10	7-6	7-12	7-12	7-21	7-27	8-29	12-21		COMPLETED
2487	8-21	241 BY	ADDITIONAL WASTE FACILITIES — ENTIRE PROJECT / PRIME CONTRACTOR PORTION	OAC	C-271	3,056,500 / 58,000 [?]		(PROJECT PREPARED AND SUBMITTED BY DESIGN DIV.)							8-22	1-17		COMPLETED
2504	7-22	271 TB	INSTALLATION OF LABORATORY EQT. IN BLDGS. 271 T-B	TECH.		24,000		8-12-49	8-12	8-12								BEING RE-SUBMITTED FOR APPROVALS
2503	7-22	234-5	DUCT LEVEL FLOOR COVERING AND SAFETY SHOWERS	S		(140,000)												DESIGNS POSTPONED BY S DIVISION
2491	5-13	241-TX	EVAPORATION FACILITIES FOR [?] CYCLE WASTE	S		(300,000)												DESIGNS PROGRESSING
2501	9-2	221-TB	COMPLETE PARALELL OPERATION FOR [?] BLDGS.	S		(300,000)												POSTPONED BY S DIVISION
2513	8-30	224-S [?]	PANELED HOOD IN REAR OF HOODS 4 TO 8	S		(25,000)												DESIGNS PROGRESSING
A-546	7-19	200 E	HOT SEMIWORKS-ENGINEERING AND DESIGNS ONLY	TECH.	C-349 [?]	(33,000)		8-12-49	9-12	9-7	10-19	12-19	10-31	11-3				PROJECT AND REPORT IN PREPARATION
2498	8-18	222-T	DESIGN AND INSTALL FISSION COUNTER	TECH.	M-753	14,750		2-1-49 [?]	9-1	9-1	9-8	9-8	10-7					WORK BEING SCHEDULED
A-568	12-23	222-U	ANNEX TO LABORATORY	M-1	MI-11	9,700		10-26-49	10-26	10-26	11-22	11-25	12-7					WORK BEING SCHEDULED

COMBINED TOTAL OF AUTHORIZED SPENDING

1195128

DECLASSIFIED

PROJECT ENGINEERING DIVISIONS
MID-MONTHLY STATUS REPORT
300 AREA PROJECTS

WORK PROGRESS DURING PERIOD
WORK PREVIOUSLY DONE

DATE JANUARY 15, 1950

ENG. REQ. NO.	DATE RECEIVED.	BLDG. OR AREA	DESCRIPTION OF WORK	DIVISION RESPONSIBLE	PROJECT NO.	ESTIMATED COST	ENGINEERING STATUS - PERCENT COMPLETE	PROJECT DATE	ROUTED FOR APPROVAL	APPROPRIATION REQUEST DATE	APPROVED A&B COMMITTEE	ROUTED TO GOVERNMENT	DIRECTIVE DATE	AUTHORIZATION RECEIVED	RELEASED TO FIELD	PHYSICAL COMP. & CLOSING NOTICE	FIELD WORK - PERCENT COMPLETE	REMARKS
A3044	11-10	3706	CONVERSION OF OFFICES TO LAB. & CONSTRUCTION OF BLDG. 3707-C	TECH.	C-327	557,000		3-1-48	3-1			3-3	3-15	5-1	3-19			WORK STOPPED PENDING FURTHER AUTHORIZATION
A3060	8-12	300	EXPERIMENTAL METALLURGY LABORATORY - BUILDING 3730	TECH.	C-287	190,000		11-5-48	11-5	11-5	11-7	11-9	12-2	12-6	3-7			WORK PROGRESSING
A3061	8-14	313-314	IMPROVED VENTILATION - BLDGS. 313-314 ($540,000 ORIGINALLY AUTHORIZED)	P	C-330	200,000		4-6	4-6	4-6	4-10	4-13	5-2	5-4	5-9			SCOPE OF PROJECT REDUCED TO INCLUDE ONLY ENGINEERING & DEVELOPMENT WORK AT PRESENT
A3062	2-9	314	BALLING MILL ($60,000 AUTHORIZED 12-13 FOR ENGINEERING)	P	C339	60,000 AUTHORIZED (2,800,000 EST. TOTAL COST		5-23-49	5-23	5-23	5-27	6-1	12-13					PRELIMINARY DESIGNS & CONSULTANT SERVICES AUTHORIZED. REVISED PROJECT TO BE SUBMITTED
A3075	12-10	305-A	NINE TUBE MOCK UP TO SIMULATE B, G, & F	TECH.	C-338	24,800		5-17-49	5-17	5-16	5-17	6-1	7-13	7-15	8-2			WORK PROGRESSING
A3077	12-23	313	AUTOMATIC SCREW MACHINE INSTALLATION	P		(180,000												PROJECT IN PREPARATION
A510	10-10	3701	300 AREA BADGE HOUSE ADDITION (INFORMAL REQUEST)	SERV.		14,500		12-14-48	12-14	12-10	12-14	12-31	1-3	1-6				WORK HELD UP PENDING FURTHER DECISIONS REGARDING ADDITIONAL FUNDS
A530	2-2	321	REHABILITATION, REMODELING & INCREASED VENTILATION - BLDG 321	TECH.	C-331	227,000		3-18-49	3-18	3-22	3-27	3-28	5-3	5-9	2-3			WORK PROGRESSING
A3083	7-21	313	SEGREGATION OF FLUORIDE SLUDGE	P		(90,000)												PROJECT IN PREPARATION
A549	8-29	300	CYLINDER STORAGE DOCK	TECH.		(25,000)												DESIGNS IN PREPARATION
A548	8-29	300	SOLVENT STORAGE FACILITIES - BLDG. 3706	TECH.		(60,000)												DESIGNS IN PREPARATION
A560	9-15	300	ADDITION TO BLDG. 3745	b.i.	C364	20,300		11-8-49	11-8	11-8	12-1	12-1	12-19					AWAITING AEC AUTHORIZATION
A567	8-25	300	BURIAL GROUND EXTENSION	P	M-725	M 800		11-1-49	11-1	11-1	11-8			12-14	12-14			WORK PROGRESSING
A528	11-18	3717	ADDITIONAL INSTRUMENT SHOP	INST.		(102,000												DESIGN IN PREPARATION

COMBINED TOTAL OF AUTHORIZED AND PENDING
AREA WORK $ 4,794,900

1105120

DECLASSIFIED

PROJECT ENGINEERING DIVISIONS
MID-MONTHLY STATUS REPORT
GENERAL PLANT PROJECTS

DATE JANUARY 15, 1950

WORK PROGRESS DURING PERIOD
WORK PREVIOUSLY DONE

ENG. REQ. NO.	DATE RECEIVED	BLDG. OR AREA	DESCRIPTION OF WORK	DIVISION RESPONSIBLE	PROJECT NO.	ESTIMATED COST	ENGINEERING STATUS - PERCENT COMPLETE	PROJECT DATE	ROUTED FOR APPROVAL	APPROPRIATION REQUEST DATE	APPROVED A&B COMMITTEE	ROUTED TO GOVERNMENT	DIRECTIVE DATE	AUTHORIZATION RECEIVED	RELEASED TO FIELD	PHYSICAL COMP. & CLOSING NOTICE	FIELD WORK - PERCENT COMPLETE	REMARKS
828	11-22	702	ADDITION TO BLDG. 702 - AUTOMATIC DIAL TELEPHONE EXCHANGE	ELECT.	C-138	470,500		3-7-47	3-7			3-10	5-12	5-21	5-13			WORK PROGRESSING
852	4-20	100 - 200	IMPROVEMENTS TO AREA ADMINISTRATION BLDGS.	MAINT.	C-279	167,800		7-8-48	7-9			8-11	9-20	8-25	9-3	12-88		COMPLETED
900	8-21	506	ADDITIONAL TELEPHONE CABLES - RICHLAND	ELECT.	C-194	71,000		3-28-47	3-28			4-1	5-5	5-21	5-13			WORK PROGRESSING
962	7-10	ALL	115 KV POWER LINE TO RICHLAND PLUS SUBSTATION FACILITIES TOTAL COST AUTHORIZED	ELECT.	C-187	1,800,000 1,384,000		7-17-47	7-17			7-21	8-14	8-26	8-28			PART IV AWAITING AUTHORIZATION WORK HELD UP
980	8-28	ALL	INSTALLATION OF NEW SECURITY FENCES - ALL AREAS	SERV.	C-291	443,800		8-31-48	9-3	9-9	9-9	9-15	10-18	11-8	11-8			WORK PROGRESSING
A452	2-17	ALL	PLANT TELEPHONE PROJECT	ELECT.	C-276	1,546,000		9-8-48	9-8	7-13	9-9	9-9	10-3	10-6	10-6			SUB-CONTRACT NEGOTIATIONS - PROCESSING FOR ADMINISTRATIVE APPROVAL
A543	7-14	HANFORD	ARSENAL, SANITARY AND FIRE PROTECTION FACILITIES - PATROL PISTOL RANGE	SERV.	C-380	54,800		12-19-49	12-20	12-23								AWAITING APPROVALS
A511	10-13	ALL	BUTT TREATMENT OF POWER LINE POLES	ELECT.	C-322	155,000		12-27-48	1-20	1-20	1-20	1-26	2-1	2-9	10-15			WORK NOW DEFERRED
A538	2-25	1100	SURGICAL WING AIR CONDITIONING - KADLEC HOSPITAL (INFORMAL REQUEST)	IND.		16,000		5-2-49	5-2	5-2	5-5	5-5	5-18	5-23	5-27			WORK PROGRESSING
A536	3-17	1100	ADDITIONAL CAPACITY RICHLAND SEWAGE LIFT STATION	VILL.	C-357	47,500		11-22-49	11-25	11-22	12-28	12-28						AWAITING APPROVALS
A562	7-8	200	ADDITION TO METEOROLOGY BLDG. 622	N. I.		(25,000)												REVISED DESIGNS IN PREPARATION
A562	10-7	1100	SOFT WATER PIPE LINE 784-B TO KADLEC HOSPITAL (INFORMAL REQUEST)	IND.		9,800		5-18-49	5-18	5-18	5-20	5-27	8-4	8-18				PLANS AND SPECIFICATIONS IN PREPARATION FOR SUB CONTRACT
A567	11-11	ALL	PERMANENT FENCING 230 KV AND DISTRIBUTION SUBSTATIONS	ELECT.		(170,000)												HELD UP FOR HIGHER PRIORITY WORK
A568	11-11	900	TRANSFORMER OIL STORAGE FACILITIES	ELECT.		(10,000)												HELD UP FOR HIGHER PRIORITY WORK
A580	11-11	1100	RELOCATION OF RICHLAND LINE CREW HEADQUARTERS	ELECT.		(30,000)												HELD UP FOR HIGHER PRIORITY WORK
[illegible]	9-16	1100	ADDITIONS TO RICHLAND ELECTRICAL DISTRIBUTION SYSTEM	ELECT.	C-381	170,000		5-27-49	5-27	5-27	6-6	6-16	9-2	9-13				WORK BEING SCHEDULED
[illegible]	7-1	1100	ELECTRICAL WORK NECESSITATED BY RICHLAND PERMANENT LEVEES (INFORMAL REQUEST)	ELECT.	C-317	8,600		5-2-49	8-2	6-2	8-5	9-5	9-16	10-3	11-24			WORK PROGRESSING
2480	3-15	ALL	N. I. OPERATIONAL DIVISION SURVEY INSTRUMENTS	N. I.	C-333	85,000		3-30-47	3-31	4-1	4-1	4-1	4-20	4-28	4-29			WORK STARTED
A562	11-1	3000	CENTRAL STORES WAREHOUSE IN 3000 AREA	STORES		(1,417,000)												DESIGNS STARTED
E422	11-11	1100	MISCELLANEOUS TELEPHONE CUSTOMER SERVICE EXTENSIONS	ELECT.		(105,000)												DESIGNS STARTED
E423	11-11	WH. BL.	EXTEND 13.8 KV FEEDER 100-H TO WHITE BLUFFS	ELECT.		(45,000)												DESIGNS STARTED
E424	11-11	ALL	CENTRALIZATION OF AREA SUBSTATION CONTROL	ELECT.		(200,000)												HELD UP FOR HIGHER PRIORITY WORK
E425	11-11	ALL	CHANGE PRESENT 440v GROUNDING - ALL AREAS	ELECT.		(58,800)												HELD UP FOR HIGHER PRIORITY WORK
E426	11-11	ALL	SALVAGE AND RECOVERY OF TELEPHONE CABLE AND EXCHANGE EQUIPMENT	ELECT.		(32,600)												DESIGNS STARTED
E429	11-11	200	CATHODIC PROTECTION (INFORMAL REQUEST)	ELECT.		(10,000)												AWAITING APPROVALS
A565	1-16	706	ADDITIONS AND ALTERATIONS-706 LABORATORY	N. I.		(100,000)												DESIGN WORK BEING SCHEDULED

COMBINED TOTAL OF AUTHORIZED AND

119130

DECLASSIFIED

PROJECT ENGINEERING DIVISIONS
ENGINEERING DESIGN
100 AREA

DATE JANUARY 15, 1950

----- WORK PROGRESSING DURING PERIOD
——— ACTUAL PRESENT DATE

E.R. NO.	DATE REC'D	BLDG & AREA	DESCRIPTION	ENGINEERING COMPLETE	DWGS OR REPORT ISSUED DATE	PRESENT STATUS	DIV. RESPONSIBLE	ESTIMATED COMPLETION DATE
A1001	9-1	100	"AS-BUILT" DWGS SINCE 9-1-46			WORK PROGRESSING	—	
A1002	2-1	105	G.E.C. STUDY			EXTENDED STUDY BY STANDING COMMITTEE	TECH. & P	
A1064	9-2	105	EQUIPMENT DESIGNS FOR OXYGEN IN PILE ATMOSPHERE			CANCELLED	P	
A1074	11-2	115BDF	DESIGN MOISTURE EXTRACTION EQUIPMENT FOR GAS SYSTEM			NOT STARTED	P	
A1075	12-10	100B	STUDY AND RECOMMEND ON LONG RANGE WAREHOUSING - 100, 200 AND 300 AREAS			REPORT IN ROUGH DRAFT FORM	MFG.	2-1-50
A1080	1-24	105BDF	THERMOCOUPLE FOR 105 PROCESS TUBE			CANCELLED	P	
A1085	2-4	100F	STUDY PILE OPERATION WITH 100% CO_2 ATMOSPHERE			DATA IN HANDS OF "P" DIVISION	P	4-1-50
A1096	4-7	105	STUDY LUBRICATION OF PROCESS TUBES DURING CHARGING			DATA BEING ANALYZED TO DETERMINE WHAT FURTHER WORK IS NEEDED	P	2-1-50
A1117	10-13	108B	CAN OPENER IMPROVEMENTS			REPORT BEING REVIEWED	TECH.	2-30-50
A1123	11-11	105F	TIE LINE - EFFLUENT VENT AND DOWNCOMER			DESIGN VIRTUALLY COMPLETE	P	1-30-50
A1126	12-12	111B	COLD DEVELOPMENT LABORATORY		12-20	DESIGNS AND ESTIMATE TO TECH. DIVISION	TECH.	

1195131

DECLASSIFIED

PROJECT ENGINEERING DIVISIONS
ENGINEERING DESIGN
200 AREA

DATE JANUARY 15, 1950

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

E.R. NO.	DATE REC'D	BLDG. & AREA	DESCRIPTION	% ENGINEERING COMPLETE (0 20 30 40 50 60 70 80 90 100)	DWGS. OR REPORT ISSUED DATE	PRESENT STATUS	DIV. RESPONSIBLE	ESTIMATED COMPLETION DATE
2266	10-28	200EW	"AS-BUILT" DWGS. SINCE SEPT. 1, 1946			ONLY MOST URGENT CORRECTIONS ARE BEING MADE TO DRAWINGS AT PRESENT	—	12-31-50
						NO WORK BEING DONE AT PRESENT	S	
2279	12-1	221TB	STUDY AND MAKE RECOMMENDATIONS FOR REMOTE CONTROL REGASKETING FACILITIES		12-31	COMPLETE	S	
2467	1-25	200EW	ENGINEERING LIASON ON NEW PROCESSES				S	
2502	6-13	234-5	RECOMMEND PORTABLE VENTILATION EQUIP. FOR DRY BOX HOODS		1-10-50	DESIGNS COMPLETE	S	1-30-50
2515	9-6	221 224	PREPARE AN ENGR. REPORT ON THE USE OF A NEW TYPE STEAM JET			RECOMMENDATION REPORT IN PREPARATION		

1195132

DECLASSIFIED

PROJECT ENGINEERING DIVISIONS
ENGINEERING DESIGN
300 AREA

DATE JANUARY 15, 1950

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

E.R. NO.	DATE REC'D	BLDG. & AREA	DESCRIPTION	% ENGINEERING COMPLETE (0 20 30 40 50 60 70 80 90 100)	DWGS. OR REPORT ISSUED DATE	PRESENT STATUS	DIV. RESPONSIBLE	ESTIMATED COMPLETION DATE
A3002	9-1	300	"AS-BUILT" DRAWINGS SINCE 9-1-46			ONLY MOST URGENT CORRECTIONS ARE TO BE MADE TO DRAWINGS AT PRESENT	—	
A3067	9-20	314	BILLET LIFTING TONGS		12-23	COMPLETED	P	
A3070	10-28	3706	STUDY VENTILATION REQUIREMENTS TO PROVIDE 40% HUMIDITY AND 2 MINUTE AIR CHANGE			WORK POSTPONED UNTIL ALL HOODS HAVE BEEN INSTALLED	TECH.	3-1-50
A3082	7-8	3706	DESIGN AND PREPARE COST ESTIMATE FOR EXHAUST SYSTEM FOR GRAPHITE MACHINING IN ROOM 41A			DESIGNS PROGRESSING	TECH.	3-1-50
A3085	9-27	RIVER-LAND	STUDY HIGH WATER TANK — RIVERLAND			RECOMMENDATIONS BEING PREPARED	POWER	2-15-50
A3086	11-4	3706	GAS CORROSION FACILITY		12-23	COMPLETED	TECH.	

1195133

DECLASSIFIED

PROJECT ENGINEERING DIVISIONS
ENGINEERING DESIGN
PLANT GENERAL

DATE JANUARY 15, 1950

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

E.R. NO.	DATE REC'D.	BLDG. & AREA	DESCRIPTION	% ENGINEERING COMPLETE (0 20 30 45 60 70 80 90 100)	DWGS. OR ISSUED DATE	PRESENT STATUS	DIV. RESPONSIBLE	ESTIMATED COMPLETION DATE
A526	1-18	300	FIELD INFORMATION FOR CERTAIN 300 AREA "AS-BUILT" DWGS.		1-6	COMPLETED	—	
A528	11-14	300	INSTRUMENT SHOP ADDITION ARCH., MECH., DESIGNS AND LAYOUT ONLY			INACTIVE	I	
A537	4-8	ALL	SURVEY FOR MAINTENANCE OF ALL RAILROADS INSIDE RESTRICTED AREAS			WORK PROGRESSING AS REQUIRED	TRAN	4-1-50
A541R	6-14	200W	RAILROADS-REDOX PLANT CIVIL DESIGNS AND SPECIFICATIONS			WORK PROGRESSING	D&C	2-1-50
A553	9-7	ALL	ARCHITECTURAL STANDARDS			WORK PROGRESSING AS REQUIRED		
A563	12-22	—	DESIGN FOR REMOTE METEOROLIGICAL STATIONS			WORK PROGRESSING	HI	2-15-50
A564	1-3	762	DESIGN FOR NEW PARTITIONS BLDG. 762, ROOM 212		1-6	COMPLETED	—	
A452L	2-17	1100	MAIN PLANT TELEPHONE SYSTEM — LAYOUT ONLY FOR PROJECT C-276		1-6	COMPLETED	ELECT	
A1001L	5-26	100	AS-BUILTS — 100 AREAS — LAYOUT ONLY			WORK PROGRESSING AS REQUIRED	—	
A1034S	6-29	100BDF	DISMANTLING OF DEAERATING PLANTS ARCH. AND MECH. DESIGNS AND SPECIFICATIONS ONLY			WORK PROGRESSING	POWER	2-1-50
A1093L	4-4		P-11 PROJECT — LAYOUT ONLY FOR PROJECT C-340		1-3	COMPLETED	TECH	
A3002L	12-7	300	AS-BUILTS — 300 AREA — LAYOUT ONLY			WORK PROGRESSING AS REQUIRED	—	
A3062A	5-17	314	ROLLING MILL — ARCH. DESIGN ONLY FOR PROJECT C-339			NOT STARTED	P	
E406L	8-1	1100	ADDITIONS TO VILLAGE DIST. — LAYOUT ONLY FOR PROJECT C-341			WORK PROGRESSING AS REQUIRED	ELECT	2-1-50
4365D	12-2	*	PROCESS CHARTS — 300 AREA (FOR IND. ENGINEERING GROUP)			WORK PROGRESSING AS REQUIRED	P	
E423L	12-16	100H	FIELD LAYOUT FOR EXTENSION OF 13.8 KV LINE — 100H TO WHITE BLUFFS			WORK PROGRESSING	ELECT	3-1-50

1195134

DECLASSIFIED

PROJECT ENGINEERING DIVISIONS
ELECTRICAL DESIGN
PLANT GENERAL

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

DATE JANUARY 15, 1950

E R NO.	DATE REC'D	BLDG & AREA	DESCRIPTION	% ENGINEERING COMPLETE 10 20 30 40 50 60 70 80 90 100	DWGS. OR REPORT ISSUED DATE	PRESENT STATUS	DIV. RESPONSIBLE	ESTIMATED COMPLETION DATE
2491E	9-14	200EW	FIRST CYCLE EVAP. FAC. – 241 T-X, ELECTRICAL DESIGNS			HELD UP FOR ADDITIONAL INFORMATION	S	2-20-50
4354E	1-26	313	FURNACE STUDY – ELECTRICAL SKETCHES			TEMPORARILY POSTPONED	P	
A505E	8-19	ALL	ELECTRICAL STANDARDS			WORK PROGRESSING	–	4-1-50
A532E	3-4	108F	BIOLOGICAL BUILDING – ELECTRICAL DESIGNS ONLY			WORK PROGRESSING	HI	2-2-50
A546E	8-19	200W	HOT SEMI WORKS – ELECT. DESIGNS ONLY			WORK PROGRESSING	TECH	2-1-50
A1100E	7-29	100F	GALVANIZING TANK – ELECT. DESIGNS ONLY			HELD FOR ADDITIONAL INFORMATION	P	
A3060E	9-1	3730	TEMPORARY METAL FAB. AND MELT LAB. BLDG. – ELECT. DESIGNS			WORK PROGRESSING	TECH	1-10-50
A3061E	12-10	314	INCREASED VENTILATION – ELECTRICAL DESIGNS ONLY			WORK PROGRESSING	TECH	2-1-50
A3062E	8-1	314	ROLLING MILL FOR PROJECT C-339 – ELECTRICAL DESIGNS			NOT STARTED	P	5-15-50
A3077E	1-7	313	AUTOMATIC MACHINING EQT. – ELECTRICAL DESIGNS ONLY			NOT STARTED	P	5-1-50
E405	2-15	ALL	ELECTRICAL AS-BUILT REVISIONS TO DWGS.			NOT STARTED	–	
E411	3-10	1100	SEWAGE LIFT STATION DUAL FEED			WORK PROGRESSING	VILL	1-15-50
E416	6-1	ALL	POWER CONSERVATION STUDY			WORK PROGRESSING	ELECT	2-1-50
E427	11-11	ALL	ADD'N. ELECTRICAL POLE REPLACEMENTS – FISCAL YEAR 1950			PRELIMINARY WORK STARTED	ELECT	2-1-50
E428	11-11	HANF.	DISMANTLE DISTRIBUTION LINES AND TELEPHONE CABLE – HANFORD			PRELIMINARY WORK STARTED	ELECT	3-30-50
E431	11-11	1100	EMERGENCY POWER PLANT – RICHLAND EXCHANGE (PRELIMINARY ENGINEERING)			PRELIMINARY WORK STARTED	ELECT	2-1-50
A1126E	12-16	100B	P-10 ELECTRICAL ADDITIONS			NOT STARTED	TECH	2-1-50

1195135

DECLASSIFIED

PROJECT ENGINEERING DIVISIONS
STUDIES
ALL AREAS

DATE JANUARY 15, 1950

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

E.R. NO.	DATE RECD	BLDG. & AREA	DESCRIPTION	% ENGINEERING COMPLETE (0 20 30 40 50 60 70 80 90 100)	DWGS. OR REPORT ISSUED DATE	REMARKS	DIV RESPONSIBLE	ESTIMATED COMPLETION DATE
4363	3-21	ALL	PROJECT ENGINEERING DIV. PERSONNEL ANALYSIS			WORK DEFERRED	—	2-24-50
4365	4-15	300	METHODS STUDIES — "P" DIVISION		12-23	WORK COMPLETED	P	
			ROD MACHINING		12-23	WORK COMPLETED	P	
			ECON. ANAL.—MACHINING SCRAP REDUCTION		12-20	WORK COMPLETED	P	
			ECON. ANAL.—CANNED SLUG REJECT REDUCTION			WORK PROGRESSING	P	6-1-50
			SLUG CANNING LINE ANALYSIS			WORK DEFERRED	P	1-21-50
			CHIP BRIQUETTING STUDY			WORK PROGRESSING	P	1-21-50
			ECON. ANALYSIS — CANNING METHODS			WORK PROGRESSING	P	4-15-50
			SCREW MACHINE ECONOMICS			WORK INITIATED	P	
			MELT PLANT OPERATION ANALYSIS			WORK INITIATED	P	4-15-50
			OPTIMUM BILLET DIMENSION DETERMINATION			WORK INITIATED	P	8-1-50
			ROTARY SWAGER STUDY			WORK INITIATED	P	2-1-50
			IMPROVED CAN CRIMPING METHODS			WORK INITIATED	P	3-1-50
			REDUCED CUT-OFF TOOL WIDTH		12-16	REPORT COMPLETE	MAINT.	
4366	6-3	ALL	WELDER CLASSIFICATION TESTS		12-27	WORK COMPLETE	MAINT.	
4368	8-23	3706	LUBRICATION SPECIFICATIONS		12-30	REPORT COMPLETE	—	
4369	9-29	ALL	PROJECT ENGINEERING DIVISIONS SAFETY MANUAL			WORK PROGRESSING	P	4-1-50
4370	11-1	100	INDUSTRIAL ENGINEERING "P" DIVISION			WORK DEFERRED	P	12-1-50
			CHARGE-DISCHARGE METHODS		1-1	WORK COMPLETED	P	
			105 BLDG. MECHANIZATION			WORK INITIATED	P	6-1-50
			EVALUATION OF ARTICULATED DUMMY TRAIN			WORK INITIATED	P	10-1-50
			EVALUATION OF SUGGESTIONS FOR P.C. GROUP			WORK PROGRESSING	—	1-27-50
			NOZZLE REPLACEMENT STUDY			WORK PROGRESSING	MGMT.	2-3-50
4371	11-15	ALL	PROJECTS MANPOWER SURVEY			WORK INITIATED	P & S	2-3-50
4373	12-6	700	OFFICE SPACE REQUIREMENTS			WORK DEFERRED	ELECT.	1-20-50
A562S	12-8	700	STORES WAREHOUSE ANALYSIS			AWAITING PERSONNEL ASSIGNMENT	S	12-20-50
M714	5-4	ALL	ELECTRICAL POWER CONSERVATION			WORK INITIATED	TRANS.	2-3-50
4374	12-20	200	INDUSTRIAL ENGINEERING — "S" DIVISION			WORK INITIATED	ELECT.	2-3-50
			CREW REQUIREMENTS 221 AND 224 BLDGS.					
4375	12-22	1100	TRANSPORTATION DIVISION CONSOLIDATION					
			ELECTRIC POWER MET					

1195139

DECLASSIFIED

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

PERIOD ENDING JANUARY 15, 1950

-----WORK PROGRESS DURING PERIOD
═══WORK PREVIOUSLY DONE

E.R. NO.	DATE REC'D.	BLDG. OR AREA	DESCRIPTION	% ESTIMATING COMPLETE (0 20 30 40 50 60 70 80 90 100)	SCHED. COMP. DATE	EST. COST	REMARKS	DIV. RESPONSIBLE	ACTUAL OR EST. COMP. DATE
								H.I.	
532	1-12	100F	BIOLOGY LAB. PART III		2-1				
541R		200W	REDOX R.R.			246,000	ESTIMATE TO D&C	D&C	12-21
546	12-15	200E	HOT SEMIWORKS		1-25			T	
562A	1-11	700, 100, 200	STORES WHSE. RENOVATION		2-3			MFG.	
941		100F	REV. WASTE DISPOSAL		1-5	1,200	ESTIMATE TO R. B. STURGES	H.I.	1-5-50
1034	12-21	100	DISMANTLING DEAERATORS 185BDF		12-21	366,000	ESTIMATE TO S. F. SCHURE	POWER	12-21
1075	12-19	100BDF 200EW 300	8 T.C. WHSES.		12-23	454,200	ESTIMATE TO J. LLOYD	MFG.	12-23
								T	
1077	1-12	108B	P-10A EXT.		1-16			T	
1116	1-4	111B	MONITOR AND STORAGE FAC.		1-20			POWER	
1119	1-4	ALL	COAL METERING EQUIPT.		1-22			T	12-22
1126		111B	COLD DEVELOPMENT LABORATORY		12-20	87,000	EST. TO F. A. BOWMAN	H.I.	
2438	12-27	200W 300	TEST WELL SAMPLER		1-25			H I.	
2469	12-27	300 200W	19 TEST WELLS		1-20			S	
2491	9-9	241TX	EVAPORATION FACILITIES				HOLD	T	12-16
3044	12-13	3706	REVISIONS TO ROOM 17 (FOR C-227)		12-16	5,300	ESTIMATE TO H. P. SHAW	P	1-10-50
3077	1-3	313	AUTOMATIC SCREW MACHINES		1-10	135,400	EST. TO C. P. CABELL	T	
3086	12-22	300	CORROSION HEAT FURNACE		1-20				

1195137

DECLASSIFIED

[redacted]

January 17, 1950

RECAP - ALL AREAS

PROJECT COSTS

	100	200	300	General	Total
Authorized	$4,120,900	$ 394,450	$1,690,400	$4,332,400	$10,538,150
Awaiting Approval	40,600	119,000	0	257,500	417,100
Work in Preparation	1,438,000	1,025,000	3,105,000	2,173,400	7,741,400
TOTALS	$5,599,500	$1,538,450	$4,795,400	$6,763,300	$18,696,650
Last Month's Totals	$5,487,500	$1,758,000	$4,628,600	$6,831,000	$18,605,100

PROJECTS COMPLETED DURING MONTH:

M-711	(Informal Request) Experimental Filter For Algae Removal	$13,000
C-268	Construction of Additional Sanitary Sewer Facilities, 200 EW	$91,000
C-271	Additional Waste Facilities (241BY) 6 E. Portion Only	$60,000
C-279	Improvements to Area Administration Bldgs.,	$167,800

WORK CANCELLED DURING MONTH

None

[redacted]

DECLASSIFIED

DECLASSIFIED

55

1195138

DECLASSIFIED
WITH DELETIONS

TECHNICAL DIVISIONS

January 1950

SUMMARY 2/10/50

Pile Technology Division

The power level of the F Pile was raised to 305 MW and that of the H Pile was raised to 330 MW without incident.

Sample tubes containing Group V material were discharged satisfactorily at 500 MD/ton. However, one Group V slug in addition to one Group IV slug was discharged with considerable difficulty during routine discharge at 400 MD/ton. Efforts to remove the Group IV slug caused rupture of the tube and leakage of water into the F Pile, but the temporary loss of 20 inhours of reactivity had been recovered by the end of the month.

Studies on the feasibility of large scale tritium production continued through the month. A feasibility report will be issued in February.

The IBM installation for tube-by-tube product accounting was completed at the H Pile.

Erection of the sigma pile for use in the exponential pile experiments was completed.

Inspection revealed that one process tube made from 2S aluminum with no cladding material had deep pits which had penetrated more than half way through the tube wall. The normal 72S aluminum cladding is essential for proper corrosion protection.

ce greater than 99.0% iodine removal efficiency.

ical Services Division

Since January 1, 1950 the Metallurgy & Control Division was reorganized as

Laboratory investigations at Hanford and Battelle relative to design of the 300 Area rolling mill were essentially completed during the month.

Initial tests on substitution of a lead bath for the tin bath in the canning process were very promising. With favorable development this procedure would permit indefinite use of the Al-Si canning bath.

Laboratory studies indicate that uranium slugs quenched from the beta phase should have a grain structure independent of the temperature reached in the beta phase.

Separations Technology Division

Recent difficulties with erratic second-cycle by-product losses and incomplete tank heel removals in the Canyon Buildings at both plants are still being

Technical Divisions

A radiochemical technique for the determination of the fission product ruthenium has been developed as a replacement for the more cumbersome and time-consuming distillation method. Investigation has shown that many standard Redox methods may be applied with only minor modifications to TBP process samples although, in general, a decrease in precision is obtained.

Several statistical studies were concluded on the measurements of slugs exposed up to 475 MWD which indicate that completely transformed alpha-rolled uranium slugs possess good dimensional stability during increased pile exposure.

The Audit and Inventory Unit began working in the field on the inventory of classified documents in the office files of plant personnel. Initial operations tested the proposed procedures and completed the inventory of some 23 offices. A secondary result was a marked increase of Classified Files work volume, due to the reduction of classified document holdings by plant personnel in preparation for the inventory of their files.

ABG:dg

ABG

[redacted] HW-15243 DEL

February 10, 1950

PILE TECHNOLOGY DIVISION

JANUARY, 1950

VISITORS AND BUSINESS TRIPS

John B. Sampson, Knolls Atomic Power Laboratory, arrived January 16, 1950 for a visit of approximately four months to assist in studies of the feasibility of expanded P-10 production.

William Primak, Argonne National Laboratory, Chicago, Illinois, was here January 16 through January 20, 1950 to discuss the proposed irradiation program.

H. Hurwitz, Jr. and T. M. Snyder, General Electric Co., Schenectady, N. Y., were here January 16 through January 20, 1950 to discuss P-11 problems and the P-10 program.

L. A. Cook and W. E. Johnson, Westinghouse Electric Co., Pittsburg, Pa., were here January 17 through January 19, 1950 to discuss the proposed HW irradiation program.

George Heitman, Knolls Atomic Power Laboratory, was here January 19, 1950 to discuss the irradiation program at Hanford.

G. A. Anderson, Argonne National Laboratory, Chicago, Illinois, was here January 30 through February 3, 1950 to arrange for installation of the test rig for Request ANL-140.

DECLASSIFIED

1195141

Pile Technology Division

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

W. K. Woods visited Knolls Atomic Power Laboratory, Schenectady, N. Y. January 9 through January 11, 1950 and Argonne National Laboratory January 12 and 13, 1950 to discuss the Materials Testing Program.

P. H. Reinker visited Los Alamos Scientific Laboratory January 16 through January 18, 1950 to attend meeting of the Reactor Safeguard Committee. He also visited North American Aviation Co., Downey, California January 18 through 20 for technical consultation on the graphite program.

ORGANIZATION AND PERSONNEL

	December	January
Pile Physics Section	37	40
Pile Engineering Section	30	31
Metallurgy Section	--	38
P-10 Project	10	13
Administrative	3	3
	80	125

Metallurgy Section of Technical Services Division transferred into the Pile Technology Division as of January 1, 1950.

A physicist and two laboratory assistants were hired for the Physics Section. A chemist was hired into the Engineering Section. Transfers from Technical Services Division into the P-10 Project included a laboratory assistant, a technical graduate, and a technologist.

PHYSICS

Conversion of a Pile to P-10 Production

A program has been initiated to develop the best method of converting a Hanford Pile to the primary production of P-10. The planning is being done within the limits set by the existing pile structure, cooling facilities, and slug canning techniques. Broadly the objectives are maximum neutron economy and minimum investment of U^{235}.

Following a series of conferences with physicists from KAPL and as a result of calculations by the Hanford Physics Section it appeared that the goals might be achieved by the investment in the pile of 450 kilograms of U^{235} in a U-Al alloy. This material would be loaded in 1600 tubes in the DR pile.

[redacted]

The remaining tubes, with the exception of a P-10-A blanket, would be empty. The entire available cooling water flow would be used in the 1600 tubes and blanket. This figure is at present uncertain by - 5% to + 30%. Water flow and maximum slug surface temperature would conform to present plant practice. Further development directed toward allowing a flow of 25 g.p.m. per tube and a maximum slug surface temperature of 90° C would, if successful, reduce the pile mass to 260 kilograms of U^{235}. In either of these cases, holdup in the recovery of U^{235} from discharged slugs would be large, and the total masses invested would be about 800 kilos for present practice and 600 kilos if the present limits can be relaxed.

Critical Mass of Plutonium Solutions

All major field work has been completed on the general site installations and the test unit with the exception of the cocoon coating of surfaces for contamination control and the testing of electrical circuits. Some minor difficulties have been encountered in the aligning of test unit components, however, it is expected that all modifications can be completed by March 1, 1950.

Details of operating procedures have been worked out with representatives of SF Accountability, Health Instruments, and Security and Patrol.

Recommendations were made to the Redox Development Group on the design of process vessels which will allow the processing of batches containing twice the presently allowed amount of plutonium. It is doubtful that such vessels are practical.

Exponential Experiments

The lay-up of a combined standard and sigma pile has been completed. This pile will serve for counter and foil standardization and also a check point for technique. The pile has been constructed of purified graphite bars whose quality was determined in the test pile. A diffusion length obtained in this pile should be in agreement with the test pile measurements.

Ten radium berylium neutron sources, each of 1/4 curie strength, have arrived and are being matched. Facilities for the experiments have been installed in the 101 Building and standardization of foil counters is in progress.

It is expected that these facilities will be useful for experiments in connection with the P-10 production program. Actual lattice design experiments may be deferred until the pile conversion has been carried out.

A critical summary has been prepared of all previous work on exponential piles.

Xenon

Work is now being renewed on the production of Xe^{135} in quantities sufficient for cross-section measurements. In June, 1948, a special slug containing uranium and thorium hydroxides was irradiated in the Test Pile (P. T. 305-11-P, Supplement A) and the Xe^{135} separated and collected. The yield was about 75% of the amount calculated to have been produced.

1195143 DECLASSIFIED

Pile Technology Division

A new gas separator and collection system will be assembled, and further tests made in the Test Pile with the objective of accumulating more data on yields, and obtaining an adequate separation of Xe and Kr. When results in the Test Pile are satisfactory, a similar installation is planned at a production pile. The cross-section as a function of neutron energy will then be determined by use of the neutron spectrometer which is nearing completion. A calculation, using data obtained at another site, has been made of the change in xenon effectiveness as the temperature of the graphite changes. The xenon effectiveness decreases by about 10% when the graphite temperature drops from normal operating values to inlet water temperature. This effect accounts for only one-half of the observed difference between graphite coefficients measured with and without xenon. The remaining difference is presumed to be due to the different temperature levels at which the coefficients are determined.

Shielding

The best analyses of the gas evolved from magnesium oxychloride concrete (under pile irradiation) indicate only a small amount of chlorine. Most of the gas evolved seems to be CO_2 and CO which apparently arise from carbonate impurities in the cement. All this indicates that the feasibility of a magnesium oxychloride shield will not depend entirely on chlorine evolution alone.

Test Pile

The galvanometer system for the Test Pile was checked and put in satisfactory operating condition. The control rod selsyn was found to be in error by 0.06 inches (0.06 inhours at the normal operating position). The selsyn was set to read correctly. Since the tests are based on a method of differences the values obtained for metal and graphite testing will not be in error.

Six special work requests were completed during January.

Special Requests

Seventy-six P-10 slugs and twelve other special request pieces were discharged from the piles during the month, while one hundred seventy-nine P-10 slugs and twenty-four other special request pieces were being charged. There are thirteen additional special request pieces on hand awaiting irradiation.

Pile Physics Work

Two more process tube ion chambers under test at the B Pile have been found to be unserviceable. It is not known whether the cause was irradiation or some other factor. Replacement chambers will not be manufactured until this is determined.

A coefficient test was performed at the B Pile with 80% CO_2. The results are fairly consistent with expected trends. A similar test was performed at the H Pile from an equilibrium power level of 320 MW. The results of this test will be reported when analysis of the data is complete.

Pile Technology Division

The power level at the F Pile was raised from 275 MW to 305 MW, with no unusual reactivity effects noted. At the H Pile the level was increased from 275 MW to 330 MW, with no unexpected effects observed.

Water entered the graphite at F Pile through a ruptured tube, resulting in a twenty inhour reactivity loss and a mild temperature depression in the lower far corner of the pile. The power level was not limited at any time by the effect, and operation has since returned to normal.

P Division shift personnel are being trained in the operation of the newly installed IBM accounting equipment at the H Pile. Routine temperature traverses on this installation are expected by mid-February.

Reactivity

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

	B Pile	D Pile	F Pile	H Pile
In rods	63 ih	95 ih	51 ih	118 ih
In xenon poison	460	492	542	590
In Special Requests				
P-10	426	342	336	120
Materials Testing Program	5	20	17	0
Other	5	49	8	0
In Lead-Cadmium columns	0	0	0	107
In bismuth	123	109	115	0
In plant assistance	0	29	0	5
In dummy columns	9	4	43	0
In over-all coefficient	-224	-235	-260	-99
Total cold, clean reactivity	867	905	852	841

The B Pile gained 20 inhours, the D Pile 5 inhours, and the H Pile 34 inhours during the month. Ten inhours of the H Pile gain was due to the removal of cooling water from the B test hole. Changes at F Pile as compared to last month were due to a re-evaluation of the strengths of flattening columns.

ENGINEERING

Slug Inspection

Two tubes of Group V metal exposed under P. T. No. 105-278-P have been discharged at 500 MD/T without difficulty.

A Group V slug canned on 10-23-48 caused a stuck tube in the F Pile. This slug will be examined to determine the degree of transformation.

[redacted]

1195145

Pile Technology Division

A warped Group IV slug canned on 7-7-48 stuck during discharge of Tube 1293F. Approximately three days were required to discharge the tube. All remaining Group IV metal is to be discharged by the end of February.

Pile Control

The preliminary mock-up of the alternative third safety device using a V.S.R. loaded with neutron absorbing balls has been completed and tests have been run. An interim report is being issued on these tests. The results show that the rate of poisoning by the flow of balls from the rod is limited by space limitations. Work on this type of control rod has been stopped until another method involving introduction of the control balls through a fluted step plug can be evaluated. It is hoped that this alternative method will permit faster poisoning of the pile. The mock-up of the fluted step plug has been completed and tests will be initiated as soon as auxiliary equipment is available. Analysis of the preliminary test results will determine the method which will be developed further.

2S Aluminum Process Tube Corrosion

All of the 2S uncladded process tubes now in service have been examined. Several of these tubes were found to have very extensive corrosion product deposition. Tube 1159B was removed for examination and was found to be very severely pitted with deep pits which had penetrated more than half way through the tube wall. It has been recommended that only 72S clad tubes be used in the future.

Slug Exposure at Elevated Temperatures

Development work in the flow laboratory has demonstrated the feasibility of using a variable flow pigtail on the F Pile in conjunction with P. T. No. 105-103-P. A variable water flow is necessary to permit pile start-ups without excessive cutbacks and to limit the flow sufficiently to increase the outlet water temperature to the desired value.

Graphite Expansion

Pile motion measurements indicate that the slight contraction of the B Pile is continuing. The total contraction at the centerline since August, 1949 amounts to about 5 % of the previous expansion. No change in trends at the D or F Piles was observed. Measurements at the H Pile showed a vertical expansion of the graphite of 0.16 to 0.22 inches on January 5 and 0.12 to 0.20 inches on January 26.

The Far Side restraining clamps which were installed on the D and F Piles at the end of December are stressed to about 1/3 capacity when the piles are hot but are loose when the piles are cold.

DECLASSIFIED

1195146

DECLASSIFIED

Pile Technology Division

The fabrication of a cutter to remove a 1 x 1 x 48 inch filler block sample from a pile was completed. It is planned to use this cutter to remove a sample from the A Hole of the D Pile during February.

Increase of carbon dioxide in the B Pile atmosphere from 80% to 100% was started on January 30.

Power Level

The power level of the H Pile was increased from 275 MW to 330 MW in accordance with P. T. No. 105-302-P in the following steps:

275 - 290	January 10
290 - 305	January 17
305 - 320	January 24
320 - 330	January 31

The maximum graphite filler block and tube block temperatures at 330 MW were 216° C and 161° C respectively. The maximum outlet water temperature in the .285 zone was 45.4° C with a 1.6° C inlet. The gas analysis at the end of the month was 94.3% CO_2 and 4% CO.

The power level of the F Pile was increased from 275 to 290 MW on January 3 and from 290 to 305 MW on January 28.

Graphite Monitoring

Preliminary observations of the X-ray diffraction line shapes of the (00.2) reflection of samples subjected to nuclear annealing in empty process tubes in the piles at about 275° C indicate that "nuclear annealing" is effective in annealing the type of damage stored in the very high activation energy regions (that annealed thermally only at temperatures above 1000° C). This is important as it indicates that the amount of annealing possible by nuclear methods probably is limited only by the rate of further damage at the temperature of the exposure. The selectivity of the nuclear annealing process with respect to thermal conductivity will be investigated in cooperation with the NAA (North American Aviation) group on the current experiments in progress in an uncooled test hole at a nominal 335° C.

X-ray examination of virgin graphite samples exposed for about 1200 MD/CT at temperatures of 250 to 275° C showed an expansion of about 0.2 percent in the C_o-spacing. This amount is only slightly more than the experimental error of the measurement, but on the basis of these data, the expansion rate at 275° C is less than 5 percent of the rate at 25° C.

A comprehensive program on CSF graphite has given results to date on ten sets of samples covering an exposure range to 651 MD/CT in cooled B test holes. No new significant differences have been observed between CSF and KC graphite. This program is providing supplementary background data under more carefully

DECLASSIFIED
WITH DELETIONS

controlled conditions and will provide a supply of irradiated samples for future annealing studies.

Molded graphitized lampblack showed rates of expansion on capsule exposure comparable to that for transverse CSF graphite. This eliminates the possibility that substantially unoriented carbon structures would lead to a significant decrease in physical expansion rate.

The gradient of damage along a core sample drilled from a process tube block was determined by the NAA group by measurements of thermal conductivity on thin slabs of the core. The gradient from these data appears to be lower than that obtained from X-ray measurements on the same sample, and may indicate a difference in the rates of damage and anneal from the variable temperature history of the core. The absolute values were significantly lower than any obtained previously from test samples and will require verification before any significant conclusions are drawn.

P-10 Project

Small samples of P-10-A alloy prepared from three grades of aluminum, 2S, 99.85%, and 99.99%, were irradiated in the test hole for two weeks to determine the reduction in activity that might be obtained with the purer grades of aluminum. The results show that the activity of the alloy prepared from 99.85% aluminum is only about 30 percent lower than the alloy prepared from 2S aluminum; however, the activity of alloy prepared from 99.99% aluminum was only about 10% that for the alloy from 2S aluminum. These preliminary results indicate that "hot" slug handling would be simpified if 99.99% aluminum were used in slug preparation. Slug irradiations are in progress to check these results.

DECLASSIFIED
WITH DELETIONS

1195148

Pile Technology Division

P-10 Production in an Enriched Pile

Calculations were made to determine the maximum power output per process tube for different lengths of tube loaded with various U^{235}-Al and P-10-A slugs. It was found that the slug surface temperatures generally limit the power output. Under the following conditions:

1. A flat neutron flux distribution from end to end
2. Water flow 20 g.p.m.
3. Inlet water 15° C
4. Slug surface temperature equal to those to be encountered under present pile operational limits
5. The uranium bearing slugs have about 2/3 of the total slug surface,

the power per tube ranged from approximately 185 KW for a 10 foot active zone to 250 KW for a 23.2 ft. active zone. If higher flow rates or slug surface temperatures were permitted the power per given length would be appreciably greater.

METALLURGY

A total of 231 uranium billets cast under pressures ranging from 25 to 1700 microns have been collected as working material for PT 314-59-M, "Effect of Furnace Pressure on Billet Quality". These billets have been shipped to Simonds, at Lockport, N. Y. for the February rolling, to be conducted under the observation of a representative from the Metallurgy Section.

DECLASSIFIED

Pile Technology Division

Because of the difficulties attending the experimental use of ferrous molds in the uranium melt plant, and the comparatively small gains to be realized from their possible successful use on a production scale, it has been agreed to discontinue work on the development of such molds using production equipment. Improved techniques in the use of graphite molds have largely eliminated the problems leading to these extended efforts to develop a substitute.

Continued experimental work with melt plant casting procedures indicates that a 2 to 3% improvement in uranium billet yield results from increasing the heating time of the melt ten minutes beyond the normal two-hour period.

Twenty-eight more test samples have been collected from the crucible burn-out air filter mockup for use by the Analytical Section in developing an accurate means of measuring the low-range uranium content of such sample papers.

Uranium Rolling

Cooling rate data at 300 and 600° C were determined on a section of production uranium rod. The data were derived from cooling curves obtained with a thermocouple imbedded in the center of the rod. Runs were made with the uranium on bricks and on channel iron in still and in moving air. The rate for the range 350 to 300° C varied from 16 to 29.5 degrees Centigrade per minute and for the range 650 to 600° C from 25.6 to 56.6 degrees Centigrade per minute.

Hardness measurements were made on the Battelle rod rolled various amounts at 300 and 600° C. The hardness of the uranium rolled at 600° C increased but little over that of cast metal while the hardness of the uranium rolled at 300° C increased 70 to 100 points Brinell with a 90 per cent reduction. Thus annealing or recrystallization occurred at 600° C while the metal was cold worked at 300° C.

Battelle has completed most of the experimental work requested by Hanford in connection with the 300 Area rolling mill design. Hanford should receive the final reports on this work by the middle of February.

A report (Document No. HW-15750) was prepared summarizing data, pertinent to rolling mill design, which has been obtained to date.

Uranium Slug Canning

As part of an experiment to test the feasibility of substituting a lead bath for the usual tin bath in the canning process, ten slugs were processed through this alternate process. These slugs were canned with no mechanical difficulties, and subsequent checks showed excellent wetting and normal bond strength. Metallographic studies of the bonding layer are in progress.

[redacted]

Pile Technology Division

A new set of visual standards was prepared for use in inspecting process aluminum cans. A study had shown that prior to the installation of these standards, approximately 75% of the cans rejected at inspection were of satisfactory quality.

Data obtained to date in the pursuit of PT 313-111-M, "Substitution of Calcium Nitrate for Calcium Chloride in the Chip Recovery Process, indicate that under suitable conditions, calcium nitrate is as effective in precipitating uranium particles from the chip wash solutions as is calcium chloride, with the added advantage that it does not contaminate the sludge with halide-ions. Work is continuing to determine optimum operating conditions.

A number of slugs canned by the quad-dip process using conditions approximating the borderline of transformation as determined in a previous test were examined for completeness of transformation. With bronze times of 60 to 80 seconds and corresponding bronze temperatures of 710 to 700° C, all slugs were found to be completely transformed; however, since the amount of agitation during the time in the bronze was greater than in the previous tests, the results are not comparable with the previous data. Tests are continuing with the agitation conditions currently used in production being held constant.

Various small pieces of uranium up to and including pieces of slug diameter were quenched from temperatures in the beta and gamma phases to study the resulting grain structure. There was no difference in grain size in similar sized samples regardless of quenching temperature in the beta range, but the pieces of slug diameter had larger grains than the smaller samples. Columnar grains extending in from the surface were observed in a slug diameter piece quenched from the gamma phase. These tests were performed to check structures observed in the induction heat treating work.

Uranium Alloys

Because of the need for immediate data on low temperature rolling studies, little progress was made at either Battelle or Hanford on the alloying program.

Dilatometry

In a continuation of tests on gamma extruded uranium, approximately random coefficients were obtained on both transverse and longitudinal samples, thus confirming further that this material has a random orientation. Previous tests were made solely on longitudinal samples.

The uranium alloy samples continue to show, in general, a slight degree of orientation in the "as rolled" condition and a random alpha coefficient after being heated into the beta phase, but there are exceptions to this behavior.

DECLASSIFIED

Pile Technology Division

X-ray Diffraction Studies

In a continuation of work on the variation of orientation around the periphery of production rods, a slug was taken from each of five rods of the same lot to be tested for orientation. Of three slugs examined thus far only two were found to vary significantly in orientation around the periphery, and in these, the variation was much less pronounced than in the slug examined previously.

Orientation work on the rods produced at Battelle is continuing. First results gave such large variations in orientation in the same rod that the two samples from each rod are now being taken from the center portion instead of being taken from the lead end and from the center.

Consideration is being given to a new method of calculating orientations in uranium from X-ray data. The method involves the use of an internal standard in place of one of the uranium lines as the intensity reference on which the orientation calculations are based.

Radio-Metallurgy

The laboratory work connected with the relative shielding of gamma rays by leaded glass with densities of 6.0 to 6.5 g/cc has been completed and a report of this attenuation compared with steel has been prepared. Previous indications of a very favorable attenuation relationship between these glasses and steel have been confirmed by this study.

The last special request slug from test KAPL-101 was discharged on January 17 after 6 months' exposure in the D Pile. Preliminary radiation studies have been made and they reveal that the 6 months' exposure pieces of C.P. lead after the same period of decay are 50% less radioactive than those exposed for 3 months.

Shop construction of the equipment for cutting tensile specimens from aluminum process tubing and thimbles has begun. All equipment is on hand except the Danly die set which should arrive this month.

Metallographic sample preparation through 4/0 grit paper has been aided by improving the paper holding mechanism with two replaceable plates that hold the abrasive paper, retain the resulting contamination, and permit easy decontamination and re-use. A few samples prepared by this method have been very satisfactory when compared with those samples prepared on the oscillating type of fine grinder.

A section of the V.S.R. thimble, No. 20-F, that was adjacent to the vertical safety rod guide was examined and photographed. The general appearance of the corroded piece is quite different from that observed on thimbles Nos. 23-D and 33-D, in that an even coat of striated corrosion products covers the surface without the presence of corrosion pits. Corrosion products for thimbles

Pile Technology Division

No. 23-D and No. 20-F have been submitted to the research group of the Metallurgy Section for crystallographic and chemical analyses of the materials present.

The prints and the philosophy for the proposed intermediate level cell were completely reviewed and discussed with the area representative of the Health Instrument Division. A list of the necessary drawing changes was submitted to the contact engineer. However, in order to obtain an estimate for the cost of such a cell, the uncorrected prints have been released for bidding purposes only since most corrections will not materially affect the cost.

All the design considerations for the slug cut-off box that will provide up to 2 inch wafers from slugs and be able to section a wafer into metallographic sections have been completed.

Design of the modification to the storage and monitoring facilities in the 111-B Building has been completed by the Project Engineering Division.

P-10 Alloy

Trial molds made from graphite pipe furnished by the National Carbon Company proved unsatisfactory due to attack of the graphite by the melt. Molds made from excess graphite shapes obtained from Electromet, however, produced excellent billets, and appear to be free from attack by the melt.

The rods obtained from the December 16 extrusion have been largely converted into slugs. These rods were of good quality, and were less crooked than those from previous extrusions. Production for January is as follows:

	No.	Weight
Total billets cast	20	789
Acceptable billets cast	16	586
Billets extruded	0	0
Slugs machined	361	182
Slugs canned	345	174

Corrosion

Except for one stressed specimen, all static corrosion tests at 72° C ± 2° of mild steel SAE 1010 in Redox waste and recovery solutions have been completed. Tests were made with machine welded (submerged arc) specimens in the as welded and welded-stressed conditions. The as welded specimens were exposed in partial immersion tests and the welded-stressed specimens in total immersion tests. It was found that the specimens exposed to solutions the pH of which was between 10 and 13 exhibited good resistance to corrosion while those specimens in solutions whose pH was between 1 and 3 showed pitting and/or rust formation and scale-like deposits.

DECLASSIFIED

Pile Technology Division

Additional Al-Si samples with a tin content between 2.0% and 3.0% have been received and will be tested as soon as test specimens and equipment have been fabricated.

Corrosion products from thimbles 23-D and 20-F are being examined by X-ray with the idea that they may be identified by this method. However, the Hanawalt Tables, used to identify structures have not been received to date and the tables currently available are old and incomplete.

Dynamic corrosion tests on stellite in Redox HW-2 Flowsheet streams were requested by Design and Construction and preparations for this work have begun.

Miscellaneous

The creep rate of a 2S aluminum specimen loaded to 60 psi at 450° C was practically zero after 2000 hours under load. The total elongation of this specimen was 0.32 per cent on January 6, 1950, the same as reported for December 12 1949. Two more tests, making a total of six, required to obtain design curves at 400 and 450° C have been completed.

The preparation of zinc-lead alloy castings containing 0.5, 1.0 and 2 per cent lead was completed. These alloys were requested by the Pile Engineering Section for tests related to the nozzle galvanizing work.

Little or no progress was made on Building 3730 during the past month. The building remains approximately 80 per cent complete.

A partition has been erected in Building 3732 to form a small room to be used as a repository for SF material held on the Plant Assistance inventory.

Thirty-nine acceptable capsule slugs and 38 receptacle slugs were prepared against future demands. Six Special Request slugs were inspected, processed, and shipped to the pile for loading.

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

[redacted]

February 10, 1950

SEPARATIONS TECHNOLOGY DIVISION

JANUARY, 1950

VISITORS AND BUSINESS TRIPS

Frank Bruce and Donald Overholt from the Oak Ridge National Laboratory visited this site on January 5 and 6 for discussions on MJ-4, 231 and 234 problems.

C. D. Carroll and W. D. Egnor of the General Engr. & Consulting Lab. were here from January 10 to 13 to discuss the long-range bearing test program for MJ-1.

G. W. Watt, Consultant from the University of Texas, visited this site from January 17 to 21 for consultation on divisional research and development problems.

W. M. Harty visited the Los Alamos Scientific Lab. on January 5 and 6 and the Oak Ridge National Lab. from January 9 to 11 for MJ-3 consultations.

R. E. Burns attended a Waste Processing Committee Meeting in Washington, D.C. on January 9 and 10 and visited the Argonne National Laboratory on January 11 for waste processing discussion.

V. R. Cooper, R. B. Richards, and C. M. Slansky were at the Oak Ridge National Lab. on January 16 and 17 for a meeting on waste metal recovery. Mr. Cooper and Mr. Slansky attended a Purex Process Meeting at ORNL on January 18.

R. B. Richards visited the Petroleum Refining Laboratory, Pa. State College, on January 19 and 20 for Redox and TBP consultations and the Argonne National Laboratory on January 21 for semi-works design consultation.

V. R. Cooper visited the Univ. of Michigan on January 19 and the Univ. of Chicago on January 20 to interview prospective employees.

B. Weidenbaum visited the Industrial Hygiene Foundation on January 20, the Army Chemical Center in Maryland on January 23, and the G.E. Research Lab. and the Gen. Engr. & Consl. Lab. on January 26 and 27 to discuss aerosol problems. He visited the du Pont Co., Wilmington, on January 24 and 25 to discuss sand filter operation.

DECLASSIFIED

1195155

Separations Technology Division

ORGANIZATION AND PERSONNEL

Personnel totals in the Separations Technology Division are as follows:

	December	January
Administration	2	2
Special Assignment	3	2
Process Section	24	24
Development Section	92	90
Research Section	35	35
	156	153

Special Assignment: One Chemical Engineer was transferred to the Technical Services Division.

Process Section: One Chemist was added as a new employee and one Steno-Typist was granted a leave of absence due to illness.

Development Section: One Chemical Helper was added as a new employee. One Chemical Engineer terminated, and a Chemical Engineer and a Chemical Trainee were granted leaves of absence.

200 AREAS PLANT ASSISTANCE

Canyon Buildings

Second cycle by-product losses have been erratic at both B and T Plants. Although the cause of the increased losses has not been determined, failure to empty the precipitator tank between runs has been found to be a contributing factor at B Plant. Phosphoric acid addition at a controlled rate lowered the level of the losses but did not eliminate the erratic performance.

An Acid Wash Run at B Plant accumulated 66% of an average run through the Canyon Building; of this, 31% was cleaned out of the second cycle product precipitation section. The high product hold-up in this section was traced to a defective spray in the precipitator tank. The spray was replaced.

Additional data at B Plant indicate that the largest portion of the coating removal loss (approximately 80%) originates during the 5% nitric acid digestion. This digestion is aimed at removing the bonding material sludge. Samples at T Plant continue to be erratic and unreliable.

Difficulty in removing heels from tanks has been experienced at both B and T Plants recently. This has been indicated through increased frequency of incompletely dissolved product solutions and occasions when additional solution has been removed from the tanks after the tank was thought to be empty. An extensive series of tests has been initiated at both B and T Plants to develop the best procedure for consistently removing the heels from tanks.

DECLASSIFIED

1195156

Separations Technology Division

Concentration Buildings

The final part of Production Test 224-T-13, aimed at shortening the metathesis time cycle, has been completed at T Plant. Runs were processed under this item at 80% of standard metathesis volume, centrifuging without dilution, and with all of the metathesis wash effluent recycled to the routine rework. The average waste loss for the test series was slightly higher than that of standard runs. Mechanical difficulties in F Cell, including failure of the F-2 centrifuge shortly after test runs began, may have been partially responsible for the slightly increased losses. The production test conditions will be evaluated further at both B and T Plants.

Controlled rate of phosphoric acid addition for the bismuth phosphate by-product precipitation has been studied at both B and T Plants with confirmatory results. Tests at 10, 5,and 2 pounds per minute rates indicated losses decreasing with decreasing addition rates. The rate has been standardized at 5 pounds per minute, since the decrease in loss at the slower rate may not be significant. Decontamination was unaffected by the slower precipitation rates.

Isolation Buildings

The nitric acid concentration in the supernatant solutions and washings has been increased from approximately 0.8 N to 1.1 N, prior to the nitrite destruction of peroxide, in an attempt to alleviate the current sludging condition in the "kill" tank. It is expected that the effect of this measure will require long-term evaluation.

The recovery of 234-5 Building Run X-9-07-6 was started again. One can of a batch of seven returned to the Isolation Building contained 31% of an average run. The oxalate in this material was destroyed with nitric acid without incident. Three cans from this same batch processed earlier recovered 8% of an average run.

Purification and Fabrication Building

Plutonium oxide weights are currently used for process control purposes, material balances, and accountability in the Dry Chemistry operations in the 234 Building. If the oxalate weights could be used, two important advantages would be gained: (1) process control and accountability would not be lost when non-standard oxidation cycles occur; and (2) attractive process changes involving the elimination or changing of the oxidation step could be investigated. An attempt to correlate oxalate weights (after the drying cycle at 130°C) with oxide weights gave a very poor correlation. It is believed that some moisture was present in these oxalates. Oxalate weights will be taken after the 250°C heating cycle and a similar correlation attempt will be made.

The heating cycle for Casting was changed during December to include a three-hour "hold" while the charge is at 900°C. This "hold" period was added to allow time for the distillation of impurities. The summations of c/q values for light element impurities for six 090 units produced prior to cycle change was 0.535 and for six comparable units produced after the cycle change was 0.325. Additional data will be accumulated before a definite conclusion is made, although the data to date indicate that greater purification is being effected.

Separations Technology Division [redacted]

Data obtained from 090 units processed in Pressing have been recorded in a report dated January 12, 1950, with File Number 15-833.

Hood 26 has been used during the month of January for experimental Coating studies by the Plant Assistance Group. Several operating procedure changes have been established as desirable from results obtained during this experimental work and these are being recommended for plant adoption. An interim report will be written during February covering the work done to date in Hood 26.

REDOX AND METAL WASTE RECOVERY DEVELOPMENT

Solvent Extraction Studies

During January, 32 solvent extraction studies for the TBP metal waste recovery process were completed in 3-inch and 8-inch packed columns. New information from these studies is summarized below:

1. Further runs using an 8.42-in. i.d. column packed with 18.4 ft. of 1-inch stainless steel Raschig rings, and operating as an RA simple extraction section, indicated the following:

   a. At a nitrate ion concentration of approximately 6.5 M in the aqueous phase, waste losses were 0.1 to 0.23% at 1 to 1.4 tons/day uranium production, compared with approximately 4% waste loss reported previously at a nitrate ion concentration of approximately 4.3 M. With H.T.U's. of approximately 2.5 feet and H.E.T.S. values of approximately 6 feet, no significant scale-up factor is indicated on comparing 3-in. RA runs using 1/2-in. Raschig-ring packing with 8.42-in. column runs using 1-inch Raschig-ring packing.

2. Studies using the above 8.42-in. i.d. column packed with 18.4 ft. of 1/2-inch stainless steel Raschig rings indicated the following:

   a. Extraction performance exhibited considerable variability, with waste losses compared to 1-in. Raschig rings being both better (0.01%) and poorer (0.6%), using approximately 5.5 M nitrate ion concentration in the extraction section aqueous phase. This variability may be related to changes in relative wetting of the 1/2-in. rings by the aqueous and organic phases.

   b. There is partial evidence that the presence of 0.02 to 0.05 M ferrous sulfamate in the extraction section (aqueous phase) actually improves extraction performance, perhaps by affecting relative wetting and emulsifying tendencies of the phases and therefore influencing organic globule size.

   c. The flooding capacity of 1/2-in. stainless steel Raschig rings was determined to be 2200 ± 200 gal./(hr.)(sq.ft.), sum of both phases, in an 8.42-in. i.d. RA extraction section operating with 0.02 M ferrous sulfamate in the aqueous phase. This corresponds to a maximum capacity of 1.7 short tons per day uranium processing rate for this size column packed with 1/2-in. rings.

DECLASSIFIED

3. Studies using the above 8.42-in. column packed with 18.4 feet of 1/2-in. stainless steel Raschig rings as an RC Column have indicated the following:

a. Anomalous extraction performance of 1/2-in. stainless steel Raschig rings was even more strikingly evident in RC Column operation than for the RA extraction column studies mentioned above. In some studies waste losses were lower than for 1-in. Raschig rings (0.6% vs. 1.2% for 1-in. rings), but in other duplicate runs losses with the 1/2-in. rings were as high as 8%. This 15-fold change in waste loss at supposedly duplicate operating conditions strongly suggests marked changes in interfacial wetting characteristics, and may necessitate the use of packing larger than 1/2-in. in plant RC Columns.

b. A flooding capacity of 1400 ± 200 gal./(hr.)(sq.ft.), sum of both phases, was checked by two duplicate runs and corresponds to an ultimate capacity of approximately 0.64 short tons of uranium/day for an 8.42-in. i.d. RC Column packed with 1/2-in. Raschig rings.

4. Continued use of a 3-in. i.d. glass column packed with 21 feet of 1/2-in. stainless steel Raschig rings (as either an RA or an RC Column) for scouting the effects of flow sheet variables on extraction performance has resulted in the following new information:

a. Contrary to predictions made previously from incomplete phase-equilibrium data, uranium losses in the RAW stream using 13-volume per cent TBP in the organic solvent were as low as when using 15% TBP. This is important because it permits operating the RA Column with a higher per cent saturation of the TBP with uranium (necessary for good decontamination from fission products), and because with the lower per cent TBP in the RCF stream the operation of stripping uranium back into the water phase in the RC Column is significantly easier.

b. The use of 0.02 to 0.05 M ferrous sulfamate in the RA extraction section (aqueous phase) appears definitely beneficial to uranium extraction -- uranium losses for conditions studied being approximately 2- to 5-fold lower with ferrous sulfamate present. The possibility of operating the RA Column with a lower concentration of nitric acid salting-agent because of this beneficial effect of ferrous sulfamate is being investigated.

c. Flooding capacities of approximately 2300 gal./(hr.)(sq.ft.), sum of both phases, with or without ferrous sulfamate present agree with flooding data reported above for 1/2-in. stainless steel Raschig rings in the 8.42-in. i.d. column.

d. As mentioned above, decreasing the TBP concentration in the organic phase from 15 to 13-volume per cent significantly improved extraction performance in the RC Column. Comparing operation at a 1 to 1 phase volume ratio, uranium losses to the RCW stream decreased approximately 5-fold. Conversely, when operating with 13% TBP, it was found that the RCX flow could be reduced to approximately 0.7 of the RCF flow without exceeding a waste loss of approximately 0.1% at 50% of flooding capacity for the packing.

e. A flooding capacity of approximately 1500 gal./(hr.)(sq.ft.), sum of both phases, for 1/2-in. rings is in substantial agreement with RC Column flooding data reported above for the 8.42-in. i.d. column.

Bldg. 321 Construction and Maintenance

Work remaining as exceptions at the close-out of Project C-331 on January 31 included (1) replacement of the second PRV in the new air conditioner steam controls, (2) installation of motor-operated louvres on the new roof vent fans, (3) installation of an expanded metal guard around the inert gas generator and installation of a water wall between generator combustion chamber and control panel, and (4) correction of the excessively high temperatures in the pipe gallery and west end of the operating gallery. Installation completion of the 8-in. and 3-in. pulse columns continues to be held up by procurement delays on the pierced plates. Shipment originally promised for December was finally made on January 27, 1950. The 8-in. column should be completed and in operation very shortly after the plates arrive. The new pulse generator for this unit has been installed and satisfactorily tested. All piping is complete. The former 2-3-in. IB Column has been dismantled and precision-bored 3-in. glass sections for the 3-in. pulse column are on hand. Piping revisions to the former 5-in. pulse column generator have been completed for use with the 3-in. column. Other piping revisions are in progress but cannot be completed until the pierced plates arrive without seriously slowing down other Demonstration Unit studies.

Engineering and design for the hexone distillation apparatus were completed and fabrication and installation begun during the period. The installation was engineered around equipment already installed, such as the concentrator, which will be used as a boiler, the hexone stripper, which will be used as a distillation column, and the distilled water condenser, which will be used as an off-gas condenser. Major revisions include fabrication of 4-in. vapor lines and installation of one pump. Several minor piping revisions are necessary. Provision has been made for protection of the boiler (AQ-8 Tank) and other equipment against excessive pressure or vacuum build-up. Although adverse weather conditions are seriously hampering the job, completion is anticipated before the 15th of February.

The major portion of the routine maintenance activities during the period has been devoted to thawing frozen lines in the Scale-Up tank farm and replacing cracked or broken pipes, valves, and fittings. Delays encountered from this source have decreased operating efficiency in the range of 30 to 50%, and make an economic study of the feasibility of constructing a permanent shelter over the entire tank farm a serious consideration.

Other maintenance items of note during the month include (1) the repair of a coil leak in O-1 tank, (2) installation of agitators in A-9 and W-15 tanks, (3) replacement of defective Holtzer-Cabot motors in the Fischer & Porter recorder-controllers with converted Brown instrument motors, (4) installation and testing (entirely successful to date) of a mechanical seal packing gland on one Worthington pump, and (5) progress on the installation of an orifice flow meter on the Scale-Up tank farm water condenser.

DECLASSIFIED

1195160

DECLASSIFIED

Separations Technology Division

Bldg. 321 Operations

W-11 Tank in the underground storage area, used during the past two and one-half years for disposal of Redox uranium wastes too high in uranium content for cribbing, is nearly full. Rodding and sample analyses on the remaining three buried tanks containing various wastes from $BiPO_4$ semi-works studies, indicated the feasibility of removing some 20,000 gallons of solution from W-14 Tank and disposal in the 200 Area cribs to provide a relatively clean, empty tank for future "cold" semi-works studies. This tank contains second-cycle $BiPO_4$ process wastes. H.I. and "S" Divisions supervision have both agreed to permitting disposal of this waste in the 200 Area cribs, and plans are currently being made to carry out this operation.

As indicated under Construction notes, plans are under way for removal of all hexone from the 321 Building tanks to provide room for the less-flammable Shell Deodorized Spray Base Solvent to be used with TBP on metal waste recovery studies. Plans include distillation to reduce water content to a tolerable level (to permit storage of the hexone in black iron drums without oxidation or rust formation, and storage of the dried hexone for use in subsequent Redox studies). Tentative plans are also being made to use this same equipment for separation of Stoddard Solvent and TBP, to make the TBP available for use with the Deodorized Base Solvent to more nearly approach plant conditions during waste metal recovery studies. The closed-cup flash points of the three solvents are: Hexone, 60°F; Stoddard Type solvent, 108°F; and Deodorized Base, 156°F.

All solvent extraction studies in the Demonstration Unit were made in the 3-in. packed column. This column was used alternately for RA and RC-type studies with nine RA and eleven RC studies completed during the period. Waste losses (uranium) throughout the month were low enough to permit disposal of the waste without reprocessing. Mechanical difficulties forced shut-down of one run (filter plugging due to crystals in feed solution) and early termination of one run due failure of a heat exchanger. Two Fischer pumps failed in service due to sheared couplings, and two instances of pump packing gland failure were noted. Instrument difficulties included failure of servo motors in the recorder-controllers in two instances, sticking of rotameter bobs in two instances, and lack of coordination between recorder-controller and rotameter due to extremely poor sensitivity in one case. It is worthy of note that rate control was good, even during periods of instrument failure when manual control was necessary, and that the only instances of wide rate fluctuation occurred during two runs at flow rates almost out of the lower operating range of the instruments. In most cases, control of ratios was very good. Mechanical and instrument performance, considering the number of runs completed, was very good.

All Scale-Up solvent extraction studies on waste metal recovery were made in the 8-in. packed column. Five RA and seven RC-type runs were completed. Scale-Up operations generally were excessively hampered throughout the month by extremely cold weather and subsequent freeze-ups and maintenance trouble in the tank farm. An unusual incident worthy of note occurred during the concentration of some combined RCU and RAW in AQ-8 concentrator. This material was combined with some Redox waste for concentration and barreling out to clear tanks for TBP studies. After barreling out, subsequent examination of the tank revealed the presence of some greasy, greyish material on

the tank bottom. This material was dissolved in hot concentrated acid, and checking indicated readings of 550 mrep./hr. at about 2 to 2-1/2" from the sample. Subsequent checks revealed a rapid decrease in the amount of activity. Radio analysis revealed high concentration of UX_1 and UX_2. No satisfactory explanation for its presence has been determined. The equipment was cleaned and material disposed of without over-exposure to personnel.

Considerable trouble was experienced with rate control during the month. Two cases were traced to a bent armature stem on the RAX rotameter bob, which caused the rotameter to stick. During one run, the Foxboro recorder-controller failed due to defective tubes, resulting in erratic solvent stream control. Presence of water in the inert gas from the new generator resulted in plugging of feed tank manometer dip tube lines, causing difficult rate control from tank measurements, and, in two instances, presence of water in the interface dip tubes resulted in erratic control of the aqueous feed stream. Installation of a filter in the inert gas supply line corrected some of the difficulty, but plans to install a dryer in this line are presently being completed. Despite the difficulties with erratic control and part time manual operation, rapid correction of instrument difficulties permitted sufficiently long H.E.T.S. and flooding periods on all runs to make the runs successful from the standpoint of obtaining column performance data for the various studies conducted.

Equipment Development

Submerged Pump No. 2 (G.E.& C.L. turbine pump driven through two foot-long vertical shaft supported on carbon-filled fluorothene bearings) completed 37 days operation in 1.8 M $Al(NO_3)_3$ at 3450 rev./min., discharge pressure 40 lbs./sq.in.gage, and flow rate 2 gal./min. Operation was smooth and uneventful The degree of wear was indicated by a decrease in shut-off head from 57 to 54 lb./sq.in.gage.

Submerged Pump No. 3 (Roth No. 147 turbine pump suspended from a 10-foot torque tube containing two process fluid-lubricated Graphitar sleeve bearings) has bee in operation for 54 days in 1.3 M $Al(NO_3)_3$ solution at 1750 rev./min., discharg pressure 80 lbs./sq.in.gage, and flow rate of 2.7 gal./min. Shut-off pressure of 95 lbs./sq.in.gage did not change over the last 30-day interval of operation. The flow rate of process fluid to the bearings has been approximately 0.4 gal./min. under all conditions. Correlation of flow rate through bearings versus applied head of lubricant (process fluid) indicates the diametrical clearance of the lower bearing increased from 3.2 to 4.1 mils and the upper bearing from 4.2 to 5.5 mils.

Roth D-62, prototype pump for production plant, was received and installed. This is a submerged-type unit with 10'6"-long drive shaft supported on process fluid-lubricated graphite-filled fluorothene bearings. The shut-off pressure, when employing water as the test fluid, is 105 lbs./sq.in.gage. The power consumption at shut-off pressure is 2.0 H.P. Employing 1.3 M $Al(NO_3)_3$ solution the shut-off pressure is 120 lbs./sq.in.gage, and the motor rated at 2.7 amp. was drawing 4.5 amp. This will necessitate the use of a larger motor.

Moyno 1B2 Submerged Pump was reinstalled following return from the manufacturer for correction of mechanical deficiencies. The operation has again been unsatisfactory due to intensive vibration. The performance characteristics (head vs. capacity vs. speed) were determined with water. At a speed of 1035 rev./min., the flow rate was 1.0 gal./min. for a 10 lb./sq.in.gage

DECLASSIFIED

1195162

discharge pressure and 1.6 gal./min. at 4.0 lb./sq.in.gage discharge pressure. At 500 rev./min. the flow rate was 0.4 gal./min. at 4.0 lb./sq.in.gage discharge pressure and the shut-off pressure was 7.5 lb./sq.in.gage.

G.E.& C.L. Submerged Motor-Pump with Graphitar thrust and sleeve bearings has operated 113 days in 1.3 M $Al(NO_3)_3$ at 1750 rev./min., 10 lb./sq.in.gage, and 0.42 gal./min. Operation has been smooth and uneventful with no detectable changes.

A 0.015 to 0.15 gal./min. flow rate range, all stainless steel, Fischer & Porter flowmeter was placed on test in the hydraulic test stand. It was found possible to increase the usefulness of rotameter equipment by installing a Schutte & Koerting indicating rotameter on a Fischer & Porter electrical transmitter. A reduction in the flow rate rangeability from 10:1 to 4:1 results from this arrangement. It was also demonstrated that rotors with armature extension rods could be fabricated satisfactorily in our shops. This will allow rapid equipment changes to accommodate changing conditions of process stream flow rates. The drive motor in the Fischer & Porter recorder-controller instrument has been the primary cause of instrument failure. It has been demonstrated that this motor can be replaced with a reliable and proven Brown Instrument Company motor.

The 21-stage S.O.D. mixer-settler (laboratory model) was renovated and the mixing system changed from vibrating plates to rotary cones. Ten stages were blanked off for study of TBP process RA system. The only attempted run was terminated because of the failure of a fitting which allowed the unit to drain. The agitation appeared adequate, and clean settling was observed in all stages except the first scrub stage above the feed point.

The 25 cu.in. nominal displacement (40 cu.in. maximum) pulse generator for use with the 8-in. diameter (or smaller) pulse columns was completed. The mechanical performance was satisfactory and appears to satisfy design criteria Investigation of the procurement of a pulse generator with displacement capacity of 126 cu.in. for use with a 16-in. diameter pulse column indicated that, on the basis of cost, delivery date, and reliability, a modified piston pump manufactured by Proportioneer's, Inc. was the most satisfactory source.

A Saran suspensoid-type protective coating (3 coats) applied to concrete was found resistant after 3-days immersion in 10% HNO_3 but became blistered, soft, and gummy after one day exposure to hexone. The most recently received Amercoat 1528E Serial 12650 failed after 2-days exposure to hexone.

A corrosion testing program relative to the TBP process has been established with the Metallurgical Section. Tests will relate to the concentration of the aqueous raffinate streams, since this appears to be the only questionable region. Test solutions have been prepared and corrosion test specimens are being fabricated.

Process Chemistry

Freezing point vs. composition data were obtained for an estimated reasonable zone of compositions defined by the TBP process RAF and RAFS streams. Equilibrium data for the TBP process RA and RC systems were obtained in studies RA-E-1, RA-E-2, RA-E-3, RC-E-1.

Water content of saturated TBP-Shell Deodorized Base system was found to range from 0.96 g./l. to 2.07 g./l. of H_2O as TBP content increased from 10 to 15 volume per cent.

Rapid determination of per cent TBP in diluent based on infra-red absorption, developed in cooperation with the Analytical Section, has produced results that are within ± 1.0% of the true TBP concentration. It is believed this can be reduced to ± 0.25%.

Trouble in recent preparation of ferrous sulfamate by Operations was investigated. The difficulty is attributed to use of very finely divided iron which increased the reaction rate.

The sludge sampling efforts in 200 West have been followed. There appears to be no assurance that the present approach will be successful, and observations made have led to the design of an alternate sampler employing a submerged pump. The installation of the Junior Cave in Room 4B in Bldg. 3706 is in progress. Major items of delay are the exhaust duct system, gloved box, and remote manipulators. The following reports were issued: HW-15209 - "Equilibrium Relationships Redox IA Column ORNL No. 1 Flowsheet" and HW-15619 - "Lead-Dip Slugs in the Redox Process."

SEPARATIONS PROCESS RESEARCH

Ruthenium Tetroxide Distillation

Decontamination factors for ruthenium through an ozonization and one extraction and two scrub steps were obtained for distillation times of two to seven hours at ozone concentrations of one to three weight per cent in air. The tests were made on successive days, the first at a solution age of fourteen days. At six hours ozonization time the decontamination factors for one, two, and three per cent ozone were 2.5×10^4, 9.8×10^4, and 1.5×10^5, respectively. The decontamination factor was approximately 5×10^4 after five hours ozonization with two per cent ozone and after three hours ozonization with three per cent ozone. With one per cent ozone, the decontamination factor after seven hours ozonization was still only 2.9×10^4.

It is assumed that in plant operation a first-column ruthenium decontamination factor of 5×10^4 will make it possible to meet the required over-all decontamination factors at the IIBP and ICU stages, if head-end scavenging performs as expected. From the above and previous data, it appears fairly definite that this value cannot be met conveniently with 1% ozone but probably can be met with 3% ozone after only three hours ozonization. With regard to the flow sheet concentration of ozone, 2%, the above data indicate that five hours ozonization will be required for 14 day-old dissolver solution. However, it has been established that greater decontamination is obtained with fresher dissolver solution. Whether 5×10^4 can be attained after only three hours ozonization of 0-10 day dissolver solution (flow sheet) with 2% ozone in air cannot yet be asserted. This is also true of a further simplification, elimination of the cobalt catalyst. With 2% ozone, 0.03 M cobalt increases the decontamination factor obtained by a factor of only about two. It should be borne in mind, however, that these uncertainties do not affect plant design but only cycle time and reagent considerations.

1195164 DECLASSIFIED

Decreasing the gas flow rate-to-solution volume ratio from 3-1/3 to 2 did not appear to affect the decontamination obtained on ozonization and extraction.

The induction period before RuO_4 starts distilling over has been observed to be inversely proportional to the ozone concentration. With the stills used in the laboratory experiments, the induction period has been about 40 minutes with two weight per cent ozone.

Head-end Scavenging

With improvement in counting methods it has been possible to demonstrate that the zirconium decontamination obtained by Filtrol scavenging is not nullified by inferior decontamination during subsequent solvent extraction. Following a decontamination factor of 580 on scavenging, a factor of 1.7 to 7.6×10^4 was obtained through an extraction and two scrub steps for an over-all factor of 0.96 to 4.4×10^7. In a control run (no scavenging) the decontamination factor for zirconium was 1.1×10^5.

Attempts to demonstrate similarly the over-all improvement in the decontamination of columbium have not yet been successful. Decontamination factors in control runs have been high and proper counting methods need to be developed. Investigation of this problem is continuing.

It has been shown that Filtrol may be recycled without sacrificing anything in adsorption capacity. Filtrol recycled without washing from the third to the second to the first contact showed the same decontamination factors in each contact as obtained with fresh Filtrol. The average cumulative zirconium adsorption was 98.2%, 99.5%, and 99.7% and the average cumulative columbium adsorption was 76.4%, 92.1%, and 97.5% for three contacts.

Oxidation of Plutonium by Ozone and Stability of Plutonium(VI) during Redox LA Extraction

Three hours ozonization with 4% ozone by weight and 0.03 M $Co(NO_3)_2$ catalyst resulted in complete oxidation of plutonium in a simulated dissolver solution. Extraction performance with dichromate holding oxidant present was exactly comparable to that obtained when the solution was initially oxidized with 0.1 M $Na_2Cr_2O_7$ instead of ozone. In either case, however, in the course of consecutive batch extractions under ORNL flow sheet conditions, the plutonium distribution coefficient steadily decreased, due apparently to the inability of the 0.1 M $Na_2Cr_2O_7$ holding oxidant to re-oxidize plutonium which had been reduced to the +4 oxidation state. When comparable consecutive extractions were made under ANL flow sheet conditions, the distribution coefficient was constant.

Continuous Cross-over Oxidation of IBP

Spectrometric observations indicated rapid and visually complete oxidation of 0.5 g./l. Pu(III) to Pu(IV) in simulated IBP by 0.02 M dichromate. Within the 20 seconds required to add the dichromate the sharp Pu(III) absorption line at 663 mμ disappeared and was replaced by the two Pu(IV) absorption bands at ca. 635 and 675 mμ. This evidence for rapid oxidation of Pu(III) to Pu(IV)

[redacted]

1195165

was confirmed by a solvent extraction study in which the distribution coefficient for plutonium was found to be high and remain constant from 30 seconds to 21 minutes after adding the dichromate to the simulated IBP equilibriated with hexone. Any significant concentration of Pu(III) would have given a low distribution coefficient, increasing with time.

Plutonium Precipitates in Redox IIBP and IIIBP Solutions

Argonne National Laboratory has shown that plutonium(IV) can precipitate as an oxalate from IIBP Redox streams in the presence of methylisopropyl diketone, an impurity formed when hexone and nitric acid react. Work is under way to delineate the conditions in the Redox Production Plant which will form this precipitate. Preliminary runs at 85°C with simulated IIIBP solutions with 10 gms./l. diketone gave a precipitate in three to four hours, while with one gm./l. diketone no precipitate was observed after 48 hours. When 10 g./l. hexone was added to IIIBP and in the absence of diketone, no precipitate occurred after 48 hours at 85°C, but complexing of Pu(IV) was observed in the solution after one hour of contact by measuring a shift in the absorption spectrum. The flasks employed were sealed with wax; however, the possibility of some loss of organic reagents through volatilization cannot be excluded.

Concentration of IIIBP by Hydroxide Precipitation

Plutonium hydroxide is sufficiently insoluble that when IIIBP solutions are made alkaline with NaOH, the plutonium hydroxide may be precipitated with but a small loss. The resulting precipitate could then be dissolved in nitric acid to a small volume. Aluminum separation may be accomplished in the precipitation step. In one test on simulated IIIBP, plutonium loss in the precipitation step was 0.7%, whereas from previous experience with hydroxide precipitations it had been anticipated to have been $<0.1\%$.

TBP Process Batch Counter-current Extraction Data

A batch counter-current run was made on a simulated concentrated composite uranium waste solution of the composition: 0.287 M UNH, 0.287 M Na_2SO_4, 0.26 M Na_3PO_4, 2.91 M $NaNO_3$, 2.75 M HNO_3, which has a freezing point of +8°C. The extractant was 15% by volume tributyl phosphate in Deo-Base and the scrub 4.0 M HNO_3. Flow ratios of 1/2/3.5/2.5 were used (scrub/feed/extractant/strip). The uranium loss in AW for seven extraction and three scrub stages was 0.0023%, while five strip stages gave 0.62% loss in CW. The losses in CW were due largely to the use of TBP which had not been caustic-treated to remove impurities which complex uranium.

A batch counter-current run was made with 15% TBP by volume in carbon tetrachloride. RA and RC uranium losses were of the same order of magnitude but slightly less than with Deo-Base under comparable conditions. Five extraction stages would appear to give adequate uranium recovery using carbon tetrachloride.

Solvent Impurities in TBP

The previously reported irregularity in solvent behavior in the stripping column (RC) has been shown to be due to impurities such as acid butyl phosphates existing in commercial TBP. The RCW uranium losses (about 0.5%) were reduced to less than 0.1% by washing recycled 15% TBP in Deo-Base with 2 M Na_2CO_3 (or NaOH) and water.

1195166 DECLASSIFIED

The dilute region (1 g./l. UNH) of the RC Column was found to be beneficially affected by adding 0.01 M HNO_3 to the water strip. The distribution coefficient, E_a°, was reduced by one-half through the addition of 0.01 M HNO_3 to RCX. The corresponding change in pH was from 4.5 to 2.2. This effect is true for both carefully purified TBP and commercial grade TBP.

Concentration of RAW and Nitric Acid Recovery in TBP Process

Vapor-liquid composition data were obtained during the distillation of simulated RAW from the TBP process for pressures of 760 and 70 mm.

Batch steam sparging of the concentrated waste was performed in order to remove HNO_3 without the precipitation of solid during evaporation. For 70% of the HNO_3 recovered the steam consumption was six pounds steam/one pound HNO_3. The freezing point of the residue after neutralizing with 40% NaOH was 54°C, and the volume was 38% of the original RAW. Further dilution to a freezing point of +20°C raised the volume to 64% of the initial RAW.

Distillation of RAW with a 25-plate Fenske packed column at atmospheric pressure recovered 70% of the initial HNO_3 as 14 M HNO_3. Corrosion of 347 stainless steel in the boiling pot amounted to a penetration of 15 mils/year.

Systematic freezing point determinations were made on still pot residues after 0 to 90% HNO_3 removal and neutralization with 40% NaOH. The freezing point of these solutions were also followed after further dilution with water.

Solubility of TBP in Aqueous Solutions

The solubility of pure TBP and of 15% by volume TBP in Deo-Base was measured in water, 3 M HNO_3, 6 M HNO_3, 1 M UNH, and RAW at 25 and 50°C. The solubilities from the TBP - Deo-Base mixture in RAW was 0.1 and 0.2 gm. TBP/liter at 25 and 50°C, respectively.

Decontamination of Current Metal Waste Using TBP

Batch extraction decontamination studies have been made on a two month-old sample of CMW (8-3-WS). The scrub and feed were made 5 M in nitric acid, the extractant was 15% TBP - Deo-Base, and the S/F/X ratio was set at 2/3/10. Following one extraction and one scrub stage, the gross gamma and zirconium decontamination factors were $> 10^5$ and 1.2×10^4, respectively. Addition of 0.04 M ammonium fluosilicate to the feed and scrub produced little change; the decontamination factors being $>10^5$ and 2×10^4 for gross gamma and zirconium. In this latter case, beta analysis of the uranium obtained from a single extraction and a single scrub showed it to have but 25% of the gross beta activity of natural uranium. These unexpectedly high decontamination factors will be investigated further with fresh CMW.

Tracer Zirconium Decontamination in TBP Extraction

The gross gamma distribution coefficient, E_a°, of tracer zirconium-columbium from 3 M nitric acid into 15% TBP - Deo-Base was reduced from 5×10^{-2} to 7×10^{-3} by the addition of 1 g./l. ammonium fluosilicate. Aluminum absorption analysis indicated that the fluosilicate improved zirconium decontamination more than columbium but that there was a favorable effect on both.

A batch extraction study was made using a 3 M nitric acid scrub, a simulated CMW feed 4 M in nitric acid spiked with columbium-free zirconium tracer, a 15% TBP - Deo-Base extractant, and a S/F/X volume ratio of 2/3/10. Again, the zirconium decontamination was unexpectedly high; none of the organic phases contained a measurable gamma activity, indicating an E_a°, of $<10^{-3}$ for the single extraction with the TBP but 50% saturated with uranium.

Plutonium and Gross Beta Decontamination of 200 Area 221 Bldg. 5-6 Waste

Neutralization of a sample of Batch 57 of Bldg. 221 5-6 Waste initially 1.25 M in nitric acid to pH 10 reduced its plutonium concentration from 6×10^{-3} μg/cc. to $<5 \times 10^{-5}$ μg/cc.; i.e., the plutonium decontamination factor was >100. Comparison of the effectiveness for carrying plutonium of the ca. 1% by volume of unknown solid produced on neutralization with added scavengers pends increasing the sensitivity of the LaF_3 procedure to $<5 \times 10^{-5}$ μg/cc.; i.e., <4 ct/m/cc.

In addition to plutonium decontamination, neutralization of Bldg. 221 5-6 Waste achieves reduction of gross beta concentration from 0.88 to 0.16 μc/cc., a factor of 5.5. Addition of 10^{-2} M scavenging agents prior to neutralization increases beta decontamination but slightly, a maximum decontamination factor of 7.5 being achieved with Fe^{+++} and UO_2^{++}.

Plutonium Decontamination of 200 Area Bldgs. 231 and 224 Wastes

Scavenging of a sample of Bldg. 231 process waste taken during run #979 with 10^{-4} M Fe^{+++}, Cu^{++}, Ca^{++}, La^{+++}, or UO_2^{++} at pH 10 in all cases reduced the plutonium concentration from its original 4.4×10^{-4} μg./cc. to $<5 \times 10^{-5}$ μg./cc. The same procedure applied to sample #4807 of Bldg. 231 laboratory waste was much less effective; maximum decontamination being achieved by 10^{-4} M Fe^{+++}; from 1.5×10^{-2} μg./cc. to 1×10^{-3} μg./cc. However, 10^{-4} M tannic acid (AERE-C/R-289) was found to reduce the plutonium concentration to $< 5 \times 10^{-5}$ μg./cc. over the pH range 8 to 12. At this concentration the centrifuged precipitate occupies ca. 0.3% of the volume of the decontaminated solution.

Neutralization of a sample of Bldg. 224 waste to pH 10 reduced its plutonium concentration from 5.2×10^{-3} μg./cc. to 7×10^{-4} μg./cc. A variety of scavenging agents, including Fe^{+++} and tannic acid, added to 10^{-4} M did not improve this decontamination. Gross beta decontamination was similarly unimproved, the original concentration of 4.8×10^{-3} μc./cc being reduced to 2×10^{-4} μc./cc. by sodium hydroxide alone.

234-5 PROCESS DEVELOPMENT

Perchloric acid waste solution from the Analytical Section in the 234-5 Bldg. has been processed on approximately a 2.5-gram plutonium scale to develop a recovery method. Plutonium hydroxide was precipitated from the solution by the addition of sodium hydroxide until a pH of 8 was attained. After the supernatant had been decanted through a frittered glass filter, the precipitate was washed with distilled water. The precipitate was then dissolved in 70% nitric acid and diluted to the desired concentration. Analytical results reported to date are erratic and are being rechecked. From the data

at hand it appears that a quantitative separation of plutonium from this waste solution can be achieved; there is little doubt that the purity of the plutonium nitrate solution obtained from the hydroxide precipitation procedure will be as good as that of the cut sample can (P-4), which is used as the feed stock in the 234-5 Building. The plutonium nitrate solutions obtained from the four runs which have been made to date will be composited and processed to give metal by standard process procedures. Future precipitations will be made with ammonium hydroxide to reduce the amount of impurities introduced into the system.

The first draft of a process design recommendation for the design of a Skull Recovery Unit for the 234-5 Building has been written.

Penetrameters of 25, 30, and 35-mil tantalum have been made. These are being used in the experimental work which is in progress to improve the present 40-mil resolution in the 090 pieces.

STACK GAS DISPOSAL

All recorded efficiencies at the T Plant sand filter continued in the range of 98 to 98.5%. A thorough check of the monitoring equipment has eliminated erroneous flow measurements or air leakage into the sampling lines as possible causes of the low values. The investigation to determine the reason for the low filtration efficiencies will be continued.

The evaluation of the Fiberglas obtained from The A. D. Little Company (filament diameter, 0.00115 inches) has been completed. The effect of gas velocity upon the filtration efficiency was established to be the same as that existing with the No. 55 Fiberglas. However, the value of the exponent of the bed depth (l) in the expression: $Eff = 1-e^{-K'(L)^a}$ has been determined to lie between 0.5 and 0.6. This is a wide variation from the value obtained in the No. 55 and "AA" studies. A further opportunity to check whether or not a correlation exists between fiber diameter and effect of bed depth will be presented upon receipt of the larger diameter fibers ordered from Owens-Corning Corp.

A study was made of the feasibility of water-flushing the dissolver cell Fiberglas filters to remove residual nitric acid and prevent the formation of ammonium nitrate. It was established that the washing and drying operations caused channeling within the filter bed and seriously impaired filtration efficiency.

Silver Reactor No. 9 was operated during the ninth and tenth dissolution for the unit. The I^{131} removal efficiencies ranged from 99.60 to 99.92%.

Separations Technology Division [redacted]

INVENTION AND DISCOVERY STATEMENT

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

Name	Title
R. L. Moore	The Use of Butyl Acid Phosphates to Improve Recovery of Plutonium by a Tributyl Phosphate Extraction Process.
W. H. Reas	Concentration of Plutonium in Final Redox Streams by Hydroxide Precipitation.

R H Beaton

R. H. Beaton, Head
Separations Technology Division

Date: February 1, 1950

DECLASSIFIED

1195170

DECLASSIFIED

TECHNICAL SERVICES DIVISION

JANUARY 1950

GENERAL

2-10-50

Effective January 1, 1950, the Metallurgy & Control Division was reorganized as the Technical Services Division. This reorganization involved (1) transfer of the entire Metallurgy Section to the Pile Technology Division, and (2) establishment of a new Engineering Section. The latter, which is to serve all three Technical Divisions, is responsible for the following activities: (1) Technical Shops operation (mechanical and glass, in Bldgs. 3706 and 101), (2) 300 Area Services, and (3) new laboratory planning. The Analytical Section, the Statistics Group, and the Information Group all continue in the Technical Services Division.

VISITORS & BUSINESS TRIPS

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

Business trips of Technical Services personnel were as follows:

A. H. Bushey spent January 23, 24, and 25 at Los Alamos Scientific Laboratory, discussing analytical methods. While there he spent some time arranging future steps in the sample exchange program.

M. Lewis spent January 30 and 31 at Louisiana State University, Baton Rouge, La., where he attended the Symposium on Modern Methods of Analytical Chemistry sponsored by the American Chemical Society.

ORGANIZATION AND PERSONNEL

Personnel totals in the several subdivisions are summarized below:

	December 31, 1949	January 31, 1950
Metallurgy Section	38	*
Analytical Section	346	323
Engineering Section	**	51
Statistics Group	13	12
Information Group	58	61
Administrative	3	3
Totals	458	449

* Transferred to Pile Technology Division as of January 1, 1950.
** Newly formed as of January 1, 1950

The organization of the newly-formed Engineering Section may be detailed as follows:

Two exempt engineers engaged in new laboratory planning were transferred in, one from the Technical Divisions staff group, and one from the Analytical Section.

Twenty-three of the Shops personnel (4 exempt and 19 non-exempt) were transferred into the Technical Services Division from the Maintenance Division on January 1, when responsibility for operation of the Bldg. 101 shops was accepted by Technical. Eleven additional Shops personnel (2 exempt and 9 non-exempt) were transferred to the Engineering Section from the Analytical Section.

The 300 Area Services Group consists of 2 exempt and 12 non-exempt personnel, all transferred from the Analytical Section.

The Analytical Section employed one exempt chemist, five laboratory assistants, and one clerk. Two laboratory assistants and one technical graduate were transferred to the Pile Technology Division, and one exempt chemist was transferred to the Accountability Section. One laboratory assistant transferred into Analytical from H.I., and one laboratory assistant went on leave of absence. The Information Group employed three clerks and one steno-typist, and one clerk went on leave of absence. The Statistics Group employed one technical graduate, and two exempt personnel went on a leave of absence. There were no terminations.

W. A. Briggs, Assistant Chief Supervisor (Control) of the Analytical Section, was appointed Administrative Assistant to the Division Head, vice R. E. Curtis, who transferred to the Technical Personnel Office. In Analytical, L. M. Knights was promoted to replace Mr. Briggs, and O. P. Amacker was promoted to Area Supervisor, 200 Control Laboratories, vice Mr. Knights.

ANALYTICAL CONTROL

Work Volume Statistics

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

	December 1949		January 1950	
	Samples	Determinations	Samples	Determinations
Routine Control - 200	3,375	8,384	3,604	10,136
Routine Control - 300	590	1,368	571	1,350
Water Control - 100,700	1,118	3,335	1,148	3,546
Redox & TBP Programs	2,634	5,687	2,212	4,694
Process Reagents	1,346	1,664	1,447	1,837
Essential Materials	117	613	81	437
Special Samples	1,710	6,076	2,633	7,509
Stack Gas Filters	43	58	57	104
Totals	10,933	27,185	11,753	29,613

1195172 DECLASSIFIED

100 Areas Water Control

A series of flocculating tests on raw water was completed. Comparison of Stauffer ferric sulfate with Ferrifloc as a flocculating agent showed the former to be only very slightly more effective; if the Stauffer feed slurry was chlorinated, it became about 10% more effective than the Ferrifloc.

200 Areas Control

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

	Precision ± %		
Sample	Expected	December Average	January Average
6-3-MR	1.58	1.76	1.12
P-1	2.39	3.14	3.63
AT	1.98	1.55	1.94
P-4	2.51	-	2.64

The P-4 precision is being reported for the first time.

As a part of the study of material balance differences between the 224 and 231 Bldgs., a special F-10-P sample (from run T9-12-D33) was analyzed for Pu by radio-assay in the 222-T Laboratory, and by chemical and radio-assay methods in the 231 Laboratory. No significant difference was apparent between the results from the two analytical methods. The P-1 sample from the same run was analyzed in the 231 Laboratory by both analytical methods, with again no apparent significant difference between results.

300 Area Control

A study has been initiated to determine the feasibility of applying the X-Ray Photometer Method (45 minutes per analysis) to the determination of uranium in the various wastes from 300 Area processes as a replacement of the ceric titration method (ca. 6 hrs. per analysis). Successful application of the instrumental method has been obtained in the case of uranium oxide samples (MD-6); control use will await statistical evaluation of precision and accuracy.

Chemical Development Service Laboratory

The name of this analytical laboratory (in Bldg. 3706), formerly known as the Redox Control Laboratory, has been broadened to be consistent with the change in process development service from Redox to TBP.

A revised X-Ray photometer method for the determination of UNH in Redox and TBP organic streams has been applied to routine control. The method has been evaluated for the range 20-100 g/L, and has a precision of ± 0.84%.

[redacted]

1195173

Technical Services Division [redacted]

Methods Adaptation

The use of hexone rather than isopropyl ether as the extractant has been shown to improve the extraction of 40-8 and to simplify the procedure. Hexone does not interfere with the ferrocyanide titration, thus permitting this titration to be performed without the use of a back extraction.

The use of the carrier concentration spectrographic method for determination of the impurities in the 234-5 Bldg. starting solution (P-4) samples is complicated by the relatively high concentrations of some of the impurity elements: Iron (5,000 ppm.), Ni (1,500 ppm.) and Cu (1,500 ppm.) The present standard films were prepared for a maximum of 1,000 ppm. of these elements. Tests using U_3O_8 to dilute the plutonium oxide have indicated moderate accuracy for Fe, Ni, Cr, P, and K; however, the sensitivity of the method is decreased for other impurity elements. The preparation of standard films with 5,000 ppm. Fe, 2,000 ppm. Ni, and 2,000 ppm. Cr has been undertaken.

The presence of phosphate, depending upon its concentration, adversely affects the determination of uranium by ceric titration after reduction of the uranium by a Jones Reductor. Titration of uranium with ferric sulfate after removal of nitrate appears feasible. In this case, phosphate does not introduce an error but does decrease the sensitivity of the method. Determination of 5 g/L UNH in the presence of 50 g/L phosphate is feasible. The detailed analytical procedure was issued as Redox Method RUV-3.

The efficiency of extracting uranium from 10 ml of an RAU solution with fresh 5 ml portions of water and also a 1 M ammonium carbonate solution was determined. After four extractions, 0.5% of the UNH remained in the organic layer with water as the extractant, and 0.05% with 1 M ammonium carbonate solution as the extractant.

The use of the A.O.A.C. volumetric method for the determination of phosphate was found to be applicable to the determination of $PO_4^{\equiv}$ in RAF and RAW type samples. This method was coded RPh-6a and a detailed procedure submitted to the Chemical Development Service Laboratory.

A statistical study of a series of sodium analyses on standard samples using the flamephotometer and an internal lithium standard indicated the precision of the method to be $\pm$ 2.4%.

Counting Standards

To determine if a large conicidence loss could be observed when comparing sample data obtained at rates of 500, 5,000 and 50,000 c/m, a dilution technique has been devised. The results have indicated that there was less than 2.1% loss (the accuracy of the test) at rates of 5,000 and 50,000 c/m. While at the 500 c/m level the results were not in good agreement, they did indicate a trend toward a significant loss between levels of 500 c/m and 5,000 c/m. From the continuing program, coincidence correction values at the lower counting rates will be determined.

DECLASSIFIED

1195174

An experimental Alpha Simpson Proportional Counter Chamber designed to accommodate two-inch sample discs was submitted by the Instrument Division for tests. Results of these tests indicate that the background, alpha plateau, geometry and coincidence loss are normal. The beta threshold is near the minimum operating voltage for alpha counting, which is not desirable. A position study showed considerable error to be introduced when samples are placed on the pedestal at points farthest from the electrode. A maximum of 8% loss was found in this manner. The total loss in counting rates for a two-inch sample disc was calculated to be 0.92%.

Rala Laboratory Design

Six scope drawings, depicting the 222-T addition, its cross-section, semi-diagrammatic view, utilities and weights of units, ventilation requirements, and cross-section of cubicle, were completed, issued for comment, and final revisions made.

A memorandum report, "Sample Flow Through the Rala Analytical Laboratory," HW-15777, was issued. It describes the radiation levels, the analytical methods employed, and the analyses to be performed at each station of the RCT system in the laboratory.

Also issued was "Rala Analytical Laboratory - Design Manpower Requirements," HW-15761, to emphasize the magnitude of the laboratory and equipment design and drafting work being undertaken by the Analytical Section, and to suggest ways to meet the personnel requirements. As a result of the continued effort in this regard, two draftsmen were borrowed from the D & C Divisions, and two Technical Graduates were assigned from the 200 Area Control Laboratories. By month-end this Rala design unit in Bldg. 101 totalled 14 personnel, and approvals had been obtained for the entire unit to start a 6-day work week (effective 1-30-50). Arrangements also had been completed for the Feb. 1 assignment of three more draftsmen from within Technical.

Preparation continued on that part of the procurement list which is Analytical Section responsibility by the issuance of Procurement List #3, describing certain equipment needs for the Rala spectrochemical laboratory.

Progress made on the RCT system was such that the guide rail layout was planned, and demonstration sections of it were assembled in the Bldg. 101 vault room for test; design modifications of commercially-available power units, trailers for transporting and storing samples, and powered carrier units have been initiated. Design also was started on decontamination cave, spectrographic arcing chamber, polarographic apparatus assembly, and vertical-lift mechanisms (remotely-controlled, motor-driven, mechanical manipulators) adaptable to the various specific determinative operations.

Special Hazards Control

Steps have been initiated (in cooperation with H.I.) to locate the sources of air-borne radioactive particles which have increased in number recently in Room 7 of the B Plant Control Laboratory (222-B). Drying lamps, decontamination sinks, and laboratory hoods have been examined as possible sources of the particles. Plans have been made to study the airflow characteristics

of hoods, and laboratory equipment and procedures will be surveyed by air sampling at specific work locations; housekeeping efforts to minimize particles of dust will be intensified.

Analytical Manuals

Descriptive matter pertaining to three Redox Methods, three Laboratory Solution preparations, two apparatus arrangements, and one Standards preparation were received for inclusion, after editing, in the Hanford Works Laboratory Manuals. Coding of five sections was revised. Completion of the manuals awaits replacement of equipment photographs.

ANALYTICAL RESEARCH

Present Separations Process

It has been observed that the presence of lanthanum exerts an appreciable influence on the efficiency of plating plutonium on counting discs. The conventional procedure involves the oxidation of plutonium to the hexavalent state, and the subsequent electrolytic reduction to PuO_2 on the counting disc; various reagents are suitable for the oxidation step, but it is difficult to hold the plutonium in the higher valence state. In studies employing ozone as the oxidant in alkaline solution, it was noted that extremely low plating efficiencies were obtained; it is probable that the observed precipitate of lanthanum hydroxide co-precipitated the plutonium. Similar ozone oxidation, electrolytic reduction treatment with purified plutonium solutions yielded efficiencies of about 65%.

Standard curves have been developed to permit a rapid spectrophotometric determination of plutonium in its various valence states. The determination of Pu(III), Pu(IV), and Pu(VI) may be conducted on a single sample by finding the transmission of visible light at each of three different wave lengths.

Redox Process

A radiochemical technique has been developed for the rapid determination of ruthenium. The method involves the direct reduction of ruthenium with metallic magnesium, filtration, and counting; it is slightly less precise than the presently used distillation method, but is equally accurate.

A report titled "The Determination of Nitrous Oxide with the Infrared Spectrometer," HW-15776, was issued, which completes the last step in the development of methods for the quantitative determination of the gaseous decomposition products of hexone.

TBP Process

The X-ray photometer has been calibrated to permit the rapid determination of UNH in R.U and R.X solutions. Information has been gathered to determine the relationship between the specific gravity and the TBP content of RCW-type solutions; similar data have been obtained for both Stoddard's Solvent and

DECLASSIFIED

1195176

Deobase solutions. Infrared absorption has been found to provide the basis for a highly precise method for the determination of TBP in RCW-type solutions.

ENGINEERING SERVICES

Technical Shops

General

A final report on graphite materials used in connection with the DR and H construction programs, together with other uses and balances of material available for future pile use, was submitted to the Manufacturing Divisions. Graphite stocks for future use were turned over completely to the Stores Division.

Office space in Bldg. 101 has been allocated to the Pile Technology Division for use in connection with the P-12 project. In addition, space has been assigned to Analytical Section personnel working on the Rala Laboratory design, and to several other Technical design personnel.

During the extremely cold weather considerable difficulty was encountered in the 101 Area due to freeze-ups of the Buffalo Forge units located on the main building roof. It was necessary to bring in emergency Transportation crews for snow and ice removal from this building, as the load factor on the roof was approaching a critical point. It was also necessary to have Maintenance personnel in the area working continuously on the Buffalo units due to freeze-ups and breaking of their traps, pumps, and heating coils.

Bldg. 101 Shops

Machining and erection work on the Sigma Base and Sigma Pile for the P-12 project was completed, and the erected pile was made ready for testing by the Pile Technology Division. In addition to the regular machining of graphite standard details for the Sigma unit, special cores and other specialty items have been machined for this program. Considerable design time also has been devoted to the Sigma unit on the development of details, layer arrangements and specialty items.

Work was completed for Pile Technology on a graphite mock-up for a vertical thimble arrangement. This mock-up was finished to a dimension of 48" high x 24" x 16", and was assembled in an angle-iron frame with a wood bottom constructed in such a manner so that the mock-up could be tilted at any degree. A 4" radius was cut in center blocks for the vertical thimble.

Work is continuing on "G" sample graphite dowels. These dowels are being turned out to a finished dimension of 4" x .426" $^{+.000}_{-.001}$.

Design work has been completed and machine shop operation started on a graphite cutting tool for Pile Technology's use in the removal of a filler-block graphite sample from D pile. The tool is designed to make a cut 48" long x .1" deep, and it will be controlled from a distance of 20 feet

from the point of the actual cut. The cutting tool consists of a fabricated steel housing having an inserted rack and gear assembly. It is controlled by an operator regulating the amount and depth of feed for the cut at the end of a 20' x $\frac{1}{2}$" rod. A vacuum will be attached to a 1" piece of pipe fastened onto the housing for removal of graphite chips. Upon completion of fabrication, a complete mock-up test will be made in the 101 Shops before release of the tool to the field.

Design work was completed and fabrication started on a warp gage for measuring the warpage of irradiated slugs, regardless of oversize or undersize diameters. The gage will be operated under approximately 20' of water, and will be used in conjunction with a turntable now being used by the Pile Technology Division. The gage is being fabricated of stainless steel and brass and employs the principle of hydraulics with the aid of a dial indicator. The resultant readings will give the warpage of slugs within .001". This is a precision instrument and is being fabricated and assembled within tolerances of .0001".

Normal routine machine shop work continued during the month, including grinding of cutters, development of special set-ups, and tools for producing specialty items for the Sigma Pile.

Work is being continued on the revision of 135G sheet rod test graphite details for use in connection with the Design Division Ball 3 X test.

Bldg. 3706 Machine Shop

A Glass Marking Lathe was designed and fabricated for serrating the calibration marks on micro pipets. The unit consists of a Mix-Master motor with a hand chuck for holding and rotating the pipet, and a compound feed for holding the carboloy tool for serrating the pipet.

A remote control track was designed and fabricated for the Chemical Research Section for moving radioactive samples behind lead shielding. It consists of a slotted track on which is a lucite sample holder. The sample holder is moved by means of a reversible 24-volt motor and an endless cord. The motor is mounted to one end of the track.

A Test Tube Holder and Slides were also fabricated for the Chemical Research Section. This consists of three lucite test tube holders and slides for positioning hot samples remotely.

A Multiple Magnetic Stirrer was fabricated for stirring 12 samples at one time. It is a motor driven unit with 12 rotating magnets mounted beneath the sample test tubes. Small glass-encased Alnico magnets in the sample solution are rotated for stirring by the fields of the 12 rotating magnets mounted underneath.

The following jobs were in progress at month-end:

DECLASSIFIED

1195178

An Ultramicroburet is being adapted to complete motor drive throughout with three 27-volt aircraft motors. The unit has one motor for operating the solution feed plunger, and two others for raising and rotating the sample table.

A Gloved Box Motor Mount is being designed and fabricated. The unit is for remote solution stirring behind shielding. It consists of a stirrer which may be moved horizontally as well as vertically. The complete unit will be driven by one fractional horsepower motor.

A vertical lift is being fabricated for use similar to the Gloved Box Motor Mount. Although it lacks the horizontal travel, it is designed for either stirring or pipet manipulation by remote control.

Some revamping of Lionel train equipment has been done for the Rala Laboratory design group.

During the month a total of 35 jobs were received in the shop and 35 jobs were completed. There was a backlog of 9 jobs at the end of the period.

Glass Shop - Bldg. 3706

The Glass Shop completed 77 jobs, which could be broken down as follows:

New Jobs	46
Repairs	20
Revisions	11

During the month assistance was rendered to Bldg. 234-5 operations through a survey and appraisal of apparatus to be made and set up in that building.

300 Area Services

Coincident with its transfer from Analytical to Engineering on Jan. 1, the 300 Area Services Group was assigned account code 247. Arrangements were made with the General Accounting Division to distribute the operating costs of this group, which include charges (to code 247) for material purchased for Bldg. 3706 Stockroom, routine and individual work order charges for general maintenance of Bldg. 3706, and labor charges for personnel in the group. Distribution is to be made by individual breakdown of these three sources of cost, which are developed from records of each month's operation according to the amount of service provided to each of the customer groups.

A total of 89 work orders for non-routine maintenance and new work in Bldg. 3706 were issued during the month. The extremely cold weather resulted in numerous difficulties involving water service and heating facilities in the building, and the continual freezing of water pipes required the constant attention of one to two Maintenance mechanics. In three instances fire protection lines were frozen and emergency repairs made to put them back in service. During a short warm spell frozen lines, which had unknowingly been

[redacted]

1195179

split by ice, thawed and the water ran through walls and ceilings requiring a large number of man hours to clean up the laboratories affected. The air conditioning units used for heating also required constant attention to maintain as much control as possible over temperature and humidity.

A total of 64 purchase requisitions were processed for special materials and equipment required by the Analytical Section and the Metallurgy Section. Moving of personnel from Bldg. 3706 to the 101 Area necessitated the issuing and expediting of requests for a number of units of furniture, etc.

The Bldg. 3706 Stockroom disbursed approximately $3,400 worth of chemicals and equipment to customer groups in the 300 Area. As in the past, a large number of store orders were issued at the request of outer area laboratories of the Analytical Section for the direct delivery of stores items to them.

The stainless steel containers which were built for use in transporting contaminated liquid wastes by truck from Bldg. 3706 to Bldg. 222-B were put in use during the month. Immediately a number of comments and suggestions were made concerning disadvantages and possible improvement of the container. Outstanding disadvantages are (1) the volume of the container (approximately 12 ounces), and (2) the difficulty in determining level of liquid in container during use. It has been suggested that a stainless steel can with a lock cover be made to contain a one quart ice cream carton as a liner, and to use a 13 oz. glass bottle with rubber stopper as the waste container. It is also evident that in event of an increase of groups requiring containers there will not be a sufficient number; any new or replacement units required will be an improved or different type.

A request for photographic service was received from the Pile Technology Division, involving the development of special type plates which are being exposed in the piles. Special solutions and techniques are necessary for satisfactory results. At present dummy plates are being used to check the procedure, solutions and techniques. Other requests have been of a normal nature, involving pictures and prints of equipment for record purposes.

New Laboratory Planning and Design Liaison

Project C-187-E - Redox Laboratory - Bldg. 222-S

Design effort for Bldg. 222-S was directed toward the clarification of details of construction. Satisfactory progress was noted, particularly with respect to multicurie laboratory and equipment design. Current efforts are being directed toward the establishment of basic procedures for the disposal of active wastes. Design of a disposal system is delayed until these procedures are defined.

Study GET-14 - Radiochemistry Bldg.

Assistance was given to the Design Divisions in preparing construction cost estimates for the Radiochemistry Bldg. A series of design liaison discussion meetings has been initiated between personnel of the Engineering Section and the various Technical Sections involved.

1195180 DECLASSIFIED

Study GET-15 - Radiometallurgy Bldg.

Except for a few minor changes requested by the Metallurgy Section, the assembly and detailed drawings for the 30 curie "Hot Cells" are complete.

Assembly and detailed drawings were completed for the "Elbow Type Manipulator." This manipulator was designed for the above-mentioned cell. Purchase requisitions #3,174, 5, 6, and 7 are now in the procurement section. The plan is to obtain one of these manipulators for thorough testing before the large orders have to be placed for this building.

A new design has been worked out for the 1000 curie cell. It has been requested by the metallurgists that the new features of this cell be made available for use also in the 30 curie cells. This work is progressing very slowly because of the lack of drafting assistance.

Study GET-16 - Technical Center Plot Plan

Topographic survey work at the 300 Area site now planned for this new facility was completed by the Design Division.

STATISTICAL STUDIES

300 Area Operations

Statistical analyses of existing and proposed analytical methods for C-6 uranium scrap material were made. It was recommended that the proposed more rapid method be adopted on the basis that (1) the sampling variation is much larger than the methods variation, and (2) the precision of the two methods is of the same magnitude.

Data submitted by the P Division Process Control Group were analyzed statistically to determine which mixture of soluble oil and water gives the best penetration and lubrication qualities on aluminum and stainless steel plates. No definite conclusion could be drawn due to the inconsistency of the data.

The recommended statistical control procedure for compositing samples and reporting results on MD-6 and CRD-6 uranium scrap was adopted and placed in operation.

A preliminary examination was made for the 300 Area Plant Assistance Group to determine the effect of a new melt plant procedure on billet yield and metal quality.

A study of tin content build-up in the bronze, the Al-Si dip, and the Al-Si canning baths of Bldg. 313 was made for the Plant Assistance Group. No significant relationships were found to exist, but this was probably due to the small amount of data submitted. More data are being gathered.

Other statistical work performed on problems during the month included (1) a recalculation of the minor injury frequency limits of the H.W. Safety Report,

(2) a study of Bldg. 313 canning reject causes for the year 1949, and (3) solving simultaneous equations for the Design & Construction Divisions.

100 Area Operations

Statistical analysis of data from PT 105-235-P revealed (1) no significant dimensional changes in completely transformed alpha-rolled uranium slugs, but (2) a decrease in average diameter and increases in average length and warp for both groups of partially transformed material. The variability of the individual changes in length and diameter increased as the degree of transformation was decreased, and the variability in warp also increased. However, the completely transformed slugs showed a greater tendency to form small blisters. This study was reported in Doc. HW-15849.

An analysis of dimensional measurements on two tubes of regular Group V alpha-rolled uranium metal exposed to 475 M.W.D. under PT 105-278-P showed no unusual dimensional changes or increased in variability when compared to similar slugs examined prior to exposure or after exposure to 400 and 450 M.W.D.

Work has been started in connection with the request of the Pile Physics Section for the establishment of routine statistical control of the counting instruments to be used in exponential pile experiments.

A statistical analysis of dimensional measurements on Group V slugs with high nickel content exposed under PT 105-224-P showed no abnormal deviation from the expected behavior of Group V slugs (Doc. HW-15848).

A routine monthly statistical quality control report on exposed slug dimensional measurements is being initiated, with the first issue to cover the month of January.

200 Area Operations

From analytical data on routine spectrographic analyses of 234-5 control laboratory standard, estimates of accuracy and reproducibility were obtained. Also, for each element considered, a factor for computing the limit that a single analytical result should not exceed, given the tolerance specification for the element, was calculated.

Computations were made for the H.I. Divisions of error due to counting in the determination of air sample product content.

A study of 234 Bldg.-231 Bldg. product differences disclosed significant trends, which were also apparent in the differences between actual P-4 assays and P-4 assays expected from the relationship with specific gravity. These trends accounted for approximately 30% of the variation in individual 234-231 differences, excluding any extraordinary differences, and were responsible for more than half the variation from month-to-month during the past three months.

DECLASSIFIED

1195182

The analysis of an experiment previously designed for the Analytical Section to study the TTA method of plutonium extraction was completed. The experiment showed significant effects due to the quantity of excess oxidizing agent and to the quantity of extractant.

A dilution method applied to the coincidence loss testing of alpha instruments was continued during the month.

At the request of the Analytical Section, best linear equations relating volume percent TBP and specific gravity in both Deobase and Stoddard's Solvent were obtained.

From a study of data from the calibration of several ring balances and process manometers in the separations plants, estimates of the reproducibility of weight factor and manometer readings were obtained.

LIBRARY AND FILES

General

A number of Classified Files questions were resolved in discussions with R. C. Robin and Alice E. Denton (of the Nucleonics Office in Schenectady) during their visit to Hanford in mid-January. Preliminary consideration also was given to the establishment of a branch of the Operations Classified Files in the 200-W Area as a means for reducing the classified document holdings in individual files in that area.

Plant Library

The work of the Plant Technical Library proceeded on a routine basis. The number of books and periodicals circulated attained a new high, and the number of technical reference services continued to increase. Following is a representative sampling from the many literature searches made:

Principles of designing heat exchangers.
Treatment of bromine burns.
Cost accounting systems for accounting for scrap.
Electrical resistivity of anodized aluminum.
How to make bead joints in ventilating ducts.
Methods of analyzing silicofluorides for impurities.
Administration of maintenance programs in a large plant.
Resolving power of photographic films.
Heat transfer coefficient from a hot surface to water containing air bubbles.
Wiring diagrams of intercommunicating telephones.

Library statistics were as follows:

	December 1949	January 1950
Number of books on order received	178	232
Number of books fully cataloged	87	215
Number of bound periodicals processed but not fully cataloged	85	1
Pamphlets added to pamphlet file	29	5

1195183

Miscellaneous material received, processed, and routed (Including maps, photostats, patents, etc.)	17	37
Books and periodicals circulated	1272	1655
Unclassified reports processed	59	110
Unclassified reports circulated	154	99
Reference services rendered	703	725

	Main Library	W-10 Branch	Total
Number of books	5357	2109	7466
Number of bound periodicals	3797	100	3897

Classified Files

The work of the Audit and Inventory Unit began to gather momentum, although the staff was below that ultimately planned for the Unit. The small staff was able to test the proposed procedures, and make a study of the total extent of the assignment. This indicated that there are approximately 800 individuals at Hanford Works with holdings of classified documents, which means that it will be necessary to inventory approximately 70 files per month to maintain the perpetual inventory on an annual basis. Based on results so far, this will require the planned staff of 10 clerks.

As a direct result of the work of the Audit and Inventory Unit, and the suggestion incorporated in the Instructions Letter authorizing this Unit, the volume of documents returned to the Classified Files for routing, re-routing, or clearing, increased markedly. As noted in the statistics below, work volume increased 50% from 14,280 of these transactions in December to 21,045 in January. This last figure represents a new high, and indicates that many holders of classified documents are reducing their files.

To simplify the interchange of classified documents between Operations personnel and the D & C Files, and between D & C personnel and the Operations Files, the practice of always transmitting through the affiliated Files was discontinued in favor of direct routing from either Files.

Following an idea received through the Suggestion System, a revised procedure for the issuance and handling of classified notebooks was instituted. Gummed pre-printed forms, prepared for the entry of information required by the Files to index these notebooks adequately for reference use, were procured. The need for a pocket-size notebook was recognized, and smaller notebooks similar to the large ones currently in use were ordered.

The preparation of formal Research and Development reports by the Central Report Publications Unit reflected an increasing work load. Seven formal reports were completed and 16 more were in process at month-end.

DECLASSIFIED

1195184

Technical Services Division

Work statistics for the Classified Files were as follows:

	December	January
Documents routed	14,280	21,045
Documents issued	6,317	7,536
Reference services rendered	3,376	3,452
Reports abstracted	469	378
Registered packages prepared for offsite	380	275
Inter-area mail sent via transmittal	15,720	17,331
Holders of classified documents whose files were inventoried:		
a. Because of normal perpetual inventory procedure		17
b. Because of transfer of work assignment		3
c. Because of termination		3
Volume of unclassified mail handled by 300 Area Mail Room	20,896	20,335

Central Report Publications Unit statistics were as follows:

Ditto masters run	745	820
Mimeograph stencils run	1,452	2,630
Ditto master copies prepared	31,987	26,110
Mimeograph copies prepared	60,049	72,493
Formal Research and Development reports issued	-	7

INVENTIONS

All Technical Services Division personnel engaged in work that might reasonably be expected to result in inventions or discoveries advise that, to the best of their knowledge and belief, no inventions or discoveries were made in the course of their work during January 1950. Such persons further advise that, for the period therein covered by this report, notebook records, if any, kept in the course of their work have been examined for possible inventions or discoveries.

Signed _____
T. W. Hauff
Division Head

TWH:mcs

DECLASSIFIED

HW-15843-DE

MEDICAL DIVISIONS

JANUARY 1950

Summary

The Medical Divisions' roll continued to decrease with a drop of 3 from 365 to 362.

Final approval for private practice of medicine in Richland to become effective some time in 1950 was secured from A. E. C., and newspaper publicity of this fact was given. There was evidence of favorable acceptance of the proposed change by both physicians and the public. Physicians have formed a clinic group to continue specialty coverage for Richland.

Rather drastic economy measures in hospital operation resulted in considerable unrest on the part of the nurses. Failure on the part of supervision to systematically discuss with employees the reasons for changes was felt to be the cause of the trouble and is in process of correction.

Visitors to the Divisions included Dr. Shields Warren, director; Dr. A. Z. Bowers, assistant director, and Mr. J. A. Derry, executive officer of the A. E. C. Division of Biology and Medicine.

Industrial

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

Employee physical examinations dropped by 13% to 1695 due to a decline in employment caused largely by curtailed construction due to severe winter weather. Dispensary treatments remained about constant at 5473. Two major and seven sub-major injuries were treated. The majors were sustained by sub-contractor employees, while all of the sub-major injuries involved G. E. employees.

The health topic of the month dealt with mental hygiene and was accompanied by an extensive community program, with a series of lectures on the subject by our psychiatrist and public health workers.

The recommendation that sub-contractor employees be allowed to work in "health restriction areas", pending completion of the laboratory phase of the pre-placement physical examination, was accepted and an estimated saving of about $200,000. should be effected during the coming two year construction period.

Sickness absenteeism increased from 1.75% to 2.23%. Total absenteeism was up from 2.34% to 2.84%.

Communities - Hospital and Clinics

The average daily hospital census increased by 26% from 68.8 to 86.7. The adult census was 75.0 as compared to 83.7 a year ago.

Clinic visits decreased slightly from 5629 to 5482, while the decrease as compared to January, 1949 was 45.6%, due largely to population decline. Dental visits increased by 9% to 2452.

DECLASSIFIED

HW-15843-DEL

MEDICAL DIVISIONS

JANUARY 1950

Public Health

There was a sharp rise in mild scarlet fever. As a result of this and increased upper respiratory infection, home nursing visits for morbidity increased by 20%.

A very successful panel discussion on mental health was directed.

Rating of food-handling establishments was completed with the result that (9) facilities are Grade A and (2) are Grade B.

Costs (December)

The net cost of operating the Medical Divisions (before assessments to other divisions) was $92,042., a decrease of $13,174., and $12,731. below the budget figure. The improvement was largely due to an increase in net revenue of $11,897.

The net cost of the Richland Community Medical program was $9,809., a decrease of $13,101., and $16,641. under the budget estimate.

Kadlec Hospital loss was $1,216. as compared to $13,728. for November and a budget figure of $17,750. The improvement was due to increased revenue, increased intra-division cost transfers, and decreased direct expense.

The clinic loss was $8,593., a decrease of $589., due to increased revenue.

1195187

DECLASSIFIED

Industrial Medical Division

General

The total number of examinations decreased to 1,695 as compared to 1,945 in December. First aid treatments increased slightly from 5,325 to 5,473. There were (2) major injuries and (7) sub-major injuries treated. The (2) major injuries were to sub-contractor employees, and the (7) sub-majors were to General Electric employees.

Approval was received from the Atomic Energy Commission for sub-contractor employees furnished insurance by General Electric to be permitted to go to work in so-called "Health Areas" prior to completion of the medical pre-placement examination. Those not medically acceptable will be removed from these areas within 48 hours, and mechanics for control of removal in this time have been carefully worked out. The estimated savings in time loss during the future construction period amount to $200,000.

One Dept. of Labor hearing was attended in Seattle during the month with a member of the Legal Division. The case involved sudden death of a General Electric carpenter while on the job where claim was made that the death resulted from the work performed.

The subject of the industrial physicians' scientific meeting dealt with the aspects of psychiatry in industry, and was presented by a psychiatrist and followed by general discussion of the group.

The Health Activities Committee met on January 26th and the topic of the month on "Mental Health" was presented. Material on this subject was prepared for distribution throughout the plant.

The need for the services of a full time industrial hygienist for measurement and survey of toxic chemical hazards was discussed with representatives of the Safety Division during the month, and it has been decided that this type of service is not adequate at the present time. A committee composed of one member from the Safety Division, one from the Industrial Medical Division, and one from the H. I. Divisions was appointed to correlate the functions of these divisions in regard to chemical hazard surveys, and plan for more adequate and routine surveys.

The absenteeism for sickness only was 2.23% in January, as compared to 1.75% in December, an increase of 0.48%.

There were no findings attributable to radiation or chemical injury to any employee during the month.

Visitors of the division during the month included Dr. Shields Warren, Dr. A. Z. Bowers, and Mr. J. A. Derry, all of the A. E. C. Division of Biology and Medicine.

1195188

MEDICAL DIVISIONS

JANUARY 1950

Physical Examinations Operations	Dec. 1949	Jan. 1950
Pre-employment	46	65
Rehire	23	40
Annual	652	450
Interval	597	544
A. E. C	7	12
Recheck	135	132
Termination	67	48
Food Handlers	22	0
Sub-total	1549	1291
Sub-contractors		
Pre-employment	120	98
Rehire	239	179
Recheck	11	60
Termination	26	67
Transfers	0	0
Sub-total	396	404
Total Physical Examinations	1945	1695
Laboratory Examinations Clinical Laboratory		
Government	256	84
Pre-employment, termination, transfer	2987	2581
Annual	3771	2319
Rechecks (Area)	3091	2864
First Aid	15	19
Clinic	2350	2629
Hospital	2647	3077
Public Health (Inc. food handlers)	59	47
Total	15156	13620
X-Ray		
Government	18	9
Pre-employment, termination, transfer	422	391
Annual	664	460
First Aid	65	76
Clinic	154	217
Hospital	128	195
Public Health (Inc. food handlers)	25	9
Total	1476	1357

DECLASSIFIED

1195189

MEDICAL DIVISIONS

JANUARY 1950

Electrocardiographs	Dec. 1949	Jan. 1950
Industrial	50	50
Clinic	8	3
Hospital	13	30
Total	71	83
Allergy		
Skin Tests	10	26
First Aid Treatments Operations		
Occupational Treatments	342	418
Occupational Retreatments	1139	1274
Non-occupational Treatments	3687	3579
Sub-total	5271	5168
Construction		
Occupational Treatments	37	51
Occupational Retreatments	73	107
Non-occupational Treatments	47	44
Sub-total	157	202
Total First Aid Treatments	5325	5473
Major Injuries		
General Electric	0	0
Sub-contractors	0	2
Total	0	2
Sub-major Injuries		
General Electric	2	7
Sub-contractors	1	0
Total	3	7
Absenteeism		
Weekly employees, all causes	2.34%	2.84%
Weekly employees, sickness only	1.75%	2.23%
Total days lost by males due to sickness	1280	2109
Total days lost by females due to sickness	744	1120
Total days lost due to sickness	2024	3229
Investigation:		
Total calls requested	36	28
Total calls made	36	28
No. absent due to illness in family	0	0
No. not at home when call was made	0	3

1195190

MEDICAL DIVISIONS

JANUARY 1950

Village Medical Division

General

Medical Divisions' roll decreased from 365 to 362. The average daily adult hospital census increased from 57.1 to 75.0, as compared to 83.6 a year ago.

Clinic visits decreased from 5629 to 5482, which is a 2.6% decrease as compared to the previous month, and 45.6% below a year ago. North Richland medical center accounted for 2.4% of the total clinic visits this month.

The net expense of the Richland Community Medical program for December, 1949 was $9,809. as compared to $22,910. for November. Breakdown is as follows:

Kadlec Hospital net expenses — $1,216.00

This is a decrease of $12,512. over November, due primarily to an increase of approximately $8,000. in revenue as a result of increased patient census; an increase of about $3,500. in Intra-division Cost Transfers due to closing of North Richland Industrial Division and the resulting increase in utilization of out-patient facilities at Kadlec Hospital; and a decrease of $2,000. in direct expenses. At the same time, Transferred Charges from Other Divisions increased $800.

Clinic net expenses — $8,593.00

This is a decrease of $589. over November due primarily to increased revenue.

Clinic Visits	Dec. 1949	Jan. 1950
Medical	1026	1062
Pediatrics	681	605
Well Babies	164	65
Surgical	598	641
Gynecological	402	373
Obstetric (new)	50	68
Obstetric (recheck)	742	705
Venereal Disease	55	15
Ear, Nose & Throat	135	300
Eye	183	201
Visits handled by nurses	821	724
Night clinic visits	772	723
Total	5629	5482
Average clinic visits per day	217	211

1195191

DECLASSIFIED

DECLASSIFIED

MEDICAL DIVISIONS

JANUARY 1950

Source of Richland Clinic Visits	Dec. 1949	Jan. 1950
Richland	90.8%	93.0%
North Richland	3.5%	2.7%
Other	5.7%	4.3%
Home Visits (Pay cases)		
Doctors	391	592
Nurses	210	476
Total	601	1068
Kadlec Hospital Census		
Admissions: Adult	365	438
Patient Days: Adult	1770	2345
Infant	363	363
Total Patient Days	2133	2708
Average Stay: Adult	4.8	5.4
Infant	5.0	5.6
Average Daily Census: Adults	57.1	75.0
Infants	11.7	11.7
Total Average Daily Census	68.8	86.7
Discharged against advice	1	3
One-day cases	49	63
Occupancy Percentage: Adults	64.0%	85.1%
Infants	150.0%	146.2%
Admission Source: Richland	84.1%	84.3%
North Richland	5.3%	5.9%
Other	10.6%	9.8%
Vital Statistics: Live Births	72	63
Still Births	0	2
Deaths	2	4
Surgery		
Majors	56	76
Minors	60	68
Eye, Ear, Nose, Throat	13	54
Transfusions	47	37
Dental	3	0
Physiotherapy Treatments		
Clinic	88	71
Hospital	104	65
Industrial: Plant	119	146
Personal	33	18
Total	344	300

1195192

MEDICAL DIVISIONS

JANUARY 1950

Pharmacy	Dec. 1949	Jan. 1950
No. of prescriptions filled	2779	2862
Patient Meals		
Regulars	2769	3168
Specials	780	1020
Lights	137	74
Softs	1075	2059
Tonsils & Adenoids	31	137
Liquids	117	136
Surgical Liquids	77	67
Total	4986	6661
Cafeteria Meals		
Noon	1833	1934
Night	266	276
Total	2099	2210

Public Health Division

General

There was a sharp rise in a mild type of Scarlet Fever. Morbidity has increased particularly in regard to upper respiratory diseases. Nursing home visits for morbidity increased by 20%.

The division is participating in the planning and carrying out of a panel discussion series on mental health.

A new work representing a system of marked senses cards was instigated.

Rating of the food handling establishments was completed with the result that (9) facilities are Grade A and (2) Grade B.

Administration	Dec. 1949	Jan. 1950
Newspaper articles	6	6
Committee meetings	2	7
Attendance	10	52
Staff meetings	4	4
Lectures & Talks	3	7
Attendance	150	517
Conferences	46	13
Attendance	125	48
Radio broadcasts	0	0

DECLASSIFIED

1195193

DECLASSIFIED

MEDICAL DIVISIONS

JANUARY 1950

Immunizations	Dec. 1949	Jan. 1950
Diphtheria	462	193
Influenza	8	1
Smallpox	106	39
Tetanus	50	48
Typhoid	1	1
Vollmer Patch Test	0	3
Total	627	285

Social Service		
Cases carried over	81	88
Cases admitted	19	22
Total	100	110
Cases closed	12	13
Remaining case load	88	97
Sources of referral:		
Public Health	3	2
Doctors	4	13
Interested Person	2	2
School	0	2
Personal application	4	2
Other agency	2	1
Miscellaneous	4	0
Total	19	22

Sanitation		
Inspections made	149	207

Bacteriological Laboratory		
Treated Water Samples	162	171
Milk Samples (Inc. cream and ice cream)	68	65
Other bacteriological tests	188	248
Total	418	484

Communicable Diseases		
Chicken Pox	83	19
German Measles	9	6
Gonorrhea	1	0
Impetigo	1	0
Measles	6	1
Pinkeye	2	1
Poliomyelitis	1	0
Ringworm	4	1
Roseola	0	1
Scabies	2	2
Scarlet Fever	2	12
Tuberculosis	1	0
Total	112	43

1195194

MEDICAL DIVISIONS

JANUARY 1950

	Dec. 1949	Jan. 1950
Total No. Nursing Field Visits.....	1156	1056

Dental Division

General

Dental visits increased 9% over the previous month, but were 31% less than the figure for a year ago.

	Dec. 1949	Jan. 1950
Patients treated.....	2259	2452

DECLASSIFIED

1195195

DECLASSIFIED

MEDICAL DIVISIONS

PERSONNEL SUMMARY

January 31, 1950

	TOTAL	1100 Area					3000 Area		Outlying Areas						
		Administration	Industrial	Clinic	Hospital	Public Health	Clinic	Public Health	100-H	100-B	100-D	100-F	200-E	200-W	300
Physicians	30	2	5.8	17	1	1	1		.3	.3	.3	.2	.2	.5	.4
Dentists	10			9			1								
Nurses	106	2	10	11	50	10	1	1	1	1	4	4	4	5	2
Anesthetists	3				3										
Nurse Aides**	31		1	2	27	1									
Ord. & Amb. Dr.	6				6										
Tech.-Dent. Hyg.	1			1											
Tech.-Clin. Lab.	15				11.4				.4	.4	.4	.4	.4	.8	.8
Tech.-X-Ray Lab.	4				4										
Tech.-Bact. Lab.	1				1										
Tech.-Phys.Ther.	1				1										
Secretary	2	2													
Cler.Wk.Leador	2	1			1										
Steno-Typist	9	3	2		2	2									
Off.Mach.Oper.	3	2	1												
Telephone Oper.	4	4													
Gen'l Clerk	62	21	18	9	9	1			.5	.5	.5	.5	.5	.5	1
Pharmacist	4				4										
Dietitian	2				2										
Cook	5				5										
Kitchen Worker	10				10										
Soc.Serv.Coun.	3					3									
Sanitarian	3					3									
Health Educator	1					1									
Dental Ass't	9			8			1								
Janitor	16	1	4.5	2.6	7.2	.7									
Bacteriologist	2				2										
Records Supv.	2	2													
Acctg Supv.	3	3													
Admin. & Ass'ts	3	3													
Others	9			3	6										
Total	362	46	42.3	62.6	152.6	22.7	4	1	2.2	2.2	5.2	5.1	5.1	6.8	4.2

** (4) Nurse Aides on part time.

Number of employees on payroll:

Beginning of month	365
End of month	362
Net decrease	3

11

1195196

[redacted]

HW-15843-DEL

HEALTH INSTRUMENT DIVISIONS

JANUARY, 1950

Summary

The force increased by four. Procurement of personnel did not meet our forecasted requirement. Only one Class I Special Hazards Incident was investigated.

In the Operational Division, survey results showed no major deviation from accepted standards.

Vegetation activity has shown a definite decrease since the "green run". Routine samples of air, water and vegetation obtained by Development Division personnel showed the normal pattern of activity distribution. Bioassay of urine samples for plutonium showed no confirmed positive results. Twenty percent of the samples analyzed for tritium oxide were significantly higher than background.

In the Biology Division, specimens collected during the month in the biological monitoring program disclosed no unusual tissue activity. Phase II of the Animal Farm has not been accepted.

[redacted]

2 1195197

Health Instrument Divisions

HEALTH INSTRUMENT DIVISIONS

JANUARY 1950

Organization

The composition and distribution of the force as of 1/31/50 was as follows:

	100-B	100-D	100-F	100-H	200-E	200-W	300	700	P.G.	Total
Supervisors	1	1	4	2	3	10	13	5	0	39
Engineers	5	4	13	4	10	19	10	4	0	69
Clerical	0	0	1	1	2	1	4	4	0	13
Others	9	12	33	11	29	66	56	11	8	235
Total	15	17	51	18	44	96	83	24	8	356

Number of Employees on Payroll	January 1950
Beginning of month	352
End of month	356
Net increase	4

Additions to the roll included one technical graduate, one field clerk, four laboratory assistants, four personnel meters clerks, and two steno-typists. Removed from the roll were a staff assistant, a senior supervisor, an engineer a technical graduate, a technologist, two laboratory assistants, and one steno-typist.

General

Once again recruitment fell below our forecasted personnel requirements, particularly in the Operational Division. Solicited transfer of exempt roll employees from this division to supervisory positions in the Manufacturing Divisions is entirely dependent upon the procurement and proper training of replacement personnel.

One Class I Special Hazards Incident, involving failure to follow standard procedure, was investigated.

The following trips were reported:

1. HM Parker and HA Kornberg - presented papers at West Coast Scientific Conference at U.C.L.A., Los Angeles, California
2. GR Hilst - Annual Conference of American Meteorological Society, St.Louis, Missouri.

DECLASSIFIED

3

1195198

[redacted]

Health Instrument Divisions

Dr. Shields Warren, Dr. John Z. Bowers, and Mr. John A. Derry of the Atomic Energy Commission, Division of Biology and Medicine, Washington, D.C. were visitors during the month for discussion of H.I. Divisions program, facilities and budget.

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

DECLASSIFIED

[redacted]

4

1195199

Health Instrument Divisions

OPERATIONAL DIVISION

100 Areas

General Statistics

	December 1949					January 1950					1950
	B	D	F	H	Total	B	D	F	H	Total	To Date
Special Work Permits	784	622	893	486	2785	738	563	909	468	2678	2,678
Routine & Special Surveys	518	397	474	360	1749	525	400	427	446	1798	1,798
107 Effluent Surveys	91	95	96	153	435	95	93	89	105	382	382
Air Monitoring Samples	108	85	100	132	425	99	75	76	193	443	443

Retention Basin Effluent

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

	100-B	100-D	100-F	100-H
Power Level (MW)	275	305	275	275-320
Average beta dosage-rate (mrep/hr)	1.2	1.0	0.9	0.7
Average gamma dosage-rate (mr/hr)	1.9	2.1	2.1	1.4
Average total dosage-rate (mrep/hr)	3.1	3.1	3.0	2.1
Average integrated dose in 24 hrs. (mrep)	74	74	72	50
Maximum integrated dose in 24 hrs. (mrep)	84	96	96	67
Maximum integrated dose in 24 hrs. (mrep)(1950)	84	96	96	67

100-B Area

Pile and Associated Buildings

Extensive decontamination work was carried out in the discharge area prior to repair work on the chute liners. Two obsolete sprocket chains suspended over the elevator caused widespread coverall contamination until they were removed and dropped into the basin. Checks of all personnel involved in the work indicated no skin contamination. The chute repair work was completed the following shutdown under carefully controlled conditions, and no contamination spread was found.

The water seal between the storage basin and the rear face was broken during pile operation when the water in the storage basin was pumped down. Scattered radiation from the discharge area was confined to the opening of the chute. Airflow was from the storage area into the rear face discharge area and no evidence of a backup of contaminated vapors from the effluent system was found.

Contamination was again found in the storage area when the #3 drain was left unplugged. The gamma radiation beam at the top, far edge of the pile showed little change with a maximum dosage-rate of 12 mr/hr reported.

DECLASSIFIED

Health Instrument Divisions

P-10 Operations - 108 Building

High gas activity, as measured by the hood room Kanne chamber, was observed and investigation led to the discovery that the main air intake was heavily iced, restricting the inlet air supply. As a result, the exhaust fan had to draw air from another source which was most likely the roof ventilators and a recycling of exhaust air occurred. The condition was corrected by removing the ice, and keeping the main air inlet free of ice. Twelve urine samples during the period showed positive results for tritium oxide. Evidence of contamination on the outside surfaces of process lines was found through a contaminated glove worn in the hood room operations.

100-D Area

Three cases of skin contamination were reported during discharge operations. Maintenance work on the top of the pile included honing and dressing several rods and rod guides, and vacuuming vertical safety rods. Work was well controlled and no unusual exposures were found. Considerable contamination was encountered during the discharge of samples from the "B" experimental hole, but was well controlled and no contamination spread was found. Investigation of a high reading on the water monitor in the "Z" sample room disclosed contamination lodged at the 1 inch sample line from the 33-1/2 header. Low level alpha contamination was also found.

The Danger Zones in sample rooms A, B, C, and X, were enlarged to include the whole rooms due to high levels of airborne contamination from effluent water vapor. Complete protective apparel is now required for entry into these rooms when air contamination concentration is above 10^{-4} μc/liter.

Contamination was reported in three returned railway express cars. The cars involved were Milwaukee 1074, Southern 498, and Milwaukee 1000.

The radiation beam at the top, far edge of the pile showed a gamma intensity of about 2.5 roentgens per hour. Film studies showed the beam to be about 3-3/16 inches wide, 3 inches from the neoprene seal, and about 3-5/16 inches wide, 24 inches from the seal.

100-H Area

During the discharge of tube #2451, three solid aluminum dummy slugs lodged on the near apron of the discharge area, and were removed with a long pole. A high air sample result was obtained during the cutting operation for the removal of tube #2577. A section of thermocouple wire and 1/4 inch aluminum tubing sheath were removed from the "D" experimental hole into a 1 inch pipe which was then removed to the roof, and then to the ground level, and ultimately to the burial trench. High exposure rates were encountered for short periods during this

[redacted]

Health Instrument Divisions

work. Rather high dosage-rates were observed inside the 105 Building, while the equipment was on the roof. A sample of pile gas, analyzed by the Health Instrument Methods Laboratory, showed a concentration of C^{14} of about 0.13 μc/liter.

Active gas in the Reactor Development room and along the base seams of the pile was greatly reduced by the application of mastic compound to the leaky surfaces.

Investigation of the ventilation in the Pile Building revealed three cases of improper air balance which are under correction.

Increased neutron fluxes were observed at check locations around the pile with the advent of the 320 MW Power Level.

100-F Area

A previously used horizontal safety rod was milled down for use as a replacement regulating rod. The milling operation was carried on in a "dry-box" under negative pressure which kept practically all of the radioactive metal chips well confined. No evidence of airborne contamination was found and no personnel contamination was reported.

Two stuck charges were encountered during the month, and one of these in tube #1293 resulted in a rupture of the tube. Extremely high dosage-rates were encountered due to irradiated metal pieces lodged on the tip-off and nozzle which were ultimately removed by long poles. Considerable contamination in the discharge area also resulted from these operations.

High airborne activity after startup was traced to a broken seal at the "C" experimental hole. Repairs to the hole on the subsequent shutdown reduced the condition. As in the other areas, air samples taken in the water sample rooms showed a high concentration of beta emitters, presumably carried in the water vapor from the effluent system.

Eleven instances of personnel contamination occurred during the month. Seven were to hands, and the others to the face and neck. Most of this contamination was obtained in the discharge area and all cases were successfully cleaned.

The gamma dosage-rate in the beam at the top, far edge of the pile was about 4.5 roentgens per hour. The slow neutron flux jammed the BF_3 counter on a scale of 128.

DECLASSIFIED

[redacted]

1

Health Instrument Divisions

200 Areas, T and B Plants

General Statistics

	December, 1949			January, 1950			1950
	T	B	Total	T	B	Total	To Date
Special Work Permits	287	380	667	275	253	528	528
Routine & Special Surveys	493	472	965	417	436	853	853
Air Monitoring Samples	572	670	1,242	414	631	1,095	1,095
Thyroid Checks	122	77	199	63	66	131	131

Air Sample Results

Location	Number Taken	Number Above 10^{-12} µg Pu/cc	Number Above 10^{-7} µc/liter	Maxima µg Pu/cc	Maxima µc/liter	Remarks
T Plant						
Canyon	116	14*	113	2.4×10^{-10}	10^{-4}	Work at open 14 L. Jetting at open 7L & 7R.
221 Galleries	131	15	2	6.0×10^{-11}	1.6×10^{-7}	Oper. Gallery Section 3.
R-13 Change House	20	8	7	4.0×10^{-10}	2.5×10^{-6}	High Canyon air conditions.
222	85	21	9	1.2×10^{-11}	4.0×10^{-7}	Decontamination Sink.
224	57	3	3	2.0×10^{-11}	1.2×10^{-7}	F-10 Room
Others	5	*	3	$<10^{-11}$	8.5×10^{-7}	291-T Stack Pit.
B Plant						
Canyon	200	26*	194	9.5×10^{-9}	10^{-3}	Open 6-L.
221 Galleries	158	5	0	1.6×10^{-11}	0	Oper. Gallery Sect. 16 Gang valve replaced.
R-13 Change House	34	5	0	4.5×10^{-12}	--	--
222-	81	10	2	2.5×10^{-11}	1.6×10^{-7}	At drying hood Room 7.
224	177	4	1	4.3×10^{-12}	3.6×10^{-7}	Pipe Gallery B cell.
Others	31	5	0	6.9×10^{-12}	--	Near water tower 224 B roof.

* Sensitivity 10^{-11} µg Pu/cc.

8

1195203

[redacted]

Health Instrument Divisions

Canyon Buildings

In the T Plant, some progress was made in decontamination of the canyon deck but considerable contamination remained at month end. Monitoring assistance was required while taking 9 samples. High level glove contamination was encountered on one sample with no overexposure to personnel indicated. The craneway was still generally contaminated; and two instances of personnel contamination occurred in the crane cab. The source of contamination in the cab is believed to be the craneway. High level exposure rates were encountered during the removal of contaminated paper from the canyon deck and while changing the insert in a sample cap. One instance of personnel contamination occurred during sampling, and was successfully cleaned. Fifteen canyon air samples jammed the beta counters with a maximum surface dosage-rate of 255 mrep/hr reported on a filter (approximately 10^{-4} μc f.p./liter).

In the B Plant, considerable canyon deck contamination occurred as a result of the removal of an agitator from 6-L and placement in 11-L. Air samples taken on the two days 6-L was open showed concentrations up to an estimated 10^{-3} μc f.p./liter. Several jet assemblies and connectors were regasketed or repaired with high exposure rates encountered but no indication of an overexposure. Monitoring assistance has been required on all 13-4 samples since January 13, 1950. In one instance it was necessary to remove the sampling equipment by means of the crane and place in contaminated waste. Routine surveys of the operating gallery led to the discovery and subsequent replacement of a contaminated gang valve and the attendant lines thereto.

Control Laboratories

	T Plant	B Plant
Items contaminated and not regulated	192	181
Skin Contamination, alpha	7	2
Skin Contamination, beta	2	3
Contaminated floor locations	35	35

In the T Plant, monitoring assistance was given while slurping five samples, and in the B Plant disposal of 8, waste shipments from the 300 Area required monitoring assistance.

Concentration Buildings

In the T Plant, routine cell surveys revealed an estimated 60 μg Pu contamination, with about 30 μg reported in E cell. Seven maintenance inspection jobs, and ten maintenance repair jobs, were done with no contamination spread.

In the B Plant, the routine sampling of air discharged from roof vents was temporarily discontinued because the cold weather froze the filters.

DECLASSIFIED

9

[redacted]

DECLASSIFIED

[redacted]

Health Instrument Divisions

Stack Areas

In the B Plant, contaminated water seeped out from under the lead brick barricade around the #3 fan, and was attributed to water vapor picked up at the water seal condensing out in the cold duct work.

Waste Disposal Areas

In the T Plant, 3 unsuccessful attempts were made to obtain the 400 lb. metal waste sludge sample from the 101-U tank. One instance of very low level skin contamination occurred during this work.

In the B Plant, there were no further findings in the vicinity of the 153-C diversion box reported last month as possible radioactive mouse feces. Snow hampered trapping efforts and efforts to find more radioactive particles. Analyses to date are not conclusive.

Plant Laundry

Thirteen of the 71 spot and continuous air samples taken showed positive results with a maximum of 1.3×10^{-6} µg U/cc obtained. The practice of sorting laundry prior to washing was again discontinued, and laundry is dumped from hampers directly into the washers.

General

All thyroid checks were below the warning level.

The Isolation Building

General Statistics

	December 1949	January 1950	1950 To Date
Special Work Permits	30	21	21
Routine & Special Surveys	311	269	269
Air Monitoring Samples	408	302	302

Air Sample Results

Location	No. Taken	Number above 10^{-11} µg Pu/cc	Maximum µg Pu/cc	Remarks
Operating cells	157	1	3.2×10^{-11}	SWP work, cell 3
Control Laboratory	124	2	2.2×10^{-11}	Slurping, room 31
Development Laboratory	9	0	---	---
Ducts	12	0	7.8×10^{-12}	---

[redacted]

10

1195205

[redacted]

Health Instrument Divisions

Building Surveys

	Operating Cells	Control Laboratories	Development Laboratories
Items not regulated found contaminated	12	128	14
Number above 20,000 d/m	0	4	3
Number above 80,000 d/m	0	1	0
Skin contamination	1	0	0
Contaminated floor locations	3	11	1

A vacuum-operated air monitoring system was installed in the operating cells so that air sample reporting to 10^{-12} µg Pu/cc may be possible. The maximum levels of gamma radiation reported were 36 mr/hr on PR containers, 5 mr/hr at the process hoods, and 5 mr/hr on SC.

234-5 Building

General Statistics

	December 1949	January 1950	1950 To Date
Special Work Permits	152	158	158
Routine & Special Surveys	339	321	321
Air Monitoring Samples	1,118	1,016	1,016

Air Sample Results

Location	Number Taken	Number above 10^{-12} µg Pu/cc	Maximum µg Pu/cc	Remarks
234 Oper. Sect.	234	100	2.4×10^{-6}	Removal tank, hood 6
235 Oper.	141	13	5.3×10^{-10}	Glove change, hood 22
Technical Control	224	18	8.0×10^{-12}	Loose contamination (0.25 µg) in room 153.
General	287	11	4.7×10^{-12}	Compressor room.
Ducts after primary filter	53	36	2.9×10^{-9}	From 234 process hoods.
26 inch vacuum line	19	17	2.7×10^{-10}	---
10 inch vacuum line	16	1	1.4×10^{-10}	Very high level air samples being taken.
Stack Breech	42	0	---	---

234 Building - Operating Section

Nine incidents of contamination spread occurred within process rooms with an associated 25 floor spots in adjacent corridors and rooms. In one instance, corridor contamination led to the discovery of a leaking flange in room 228. Eleven major maintenance jobs involving work in Zone 4, or on process lines, were completed with contamination confined to work areas and protective clothing.

[redacted]

[redacted]

1195206

DECLASSIFIED

Health Instrument Divisions

Included in these was the replacement of the supernate hold tank in hood 6, where a temporary plywood airlock was constructed on the backside of the hood in order to accomplish the job. Air contamination inside the airlock was severe, and samples averaged 5×10^{-7} µg Pu/cc, with a maximum of 2.4×10^{-6} µg Pu/cc reported. The majority of the work was performed wearing assault masks inside of fresh-air masks. Glove contamination up to 140 µg Pu, and SWP clothing contamination up to 10 µg Pu, was reported, but no skin contamination occurred during the entire job.

235 Building - Operating Section

Two spots of floor contamination were reported in rooms adjacent to the process rooms, and one instance of skin contamination was reported and successfully cleaned.

Control Laboratories

Significant improvement was made in reducing the number of instances of airborne plutonium contamination. A total of 203 items, not regulated with respect to handling, was found contaminated and outside of hoods; thirty-two of which were above 20,000 d/m, including 16 above 40,000 d/m. Twenty-five contaminated floor locations were reported in the laboratory rooms, and twenty-two in the adjacent corridors. One instance of skin contamination was reported and successfully decontaminated.

The original traps in the decontamination room failed, and are being replaced with stainless steel traps. A potentially serious minor injury occurred when a volumetric flask, containing a process sample, shattered in a laboratorian's hand while replacing the stopper. Contamination was found on the gloves, but no contamination was reported in the wound.

General Building

Ten items, not regulated with respect to handling, were found contaminated. One instance of skin contamination was reported, and successfully cleaned. The plutonium concentration in the discharge air of the 26-inch vacuum system increased during the month. A similar condition occurred in November, and was corrected by switching to another seconiary filter.

Health Instrument Divisions

The 300 Area

General Statistics

	December	January	1950 To Date
Special Work Permits	166	178	178
Routine & Special Surveys	236	184	184
Air Monitoring Samples	178	130	130

Metal Fabrication Plant

Thirty-three of fifty-five air samples taken were above 5×10^{-5} µg U/cc as follows:

Location	Number Taken	Number Above 5×10^{-5} µg U/cc	Maximum Conc. µg U/cc	Conditions
Chip Recovery	22	18	9.5×10^{-4}	First sorting table.
Machining	12	3	1.1×10^{-4}	By rod pallet.
Main Room, 314	17	11	2.6×10^{-4}	Normal operation.
Hand Count Station, 314	4	1	6×10^{-5}	Normal operation.

Supernatant cooling liquid from the machining operation will be flushed to the process waste line and discharged to the pond instead of dumping into the burial ground. No interference with pond seepage is foreseen.

Film surveys of plant issue shoes disclosed eight pairs highly contaminated, of which seven pairs were assigned to 314 Building personnel.

Associated Laboratories

Floor contamination resulted from manipulation of an irradiated concrete sample in room 37. Decontamination was not successful, and the floor was painted pending linoleum replacement.

Six high hand scores were successfully reduced.

Technical Building

A filter in the southwest hood in room 98 was replaced after six months' service. Considerable contamination was reported on the upstream filter surface. A high alpha hand score led to discovery of a contaminated poppy probe in the same room.

Twenty-five high hand counts were reduced except for one of low level uranium

1195208

DECLASSIFIED

contamination where no attempted reduction was recorded.

Cold Semi-Works Building

A total of 6 high hand counts was recorded; 5 were reduced and 1 was "no attempt".

About 1,423 pounds of uranium have been discharged to the waste ponds and about 260 pounds to the 300 N crib.

Hand Score Summary

A total of 44,657 alpha and 45,637 beta hand scores was recorded. About 0.11% of the alpha and about 0.2% of the beta scores were high. No attempted reduction was recorded for 1 high alpha and 1 high beta score. Indicative of the increased contamination problems in the 100 Areas was the fact that 79% of the high beta scores were recorded there.

Health Instrument Divisions

PERSONNEL METERS

Pencils

	100-B	100-D	100-F	100-H	E&N 200	200-W	300	Total	1950 To Date
Pencils Read	9,399	9,515	14,341	10,146	17,233	26,734	35,799	123,167	123,167
Single Readings (100 to 280 mr)	24	20	27	11	12	66	51	211	211
Paired Readings (100 to 280 mr)	2	1	2	0	1	0	0	6	6
Single Readings (Over 280 mr)	16	12	9	5	20	44	77	183	183
Paired Readings (Over 280 mr)	0	0	1	0	0	0	2	3	3
Paired readings Lost	0	1	2	1	0	1	0	5	5

Of the nine significant pencil results only one was confirmed by the badge result. This did not constitute an overexposure on the basis of 300 mrep per week. Investigation of lost readings indicated no possibility of an overexposure.

Badge Resume, Construction Areas

	190-D	Total	1950 To Date
Badges Processed	1,103	1,103	1,103
Number Readings (100 to 300 mrep)	0	0	0
Number Readings (Over 300 mrep)	0	0	0
Lost Readings	3	3	3

Lost readings were all due to badge lost in area.

Badges

	100-B	100-D	100-F	100-H	200-E	R.R.T. 200-N	200-W	300	Total	1950 To Date
Badges Processed	1,561	1,825	2,267	2,546	1,856	504	3,253	5,742	19,554	19,554
Number Readings (100 to 300 mrep)	12	3	32	3	21	0	23	144	238	238
Number Readings (Over 300 mrep)	0	0	7	0	0	0	1	1	9	9
Lost Readings	0	0	2	1	0	0	0	1	4	4

15

DECLASSIFIED

1195210

Health Instrument Divisions

Investigation of the badges that read in excess of 300 mrep showed no real overexposure except in possibly one case. Six of the nine results were due to defective film while two, an x-ray and a gamma ray exposure, were below 300 mrep when appropriate calibration curves were used. The other, a reading of 305 mrep, occurred in the Metal Fabrication Plant.

Lost readings were accounted for as follows:

Badges lost in area	1
Lost in processing	1
Light struck	1
Badge dropped in liquid	1

Investigation of the above lost readings revealed no possibility of an overexposure.

Total badges processed 1950,	Operations	19,554
	Construction	1,103
	Total	20,657

In addition to the badge program, a total of 1,705 items of non-routine nature were processed during the month.

Slow Neutron Pencil Summary

	100-B	100-D	100-F	100-H	Total	1950 To Date
Number of pairs issued	35	106	107	144	392	392
Number of significant readings	2	6	8	21	37	37
Number of significant readings above 100 mrem	0	0	0	0	0	0

1195211

Health Instrument Divisions

CONTROL AND DEVELOPMENT DIVISION

Site Survey

Water samples were taken on a reduced schedule this month because of the extreme cold. Alpha activities in the water remained normal at the natural uranium background. Trace beta activities of less than 100 μμc/liter were found in water supplies which use the Columbia River as a source.

The vegetation activity has shown a definite decrease since the "green run". The I^{131} activity in the separations areas was between 25 and 500 μμc/kg while in the region of Richland and Pasco, the activities are between 4 and 10 μμc/kg Only one off-area trip was scheduled because of poor driving conditions. This trip in the vicinity of Davenport and Soap Lake gave a maximum value of 24 μμc/kg with an average of less than 3 μμc/kg for all samples.

Particle deposition rates remained fairly constant except inside of the 222-B laboratory where the average concentration increased by a factor of ten. The activity in the 100 Area waste effluents averaged between 380 and 660 μμc/liter, the highest monthly average in the last several years.

Geology

Activity levels in water samples from wells 361-B-1, 361-B-9 and 241-T361 remained at the previously observed levels.

Analyses of two liquid samples obtained from the laterals 10 feet and 20 feet beneath the second cycle crib after approximately 100,000 gallons of waste from the 112-B tank had been jetted indicate no very appreciable decrease in the beta activity compared to the activity of the liquid in the 112-B tank. The alpha activity, however, was less by a factor of about fifteen. Sediment samples taken from the test holes in the 241-T second cycle tile field showed no significant contamination following the completion of jetting from the 112-T tank.

The wells to the water table in the 200 West Area continue to show a rise in the water table as was indicated last month.

Meteorology

Forecasts	Number Made	Percent Reliability
Production Forecasts	93	75.7
24-hour	62	79.0
Special	14	85.7

17

DECLASSIFIED

1195212

Health Instrument Divisions

January, 1950, was the most severe winter month in the thirty-eight year history of weather records in this locality. While January, 1949, was more consistently cold than the past month, the average temperatures were somewhat higher. The lowest temperature during the month was -21 and in fourteen days the minimum was below zero. The total snowfall was 23.4 inches with a greatest depth at any one time of 11.5 inches.

Bioassay

There were 504 urine samples analyzed for plutonium during the month. The blank samples average 0.05 d/m with a 92% yield on the spiked sample. Five resamples were necessitated by high values, two of which were 270 d/m and 185 d/m. These two were immediately resampled and results were below the reporting limit. An investigation of the plates indicated that the activity had an alpha energy of 5.15 mev and was uniformly spread on the plate indicating that plutonium was originally in the sample analyzed. The ultimate source of this plutonium remains a mystery. The three resamples from last month gave values below the detection level of 0.33 d/m.

One hundred and fifty-six samples were analyzed for uranium on the fluorophotometer. The maximum individual result was 105 µg/liter with another sample at 95 µg/liter.

Sixty-three urine samples were analyzed for tritium oxide. Of these samples 13 gave results significantly higher than background. Six of the high values were from one man and three from another. Attempts to take breath samples on a dessicant were abandoned because of dilution of the sample with air giving lower sensitivities and the large amount of time required to obtain an adequate sample.

Methods Development

Attempts to plate plutonium uniformly on a 35 mm disc by the electro-deposition method have given satisfactory results. Sources of this nature will be used to check the NTA film with low activity per unit area. Yields obtained by electrodepositing the solution from TTA analyses have been comparable to those obtained by evaporation of this solution. A new electroplating unit has been received and is being altered for use in the Bioassay laboratory for further tests on routine application of the procedure.

A series of tests are being made on NTA film to obtain optimum developing conditions. Sources are being prepared and exposures made to check the reproducibility and accuracy. Sources have been exposed for the Biology Division and the Survey Group to evaluate the number of particles of alpha emitters.

[redacted]

Health Instrument Divisions

The ion column procedure for analyzing fission products in urine has been adapted to the analysis of special samples. A sulfate precipitation step has been added to the fission product analysis in use at Bioassay to allow higher yields on the strontium.

A new spectrophotometer was set up and standard transmission curves prepared for known amounts of potassium. Preliminary work indicates that this may give a sensitive procedure for the analysis of K-40 in samples.

Consistent yields on the order of 90% have been obtained on air filter papers spiked with plutonium nitrate and analyzed by ether extraction. One series of samples from the Survey Group gave values consistently lower, in some cases by a factor of ten, than the values obtained by Survey. Tests on the effect of various plutonium compounds on the yield are planned.

Methods Control

A new vibrating reed electrometer has been obtained for P-10 measurements. Results from this unit are quite consistent with the old instrument. A tracer lab mica window tube is being tested. Backgrounds are about five to seven counts per minute higher than present tubes, but operation otherwise appears satisfactory in the short testing period used.

Considerable time has been spent in training new personnel on the analytical techniques. Extractions of water samples for plutonium and uranium has been giving low yields. The source of the trouble has not yet been located.

A summation of the work load follows:

Laboratory	
Vegetation	571
Water	1122
Solids	132
Fluorophotometer	515
P-10	89
Miscellaneous	31
Total	2460
Counting Room	
Beta Measurements	4386
Alpha Measurements	3980
Control Points	2292
Decay Curve Points	831
Absorption Curves	4
Total	11,493

DECLASSIFIED

Health Instrument Divisions

Physics

The final report on the extrapolation chamber measurements on uranium and thorium will be completed shortly. Important dose rates which have been measured are tabulated below.

Absorber Thickness	Radiation	Rep. per hour For Uranium	Rep. per hour For Thorium
None	Alpha	13.8	8.5
None	Hard Beta	0.232	---
None	Soft Beta	0.026	---
None	Total Beta	0.258	0.056
7 mgm/cm^2	Hard Beta	0.220	---
7 mgm/cm^2	Soft Beta	0.016	---
7 mgm/cm^2	Total Beta	0.236	0.052

A report on the fast neutron counter is being prepared.

Work is continuing on the high pressure differential ionization chambers for fast neutron detection and on the moderated slow neutron detector. Some preliminary measurements have been made to determine the errors to be expected in using the present beta calibrations for other than surface measurements.

Industrial Hygiene

The study of general atmospheric dustiness by routine air sampling was practically completed. The remaining experimental work should be finished during the coming month. Some work is being done on design improvements for the thermal precipitator and for a special high volume air sampler.

A survey was made on the use of nickel carbonyl in the 234-5 Building. Two reports were issued, one covered the health hazards in the H.I. Bioassay laboratory and the other was on the toxicity of hexone.

Instrument Development

An alpha scintillation probe which has been in Building 234 about a month is giving satisfactory service. It has been found that light tight alpha transmitting aluminum screens can be made rather easily by floating a sheet of foil on water, then picking it up on a wire submerged beneath the middle of the sheet. This completes anticipated development work on a scintillation probe. Drawings and specifications will be prepared so that, if sufficient interest is shown, such probes can be produced by a manufacturing concern.

[redacted]

20

The pulse analyzer was used to determine the energy of the alpha emitter in two questionable urine samples from the Bioassay laboratory. One alpha emitter was found in each sample and in both cases the energy was found to be 5.14 ± 0.06 mev, corresponding to plutonium. It was also found that pulse height decreases slowly with time, suggesting counter gas contamination by chamber components. This should be easily correctable by using a slow gas flow during counting. Before completing this project, several unknown alpha sources need to be run and instructions prepared.

Work on the portable BF_3 counter continued along the line of increased maximum counting rate. Thus far, the counting rate meter indication is 10% low at 50,000 c/m. To date, no suitable small BF_3 tube has been found.

The high voltage section of the portable poppy was re-engineered to give fewer and longer leakage paths, and more working space. Specifications were also written.

The proportional alpha-beta counting system now yields 50% alpha geometry at an operating voltage of 2900 ± 50. Dead time per alpha pulse will have to be about 200 μ sec (coincidence loss at 5000 c/m about 0.1%), and operating voltage must be held in the quoted range in order to prevent betas counting in the alpha channel. At present, a 10,000 c/m beta source causes a background of about 1 c/m in the alpha channel. A working laboratory instrument will be built in the near future.

Calibrations

The routine calibrations were:

	Number of Calibrations	
RADIUM CALIBRATIONS	December, 1949	January, 1950
Fixed Instruments		
Gamma	394	390
Portable Instruments		
Alpha	251	240
Beta	503	434
Gamma (Radium)	775	749
X-ray Scanning	6	3
Neutron	43	88
Total	1,578	1,514
Personnel Meters		
Beta	665	973
Gamma (Radium)	8,235	6,711
X-ray	6,258	6,412
Neutron	--	--
Total	15,158	14,096
GRAND TOTAL	17,130	16,000

21

DECLASSIFIED

Health Instrument Divisions

BIOLOGY DIVISION

Analyses Group

1. Plutonium Analyses in Tissue

An analytical method for Pu, involving a prebismuth phosphate precipitation to separate the Pu from the bulk of the salts, followed by a LaF_3 precipitation and a TTA extraction, has been successfully adapted to whole rat carcasses. An average yield of 93.4% with a standard deviation of 2.7% was obtained on seven rats. Spiked rat skins were analyzed by digestion, a LaF_3 precipitation and TTA extraction. An average yield of 90.2% was obtained on two skins.

2. Adsorption of Plutonium on Surfaces

A second comparison of the spike delivery method used by Biochemistry (air flushing and a catheter) showed no significant difference from spike delivery with an acid-flushed lambda pipette. The experiment was run over a period of 15 days.

3. Chromatographic Procedures

Other work has necessitated delay on this problem.

4. Radioactivity in Carcasses

In conjunction with the H.I. Development Division, a counting tube made from an aluminum pipe 2-3/8 in. x 12 in. has been tested for the possibility of counting radon samples. Samples of radon are currently being tested.

5. Separation Area Control Plot Analyses

Russian thistle samples (seeds and stem) and soil samples from the R-3 Danger Zone were analyzed for Ce, Si, Y, Zr, Cs, Ru, and Rare Earths.

6. Analyses of Active Particles

Particles, collected with precipitrons from the off-gases at 200-East, have been analyzed. Included are alpha and beta activity determinations, chemical composition, decay and absorption analyses, and the age of the particles. It should be noted that this work was done by a member of the Biochemistry group.

7. Services to Other Groups

Work in this category consisted of preparing feed solutions of calibrated Pu

[redacted]

1195217

[redacted]

spike and I^{131} spike for the Biochemistry and Zoology Groups, spiking sheep pellets, preparation of a second glass thyroid for Zoology, alpha analysis of rat feces for Biochemistry, and particle determination in the rat feed solution for Biochemistry. This latter problem was attacked by drying aliquots of the solution on glass slides and exposing NTA film to the dried aliquot. After development, the alpha track pattern was studied with a microscope. No significant clusters were found, indicating there were no Pu-laden particles in the solution.

Aquatic Biology Group

1. Effect of Pile Effluent on Aquatic Life

Development of the Chinook salmon fry in the monitoring test has been very slow because of the extremely cold water. A bacterial disease affecting the yolk sacs of these fish has somewhat increased the mortality in all lots. This disease has apparently been aggravated by the retarded developmental rate. Over 70% of the young fish in 10% area effluent have died, while the mortality in weaker dilutions and in the controls has amounted to about 7%. The specific activity of the young salmon remains at about 15 times that of the water in which they are being held.

2. Biological Chains

The specific activity of trout being held in a 5% concentration of area effluent water and fed a diet containing algae from the 107 Basin has further declined because of the reduced metabolic activity and loss of appetite by the fish. Trout not receiving the 107 Basin algae in their diet are less active by a factor of 5.

Isotopic dilution tests with disodium phosphate were discontinued at the first of the month because of the frozen condition of the outside ponds and the loss of appetite by the fish. No additional food chain studies are planned until existing data can be worked up and reported upon.

3. Radiobiological Survey of the Columbia River

Continued inclement weather, heavy ice along the shore line, and fluctuating levels of the Columbia River greatly inhibited the collection of samples. The activity of the river water remained at about the same level found last month. With the exception of the plankton, which showed an increase, the activity in the fish and invertebrate organisms remained at about the same level found last month. The highest specific activity found in fish was in the scales of a sucker (0.5×10^{-3} $\mu c/g$).

DECLASSIFIED

1195218

DECLASSIFIED

Health Instrument Divisions

Average activities found in representative organisms at Hanford during January 1950 were:

Organism	Activity in $\mu c/g \times 10^{-3}$
Bottom algae (with sediments)	1.5
Plankton	6.3
Sponge	0.8
Caddis fly larvae	0.9
Snails (limpets)	6.3
Fish (juvenile)	0.1
Water	0.0016

Biochemistry Group

1. Collection and Analysis of Active Particles

Data accumulated in this project are being reported by the Analyses Group in the January Monthly Report.

2. Deposition in Lungs of Active Particles

Due to the unusually cold weather, no animals could be successfully exposed to stack gas inhalation.

3. Pathology of Active Particles

Autoradiographs of frozen lung sections of rabbits exposed to stack gas inhalation are still being searched for the presence of radioactive particles.

4. Gastro-intestinal Absorption of Plutonium

The oral administration of Pu^{239} to five male and five female rats is continuing. Two male and two female rats are receiving water and will serve as controls. Some difficulty has been experienced in maintaining a proper concentration of plutonium in the feed solution. This problem is being studied by the Analyses and Biochemistry groups. These feedings will continue until about March 5th.

Botany Group

1. Separations Area Control Plot

Late in December, soil samples were collected from the four-foot depth in the 200 East R-3 Danger Zone. On analysis, these samples were found to have a beta activity of 90 $\mu c/g$.

14

[redacted]

Health Instrument Divisions

Preliminary germination tests were made on Russian thistle seed obtained from plants grown in this area. It was found that the percentage germination of these seeds could be increased significantly by subjecting the seeds to freezing temperatures for short periods of time previous to germination.

The results of the study on the absorption and translocation of certain fission elements by the Russian thistle were presented at the Biology Division Seminar on January 24. A written report on this work is in the final stages of preparation.

2. Agricultural Field Station

Thirty soil samples were taken from the treatment plots of the station. The average beta activity of the soil samples was 0.019×10^{-3} uc/g.

The drilling of a well was continued through the month, and on January 30 a depth of 583 feet was reached.

The "First Annual Report of the Agricultural Field Station" is being prepared.

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

Cellulose sponges are being used in place of the algae in the decontamination column. It is considered desirable to have a control in which the accumulation of radioactive elements by non-living material is compared with that of live algae.

Use of Escherichia coli to remove radioactive materials from the effluent water. Escherichia coli is capable of accumulation of the activity of the effluent pile water to a degree only slightly less than are algae.

Blue grass grown in sand culture and watered with a concentrate of the elements of the pile effluent has been found to concentrate the radioactive materials to 5.4 times that of the concentrate.

4. Translocation of Radioelements in Plants

Two tomato plants (27 in. and 3 in. in height) are growing in a nine-inch pot in the greenhouse. A total of approximately 25 μc of beta activity (concentrated pile effluent water) has been added to this pot during the month. Activity within the leaves of the two plants ranges from $0.05 - 0.08 \times 10^{-3}$ μc/g. Activity of the surface soil is approximately 0.2×10^{-3} μc/g. The more mature plant shows no evident signs of damage. The smaller plant is quite yellow, a condition which might be due to root damage resulting from the action of radioactive elements. Its roots are growing largely in the upper two-three inches of the soil.

25

DECLASSIFIED

1195220

Health Instrument Divisions

A single branch of a flowering tomato plant was sealed into a pyrex flask with paraffin and then exposed to I^{131} vapors. Counts made on other parts of the plant showed that some of the I^{131} vapors were absorbed and then translocated to other parts of the plant. This experiment will be repeated, and additional experiments to determine the factors affecting absorption and translocation of iodine are planned.

Physiology Group

1. Physiological response to animals intubated with active particles

We have begun discussions with informed personnel with respect to the establishment of a long-term experiment involving active particles.

2. Pathology of active particles

No report.

3. Techniques in Autoradiography

Routine work continues on autography and photomicrography.

4. The blood morphology studies in support of the Animal Farm continues.

Zoology Group

1. Biological Monitoring

Extreme temperatures, snow, and associated shortage of natural foods have so weakened certain species of wildlife that many have frozen or have fallen prey to predatory animals. Limited supplemental feeding has been practiced at three of the more important collection stations.

An adult female goat and her two still-born offspring from the region of 100-D were sampled on January 19. Thyroid activity in the mother and one kid was about 0.02 $\mu c/g$, while that of the other kid was about twice that level. A jackrabbit from the 200-W Area had thyroid activity of 0.15 $\mu c/g$ when assayed on January 17, 1950.

2. Toxicology of I^{131}

Phase II (141-N Waste Disposal Building) of the Animal Farm has not been accepted. Its failure to function properly is seriously delaying the experiment. The Project Engineers have temporarily assigned an engineer to operate and observe the functioning of the disposal plant and to make recommendations for its improvement.

26

[redacted]

[redacted]

Health Instrument Divisions

Unsatisfactory breeding performance of rams during the first estrus cycle of the ewes has prompted us to negotiate an exchange with the vendor for three younger, more virile rams.

A Hampshire ewe weighing 180 lbs. was sacrificed after five months on daily feedings of 0.5 μc of I^{131}. Preliminary tests indicate that the accumulated activity was between 2 and 4 μc total in the 6-gram gland. More exact analysis will be made before this data is fully interpreted.

The 3-tube thyroid counter unit was calibrated by counting a glass "thyroid" inserted in the location formerly occupied by the thyroid of the sacrificed ewe.

The H.I. Divisions report for this period was compiled by M.L. Mickelson in the absence of the Divisions Manager.

DECLASSIFIED

1195222

DECLASSIFIED

GENERAL ACCOUNTING DIVISION

JANUARY 1950

GENERAL

Consolidated Completed Project Cost Reports were improved and revised. Construction Work in Progress Reports were also revised and reconciled with Completed Project Reports.

Studies regarding various inventory procedures and controls in general were made during the month. Information gained is to be used in coming months when more intensive studies and investigations in this connection are to be made.

Independent auditors reviewed records regarding funds advanced by AEC. Favorable comment was made concerning the procedures in effect and the adequacy of control of these funds.

As of January 31, 1950, additional salary adjustments retroactive to April 11, 1949 in accordance with the Agreement Between Hanford Atomic Metal Trades Council and General Electric Company amounted to $1,997 bringing the gross payments to date to $229,635.

Withholding Statements for 1949, Form W-2, were delivered to Monthly Paid employees on January 6, 1950 and to Weekly Paid employees on January 13, 1950. The Collector's copies of Withholding Statements were forwarded to the General Office on January 11, 1950 for transmission to the Collector of Internal Revenue.

Considerable overtime was required in January in the Payroll Divisions in order to complete Federal Social Security Reports, Withholding Tax Reports, Returns of Information at the Source, Annual Report of Employee Contributions under the Pension Plan, and various other year-end reports.

Further discussion of the Check-off of Union Dues was held in a meeting on January 4 between representatives of Labor Relations and Payroll Divisions and G. A. Foster, President of Hanford Atomic Metal Trades Council. Decisions were reached with respect to a plan for administration of the Check-off, and procedures to be followed with respect to collection, reporting, and payment of dues to the Hanford Atomic Metal Trades Council.

Hanford Works and Nucleonics Department Financial Statements for the month of December were completed and distributed on January 18, and January 24, 1950 respectively. General Divisions Operating Reports covering December operating costs were completed on January 15, 1950.

Advances from AEC remained at $4,000,000 at the month end. Items comprising the balance in the advance account as of January 31, 1950 compared with those of December 31, 1949 are detailed below:

	December 31	January 31
Cash in Bank - Contract Accounts	$ 3,199,012	$ 3,178,952
Salary Accounts	55,000	55,000
Travel Advance Funds	50,000	50,000
Advances to Subcontractors	300,000	300,000
Cash in Transit	395,988	416,048
Total	$ 4,000,000	$ 4,000,000

1195223

DECLASSIFIED

General Accounting Division

STATISTICS

Employees and Payroll	Total	Monthly Payroll	Weekly Payroll
Employees on Payroll at beginning of month	7 401	1 617	5 784
Additions and transfers in	101	14	87
Removals and transfers out	(68)	(13)	(55)
Transfers from Weekly to Monthly Payroll	--	15	(15)
Transfers from Monthly to Weekly Payroll	--	--	--
Employees on Payroll at end of month	7 434	1 633	5 801

Employees on Payroll at end of month	December	January
Manufacturing	3 198	3 174
Design and Construction	529	547
Community	734	731
Other	2 940	2 982
Total	7 401	7 434

Overtime Payments		
Weekly Paid Employees	$32 164	$28 910
Monthly Paid Employees	1 623 (1)	2 291 (2)
Total	$33 787	$31 201

Number of Changes in Salary Rates and Job Classifications	773	637

Gross Amount of Payroll		
Manufacturing	$1 332 785	$1 116 720
Design and Construction	204 356	186 460
Community	267 450	231 033
Other	1 084 689	942 785
Total	$2 389 280 (3)	$2 476 998 (4)

Annual Going Rate of Payroll		
Manufacturing	$14 259 819	$14 150 371
Design and Construction	2 259 890	2 391 787
Community	2 875 378	2 895 571
Other	11 694 017	11 859 744
Total	$31 089 104	$31 297 473

Average Salary Rate Per Hour (5)	December			January		
	Weekly	Monthly	Total	Weekly	Monthly	Total
Manufacturing	$2.018	$2.650	$2.124	$2.017	$2.654	$2.127
Design and Construction	1.563	2.701	2.041	1.561	2.748	2.048
Community	1.762	2.323	1.873	1.766	2.322	1.875
Other	1.638	2.526	1.847	1.638	2.527	1.846
Total	$1.820	$2.574	$1.983	$1.817	$2.582	$1.983

(1) Payments cover period from 16th of previous month to 15th of current month

(2) Payments cover period from 16th of previous month to 15th of current month except overtime payments to Design and Construction Division employees which cover period December 16, 1949 to December 31, 1949

(3) Includes 5 weeks in case of weekly paid employees

(4) Includes 4 weeks in case of weekly paid employees

(5) Includes shift differential and isolation pay. Excludes overtime premiums, commissions, Suggestion Awards, etc.

General Accounting Division

Employee Plans

Pension Plan

	December	January
Number participating at beginning of month	6 567	6 562
New participants and transfers in	41	179
Removals and transfers out	(46)	(33)
Number participating at end of month	6 562	6 708
% of eligible employees participating	91.8%	93.4%

Employees Retired	January	Total to Date
Number	6	112
Aggregate Annual Pensions Including Supplemental Payments	$2110	$27 798*
Amounts contributed by employees retired	$ 830	$10 581

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

Group Life Insurance

	December	January
Number participating at beginning of month	5 821	5 808
New participants and transfers in	76	38
Cancellations	(25)	(17)
Removals and transfers out	(64)	(33)
Number participating at end of month	5 808 (1)	5 796 (2)
% of eligible employees participating	78.3%(1)	77.5%(2)

(1) Excludes 32 pensioners who were granted lump sum pension settlement and who are paying premiums at Hanford Works

(2) Excludes 33 pensioners who were granted lump sum pension settlement and who are paying premiums at Hanford Works

Group Life Insurance Claims	January	Total to Date
Number of claims	1	36
Amount of insurance	$6200	$183 817

Group Disability Insurance (1)

Personal Coverage

	December	January
Number participating at beginning of month	6 446	36
New participants and transfers in	-0-	-0-
Cancellations	(6 410)	(7)
Removals and transfers out	-0-	-0-
Number participating at end of month	36	29

Dependent Coverage

Number participating at beginning of month	4 084	19
Additions and transfers in	-0-	-0-
Cancellations	(4 065)	(6)
Removals and transfers out	-0-	-0-
Number participating at end of month	19	13

1195225

DECLASSIFIED

DECLASSIFIED

Group Disability Insurance (1) (continued)

Claims (2)	December	January
Number of claims paid by insurance company:		
Employee Benefits		
Weekly Sickness and Accident	45	21
Daily Hospital Expense Benefits	67	23
Special Hospital Services	76	20
Surgical Operations Benefits	52	19
Dependent Benefits Paid		
Daily Hospital Expense Benefits	62	16
Special Hospital Services	69	16
Amount of claims paid by insurance company:		
Employee Benefits	$7 418	$3 664
Dependent Benefits	2 541	645
Total	$9 959	$4 309

Premiums		
Personal - Employee Portion	$ 61	$ 49
- Company Portion	37	30
- Total	$ 98	$ 79
Dependent- Employee Portion	$ 15	$ 12
- Company Portion	2	1
- Total	$ 17	$ 13
Grand Total	$ 115	$ 92

(1) Group Disability Insurance Plan was discontinued November 30, 1949. December and January statistics cover employees who were participating in the Group Disability Isnurance Plan but who were not actively at work on December 1, 1949, and therefore were not eligible to participate in the new Group Health Insurance Plan.

(2) Statistics are for claims paid during the month and do not necessarily indicate that claims were incurred during the month.

Group Health Insurance (1)

Personal Coverage	December	January
Number participating at beginning of month	6 855	6 942
New participants and transfers in	129	39
Cancellations	(7)	(20)
Removals and transfers out	(35)	(48)
Number participating at end of month	6 942	6 913
% of eligible employees participating	94.1%	93.5%

Dependent Coverage		
Number participating at beginning of month	4 573	4 618
Additions and transfers in	71	23
Cancellations	(11)	(18)
Removals and transfers out	(15)	(24)
Number participating at end of month	4 618	4 599

General Accounting Division

Group Health Insurance (1) (continued)

Claims (2)	December	January
Number of claims paid by insurance company:		
Employee Benefits		
Weekly Sickness and Accident	1	49
Daily Hospital Expense Benefits	2	86
Special Hospital Services	2	96
Surgical Operations Benefits	2	49
Dependent Benefits Paid		
Daily Hospital Expense Benefits	2	123
Special Hospital Services	4	137
Surgical Operation Benefits	4	69
Amount of claims paid by insurance company:		
Employee Benefits	$109	$ 9 986
Dependent Benefits	120	12 404
Total	$229	$22 390

Premiums		
Personal - Employee Portion	$14 925	$14 863
- Company Portion	7 192 (3)	7 162 (3)
- Total	$22 117	$22 025
Dependent- Employee Portion	$12 931	$12 877
- Company Portion	10 298 (3)	10 256 (3)
- Total	$23 229	$23 133
Grand Total	$45 346	$45 158

(1) Group Health Insurance Plan was made effective December 1, 1949
(2) Statistics cover only claims paid and not all claims incurred during the month
(3) Gross company cost before dividend

Vacation Plan

Number of employees granted permission to defer one week of their 1950 vacation to 1951

	January 1950		
	Weekly	Monthly	Total
Manufacturing	20	1	21
Community	1	0	1
Plant Security & Services	46	13	59
Total	67	14	81

Annuity Certificates (For duPont Service)	January	Total to Date
Number issued	2	68

1195227

DECLASSIFIED

General Accounting Division

Employee Plans (continued)

U. S Savings Bonds	Mfg.	D&C	Comm'y	Other	Total
Number participating at beginning of month	1 755	239	339	1 439	3 772
New Authorizations	29	11	8	42	90
Voluntary Cancellations	(27)	(1)	(4)	(24)	(56)
Removals and Transfers Out	(13)	(2)	(2)	(6)	(23)
Transfers In	2	1	1	7	11
Number participating at month end	1 746	248	342	1 458	3 794
% Participating	55.0%	45.3%	46.7%	48.8%	51.0%
Bonds issued					
Maturity Value	$76 600	$10 725	$13 750	$57 850	$158 925
Number	1 554	211	278	1 206	3 249
Refunds issued	44	5	11	40	100
Revisions in authorizations	20	5	12	39	76
Annual going rate of deductions					
GE Employees Savings and Stock Bonus Plan	$735 115	$100 954	$132 643	$580 832	$1 549 544
General Electric Savings Plan	223 541	88 843	40 026	154 204	506 614
Total	$958 656	$189 797	$172 669	$735 036	$2 056 158

Suggestion Awards	January	Total to Date
Number of awards	20	478
Total amount of awards	$405	$6995

Employee Sales Plan

	January		
	Total	Major Appliances	Traffic Appliances
Certificates Issued	274	27	247
Certificates Voided	14	0	14

Salary Checks Deposited

	December		January	
	Weekly	Monthly	Weekly	Monthly
Richland Branch - Seattle First National Bank	775	816	800	825
North Richland Area Office - Seattle First National Bank	11	7	11	7
Richland Branch - National Bank of Commerce	61	52	85	59
Out of state banks (Schenectady staff)	-	3	-	3
Total	847*	878	896**	894

*Week ended 12-25-49
**Week ended 1-29-50

Special Absence Allowance Requests	December	January
Number submitted to Pension Board	4	10

Absenteeism (Weekly Paid Employees)		
January 1 to January 22	1949	1950
	3.27%	2.77%

1195228

General Accounting Division

PERSONNEL AND ORGANIZATION - GENERAL ACCOUNTING

Number of Employees	December	January
On Payroll at beginning of month	179	173
Removals and transfers out	(7)	(4)
Additions and transfers in	1	5
Number at end of month	173	174
Net increase (or decrease) during month	(6)	1
% of terminations and transfers out	3.9%	2.3%
% of absenteeism	3.97%	3.04%

Changes by division in number of Accounting Division employees during January were as follows:

General: Increase of one employee

One transfer from G. E Credit Corporation, Syracuse, New York

Accounts Payable: No Change

Cost: No Change

General Accounts: Increase of one employee

One new hire

Plant Accounting: No Change

Weekly Payroll: Increase of one employee

Two new hires
One return from illness absence
One transfer to General Administrative
One termination

Monthly Payroll: Decrease of one employee

One termination

Special Assignments: Decrease of one employee

One transfer to General Administrative

Budgets: No Change

Injuries	December	January
Major	0	0
Sub-major	0	0
Minor	2	1

DECLASSIFIED

PERSONNEL AND ORGANIZATION - GENERAL ACCOUNTING (continued)

Number of Accounting Division employees as of January 31, 1950 were as follows:

	Number of Employees		
	Non-Exempt	Exempt	Total
General	3	4	7
Accounts Payable	15	1	16
Cost	9	1	10
General Accounting	15	1	16
Plant Accounting	22	3	25
Weekly Payroll	73	5	78
Monthly Payroll	14	2	16
Special Assignments	0	3	3
Budgets	2	1	3
Total	153	21	174

Non-exempt employees may be summarized as follows:

	Number as of	
Classification	12-31-49	1-31-50
Accounting A	1	3
Accounting B	2	1
Accounting C	1	1
Accounting D	6	5
Business Graduate	4	4
Clerical Working Leader	7	5
Cost Clerk A	1	1
Cost Clerk B	1	1
Cost Clerk D	2	2
Field Clerk C	3	3
General Clerk A	24	23
General Clerk B	44	42
General Clerk C	19	21
General Clerk D	10	10
General Clerk E	1	1
Office Machine Operator B	15	16
Secretary B	1	1
Steno-Typist A	2	2
Steno-Typist B	3	4
Steno-Typist C	3	2
Steno-Typist D	4	5
Total	154	153

Open employment requests as of January 31, 1950 were as follows:

Business Graduate	9
General Clerk B	1
	10

DECLASSIFIED

General Accounting Divisions

	December	January
Accounts Payable *		
Balance at Beginning of Month	$ 55 079	$ 74 319
Vouchers Entered	869 921	885 765
Cash Disbursements	850 933 Dr.	904 258 Dr.
Cash Receipts	252	409
Balance at end of month	$ 74 319	$ 56 235
Number of Vouchers Entered	1 829	1 588
Number of Checks Issued	1 314	1 086
Number of Freight Bills Paid	261	225
Amount of Freight Bills Paid	$ 5 172	$ 2 958
Number of Purchase Orders Received	1 041	818
Value of Purchase Orders Received	$ 138 036	$ 148 776
Cash Disbursements		
Community	$ 26 636	$ 35 325
Design & Construction	1 106 937	1 430 973
General	2 994 731	2 847 316
Manufacturing	602 881	352 920
Total	$4 731 185	$4 666 534
Material and Freight	$ 798 787	$ 711 566
Lump Sum and Unit Price Subcontracts	415 659	363 105
CPFF Subcontracts		
Labor	370 260	558 156
Others	296 323	294 931
Payrolls (Net)	2 035 726	1 710 614
Payrolls Taxes	242 119	244 515
U. S. Savings Bonds	108 071	232 439
General & Administrative Expenses	200 000	200 000
Miscellaneous	264 240	351 208
Total	$4 731 185	$4 666 534
Cash Receipts		
Community	$ 87 785	$ 98 538
Design & Construction	26 864	35 694
General	5 242 543	4 497 023
Manufacturing	12 662	15 289
Total	$5 369 854	$4 646 544

* General Divisions Only.

1195231

General Accounting Divisions

	December	January
Detail of Cash Receipts		
Hospital	$ 43 501	$ 62 407
Scrap Sales	10 499	18 849
Miscellaneous Accounts Receivable	2 210	5 362
Educational Program	519	619
Employee Sales	744	619
Refunds from Vendors	2 362	6 704
Rents	97 002	98 391
Telephone	9 624	11 563
Bus Fares	10 802	13 229
Sales of Plant & Equipment	26	130
Advances from A.E.C.	5 176 685	4 395 988
Final Settlement from Great Lakes Carbon Co.	-0-	14 819
Refund from Metropolitan Insurance Co.	-0-	14 890
All Other	15 880	2 974
	$5 369 854	$4 646 544
Number of Checks Written		
Community	163	171
Design & Construction	154	163
General	1 314	1 086
Manufacturing	550	558
Total	2 181	1 978
Bank Balances at End of Month		
Chemical Bank & Trust Company - New York Contract Account	$1 137 297	$ 699 390
Seattle First National Bank - Richland		
Contract Account	1 891 233	1 967 807
U. S. Savings Bond Account	168 789	69 024
Salary Account No. 1	20 000	20 000
Salary Account No. 2	29 891	30 000
Travel Advance Account	30 015	22 314
Seattle First National Bank - Seattle		
Escrow Account	59 806	38 871
Salary Account No. 3	5 000	5 000
National Bank of Commerce - Richland		
Contract Account - Manufacturing	97 119	447 080
Contract Account - Community	73 364	64 675
	$3 512 514	$3 364 161
Travel Advances and Expense Accounts		
Cash Advance balance at end of month*	$ 8 645	$ 13 114
Cash Advance balance outstanding over one month*	801	100
Traveling and Living Expenses:		
Paid Employees	19 898	11 104
Billed to Government	18 595	10 420
Balance in Variation Account at end of month	3 174 Dr.	4 004 Dr.

* General Divisions Only.

1195232

DECLASSIFIED

UNCLASSIFIED

General Accounting Divisions

	December	January
Hospital Accounting		
Accounts Receivable		
Balance at Beginning of Month	$ 132 463	$ 161 432
Invoices Issued	85 785	102 149
Refunds	12 008	964
Cash Receipts	(43 500)	(62 407)
Payroll Deductions	(24 786)	(31 020)
Bad Debts Written Off	(538)	-0-
Balance at End of Month	$ 161 432	$ 171 118

General Accounting Divisions

ACCOUNTS PAYABLE

For the first time in six months the number of accounts payable vouchers and freight bills booked was less than the previous month. There was also a decrease in number of checks issued and purchase orders received from Purchasing.

Vouchers on hand not completely audited and finally approved number 1,051 at the month end. This is slightly less than a three week backlog. Paid vouchers on hand over 60 days old which are not finally approved number 17. There was one uncollected debit voucher on hand over 60 days old.

The accounts payable balance of $56,234.66 may be broken down as follows:

October, 1949	$ 7.50 Dr.
November, 1949	191.06
December, 1949	1,123.11
January, 1950	54,234.99
Total	$56,234.66 Cr.

As a result of reviewing payments to vendors with whom the greatest volume of purchase orders are placed, arrangements were made, through the Purchasing Division, to issue one check per month to approximately 30 vendors. Previously, as many as five or more checks had been issued to some vendors each month. This action will result in a savings of checks written and considerable manpower.

BUDGETS

Detail sheets were prepared to record and control appropriation requests originating in General Divisions. These sheets contain necessary information such as title, project number, sponsoring and servicing division, costs by months, balance to complete, and commitments. They also record action taken by A and B Committee and AEC and other pertinent information.

Detailed work sheets were prepared for use of all General Divisions in preparing fiscal year 1952 budget estimates and revising fiscal year 1951 budget estimates.

After making necessary revisions due to various organizational changes, the Cost Section was furnished with breakdown by months of budget estimates to be used on operating reports.

COST

General Divisions Operating Reports were issued on January 14, 1950. Detailed report of Research and Development costs was issued on January 20, and Summary of Costs Report was issued on January 27, 1950.

Assessment studies were again carefully analyzed to eliminate charges for fixed expense to Community, Medical, and Design and Construction Divisions. As a result certain assessments were eliminated and certain others were established at a fixed monthly amount. In addition, assessments to Design & Construction and Project Engineering based on applied labor were adjusted to include a fixed IME rate of 65%.

1195234

DECLASSIFIED

UNCLASSIFIED

COST (Continued)

Necessary code adjustments were made as a result of the reorganization of the Technical Metallurgy and Control Divisions and the transfer of the Metallurgy Section to Pile Technology Division. Two new divisional codes were created, the Technical Shops and the 300 Area Services Group. In addition, a work order routine was established for the Technical Shops Division to be effective January 30, 1950.

Effective January 1, 1950, Divisional Code 030 - Technical Personnel Office was established. This consists of Technical Recruiting, Rotation Training Program and the Nucleonics School. One consolidated operating report will be issued for Division 030 but supplemental cost reports will be prepared giving cost breakdown for each of the three sections.

Arrangements were made for AEC to bill us for inventory materials transferred from other Government installations during calendar year 1947 for which no billing had been received. In addition, a list of similar 1948 items was delivered to AEC with the request that prompt action be taken to effect billing on these items. A list covering unbilled shipments for the first six months of 1949 is now being prepared by Stores and will be presented to AEC shortly.

GENERAL ACCOUNTS

General Ledger Trial Balances were received from other Accounting Divisions on January 17. Hanford Works Financial Statements were completed on January 18 and Consolidated Financial Statements on January 24.

Advances from AEC remained at $4,000,000.

The annual audit of Advances from AEC was made by the accounting firm of Peat, Marwick, & Mitchel & Co. during the past month. Their auditor was impressed with the reimbursement procedure from the standpoint of control and completeness of information.

In addition to Balance Sheet Budgets for current month, a new column was added for Balance sheet Budget as of June 30, 1950 on the Hanford Works and Consolidated Financial Statements.

Atkinson-Jones submitted their first General Ledger Trial Balance and a column was added on the Consolidated Trial Balance to record this information. Atkinson-Jones Private Account was treated as a liability of the General Electric Company as it represents A & J funds.

Work is continuing on a schedule of closing dates for the year 1950. This schedule will apply to all Accounting Divisions as well as the Atkinson - Jones Company.

Improvements were made on the Construction Work in Progress Report and this report was reconciled with the Completed Project Report as of December 31 and all capitalized projects were reconciled with the Plant Accounting records. It is intended that a Completed Project Report will be issued every six months in the future.

GENERAL ACCOUNTS (Continued)

Considerable time was spent assisting Design and Construction personnel to establish unit costs of Graphite. The graphite inventory was adjusted as of December 31. In addition to work in connection with the graphite inventory, studies were made and routines were investigated regarding inventories in general in order to gain a better working knowledge regarding procedures and controls in effect.

MEDICAL ACCOUNTING

The accounts receivable balance increased by $9,686, from $161,432.46 to $171,118.98.

In-patient sales increased 31.5% from $46,233 to $60,786.

Out-patient invoices numbered 9,622 and amounted to $41,363. Cash invoices number 5,382 amounting to $18,043 and charge invoices number 4,240 amounting to $23,320.

A letter to AEC was written during the month requesting approval of the selection of a collection agent to handle certain delinquent accounts receivable accounts. Revisions to all collection letters now being used by the accounts receivable group were also prepared.

A number of Medical Cost reports were revised and special reports were prepared showing certain unit cost information.

PLANT ACCOUNTING

Considerable work was done during the month toward completion of Plant Accounting Statements for the six-month period ended December 31, 1949. These Statements reflect balances in plant accounts as of June 30, 1949, summary of changes during the period, and balances as of December 31, 1949.

Work of transcribing to the plant accounting records information developed by the AEC Consultants in connection with the plant appraisal is now approximately 53% complete.

Of the twenty-one projects included in the June 30, 1949 plant statements as Unclassified Property, all but four have been completely distributed to plant accounts or disposed of in some other manner. The work involving unitization of completed projects which are transferred from Unclassified Property has been accomplished with the assistance of personnel from Project Engineering Division.

One employee was assigned to the Manufacturing Cost Section to work out procedures in connection with the flow of work orders to insure proper review of accounts charged. A review of existing orders was made to determine that all work which should be capitalized was charged to Plant accounts.

DECLASSIFIED

DECLASSIFIED

SPECIAL ASSIGNMENTS

Continued assistance was rendered the D & C Accounting Division.

January statements incorporated the account classifications which were recently developed.

Accounting routines are being prepared for use by the SF Accountability Section. These will encompass accounting for materials in all areas.

1195237

General Accounting Divisions

PAYROLLS

During the month of January there were 68 Removals from Payroll of which 29 were removals due to lack of work, and 1 was a transfer to another unit of General Electric Company. There were 101 Additions to the Payroll, including 5 transfers from other units of the Company. The result is a net increase of 33 employees on the Payroll.

* * * * * * * *

Due to the observed holiday on Monday, January 2, 1950 and the resulting short work week, it was necessary to change the normal schedule for delivery of weekly salary checks to the Outer Areas on Thursday, January 5, 1950. Checks were delivered to the Areas on that day between the hours of 8:00 P.M. and 11:00 P.M. rather than at the usual time which is between 11:30 A.M. and 2:30 P.M. on Thursday.

* * * * * * * *

A total of 4,825 U. S. Savings Bonds and Custody Receipts for U. S. Savings Bonds purchased under the Stock Bonus Plan were delivered to employees on January 27, 1950. These bonds and receipts cover purchases by employees through payroll deductions in December 1949.

U. S. Savings Bonds purchased by employees under the Stock Bonus Plan having a maturity value of $31,900 were withdrawn from the Plan in January by 122 employees.

The total number of employees purchasing U. S. Savings Bonds by payroll deductions increased during January for the first time since November, 1948. There were 22 more employees participating in the Savings Plans at the end of January, 1950 than there were at the end of December, 1949.

* * * * * * * *

Under the new Group Health Insurance Plan, made effective at Hanford Works December 1, 1949, 362 claims for benefits by employees were forwarded to Metropolitan Life Insurance Company. There were 48 claims under the former Group Disability Insurance Plan forwarded to the Metropolitan Insurance Company for employees who are still covered under that Plan.

* * * * * * * *

Permission to defer one week of their 1950 vacations until 1951 was granted by Division Managers in January to 67 Weekly Paid employees and 14 Monthly Paid employees. During the last three months of 1949, a total of 142 employees were granted permission to defer one week of their 1949 vacations to 1950.

* * * * * * * *

Approximately 54,300 items were addressographed in Weekly Payroll Division during January for other divisions at Hanford Works and for the Atomic Energy Commission. These items were in addition to regular payroll addressograph work.

* * * * * * * *

DECLASSIFIED

General Accounting Divisions

PAYROLLS (CONT.)

There was an increase during the month in the number of time cards received late in Payroll. There were 66 cards received late in January. Divisions are continually being reminded of these items and the additional work which results from late time cards.

* * * * * * * *

As of January 31, 1950 the gross amount of salary adjustments retroactive to April 11, 1949 under the Agreement Between Hanford Atomic Metal Trades Council and General Electric Company amounted to $229,635. The amount of the adjustment paid to employees on November 18, 1949 was $227,638. The additional payments are the result of errors in calculations and retroactive re-classifications made by Wage Rates Division.

* * * * * * * *

Withholding Statements for 1949, Form W-2, were delivered to Monthly Paid employees on January 6, 1950 and to Weekly Paid employees on January 13, 1950. The Collector's copies of Withholding Statements were forwarded to the General Office on January 11, 1950 to be transmitted to the Collector of Internal Revenue.

We will be required to file Returns of Information At The Source with State Tax Commissions in the States of New York, Massachusetts, North Carolina, Indiana, Colorado, and Oregon. Forms required for filing these Returns have been received and Returns will be transmitted prior to the due date in the various States.

Fourth Quarter Reports for Social Security Tax purposes, Forms SS-1A and SS-1B were prepared and filed in January. Reports required in connection with Washington State Unemployment Compensation Tax were completed in January.

* * * * * * * *

Report of Employee Contributions to the Pension Plan during the year 1949 was completed during the month and was forwarded to the Pension Division in Schenectady on January 24, 1950.

* * * * * * * *

Mr. La Hue, a representative of the Atomic Energy Commission was present and assisted at the bank reconciliation of the Weekly Payroll for the week ended January 1, 1950.

* * * * * * * *

Further discussion of the Check-off of Union Dues was held in a meeting on January 4 between representatives of Labor Relations and Payroll Divisions and G. A. Foster, President of Hanford Atomic Metal Trades Council. Decisions were reached with respect to a plan for administration of the Check-off and procedures to be followed with respect to collection of dues, and reporting and payment of dues to the Hanford Atomic Metal Trades Council.

PLANT SECURITY AND SERVICES DIVISIONS

MONTHLY REPORT - JANUARY 1950

SUMMARY

There were no lost-time injuries on the Works during the month.

There were seven fire alarms in the industrial areas with no fire loss involved.

Laundry volume continued to increase in both the 700 and 200 area Laundries.

Mail volume has increased to the point where it is necessary to make physical rearrangements in order to handle the present and expected future increases in volume.

Printing volume has continued to increase. Changes in equipment and work space will be made in the near future in order to facilitate the work.

Records have been inventoried in all Divisions except Health Instrument and the Payroll Divisions of Accounting.

A Material and Package Pass Procedure was placed in effect for the removal of all "SF" material from 3706 and 321 exclusion areas to other exclusion areas within the 300 Area and to other exclusion areas within the perimeter barricade.

Patrol coverage of the P-11 Area began on January 30.

A procedure for emergency blackout of the 300 Area was placed in effect. Blackout procedures are now in effect for all areas except Richland and North Richland.

DECLASSIFIED

1195240

DECLASSIFIED

PLANT SECURITY AND SERVICES DIVISIONS

MONTHLY REPORT - JANUARY 1950

ORGANIZATION AND PERSONNEL

Number of employees on payroll:

	Beginning of Month	End of Month	Increase	Decrease
Staff	3	3		
Patrol and Security	573	574		4 (a)
Safety & Fire Protection	150	150		
Office Services (General Services, Clerical Services, and Records Control)	205	212	7 (b)	
TOTALS	936	939	7	4

NET INCREASE: 3

(a) - Patrol and Security

1 - Returned from Leave of Absence (Patrol)
1 - Removed from Roll due to Leave of Absence (Patrol)
2 - Terminations (Patrol)
1 - Discharged (Patrol)
1 - Transferred to Health Instrument Division (Patrol)

(b) - General Services

5 - Rehired
1 - Termination
1 - Transferred to Health Instrument Division

Clerical Services

7 - New Hires
1 - Rehire
4 - Transferred to other Divisions

1195241

DECLASSIFIED

Plant Security and Services Divisions

SAFETY AND FIRE PROTECTION

Injury Statistics

Days since last Major Injury	43
Accumulated Exposure Hours since last Major Injury	1,696,291
Major Injury Frequency Rate (start-up to date)	0.83

	December 1949	January 1950
Major Injuries	1	0
Sub-Major Injuries	2*	7
Minor Injuries	294	334
Exposure Hours	1,269,476	1,204,881
Major Injury Frequency Rate	0.79	0.0
Major Injury Severity Rate	0.009	0.0
Minor Injury Frequency Rate	2.32	2.77

*Sub-Major Injury No. 165 retroactive to 12/28/49, classified on 1/3/50.

Sub-Major Injury No. 165

On December 28, 1949, at approximately 3:45 P.M., an employee of the Transportation Division working at the Riverland Roundhouse sustained slight fractures of the 9th and 10th ribs on the right side when he was struck by a large door and thrown against a locomotive coupler.

Sub-Major Injury No. 166

On January 12, 1950, at approximately 10:30 A. M., an employee of the Transportation Division, while lubricating a crane with a drag bucket attachment, received a tuft fracture of the distal phalanx of the left middle finger with some separation of fragments. The injured grasped the sheave with both hands to pull the sheave away from the bucket so it could be turned. He had the sheave pulled away from the bucket about four inches when his right hand slipped off the sheave. This let the sheave go back against the bucket, catching his left middle finger between the bucket and the sheave.

1195242

Sub-Major Injury No. 167

On January 23, 1950, at approximately 11:10 A.M., an employee of the Transportation Division, while on loan to the Purchasing and Stores Division, incurred a fracture of the distal phalanx of the right middle fingerwhen he caught it between a ten-pound gas bottle and the floor of a four-wheel dolly. The injured's finger was caught when he attempted to keep the bottles from falling to the floor.

Sub-Major Injury No. 168

On January 25, 1950, at approximately 11:35 A.M., an employee of the Maintenance Division, working in the 100-F Area, sustained a simple fracture of the right great toe when the steel tip of his safety shoe was struck by the end of a piece of steel. The injured was getting ready to cut a length of gun barrel tubing into short lengths in the power hack saw. A length of round bar was also on the roller conveyor. While moving his piece of tubing ahead to the saw, the round bar fell from the conveyor and struck the employee's right great toe causing the injury. It was estimated by the investigating committee that his safety shoes probably saved the loss of two toes.

DECLASSIFIED

Sub-Major Injury No. 169

On January 30, 1950, at approximately 1:15 P.M., a Maintenance Mechanic, working in the 200-West Area, received a fracture of the right great toe when a 150 lb. gas cylinder dropped 14 inches onto the injured's right foot. The injured was placing the gas cylinder on a pedestal provided to compensate for the shorter length of the stubby type bottles. It was intended to hook the gas bottle into the manifold system. The pedestals are approximately 14 inches high, have a base of 12" x 14". As he placed the bottom ofthe bottle on the pedestal, the top of the box type pedestal kicked out and the cylinder dropped onto the injured's foot. The injured was wearing safety shoes, but the bottom lip of the cylinder struck the injured's foot just back of the metal cap of the shoe.

Sub-Major Injury No. 170

On January 30, 1950, at approximately 3:15 P.M., an employee of the Transportation Division, working on the railroad received a fracture to the right thumb when it was caught between pieces of angle iron. The injured and fellow worker were taking pieces of angle iron from two men on the lowboy truck. As the injured straightened the last two he had put down, his fellow worker placed a pair on the pile catching the injured's thumb.

Sub-Major Injury No. 171

On January 30, 1950, at approximately 1:30 P.M., an employee of the Stores Division working at White Bluffs received a fracture of the right middle finger when it was caught between two pieces of grating.

Sub-Major Injury No. 172

On January 31, 1950, at approximately 3:00 P.M., an employee of the Transportation Division working in the 100-B Area sustained a fracture of the right little finger when it was caught between the steel bar and the bottom edge of the hopper. The injured was using a 4' steel bar to dislodge frozen chunks of sand and other obstacles to allow the sand to run free through the chute. The bar struck an obstruction which came loose throwing the man off balance causing him to catch his finger.

1195243

100 Areas Activities

Final acceptance of P-10 and P-10-A Projects was made on January 3. All safety exceptions were corrected as requested.

Some additional and revised guards have been installed on the Metal Worker machine in the 100-B Maintenance Shop and color code painting of shop pipe lines is in process.

Facilities for exhausting carbon tetrachloride fumes from motor cleaning work in the 100-B Electrical Shop are being installed.

The 100-D Area Patrol won the safety plaque for the current period of the Patrol Safety Hurdle race.

The 100-D Area completed a no lost-time injury year on Friday, January 13. The Area Council is planning a supplement to the Hanford Works News. Also an individual safety citation card with personal identification on reverse side will be awarded to each 100-D Area employee. This is the third lost-time injury free year for 100-D Area

A study of grinding wheel control measures was made after finding numberous unidentified wheels in the Maintenance tool crib stocks. Work is in progress to revise the safety bulletin on this subject.

The 100-D Area Electrical Division in in the process of equipping their shop with an exhaust hood to carry off carbon-tetrachloride fumes from motor cleaning jobs.

A program has been started to follow at least one S.W.P. job during each period that repair work under these conditions is carried on.

The Maintenance Safety Derby is bringing out several points that need additional attention in inspection of ladders and securing lockers and cabinets to the wall or floor.

The Maintenance Safety Derby has been particularly effective in causing a renewed interest and study of the plant safety bulletins. On several occasions conditions encountered in the inspections have been referred to the Safety Engineer for an opinion. In all cases the answers have been that the bulletins should be followed as written.

Maintenance and Transportation personnel engaged in repair of a large underground line were given instructions in the proper use of the chemox mask.

200 Areas Activities

Plans are completed for the publicity to be used in the 200-West Area, beginning February 14, at which time 200 West will have 50 days to go to complete another no-lost-time year.

The first round of supervisors training classes are due to be completed February 1. At that time a new schedule of subjects will be worked out.

General inspections are being made of operating buildings in the 200 Areas and major items in need of correction handled through supervision.

A crane committee was called by area heads, at the request of the Safety Engineer, to study maintenance problems and make recommendations for changes needed. The [illegible] Division and Maintenance Division are proceeding with recommended changes.

Safety activities in line with the Maintenance Derby has brought about considerable improvement in housekeeping. Shops are being painted and equipment is being painted in some locations to conform with recommended safety coloring of machines.

A Survey is being conducted on the use of air hose couplings and possible need for changes.

700 - 1100 Areas Activities

The 700 Area completed its second consecutive year without a lost time injury at midnight, January 18, 1950.

A study was made of a gas cylinder set up in 717-A Instrument Shop.

Recommendations were made as to the safe way of using Carbon tetrachloride for cleaning cables and ferrules.

DECLASSIFIED

Recommendations were made to Village Maintenance in regard to the 722 Paint Booth.

An inspection was made of the methods of handling solvents in the typewriter repair shop.

FIRE PROTECTION

Project proposal prints for the Hot Semi Works were reviewed and approved.

The new Plant Laundry prints were reviewed and a fire detector system was recommended. This system was designed and approved.

Recommendations were made on the warehouses in White Bluffs that have been taken over by Operations.

A review of the fire fighting in the 101 Area is being made.

The sprinkler system at Riverland was given its semi annual test.

Industrial Fires

Division	Area	No. of Fires	Cause	Loss
Maintenance	100-F	1	Welding	None
Transportation	100-F	1	Motor Vehicle	None
[illegible] Division	200-W	1	Heating Units	None
	Total	3		

Industrial Investigations

Division	Area	No. of Fires	Cause	Loss
Plant General	Outer	1	Spontaneous Ignition	None
Service	200-W	1	Electric	None
[illegible] Division	100-D	1	Electric	None
Technical	Outer	1	Electric	None
	Total	4		
TOTAL NUMBER OF FIRES		7	TOTAL LOSS	NONE

OFFICE SERVICES DIVISIONS

General Services

Laundering volumes were as follows:

Plant Laundry (Building 2723)

	December	January
Coveralls - Pieces	29,303	30,415
Towels - Pieces	7,355	7,513
Miscellaneous - Pieces	67,589	70,017
Total Pieces	104,752	107,945
Total Dry Weight - Lbs.	150,775	153,568

1195245

Plant Security and Services Divisions

Richland Laundry (Building 723)

	December	January
Flatwork - Pieces	50,805	57,251
Rough Dry - Pieces	28,351	31,726
Finished - Pieces	3,305	2,980
Total Pieces	82,461	91,957
Total Dry Weight - Lbs.	53,600	59,772

Monitoring Section (Building 2723-W)

Poppy Check - Pieces	81,735	82,731
Scaler Check - Pieces	94,901	97,209
Total Pieces	176,636	179,990

Clerical Services

Mail Room

Mail volume again increased during the month of January. The volume has reached the point where rearrangements are necessary to allow handling.

The 703 Building Stationery Room will be discontinued March 1 and a delivery service from the main Stores will be instituted in its place providing essentially the same conveniences without the necessity for maintaining a large stock of materials in two places.

	December	January
Pieces of Internal Mail Handled	368,561	378,596
Pieces of Postal Mail Handled	59,055	61,075
Pieces of Registered Mail Handled	861	951
Pieces of Insured Mail Handled	467	687
Pieces of Special Delivery Mail Handled	224	185
Total Mail Handled	429,168	441,494
Total Amount of Postage Used	$ 1,390.48	$ 1,458.80
Teletypes Sent Out	929	933
Teletypes Received	833	793
Total Teletypes Handled	1,762	1,726
Total Number of Store Orders filled	2,021	1,920

Plant Security and Services Divisions

Office Equipment

One hundred wood file cabinets were sent to McNeil Island Prison Industries for repair and refinishing at a cost of from $10 to $12 per cabinet. These will be used in exchange for combination lock file cabinets wherever possible and for other requests for cabinets.

The Office Machine Repair Shop in North Richland was taken over on January 9 by our mechanic.

The service and sales managers of the Marchant Calculator Company called on us in regard to our complaint of improper service on guaranteed equipment from their service agency in Spokane. They assured us that their investigation had revealed that we were entirely in order and that adjustments would be made.

	December	January
Office Machines repaired in shop	185	193
Office Machine service calls	259	255
Total Machines Serviced	444	448

Printing

A new cost system has been established in Printing. This system will be based on actual hours expended and materials used, and will give an accurate figure on cost of operation of the Printing Section. This system will go into effect during the first week of February and will allow more equitable charging of customer divisions.

Due to the extremely heavy volume of work, it has been found necessary to revamp some of the equipment, as well as make several changes to the interior of the building in order to handle the work.

	December	January
Multilith Orders Received	235	319
Multilith Orders Completed	249	299
Multilith Orders on hand at month end	62	82
Mimrograph Orders received	2,088	1,949
Mimeograph Orders completed	1,993	2,040
Mimeograph Orders on hand at month end	95	4
Ditto Orders Received	1,079	1,315
Ditto Orders completed	1,029	1,363
Ditto Orders on hand at month end	50	2

Stenographic Services	December		January	
	Hours	Quantity	Hours	Quantity
Dictation and Transcription	0	0	0	0
Machine Transcription	7:45	14	18:30	42
Letters	57:00	103	63:50	102
Manual and Procedures	25:20	40	32:00	56
Duplicating - Stencils, Ditto	197:45	305	159:05	251
Special	406:00	504	412:50	990

1195247

DECLASSIFIED

Plant Security and Services Divisions

Stenographic Services (Contin)

	December		January	
	Hours	Quantity	Hours	Quantity
Training	102.4	8	97.5	---
Unassigned time during month	25.0	4	53.5	---
Termination	---	---	---	---
Safety & Security Meetings	15.1	---	---	---
Meeting Time	---	---	3.3	---
Illness	---	---	13.7	---
Assembling	---	---	48.5	---
Total Hours	836.5		902.8	
Employees loaned to other Divisions	855:00		428.5	
Total Hours Available	1,691:5		1,331.3	

Records Control Division

Quantity of Records recieved and processed:

Division	Std. Cartons	½ Std. Ctn.	#50 Oxf.	#13 Oxf.
Accounting	40	34	6	6
Administration	1			
Community	1			
Design & Construction	30			
Employee & Comm. Relations	68			
Instrument	2			
Technical Services	15			
Power	2			
Service	7			
	166	34	6	6

TOTAL: 212 Boxes

	December	January
Persons furnished records services	101	121
Cartons issued for Records storage	496	322

Material Reprocessed: 31 Standard records cartons.

Records have been inventoried in all divisions except Health Instrument and the Payroll Divisions of Accounting.

All microfilming in accordance with A. E. C. Bulletin GM-113 has been held up pending written confirmation from the Atomic Energy Commission of instruction for microfilming and a revised list of the records to be microfilmed.

1195248

UNCLASSIFIED

Request for consultant services of E. J. Leahy of the National Records Management Council has been approved and Mr. Leahy will be here the week of February 20 to review our Records Control Program and make recommendations for changes, if necessary.

Forms Control

The revision and consolidation of hospital forms is continuing. As new and more adequate forms are being developed, interest in forms has greatly increased among hospital supervision. Forms are being revised as current stocks are depleted, for this reason the appearance of new forms will be gradual but more economical.

Quite an extensive revision of forms used by Design & Construction Divisions is under way which will reduce the number of forms required for their use. Project Engineering Division forms are being reviewed with Design and Construction forms and new forms are so designed that they may be used by both divisions. The combining of forms by these two divisions will represent a substantial reduction.

A standard filing procedure for project wide use is being developed. The various divisions have been contacted for suggestions, their files reviewed and information compiled for the purpose of determining the most practical procedure to be recommended, considering both economy of operation and desired end results.

PATROL AND SECURITY

General

Effective January 1, Security Patrol discontinued the handling of Community Fire Division laundry and dry cleaning.

Beginning January 4, classified file checks are being conducted in the 770 Building.

A procedure for the issuance of health instruments was established for employees working in the 108-F Building, 100-F Area, effective January 4.

On January 6, a Material and Package Pass Procedure was placed into effect for the removal of all "SF" material from the 3706 and 321 exclusion areas to other exclusion areas within the 300 Area and to other areas within the perimeter barricade.

The posts designated as Supply Room Clerk, Main Gate and Relief were combined in each of the 100 Areas as of January 16.

Effective January 18, the Riverland Yards rover patrol post was discontinued for approximately three months. The Transportation Division will have a man on duty 24 hours per day who will contact the 200-West Patrol Radio Operator at least once each hour.

Beginning January 20, the procedure for honoring of Knolls Atomic Power Laboratory Photo identification passes was discontinued at this installation.

UNCLASSIFIED

Plant Security and Services Divisions

Seven additional sections were issued, January 20, to H. W. Instructions Letter No. 135 concerning Security procedures and regulations:

VIII. Registered Delivery of Classified Documents
IX. Destruction of Classified Scrap
X. Authorization and Control of Visitors
XI. Restrutions on Personal Notes
XII. Procedure for Transmitting Documents and Material
XIII. Procedure for Sending Classified Tehetypes and Telegrams
XIV. Security Requirements for Procurement of Classified Services and Material.

A new pass procedure was placed into effect on January 23 for the removal of unclassified metal bath samples from the 303 exclusion area, 300 Area. This pass in no way will alter or interfere with the Material and Package Pass Procedure now in effect which must be authorized by certain individuals and signed by a member of the "P" Division supervision.

Effective January 27, and continuing until further notice, each lane at all plant barricades will be blocked with a chain between the hours of 5:15 P.M. and 7:00 A.M., with the chains being let down to permit the passage of traffic in or out ofthe plant area.

A standard monthly report form was issued January 27 to establish a uniform monthly report from each of the Security Patrol areas.

A new patrol post was established in the P-11 Area January 30, and will be designated as "Badge House Clerk". For the present time, this post will be manned on the No. 2 shift only.

Beginning January 30, the constrution pin-type badge was revised to insure more adequate security for the project, as many of the old type badges have been lost, etc.. This pass will also determine security clearance.

A physical inventory of all Security Patrol central supply stock was completed January 31.

A representative of the Security Division gave "Q" orientation talks to 40 new employees who had received their "Q" clearance from the Atomic Energy Commission during the month.

Arrangements are being made to enlarge one entrance lane of the Richland barricade to permit two alleys for bus traffic. One lane will be used for buses requiring a complete pass check.

A number of color photographs were made for the contemplated security film. The locale was the 100-H Patrol Headquarters.

Four additional patrolmen are being added to the 100-D Area to handle construction problems. These men were transferred from the 200-W Area.

Arrangements are being made to transfer the responsibility of manning the Yakima barricade from 200-W Area to 100-B Area.

A procedure for emergency blackout of the 300 Area was placed into effect. The final blackout problem - Richland and North Richland - is under consideration.

DECLASSIFIED

Patrol

The 200 Areas handled 95 process escorts between the areas.

Requests handled totaled 613, consisting mainly of opening doors, gates and providing escorts for employees of other departments.

A total of 61 Unusual Incident Reports were received, consisting mainly of lost badges, pencils, contraband picked up at barricades, traffic accidents and fires.

A total of 432 pat searches were made of employees leaving the operating areas during the month.

Patrol supervision handled no First Aid cases during the absence of the Area Nurse.

Classified escorts totaling 221 were handled during the month.

Patrol made 17 ambulance runs for the Medical Division during the month.

Practice Evacuation was held as follows:

100-B Area	January 11, 1950	10:05 A.M.

No practice blackouts were held during the month.

Arrest Summary

	December	January
Warning tickets issued	0	0
Verbal warning given	0	1
Citation tickets issued (traffic only)	0	0

Accident Summary

Total accidents	7	3
Government permits suspended	0	1

Training

Training courses held during the month were as follows:

	Hours
Safety	1/2
Health	1/2
Patrol Operations Class (Subject No. 1)	2
Patrol Operations and Security (Subject No. 2)	3
Pistol	2

The safety bulletin board which was constructed during the month of May, 1949 was also used during the month of January, 1950.

The competitive safety program is being continued.

Plant Security and Services Divisions

No classes were held for the Security Patrol from January 12 through January 27 due to redecorating the interior of the school building.

Photo flood bulbs, 35 mm film and a light bracket were received for use in filming the Security Pictures.

All machine guns and 37 mm weapons mounted in the armored cars were given a thorough oiling and cleaning.

Inventory of all range equipment and arsenal contents was started on January 25.

Preparation was made at 100-H for filming ofthe pictures for the Security Division.

A safety hurdle race inspection was made on January 30 and 31.

SECURITY

There 241 security meetings held and attended by 3,010 General Electric employees during the month.

Employee Clearance

Class "Q" clearances received on old employees this month	2
Class "Q" clearances received on old employees to date	4,459
Class "Q" clearances received on new employees this month	27
Class "Q" clearances received on new employees to date	6,256
Class "Q" clearances received on both old and new employees since February 17, 1947	10,715
Formal "P" clearances awaiting change to "Q"	17
Authorization clearances issued this month	49

Statistical Summary of Outstanding Area Badges

	December					January			
	A	B	C	Total		A	B	C	Total
100-B	1717	553	466	2736	100-B	1709	584	464	2757
100-D	704	926	513	2143	100-D	733	924	508	2165
100-F	704	1047	405	2156	100-F	706	1052	404	2162
100-H	754	1606	474	2834	100-H	717	1678	491	2886
200-E	881	1766	366	3013*	200-E	871	1761	362	2994*
200-W	1395	1683	360	3438	200-W	1359	1673	357	3389
200-N	25	877	134	1036	200-N	32	873	137	1042
300	1340	1613	235	3188	300	1331	1629	239	3199
100-DR	194	2		196	100-DR	452	6		

*Includes 37 "A" badges at Riverland Yards

*Includes 36 "A" badges at Riverland Yards

DECLASSIFIED

Plant Security and Services Divisions

Visitors or Temporary Badges

Area	December	January
100-B	487	505
100-D	926	969
100-F	833	860
100-H	210	333
200-E	714	729
200-W	1000	1048
200-N	673	706
300	1407	1472
100-DR	1	---
Total	6434	6616

Special Clearance Section

Following is a statistical summary of clearance status of vendor and consultant vendor companies:

Total companies forwarded to AEC this month:	3	Personnel:	4
		Consultant personnel:	1
Total companies forwarded to AEC last month:	2	Personnel:	5
		Consultant personnel	3
Total companies forwarded to AEC to date:	217	Personnel:	2,372
Total companies cleared for "Restricted Data" this month:	4	Personnel:	15
		Consultant personnel:	2
			17
Total companies cleared for "Restructed Data" last month:	10	Personnel	40
		Consultant personnel:	2
			42

New companies forwarded to the Atomic Energy Commission this month:

American Pipe and Construction Company
4809 Firestone Boulevard
South Gate, California

Number and type of clearance granted by the Atomic Energy Commission this month to vendors and consultants:

Formal "P"	4
Formal "Q"	17
Emergency "Q"	3 (G.E. personnel)

[redacted]

HANFORD WORKS
General Electric Company
Richland, Washington

REPORT OF VISITORS FOR PERIOD ENDING JANUARY 31, 1950

Name - Organization	Purpose of Visit	Person Contacted	Arrival	Departure	Restricted Data Class.	Restricted Data Unclass	Areas
COMMUNITY DIVISION							
I. Visits to other Installations							
R. H. Hopkins to: General Electric Company Schenectady, New York	Consultation on accounting problems	R. Turner	1-4-50	1-5-50		X	
R. H. Hopkins to: Los Alamos Scientific Lab. Los Alamos, New Mexico	Conference on community management problems, budgeting and cost	E. Sullivan	1-23-50	1-27-50		X	
H. A. Root to: Los Alamos Scientific Lab. Los Alamos, New Mexico	Conference on community management problems, budgeting and cost	E. Sullivan	1-23-50	1-27-50		X	
MEDICAL DIVISION							
I. Visitors to this Works							
A. Z. Bowers Atomic Energy Commission Washington, D. C.	Discuss problems of Medical Division	W. D. Norwood P. A. Fuqua	1-10-50	1-10-50		X	
J. A. Derry Atomic Energy Commission Washington, D. C.	Discuss problems of Medical Division	W. D. Norwood P. A. Fuqua	1-10-50	1-10-50		X	
S. Warren Atomic Energy Commission Washington, D. C.	Discuss problems of Medical Division	W. D. Norwood P. A. Fuqua	1-10-50	1-10-50		X	

[redacted]

DECLASSIFIED

1195254

[redacted]

Name - Organization	Purpose of Visit	Person Contacted	Arrival	Departure	Restricted Data Class.	Restricted Data Unclass	Areas
DESIGN AND CONSTRUCTION DIVISIONS							
I. Visits to other Installations							
R. C. Hollingshead to: Los Alamos Scientific Lab. Los Alamos, New Mexico	Rala consultation	R. P. Hammond	1-5-50	1-6-50	X		
R. T. Jaske to: Oak Ridge National Lab. Oak Ridge, Tennessee	Shielding discussion, and arrangements for shielding test program	C. E. Winters	1-12-50	1-13-50	X		
R. T. Jaske to: Argonne National Lab Chicago, Illinois	Review of shielding problems	A. Amorosi	1-10-50	1-11-50	X		
J. E. Kaveckis to: Gen. Eng. & Consulting Lab. Schenectady, New York	Consultation on Phase III, 234-5 Program	D. H. Marquis E. J. Hatfield	1-16-50	1-20-50	X and TS information		
J. H. Carlin to: Kellex Corporation New York, New York	Discuss Redox design problems and check progress	G. White, Jr.	1-16-50	1-20-50	X		
H. E. Hanthorn to: Kellex Corporation New York, New York	Discuss Redox design problems and check progress	G. White, Jr.	1-16-50	1-20-50	X		
W. B. Webster to: Kellex Corporation New York, New York	Discuss Redox design problems and check progress	G. White, Jr.	1-16-50	1-20-50	X		
R. G. Barnes to: Kellex Corporation New York, New York	Discuss engineering flow diagrams and towers and heat exchanges.	J. S. Atwood R. Long	1-23-50	1-27-50	X		
C. E. Kent to: Kellex Corporation New York, New York	Discuss engineering flow diagrams and towers and heat exchanges	J. S. Atwood R. Long	1-23-50	1-27-50	X		

[redacted]

[redacted]

1195255

[redacted]

Name - Organization	Purpose of Visit	Person Contacted	Arrival	Departure	Restricted Data Class.	Restricted Data Unclass	Areas
R. S. Perry to: Fanstell Metallurgical Corp. Chicago, Illinois	Obtain design information for MJ-3 Project	L. R. Scribner	1-26-50	Still gone		X	
R. S. Perry to: Schutte & Koerting Philadelphia, Pennsylvania	Obtain design information for MJ-3 Project	C. G. Batchley	1-26-50	Still gone		X	
T. Williams to: Crane Company Chicago, Illinois	Design conference on pipe and electrical program	P. M. Weiss A. M. Houser	1-27-50	Still gone		X	
T. Williams to: Pyle National Company Chicago, Illinois	Design conference on pipe and electrical program	P. E. Packard	1-27-50	Still gone		X	
II. Visitors to this Works							
L. C. Ford General Electric Company Apparatus Department Pasco, Washington	Installation of equipment purchased from the Apparatus Department	T. W. Jeffs	1-26-50	1-26-50	X		100-H 105
ELECTRICAL DIVISION							
I. Visitors to this Works							
V. H. Bonner Bonneville Power Administration	Check 251 Sub-station	F. J. Mollerus L. H. Holden	1-11-50	1-12-50		X	
R. N. White Bonneville Power Administration	Check 251 Sub-station	F. J. Mollerus L. H. Holden	1-11-50	1-12-50		X	
G. M. Clifton General Electric Company Apparatus Department Pasco, Washington	Check equipment at 251 Sub-station	F. J. Mollerus	1-25-50	1-25-50		X	

[redacted]

1195256

204

[redacted]

Name - Organization	Purpose of Visit	Person Contacted	Arrival	Departure	Restricted Data Class.	Restricted Data Unclass	Areas
O. B. Falls General Electric Company Seattle, Washington	Check equipment at 251 Sub-station	F. J. Mollerus	1-25-50	1-25-50		X	
HEALTH INSTRUMENT DIVISIONS							
I. Visitors to this Works							
J. Z. Bowers Atomic Energy Commission Div. of Biology & Medicine Washington, D. C.	Inspect Health Instrument facilities	H. A. Kornberg	1-10-50	1-10-50	X		
J. A. Derry Atomic Energy Commission Div. of Biology & Medicine Washington, D. C.	Inspect Health Instrument facilities	H. A. Kornberg	1-10-50	1-10-50	X		
S. Warren Atomic Energy Commission Div. of Biology & Medicine Washington, D. C.	Inspect Health Instrument facilities	H. A. Kornberg	1-10-50	1-10-50	X		
P. E. Church University of Washington Seattle, Washington	Meteorology consultation	D. E. Jenne	1-27-50	1-27-50	X		
II. Visits to other Installations							
P. R. McMurray to: Radiation Laboratory Berkeley, California	General discussion of health problems	N. Garden	1-5-50	1-5-50	X		
G. R. Hilst to: St. Louis, Missouri	Attend conference of American Meteorological Society	G. R. Hilst	1-4-50	1-6-50		X	

[redacted]

1195257

[redacted]

Name - Organization	Purpose of Visit	Person Contacted	Arrival	Departure	Restricted Data Class.	Restricted Data Unclass	Areas
PROJECT ENGINEERING DIVISIONS							
I. Visitors to this Works							
W. H. Finkledey Singmaster and Breyer New York, New York	Observe existing facilities in 300 Area and proposal for new rolling mill as per contract	S. F. Schure	1-26-50	2-10-50	X		300 3706 303
II. Visits to other Installations							
W. R. Falts to: Simonds Saw & Steel Company Lockport, New York	Observe rolling of uranium	F. Epp	1-9-50	1-10-50	X		
MANAGEMENT							
I. Visitors to this Works							
Alice Denton General Electric Company Schenectady, New York	Review filing procedures used at Hanford Works	F. K. McCune C. G. Stevenson	1-16-50	1-20-50	X	100-H 105; 200-W- 221-T, 231;	300 303, 305 3706, 321
R. C. Robin General Electric Company Schenectady, New York	Discussion of problems relating to Hanford Works	F. K. McCune R. B. Richards - Tech.	1-16-50	1-26-50	X	100-H-105 200-W- 221-T, 231;	300 303, 305 3706 321
B. R. Prentice General Electric Company Schenectady, New York	Discussion of problems relating to Hanford Works	G. G. Lail C. N. Gross	1-9-50	1-12-50	X		
PURCHASING AND STORES DIVISION							
I. Visitors to this Works							

[redacted]

DECLASSIFIED

1195258

Name - Organization	Purpose of Visit	Person Contacted	Arrival	Departure	Restricted Data Class.	Restricted Data Unclass	Areas
E. Winkleman Inland Motor Freight Pasco, Washington	Unload material on HW-55428M	H. O. Monson	1-5-50	1-5-50		X	300-303 AREA
L. Clayton United Truck Lines Pasco, Washington	Delivery of material on HW-53192M	H. O. Monson	1-10-50	1-10-50		X	100-D XXX
W. Frueling United Truck Lines Pasco, Washington	Delivery of material on HW-53192-M	H. O. Monson	1-10-50	1-10-50		X	100-D XXX
D. A. Westermeyer Consolidated Freight Ways Pasco, Washington	Deliver blower for 108 Building	H. O. Monson	1-23-50	1-23-50		X	100-F 108
D. A. Westermeyer Consolidated Freight Ways Pasco, Washington	Delivery of bismuth on HW 56174M	H. O. Monson	1-25-50	1-25-50		X	200-W 271-T 271-U
D. A. Westermeyer Consolidated Freight Ways Pasco, Washington	Delivery of bismuth on HW 53185M	H. O. Monson	1-25-50	1-25-50		X	200-E 271-B
D. A. Westermeyer Consolidated Freight Ways Pasco, Washington	Delivery of ferrous ammonium sulfate	H. O. Monson	1-26-50	1-26-50		X	200-W 271-U
"P" DIVISION							
I. Visitors to this Works							
C. G. Kruse International Bus. Machines Corp. Seattle, Washington	Repair of IBM machines	J. R. Young	1-20-50	1-23-50	X		100-H 105
W. H. Finkledey Singmaster & Breyer New York, New York	Observe existing facili- ties for rolling mill	E. P. Lee W. W. Winsheimer	1-26-50	1-30-50	X		300 303

[redacted]

DECLASSIFIED

1195259

[redacted]

Name - Organization	Purpose of Visit	Person Contacted	Arrival	Departure	Restricted Data Class.	Restricted Data Unclass	Areas
II. Visits to other Installations							
J. A. Cowan to: Simonds Saw & Steel Corp. Lockport, New York	Inspection of rolling mill operation as related to materials processed for HW	F. Epp	1-9-50	1-11-50	X		
POWER DIVISION							
I. Visitors to this Works							
J. W. Burton Roberts Filter Company Darby, Pennsylvania	Inspection of equipment	J. A. Todd W. R. Conley	1-9-50	1-9-50		X	100-H XXX
F. R. Haddock Roberts Filter Company Darby, Pennsylvania	Inspection of equipment	J. A. Todd	1-9-50	1-9-50		X	100-H XXX
II. Visits to other Installations							
H. F. Measley to: Standard Oil Company San Francisco, California	Inspect oil burner installations of the Standard Oil Company	T. C. Wellman	1-1-50	1-8-50		X	
"S" DIVISION							
I. Visits to other Installations							
R. L. Lance to: Oak Ridge National Lab. Oak Ridge, Tennessee	Consultation of recent developments in 706-D process	L. B. Emlet	1-9-50	1-11-50	X		
TECHNICAL DIVISIONS							
I. Visitors to this Works							
J. B. Sampson Knolls Atomic Power Laboratory Schenectady, New York	Reactor calculations	A. B. Greninger P. F. Gast	1-13-50	Four months	X		100-B-105 100-D-105 100-F-105 300-3706

[redacted]

DECLASSIFIED

1195260

[redacted]

Name - Organization	Purpose of Visit	Person Contacted	Arrival	Departure	Restricted Data Class.	Restricted Data Unclass	Areas
W. Primak Argonne National Laboratory Chicago, Illinois	Discuss planning of HW radiation program	R. E. Nather	1-16-50	1-20-50	X		300 3706 100-H 100-F 105
H. Hurwitz, Jr. General Electric Company Schenectady, New York	Discuss pile and P-11 problems	P.F. Gast	1-16-50	1-20-50	X	100-B 105	300- 3706 100-D 105
T. M. Snyder General Electric Company Schenectady, New York	Discuss pile and P-11 problems	P. F. Gast	1-16-50	1-20-50	X	100-B 105	300- 3706 100-D 105
L.A. Cock Westinghouse Electric Company Pittsburgh, Pennsylvania	Discuss proposed irradiation program	J. B. Lambert	1-17-50	1-19-50	X	100-D 105	300 3706 100-H 105
W. E. Johnson Westinghouse Electric Company Pittsburgh, Pennsylvania	Discuss proposed irradiation program	J. B. Lambert	1-17-50	1-19-50	X	100-D 105	300 3706 100-H 105
George Heitman Knolls Atomic Power Laboratory Schenectady, New York	Position in radiation testing program at Hanford Works	W. K. Woods	1-19-50	1-19-50	X		300 3706
G. A. Anderson Argonne National Laboratory Chicago, Illinois	Arrange for installation of Hanford test rig	J. B. Lambert	1-30-50	2-3-50	X	100-D 105 100-F 105	300 3706 100-H 105
K. L. Mattern Radiation Laboratory Berkeley, California	Inspect analytical instruments, techniques and laboratory	D. W. McLenegan A. H. Bushey	1-16-50	1-18-50	X		300 3706

602

1195261

[redacted]

DECLASSIFIED

[redacted]

Name - Organization	Purpose of Visit	Person Contacted	Arrival	Departure	Restricted Data Class.	Unclass	Areas
F. Bruce Oak Ridge National Laboratory Oak Ridge, Tennessee	Discussions on Rala, TBP, 231 and 234 processing	R. H. Beaton	1-5-50	1-6-50	X	300 3706, 321	200-W 231 234
D. Overholt Oak Ridge National Laboratory Oak Ridge, Tennessee	Discussions on Rala, TBP, 231 and 234 processing	R. H. Beaton	1-5-50	1-6-50	X	300 3706 321	200-W 231 234
C. D. Carroll Gen. Eng. & Consulting Lab. Schenectady, New York	Consultation on long-range bearing development program for Redox and Metal Recovery	R. B. Richards (also G. Thayer - Design)	1-10-50	1-13-50	X	300 3706 321	200-W 234 235
W. D. Egnor Gen. Eng. & Consulting Lab. Schenectady, New York	Consultation on long-range bearing development program for Redox and Metal Recovery	R. B. Richards	1-10-50	1-13-50	X	300 3706 321	200-W 234 235
CONSULTANT TO HANFORD WORKS - TECHNICAL DIVISION							
G. W. Watt University of Texas Austin, Texas	234-5 inspection and consultation	R. H. Beaton	1-17-50	1-21-50	X	300 3706 321 200-E 221-B	200-W 234 235 231 221-T
II. Visits to other Installations							
W. K. Woods to: Knolls Atomic Power Lab. Schenectady, New York	Discuss materials testing program	K. H. Kingdon	1-9-50	1-11-50	X		
W. K. Woods to: Argonne National Lab. Chicago, Illinois	Discuss materials testing program	W. H. Zinn	1-12-50	1-13-50	X		
P. H. Reinker to: Los Alamos Scientific Lab. Los Alamos, New Mexico	Attend meeting of Reactor Safeguard Committee	E. P. Wigner	1-16-50	1-18-50	X		

[redacted]

1195262

DECLASSIFIED

[redacted]

Name - Organization	Purpose of Visit	Person Contacted	Arrival	Departure	Restricted Data Class.	Unclass	Areas
P. H. Reinker to: North Americam Aviation Co. Downey, California	Technical consultation	W. E. Parkins	1-18-50	1-20-50	X		
W. M. Harty to: Oak Ridge National Lab. Oak Ridge, Tennessee	Rala consultation	L. B. Emlet	1-9-50	1-11-50	X		
W. M. Harty to: Los Alamos Scientific Lab. Los Alamos, New Mexico	Rala consultation	R. P. Hammond	1-5-50	1-6-50	X		
R. E. Burns to: Atomic Energy Commission Hdqtrs. Washington, D. C.	Waste processing comm-ittee meeting	J. H. Hayner	1-9-50	1-10-50	X		
R. E. Burns to: Argonne National Lab. Chicago, Illinois	Waste metal processing meeting	H. Hyman	1-11-50	1-11-50	X		
V. R. Cooper to: Oak Ridge National Lab Oak Ridge, Tennessee	Waste metal recovery consultation	F. L. Steahly	1-16-50	1-17-50	X		
R. B. Richards to: Oak Ridge National Lab. Oak Ridge, Tennessee	Waste metal recovery consultation	F. L. Steahly	1-16-50	1-17-50	X		
C. M. Slansky to: Oak Ridge National Lab. Oak Ridge, Tennessee	Waste metal recovery consultation	F. L. Steahly	1-16-50	1-17-50	X		
V. R. Cooper to: Oak Ridge National Lab. Oak Ridge, Tennessee	Purex Process meeting	F. L. Steahly	1-18-50	1-18-50	X		
C. M. Slansky to: Oak Ridge National Lab. Oak Ridge, Tennessee	Purex Process meeting	F. L. Steahly	1-18-50	1-18-50	X		

[redacted]

DECLASSIFIED

1195263

Name - Organization	Purpose of Visit	[redacted] Person Contacted	Arrival	Departure	Restricted Data Class.	Restricted Data Unclass	Areas
R. B. Richards to: Pennsylvania State College State College, Pennsylvania	Redox and TBP consultations	M. R. Fenske	1-19-50	1-20-50	X		
R. B. Richards to: Argonne National Lab. Chicago, Illinois	Laboratory and semi-works design consultation	S. Lawroski	1-21-50	1-21-50	X		
V. R. Cooper to: University of Michigan Ann Arbor, Michigan	Employment interviews	R. B.White	1-19-50	1-19-50		X	
V. R. Cooper to: University of Chicago Chicago, Illinois	Employment interviews	J. B. Parsons	1-20-50	1-20-50		X	
B. Weidenbaum to: Industrial Hygiene Foundation Pittsburgh, Pennsylvania	Consultation	T. F. Hatch	1-20-50	1-20-50		X	
B. Weidenbaum to: Army Chemical Center Maryland	Consultation	Mr. Mitchell	1-23-50	1-23-50		X	
B. Weidenbaum to: Gen. Eng. & Consulting Lab. Schenectady, New York	Discuss Aerosol problems	D. H. Marquis	1-26-50	1-27-50	X		
B. Weidenbaum to: Gen. Electric Research Lab. Schenectady, New York	Discuss Aerosol problems	I. Langmuir	1-26-50	1-27-50	X		
B. Weidenbaum to: E. I. du Pont de Nemours Wilmington, Delaware	Sand filter operation discussions	C. E. Lapple	1-24-50	1-25-50	X		
A. H. Bushey to: Los Alamos Scientific Lab Los Alamos, New Mexico	Discuss chemical analytical methods and the sample exchange program [redacted]	C. F. Metz	1-23-50	1-25-50	X		

DECLASSIFIED

242

1195264

[redacted]

Name - Organization	Purpose of Visit	Person Contacted	Arrival	Departure	Restricted Data Class.	Restricted Data Unclass	Restricted Data Areas
M. Lewis to: Louisiana State University Baton Rouge, Louisiana	Attend symposium on modern methods of analytical chemistry	- -	1-30-50	1-31-50		X	

[redacted]

213

1195265

DECLASSIFIED

PURCHASING AND STORES DIVISIONS
SUMMARY
JANUARY, 1950

Following is a personnel summary indicating total number of employees of the Purchasing and Stores Divisions as of 12-31-49 and 1-31-50:

	Total Personnel as of 12-31-49	Total Personnel as of 1-31-50	Net Change
Exempt	53	53	0
Non-Exempt	232	234	Plus 2
TOTALS	285	287	Plus 2

The number of orders placed for construction materials and equipment increased. The major portion of these orders were for the DR Water Plant. Although many quotations have been solicited for the MJ-1 Project, no actual orders had been placed at month end, pending release from the Manager, D&C Divisions.

Steps were taken to speed up the procedure for screening purchase requisitions against project inventories.

On January 3, the Continental Coal Company advised that their Monarch Mines were shut down due to a strike. Not knowing how long the strike would last, a spot purchase of 50,000 tons of coal was made from the Big Horn Coal Company. On January 23, the Monarch Mines resumed operations on a three-day week basis. The net result of the work stoppage was a reduction in our stock pile of approximately 30,000 tons which is a little more than two days' consumption.

Materials valued at $341,181.62 were declared excess from Stores active inventories.

1,155 purchase requisitions were screened against project stocks with the result that 756 items were furnished out of inventories thus obviating the necessity for outside purchase.

The Stores Division assumed the custody of the special Graphite inventories located in the 101 Building as of January 1. The value of this inventory was established at $3,299,956.62.

The Commission directed that we move from the Pasco Base into storage on the project all the B Block tool and fabrication equipment. This equipment is to be held for possible future use.

As a result of rate reductions obtained from carriers, savings for the month in freight charges amounted to $4,400.98.

1195266

DECLASSIFIED

PURCHASING AND STORES DIVISIONS
PURCHASING DIVISION
JANUARY, 1950

GENERAL

The work load decreased slightly during the month. 1,299 purchase orders were placed as compared to 1,432 placed in December. 2,106 purchase requisitions were received and assigned as compared with 2,079 during December. Requisitions on hand at month end totaled 570 as compared with 462 at the end of the previous month.

Although the total orders placed declined from the previous month, there was a marked increase of 41 per cent in the number of orders placed for construction materials and equipment. The major portion of these orders were placed for the DR Water Plant. Quotations were solicited on many requisitions for MJ-1 and the first order was ready for placement on January 25; however, it was held pending release of procurement from the Manager, D&C Divisions.

The issuance of numbered Procedure Letters was inaugurated during the month. Each of the letters will be indexed for ready reference to any given subject and subsequent changes will be covered by supplements or by complete revisions.

The successful bidder on order HW-56247M for the galvanizing of stainless steel nozzles was compelled to admit thier inability to meet the specifications required by the order. Their order was cancelled and the work was awarded to the next lowest bidder whom we know can handle the job as he has successfully completed a previous order.

In cooperation with the Stores Division a new procedure was established to speed up the screening against plant stocks of construction requisitions. Under the new system the requisitions are delivered directly to the Purchasing Division and Invitations to Bid are prompty mailed to the prospective bidders and one copy of the Invitation is forwarded to Stores for screening. It is the buyers responsibility to secure a report from Stores before placing an order.

On January 3, the Continental Coal Company which holds our current steam coal contract advised that the Monarch Mines were closed down due to a strike. Immediate negotiations were started to supplement our supply by contacting other producers in this area, and as a result, a purchase order was placed with the Big Horn Coal Company for 50,000 tons of steam coal to be delivered at the rate of 5,000 tons per week. The Monarch Mines resumed operations on a three-day week basis on January 23. Despite our best efforts the extremely bad weather caused our inventory to drop approximately 30,000 tons. We were able to maintain our inventory level on lump coal by making a spot purchase of 3,000 tons from the Western Fuel Company of Seattle.

Lists of essential materials together with quantities required for MJ-4 have been completed. Work is also in progress to secure the same type of information regarding materials which will be required for MJ-1.

PERSONNEL

	Total Personnel as of 12-31-49	Total Personnel as of 1-31-50	Net Change
Exempt	25	26	Plus 1
Non-Exempt	27	27	0
TOTALS	52	53	Plus 1

1195267

DECLASSIFIED

PURCHASING AND STORES DIVISIONS
PURCHASING DIVISION

SAFETY AND SECURITY

Safety and Security Meetings Scheduled	2
Number of Employees Attending	44
Minor Injuries	0

STATISTICS

	G	D	Total
Requisitions on hand 1-1-50 (includes 44 assigned to Govt.)	428	34	462
Requisitions assigned during January	1,966	140	2,106
Requisitions placed during January	1,891	107	1,998
Requisitions on hand 1-31-50 (includes 24 assigned to Govt.)	503	67	570

	Number	Value
HW Orders placed	1,220	$671,959.67
HW Alterations placed	118	10,795.94
Total	1,338	$682,755.61
HWC Orders placed	79	$116,752.60
HWC Alterations placed	11	101,035.16
Total	90	$217,787.76
AEC Orders placed	166	$ 66,741.25
DC Orders placed	5	1,976.70

	OR	ORC	Total
Government Transfers	12	0	12

Open Orders

HW Orders	977
HWC Orders	128
Govt. Orders	10

Number of new orders requiring inspection during month	10
Number of orders requiring inspection completed during month	4
Number of orders outstanding requiring inspection at month end	81
HW Orders expedited (Special Request)	218
HW Orders expedited (Routine)	430
HWC Orders expedited (Routine)	128

1195268

DECLASSIFIED

PURCHASING AND STORES DIVISIONS
STORES DIVISION
JANUARY, 1950

GENERAL

Materials valued at $341,181.62 were declared excess from Stores active inventories during the month of January, 1950. Stainless steel bars, plates, etc. comprised the bulk of these materials with a valuation of $249,198.70. As a result, total Stores inventories were reduced by $383,001.65.

1155 purchase requisitions were processed through screening and 756 items were furnished out of plant inventories.

The valuation of special material warehoused in Building 101, Hanford, was established by the Accounting Division as $3,299,956.62. This was being incorporated into Stores inventories at month end.

A directive was received from the Commission to move onto the Project, "B" block tool and fabrication equipment currently stored at Pasco for possible long-term storage. An expenditure of approximately $11,000.00 will be required to effect the physical movement.

Notice was received that spare parts were to be ordered for proposed new areas or facilities. It is estimated that these items may expand inventories by another two million dollars. The most serious aspect of this problem is that of inadequate storage space.

The Project Engineering Division was continuing the study to justify enlarged and centralized warehousing facilities and results are to be submitted to the Commission within the next few weeks.

112 formal excess lists totaling $3,719,618.45 were turned over to the Commission during the month and 41 shipping orders were processed in disposing of materials so authorized. It is noteworthy that materials and equipment valued at approximately $840,000.00 were removed from Excess and returned for use on the Project.

The procedure outlined in the December report relative to disposition of line items of $25.00 or less from active inventories has now been applied to material in the Excess Account and to material held for future construction (Construction Materials Inventory Control Section). It is estimated that savings upward of $30,000 will be effected by this procedure.

1195269

PURCHASING AND STORES DIVISIONS
STORES DIVISION

PERSONNEL

	Total Personnel as of 12-31-49	Total Personnel as of 1-31-50	Net Change
Exempt	23	22	Minus 1
Non-Exempt	197	199	Plus 2
TOTAL	220	221	Plus 1

SAFETY AND SECURITY

Construction Materials Inventory Control	
Safety and Security Meetings Scheduled	2
Number of Employees Attending	32
Minor Injuries	0
Sub-Major Injuries	1
Inventory Control	
Safety and Security Meetings Scheduled	1
Number of Employees Attending	34
Minor Injuries	0
Receiving, Warehousing & Disbursing	
Safety and Security Meetings Scheduled	4
Number of employees Attending	65
Minor Injuries	2
Surplus, Salvage & Scrap	
Safety and Security Meetings Scheduled	4
Number of Employees Attending	68
Minor Injuries	0

STATISTICS

Construction Materials Inventory Control	
Items in Stores Stock (Estimated)	51,470
Store Orders Filled	2,521
Number Requisitions Screened	646
Number Items Furnished from Stock	193
Value Inventories at Month End	$11,266,334.73
Value of Disbursements	121,164.86
Inventory Control	
Number of Items Added to Stores Stock	363
Number of Items Deleted from Stores Stock	202
Items in Stores Stock at Month End	48,088
Store Orders Filled	20,604

DECLASSIFIED

1195270

DECLASSIFIED

PURCHASING AND STORES DIVISIONS
STORES DIVISION

STATISTICS

Inventory Control (Continued)	
Number of Requisitions Screened This Month	1,155
Number Items Furnished from Plant Sources This Month	756
Inventory Valuation (903, all captions, 906 & 912)	$21,601,883.55
Inventory Valuation (Spare Parts) at Month End	1,548,698.58
Total Value Inventories at Month End, including Spare Parts	3,150,585.13
Value of Disbursements, not including Cash Sale Items	207,878.91*
Value of Cash Sales	412.51
Value of Materials Declared Excess	341,181.62
Value of Materials Returned to Stores Stock for Credit	2,254.43

*Includes $11,664.31 disbursed to Construction and CPFF Subcontractors.

Receiving, Warehousing & Disbursing	
Receiving Reports Issued	3,283
Emergency Store Orders Filled	9
Returnable Containers on hand at Month End	6,748
Returnable Containers on hand over Six Months	1,649
Shipments Processed (Containers and Material)	187

Surplus, Salvage & Scrap

Excess Account 10.10 Balance		$20,052,065.14
Receipts 12-25-49 to 1-25-50		
Automotive Equipment	$207,150.34	
Machine Tools & Equipment	130,475.62	
Office Furniture, Machines	1,439.47	
Household Furniture	32.00	
Material & Supplies	178,726.89	
Miscellaneous Equipment	33,819.75	
	$551,644.07	551,644.07
		$20,603,709.21

Disbursements 12-25-49 to 1-25-50	
On Project	
Lumber	$ 325.62
Automotive Equipment	546,371.00
Machine Tools & Equipment	193,841.74
Office Furniture, Machines	3,048.68
Household Furniture	371.20
Material and Supplies	36,515.50
Miscellaneous Equipment	61,429.70

1195271

PURCHASING AND STORES DIVISIONS
STORES DIVISION

STATISTICS (Continued)

Surplus, Salvage & Scrap (Continued)

Off Project		
Lumber	$ 57,676.26	
Automotive Equipment	21,166.17	
Machine Tools & Equipment	1,968.53	
Office Furniture, Machines	2,767.00	
Material & Supplies	15,913.77	
Miscellaneous Equipment	13,338.17	
	$954,733.34	$954,733.34
Balance of Account 10.10 as of 1-25-50 (See attached list for breakdown of materials in this account by classification)		$19,648,975.87
Total Receipts to Date		$29,029,698.78
Total Disbursements to Date		$ 9,380,722.91
Scrap and Salvage Disbursed		
Scrap Sales Completed	37	
Scrap Sales in Process	25	
Scrap Sale Revenue for the Month	$ 25,160.09	

DECLASSIFIED

1195272

DECLASSIFIED

PURCHASING & STORES DIVISIONS
STORES DIVISION

RECAPITULATION BY CLASSIFICATION ACCOUNT 10.10

Class	Description	Monetary Value
1	Gun Emplacements, Fire Control Instruments	$ 1.25
2	Small Arms	1,429.02
3	Lethal Device Equipment	10.00
4	Ammunition	83.62
5	Flags, Bunting, Pennants, etc.	201.71
7	Fuel	641.46
8	Motor Vehicles: Electric Trucks, Tires, Tubes	677,442.76
9	Boats	62.00
10	Outboard Motors and all Accessories	4,402.18
11	Pumps and Pump Parts	170,152.43
12	Marine Hardware	2,317.86
13	Engine & Fireroom Fittings	6,025.26
14	Lubricants	28,351.34
15	Electric Cable and Insulated Wire	54,249.20
16	Radio and Sound Signal Apparatus	26,664.93
17	Electric Apparatus	1,690,796.61
18	Instruments of Precision and Photographic Equipment	76,970.96
19	Blocks	36,272.79
21	Cordage, Hemp, Jute, Oakum, Twine, Etc.	16,453.09
22	Wire Rope, Bare Wire, etc.	52,018.78
24	Canvas, Duck, Tentage, etc.	17,685.58
26	Furniture	279,027.09
27	Textiles, Thread, Findings, Floor Coverings	440,478.59
29	Toilet Articles	7,761.69
30	Bathroom and Toilet Fixtures	60,367.47
31	Non-Electric Lighting Apparatus	2,025.22
32	Fire-Surfacing and Heat Insulating	61,805.13
33	Gaskets, Hose, Packing, Sheet & Strip Rubber, Hose Fittings, Flexible Tubing	136,368.28
34	Belting, Harness, (Leather) etc.	2,719.11
36	Music and Musical Instruments	8.50
37	Special Wearing Apparel and Athletic Equipment	131,594.25
38	Brooms and Brushes	5,815.00
39	Lumber	1,010,155.38
40	Machine Tools	723,183.60
41	Hand Tools	477,887.18
42	Builders and General Hardware	250,771.73
43	Bolts, Nuts, Rivets, Screws, Washers, etc.	378,489.16
44	Pipe and Non-Flexible Tubes and Tubing	1,077,770.00
45	Pipe Fittings	2,505,332.42
46	Metal in Bars: Including Flat, Hexagon, etc.	167,366.69
47	Metal in Plates and Sheets	41,413.46
48	Metal Shapes and Structural	[illegible],623.76

8 1195273

PURCHASING AND STORES DIVISIONS
STORES DIVISION

RECAPITULATION BY CLASSIFICATION ACCOUNT 10.10 (Continued)

Class	Description	Monetary Value
51	Acids, Chemicals, etc.	$ 89,294.14
52	Paints and Paint Ingredients	169,468.03
53	Pens, Pencils, Paper, Drafting Room & Printers' Supplies	35,268.72
54	Office Equipment	93,912.81
55	Clothing	6,089.64
57	Laboratory Equipment	51,888.68
58	Fire Fighting Apparatus: Railway Equipment Prefabricating Buildings, etc.	449,673.42
59	Building Materials: Asphalt, Bricks, etc.	178,444.64
60	Boilers and Power Plants	124,864.52
63	Tableware	7,013.03
64	Kitchen Utensils and Apparatus	66,486.13
65	Ovens, Ranges, Stoves, etc.	31,103.01
66	Machinery: Pneumatic Tools, etc.	657,810.53
69	Animal and Hand-Drawn Vehicles	15,639.58
70	Agricultural Implements	1,497.96
71	Badges, Insignia and Medals	1,602.00
72	Leather Boots & Shoes, Leather Clothing, etc.	7,245.72
73	Caps, Hats, Gloves, etc.	32.99
74	Infantry and Landing Force Equipment	796.83
78	Motorized Equipment & Heavy Construction Equipment	7,028,316.60
83	Airplane Accessories, Equipment & Parts	130.33
	Total Account 10.10 as of January 25, 1950	$19,648,975.87

DECLASSIFIED

1195274

DECLASSIFIED

PURCHASING AND STORES DIVISIONS
TRAFFIC SECTION
JANUARY, 1950

GENERAL

Through negotiations with the Northern Pacific and Union Pacific Railroads, we have been assured that upon completion of the Southern connection, a full set of rates on the Kennewick basis will be published to and from Richland. Such rates will be no higher than those now in effect to Hanford, although in many instances the rates will be lower, which may open up new markets for purchase of materials.

In order to insure payment of all freight bills within the credit period extended by the carriers in accordance with regulations prescribed by the Interstate Commerce Commission, a new procedure has been put into effect for payment of freight bills on shipments made to General Electric Company on a "No Charge" basis on which no purchase order has been issued. This new procedure eliminates the necessity of creating a purchase requisition and purchase order on each such shipment and permits payment of the freight bill within the credit period.

As a result of rate reductions obtained from the carriers, there was a total savings in freight charges for the month of January amounting to $4,400,98. This makes a total savings from September 1, 1946 to date of $1,137,462.68.

PERSONNEL

	Total Personnel as of 12-31-49	Total Personnel as of 1-31-50	Net Change
Exempt	2	2	0
Non-Exempt	7	7	0
	9	9	0

SAFETY AND SECURITY

Safety and Security Meetings Scheduled	1
Number of Employees Attending	7
Minor Injuries	0

STATISTICS

Savings Report

1. Rate Reductions obtained from the carriers:

Commodity	Origin	Savings for January	Savings 9-1-46 thru December	Total Savings 9-1-46 to date
Acid, Nitric	Dupont, Wash.	$1,048.72		
Gas, Chlorine	Tacoma, Wash.	90.00		
Soda, Caustic	Portland, Ore.	2,036.21		
Ferric Sulphate	Stege, Calif.	1,226.05		
		$4,400.98	$1,133,061.70	$1,137,462.68

1195275

DECLASSIFIED

PURCHASING AND STORES DIVISIONS
TRAFFIC SECTION

STATISTICS (Cont.)

Savings Report (Cont.)

	Savings for January	Savings 9-1-46 thru December	Total Savings 9-1-46 to date
2. Freight Bill Audit	600.14	45,275.99	45,876.13*
3. Loss & Damage and Overcharge Claims	264.49	91,216.90	91,481.39
4. Ticket Refund Claims	273.20	7,169.53	7,442.73
5. Household Goods Claims		13,820.34	13,820.34
	$5,538.81	$1,290,544.46	$1,296,083.27

* Includes $19,495.23 for the AEC

Work Volume Report

Reservations Made	Rail	125
	Air	55
	Hotel	59
Expense Accounts Checked		82
Household Goods and Automobiles	Movements Arranged inbound	4
	Shipments Traced	4
	Insurance Riders issued	4
	Claims Filed	3
Ticket Refund Claims	Filed	10
	Collected - Number	16
	Collected - Amount	$273.20
Freight Claims	Filed	7
	Collected - Number	6
	Collected - Amount	$264.49
Freight Bill Audit Savings		$600.14
Freight Shipments Traced		12
Quotations	Freight Rates	164
	Routes	120
Bills Approved	Air Freight	1
	Air Express	7
	Carloading	70
	Express	110
	Rail	338
	Truck	149
Carload Shipments	Inbound - GE	402
	Others	22
	Outbound - GE	30
	Others	0

1195276

DECLASSIFIED

PURCHASING AND STORES DIVISIONS
TRAFFIC SECTION

STATISTICS (Cont.)

Report of Carloads Received

Consolidated Western Steel Corp.	Motor Crane	1	
E. F. Hauserman Co.	Steel Partitions	2	
Richland Transportation Company	Coal	19	22
General Electric Company	Aluminum Ingots	1	
	Caustic Potash	1	
	Caustic Soda	12	
	Cement	1	
	Chlorine	2	
	Coal	359	
	Express	4	
	Ferric Sulphate	5	
	Ferrous Ammonium Sulphate	1	
	Lime	1	
	Merchandise	2	
	Nitric Acid	8	
	Phosphoric Acid	2	
	Soda Ash	2	
	Steel	1	
			402
Total Entire Project			424

1195277

EMPLOYEE AND COMMUNITY RELATIONS DIVISION

SUMMARY -- JANUARY, 1950

Open requisitions decreased from 94 at the beginning of the month to 86 at the end of January. Total plant personnel increased from 7,405 to 7,431. Turnover rate including terminations due to lack of work was 1.02%. Turnover rate exclusive of terminations due to lack of work was .73%. A standard interview form for recording opinion of interviewer was prepared and placed into effect during January. Transfer of 6,840 inactive personnel files to the Record Storage Center was completed during January. Recruitment was conducted in Spokane, Washington; Portland, Oregon; and Denver, Colorado, for stenographers and typists with fair results. Advertising conducted in Seattle and Spokane, Washington, and Portland, Oregon, for draftsmen and designers resulted in 176 inquiries being received.

149 visits were made to employees off work because of illness. Three employees retired during January, and 1 employee death occurred during the month. The Instructions Letter, entitled "Ratings -- Exempt Employees", was revised and issued during January. Rating forms for exempt employees were distributed to all Divisions during the past month. Twenty suggestion awards, totaling $ 405.00, representing an estimated savings of $ 5,030.00, were granted to employees during the month. The Travelers Insurance Company made an offer of settlement of $ 25,000.00 in the case of the death which occurred recently at the Kadlec Hospital. This offer has been refused, and a counter offer of $ 65,000.00 was made. Negotiations are presently being conducted between the Travelers Insurance Company and the claimant's law firm. Two hearings were held on appeals made by the Company before the Washington State Department of Labor and Industries in connection with compensation cases.

43 supervisors participated in the 40-Hour Supervisors Training Program during January. The economic program, which included the film, "This Is Our Problem", was exhibited to 66 additional employees who did not have the opportunity to participate in this program during December. The program outlining the exempt rating system and reviewing the Instructions Letter issued on this subject was held during the weeks of January 23 and January 30, with a total of 32 meetings being presented, at which 511 supervisors attended. A report on the 1949 Progress of the Training and Program Development Group, as well as a Prospectus outlining some of the 1950 programs, was distributed to all Superintendents, Division Heads, and Managers. Several discussions were held with respect to planning an Accountability Program for employees in those Divisions responsible for fissionable material.

DECLASSIFIED

1195278

DECLASSIFIED

Employee and Community Relations Division
Summary

The name of the Labor Relations and Wage Rates Division was changed to Union Relations and Wage Rates, with C. C. Tallman appointed Manager and J. N. Dupuy, Assistant Manager. A representative of the Union Relations and Wage Rates Division attended a meeting of the Labor Relations Committee in Schenectady, and met with Company Union Relations officials in New York City, and AEC officials in Washington, D.C. It was decided that there were no questions to be resolved by a formal hearing with regard to the unit appropriate for collective bargaining purposes in the matter of the Hanford Industrial Firemen's Petition. Preparations were made for the hearing in the case of the Technical Engineers and Architects Association. Several meetings were held with a committee appointed by the HAMTC for the purpose of discussing the upgrading of certain metal workers in June, 1949. A careful review of all articles of the HAMTC-GE Agreement is being made for the purpose of developing the Company's position in the event the Agreement is reopened for negotiations. Two meetings were held with the Council Grievance Committee. Work continued on the annual community rate survey. Additional meetings were held with project supervisors relative to the proposed rate and progression schedules for Draftsmen and Designers at the Hanford Works. Individual jobs were studied and classifications and rates were determined. A study was completed relative to the work for trainees in the automotive repair section of the Transportation Division.

Of particular significance among the varied activities of Community Relations during the month of January was the special auditorium production presented on January 25 which provided the Nucleonics Department General Manager with an opportunity to speak to all Hanford Works supervisors who could be accommodated in Carmichael Junior High School auditorium. The presentation included a stage skit which depicted the investigations conducted by the Joint Committee on Atomic Energy last summer. The skit was presented for the purpose of stimulating interest in the Source and Fissionable Materials Accountability Program which is being stepped up through a three-phase special program. The skit presentation was the first of the series.

The work of the Community Relations Public Information Supervisor was highlighted during the month by a meeting held with Columbia High School Student Counselors for the purpose of discussing the G.E. Educational Assistance Program.

In addition to producing a total of 3,591 prints of all sizes from the small application photographs up to the 8" x 10" glossy prints required by newspapers, the Hanford Works Photo House also assisted the Manufacturing Divisions during the month by taking motion pictures of a classified nature to fill a special need of the using Division.

Four issues of Hanford Works NEWS were produced during the month of January. The total number of copies of each week's issue continued at 7,900. The December 30 issue of "Candid Camera" was inserted in the January 6 issue of Hanford Works NEWS because of the necessity of inserting the new telephone numbers summary in the December 30 issue.

1195279

Employee and Community Relations Division
Summary

The Works NEWS performed a community service by publicizing the March of Dimes campaign to all Hanford Works employees. In addition, it served as a medium through which the General Manager could express his commendation to all employees for the excellent safety record accomplished in 1949.

Special Programs, acting in its capacity as public relations counsel for the Medical Divisions, assisted in arranging a special press conference to announce that the decision had been made to place doctors and dentists on a private practice operating basis. In addition, a news story was prepared for distribution to all newspapers on the "Daily List" who could not have personal representatives at the press conference.

Included among the many other activities of Special Programs during the month of January was a special letter prepared for the General Manager's signature which complimented all Hanford Works employees on the safety record during 1949. The letter was sent to home addresses of all employees.

Classified advertising was prepared and placed in newspapers in those cities where it was thought that typists and stenographers, draftsmen and design draftsmen, and stenographers only could be recruited. In several instances, advertisements were run to announce the arrival in the city concerned of the recruiter from the Employment Division.

A total of 58 releases of information were made by the News Bureau during the month of January. Of this number 31 were sent to the "Local List." 9 to the "Daily List," and the others to individual media requesting special information.

An outstanding accomplishment of the News Bureau during the month of January was evidenced when the Yakima MORNING HERALD published a feature story together with pictures concerning Richland's churches. The story dominated an entire page in the newspaper.

DECLASSIFIED

1195280

DECLASSIFIED

EMPLOYEE AND COMMUNITY RELATIONS DIVISION

JANUARY, 1950

ORGANIZATION AND PERSONNEL

Employee Relations

Employment:

Effective January 30, 1950, a Stenographer-Typist "A" was transferred to the Law Division. On the same date one Stenographer-Typist "B" was upgraded to replace the Stenographer-Typist "A" transferred.

Effective January 30, 1950, one General Clerk "C" was transferred to the Manufacturing Division and upgraded to a General Clerk "A".

Effective January 30, 1950, a Messenger was employed for the Employment Group to replace the present Messenger who is being upgraded and transferred to another Division.

Employee Services:

Effective January 6, 1950, a Stenographer-Typist "B" terminated, and on the same date a General Clerk "C" was upgraded to fill the Stenographer-Typist "B" position.

Effective January 6, 1950, a General Clerk "C" was transferred from the Suggestion System to the Insurance and Compensation Section, and a General Clerk "C" was employed to fill the opening of the General Clerk "C" in the Suggestion System.

Training and Program Development:

Effective January 1, 1950, W. A. Halteman, Staff Assistant, was transferred to the Community Relations Division.

4 1195281

Employee and Community Relations Division

Union Relations and Wage Rates

Effective January 20, one Assistant Division Supervisor was removed from the payroll and is on military leave of absence.

Community Relations

Effective January 1, one Staff Assistant was transferred from the Training and Program Development Group of the Employee Relations Division to the Community Relations Division as Supervisor, Public Functions and Services.

Number of Employees on Payroll	January, 1950
Beginning of month	82
End of month	80
Total Decrease	2

This decrease was due to the transferring of employees to other divisions.

DECLASSIFIED

1195282

DECLASSIFIED

Employee and Community Relations Division

ACTIVITIES

Employee Relations

Employment:

	December, 1949	January, 1950
Applicants interviewed	1,048	1,298

322 of the above applicants interviewed in January, were individuals who had applied for employment with the G.E. Company for the first time. 249 new applications were received through the mail.

Open Requisitions:	December, 1949	January, 1950
Exempt	3	1
Nonexempt	94	86

Of the 94 open nonexempt requisitions at the beginning of the month, 35 were covered by interim commitments. Of the 86 open nonexempt requisitions at the end of the month, 53 were covered by interim commitments. In addition, 1 exempt requisition was being processed at the end of the month.

	December, 1949	January, 1950
Employees added to the roll	53	102
Employees removed from the roll	77	76
Net gain or loss	- 24	+ 26

Of the 76 employees removed from the rolls during January, 22 were terminated due to lack of work, 10 of which were in the bargaining unit.

Turnover:	December, 1949		January, 1950	
	Male	Female	Male	Female
Including employees laid off for lack of work	.9 %	1.62%	.87%	1.67%
Excluding employees laid off for lack of work	.33%	1.48%	.57%	1.4 %

	December, 1949	January, 1950
Including employees laid off for lack of work	1.04%	1.02%
Excluding employees laid off for lack of work	.55%	.73%

1195283

6

Employee and Community Relations Division

At the end of January, there were 747 employees in lack of work status divided into the following categories:

Nonbargaining unit employees	507
Bargaining unit employees	240

The increase here over last month's report is due to a correction in the records and not due to an increase in the number of lay offs.

During the month of January, 10 new requests for inter-Divisional transfers were received and reviewed by the Employment Office. In addition, 21 employees who had filed requests for transfers were interviewed during the month. As a result of these requests and interviews, 8 transfers were effected. Two transfers were effected for employees who had received notice of termination due to lack of work.

During the past month, a standard form for recording the results of the interview of new applicants was designed by the Employment Office, and placed into effect. The purpose of this form is to standardize the recording of such factors as personal appearance, poise, self-confidence, personality, etc., on each applicant, as the result of the interview.

The program initiated during November to transfer all inactive personnel records to the Storage Center has been completed. In completing this program, approximately 6,840 personnel files were transferred to the Storage Center.

49 letters were written during January to former employees in lack of work status, informing them of the employment situation at the present time in order that they might have an indication concerning the possibility of their being recalled to work.

Advertising for stenographers and typists in the newspapers of Pasco and Yakima, Washington, and Lewiston, Idaho, during the latter part of December and the first part of January, failed to produce any applicants. Accordingly, in view of the increased demand for this type of personnel, recruitment trips were made to Spokane, Washington; Portland, Oregon; and Denver, Colorado; during the past month. The results of these trips were as follows:

	Spokane	Portland	Denver
Total applicants interviewed	31	24	34
Total number of stenographers interviewed	10	18	22
Total offers made	6	9	8

Inasmuch as the commitments made are still not sufficient to fill current requirements, plans were made during January to recruit stenographers in Los Angeles and San Francisco, California, early in February.

1195284

DECLASSIFIED

DECLASSIFIED

Employee and Community Relations Division

Through a number of contacts made with business colleges located principally in the Northwest, it has been determined that generally enrollments for stenographic training in the various schools contacted are very much below normal. In spite of this condition, letters have been addressed to 35 business college located in the Northwest setting forth our needs for stenographic help and requesting that any graduates interested in employment with this Company, contact the Employment Office here.

As the result of a rather urgent demand for 12 designers and draftsmen for the Mechanical and Power Divisions of the Design and Construction Divisions, advertisements were inserted in daily newspapers published in Seattle and Spokane, Washington, and Portland, Oregon. As a result of these advertisements, approximately 176 applicants have made inquiries. As a result of these inquiries, together with other recruitment efforts, it is anticipated that the requisitions for designers and draftsmen will be filled.

Employment Statistics:

Number of Employees on Rolls	12-31-1949	1-31-1950
Exempt	1,614	1,630
Nonexempt	5,791	5,801
TOTALS	7,405	7,431

ADDITIONS

	Exempt	Nonexempt	Total
New Hires	10	49	59
Re-engaged	1	29	30
Reactivations	-	10	10
Transfers (from other plants)	3	-	3
Actual Additions	14	88	102
Payroll Exchanges	14*	-	14
Gross Additions	28	88	116

TERMINATIONS

Actual Terminations	8	45	53
Removals from Roll	4	19	23
Payroll Exchanges	-	14**	14
Gross Terminations	12	78	90

* Transferred from Weekly Salary Roll
** Transferred to Monthly Salary Roll

1195285

DECLASSIFIED

Employee and Community Relations Division

Approximately 58% of all terminations were on a voluntary basis, and most of these were for the following reasons: (a) Personal reasons (b) Another job (c) Returning to school.

GENERAL

	December, 1949	January, 1950
Applicants interviewed	1,048	1,298
Photographs taken	135	177
Fingerprint impressions taken (in duplicate)	160	212
Procurement letters written	391	900

ABSENTEEISM STATISTICS
(Weekly Salary Roll)*

Male	1.82 %	2.41 %
Female	3.31	3.91
Total Plant Average	2.17	2.77

INVESTIGATION STATISTICS

Cases pending at beginning of month	835	523
Cases received during the month	181	165
Cases closed	195	107
Cases pending at month end	523	554
Cases found satisfactory for employment	116	100
Cases found unsatisfactory for employment	2	0
Cases closed before investigation completed	3	2
Special investigations conducted	1	2

* Statistics furnished by Weekly Payroll Division

Employee Services:

During the past month, comments were received from various supervisors on the proposed H.W. Instructions Letter, entitled "Procedure for Disciplinary Action". As a result of these comments and suggestions, certain revisions were made in this proposed Instructions Letter and the final draft was completed, and the forms to be used in connection with this letter have been submitted to the Printing Office. As soon as these forms are completed, the Instructions Letter will be issued.

During January, contact was made with the officials of the Red Cross, Cancer Fund, Community Chest, and the March of Dimes, with respect to their participating in a General Electric Employees' Services Fund. Each of these organizations agreed to participate in this fund in the event that the employees at this Works decided to adopt it. In addition, the general purpose of this fund was discussed with two members of the H.A.M.T.C. who were very much in favor of it, and agreed to

PRIVACY ACT MATERIAL REMOVED

present it to the Council members, at which time a committee would be appointed with which this matter might be discussed further.

Instructions Letter No. 111, entitled "Ratings - Exempt Employees", was revised and issued during January. During the past month, a sufficient supply of rating forms for exempt employees was distributed to all Divisions.

Assistance was rendered during the month of January to the Steering Committee of the proposed G.E. Supervisors' Association in preparing and distributing materials describing this organization to the various Hanford Works supervisors.

The following visits with absent employees were made during the month of January, by representatives of the Employee Services Group:

Kadlec Hospital	139
Employees at home	10
Salary checks delivered to employees confined at Kadlec Hospital	51

The following trips to areas were made by the Employee Services Group:

Posting of Union notices, tax assistance notices, G.E. educational assistance posters, and March of Dimes posters	4

The following employees retired during the month:

Julia R. Coats, Design and Construction Division, (Optional);
Pearle G. Shelley, Power Division; and
Otto C. Pape, Community Division, (Optional).

One employee death occurred during the month of January:

, Power Division.

Assistance was rendered to members of the family of the deceased with respect to all Employee Benefit Plans and Social Security information which was furnished to the surviving widow.

During January, 6 employees in lack of work status requested that their separation be changed to resignation, in order that their pension contributions might be refunded.

During January, 4 publications of Employee Benefit Plans information were prepared and released to the Works News.

DECLASSIFIED

PRIVACY ACT MATERIAL REMOVED

PRIVACY ACT MATERIAL REMOVED

DECLASSIFIED

Employee and Community Relations Division

During January, 2 notices of change in draft classifications were received. A deferment was requested for one employee who has technical training. This deferment has been received.

A total of 10 certificates for Company appliances were issued by the Employee Services Group during January.

Suggestion System

At the end of January the volume of work in the Office of the Secretary of the Suggestions System was as follows:

	12-1949	1-1950	Total since 7-15-1947
Suggestions Received	156	131	4,399
Investigation Reports Completed	141	72	3,903
Awards granted by Suggestions Committee	6	20	521
Cash Awards	$ 85	$ 405	$ 7,065
Estimated Savings Resulting from Suggestions	771	5030	

The Works News issues of January 6 and January 20 carried news stories of several awards made during January.

To date, after a number of contacts, no word has been received from the A.E.C. on the $ 1,000 award mentioned in last month's report. Further follow up is being conducted on this matter in an effort to expedite the approval.

Insurance and Compensation

Public Liability

. As indicated in the December report, the death of this employee's wife, a dental assistant at the Kadlec Hospital, which occurred during a tonsillectomy operation, was referred to the Travelers Insurance Company due to the possibility of negligence being involved. As a result of the investigation conducted by this insurance company, a Travelers representative met with the claimant in this case on January 17, at which time an offer was made to the claimant for $ 25,000 in full settlement of this claim. A letter was received from the Travelers Insurance Company requesting the and A.E.C. approval. This letter was forwarded to the A.E.C. on January 24. Subsequent to this date, the Travelers Insurance Company informed the that the claimant had refused the offer, and had submitted a counter offer of $ 65,000. They further advised that they had informed the claimant that this counter offer was excessive, and that the original offer of settlement could not be changed. The Travelers Insurance Company further advised that as a result of this discussion with the claimant, he had engaged the services of the law firm of Senseny and Davis of Prosser, Washington, and that further negotiations were being conducted with that firm.

1195288

PRIVACY ACT MATERIAL REMOVED

PRIVACY ACT MATERIAL REMOVED

Employee and Community Relations Division

. The claimant was involved in an automobile accident on November 29, 1949, with a truck owned and operated by the It has been alleged that the operator of the Company truck was negligent, and as a result, this claim has been referred to the Travelers Insurance Company for handling.

Bus Accident, Claim No. B-6194396. On January 9, 1950, one of the Transportation busses operated by the Company, had stopped to unload passengers in a parking lot just outside the 200-West area on Project property. Another bus approached from the rear and being unable to stop, collided with the bus unloading passengers. Several employees received minor injuries and one employee was hospitalized for a back injury and shock. The question as to whether or not this was a compensable accident was referred to the Department of Labor and Industries, and they have indicated that since all passengers were required to pay a fare, and the accident occurred outside the working area, that any claims from a compensation standpoint would be denied. Accordingly, in view of this information, this case has been referred to the Travelers Insurance Company, and an investigation is presently under way by that company.

Compensation

. On September 8, 1948, while an employee of the a sub-sub-contractor of the , the above named claimant was struck on the head by a large board. On September 13, 1948, convulsions occurred requiring a brain specialist. Accordingly, the claimant was flown to Seattle where he died shortly after arrival. Pathological finds indicated that death resulted from a blow on the head. Based on these findings, the State Department of Labor and Industries, on February 28, 1949, issued an order stating that the claimant had received a fatal injury within the contemplation of the compensation act. Shortly thereafter, the State Department of Labor and Industries placed the parents on a pension as dependents of the deceased, and established a pension reserve of $ 14,825.50. The appealed this order establishing this pension reserve on the grounds that the investigation did not prove dependency, and further if dependency could be shown, the amount of the pension was incorrectly computed. At a hearing held on January 17, 1950, the claimant's parents testified that the deceased had contributed approximately $ 50.00 a month to their income. They also testified that they owned and operated their own farm which was unencumbered. It was the contention of the Company that in view of this testimony, that no dependency existed. No order has been issued on this appeal, however, in the event the Board sustains the Company's contention, the full amount of the reserve fund established will be returned.

. As the result of the death on November 12, 1947, of the Department of Labor and Industries entered an order establishing a pension for the claimant, , wife of the deceased. The Company appealed the order establishing this pension on

1195289

DECLASSIFIED

12

PRIVACY ACT MATERIAL REMOVED

DECLASSIFIED

the basis that there was no relationship between the employee's death and his occupation since the cause of death was not definitely established. At a hearing conducted on January 20, 1950, Dr. Von Phul, a cardiologist, testified substantially to this effect. Further testimony will be submitted by Dr. Eckles and Dr. Sachs, of the Kadlec Hospital staff, and in view of a recent opinion rendered by the Washington State Supreme Court on a case similar to this one, it is anticipated that favorable action will be taken as to the appeal. In the event this appeal is allowed, the pension reserve fund of $ 19,765.55 will be returned.

Life Insurance

Code information for use by companies in issuing insurance to employees at this Works, was furnished to 33 insurance and investigation agencies during the month of January.

	12-1949	1-1950	Total since 9-1-1946
Claims reported to the Department of Labor and Industries	22	20	3,211
Claims reported to Travelers Insurance Company	8	9*	398

* Of the above claims reported during January to the Travelers Insurance Company, 8 were property damage claims and one was bodily injury claim.

Training and Program Development:

During the week of January 16-20, the 40-Hour Supervisors Training Program was presented to 34 supervisors.

As a result of requests by two groups the economic program, which included the film, "This Is Our Problem", together with a brief explanation of our economic system was presented to a group of 21 at the Hanford High School and a group of 45 at the 1131 Garage. This program was presented to these groups who did not have an opportunity to participate during the December schedule.

During the weeks of January 23 and January 30, a program was presented to supervisors on the exempt rating system. A total of 32 meetings were held with 511 exempt employees participating in these meetings. The purpose of these meetings was to explain the philosophy on which our exempt rating system is based, as well as to review the Revised Instructions Letter No. 111, together with the actual rating forms.

1195290

Employee and Community Relations Division

Under date of January 13, a report on the progress made by the Training and Program Development Group during 1949, together with a Prospectus as to some of the programs to be presented during 1950, was distributed to all Managers, Superintendents, and Division Heads by the Training and Program Development Group.

During January, a total of 27 handbooks were issued personally to supervisors in various Divisions. During the past month, 8 handbooks were returned due to termination or transfers of employees from this Project. At the present time, there are 5 additions and 6 revisions to the handbook in the Printing Shop, and it is anticipated that they will be distributed during February. No mailings were made during January due to failure of the Printing Shop to receive multolith plates due to the manufacturer's strike.

During the month of January a total of 61 new employees were given orientation. Of this number 63% elected to participate in the Group Life Insurance Plan and 89% elected to participate in the G.E. Group Health Insurance Plan. In addition to the above, 31 re-engaged employees were given orientation, of which 70% elected to participate in the Group Life Insurance Plan and 90% elected to participate in the G.E. Group Health Insurance Plan.

During January several conferences were held with the Accountability Group for the purpose of preparing a program to be presented to employees in the various Divisions who are responsible for fissionable material.

During the week of January 9, a representative of the Training and Program Development Group attended a four-day meeting with the Borg-Warner Company people in Chicago, at which time the Borg-Warner plan for presenting economics to their employees was gone over in detail.

DECLASSIFIED

1195291

DECLASSIFIED

Employee and Community Relations Division

Union Relations and Wage Rates

Union Relations:

On January 30, 1950, our division name was changed from Labor Relations & Wage Rates to Union Relations & Wage Rates, with C. C. Tallman appointed Manager and J. N. Dupuy, Assistant Manager. The duties of this division will now include all Nucleonics Department Union Relations matters.

A representative of this division attended a meeting of the Labor Relations Committee in Schenectady, and met with Company Union Relations officials in New York City, and AEC officials in Washington, D.C.

After various meetings between Company and Union representatives, it was decided that there were no questions to be resolved by a formal hearing with regard to the unit appropriate for collective bargaining purposes in the matter of the Hanford Industrial Firemen's Petition. The Union agreed to exclude Village Firemen and to amend their petition so as to permit the firemen to affiliate with the HAMTC or no union. Accordingly, the Company consented to an election. A Stipulation for Certification upon Consent Election was executed by the Company, the HAMTC and the NLRB, and a meeting arranged for February to make plans for the election.

Preparations were made for the hearing in the case of the Technical Engineers and Architects Assn. scheduled for February 8, 1950.

Several meetings were held with a committee appointed by the HAMTC for the purpose of discussing the upgrading of certain metal workers in June, 1949. The Company's position remained unchanged in regard to this matter.

A careful review of all articles of the HAMTC - GE Agreement is being made for the purpose of developing the Company's position in the event the Agreement is re-opened for negotiations.

Grievance Statistics:

Twenty-four grievance reports were received for the month, bringing the total received since the grievance procedure was established to 201:

Accounting	1
Health Instrument	1
Manufacturing Electrical	5
Manufacturing Instrument	3
Manufacturing Maintenance	5
Manufacturing Power	2

1195292

Employee and Community Relations Division

Manufacturing "S"	1
Manufacturing Transportation	1
Village Fire Protection	1
Village Maintenance	2
Village Power	2
TOTAL	24

Employee grievance reports were regarding the following subjects:

Jurisdictional	4
Health, Safety	8
Overtime Rates	1
Holidays	1
Sick Leave & Days Off	3
Vacations	2
Seniority	3
Wage Rates	2
TOTAL	24

The status of all grievances received to date is as follows:

Settled satisfactorily, Step I	60
Not settled satisfactorily, Step I	141

Of the 141 grievances not settled at the Step I level, 65 have been satisfactorily processed at the Step II level and were settled. Only 6% of the total grievances received to date have been submitted by employees outside the bargaining unit. Forty-seven per cent of all grievances were submitted by employees in only 5% of the divisions.

Meetings:

The Council Grievance Committee and the Company Negotiating Committee met twice during the month for the purpose of processing grievances at the Step II level. All supervisors were informed regarding the disposition of the grievances discussed at these meetings.

Wage Rates:

Personal contacts were made with many Northwest industries by a representative of the Wage Rate Division as the work continued on the annual community rate survey.

Additional meetings and discussions were held with interested project supervisors relative to the proposed rate and progression schedules for Draftsmen and Designers at the Hanford Works.

DECLASSIFIED

1195293

DECLASSIFIED

Individual jobs were studied and classifications and rates determined.

A study was completed to obtain information on the availability of work for trainees in the automotive repair section in the Transportation Division.

Reimbursement Authorization No. 83 was received giving approval to a requested change in Reimbursement Authorization No. 45 concerning the regular working hours of Auxiliary Firemen. It was requested that the regular working hours of a shift be spelled out to definitely indicate a 40 hour work limit. Approval was given December 16, 1949, to be effective September 12, 1949.

On January 4, 1950 a Request for Reimbursement Authorization was submitted for approval of the following new job classifications to be included in the unit group.

Locksmith - Journeyman	Grade 21
Locksmith - Trainee	Grade 17
Locksmith - Helper	Grade 11

Reimbursement Authorization No. 86 was received January 20, granting approval of this request, to be effective January 1, 1950.

Statistics

Transfers Monthly to Weekly	0
Transfers Approved	75
Job Reclassifications Approved	142
Automatic Increases	298
Merit Increases	8

1195294

Employee and Community Relations Divisions

Community Relations

"Public Information" - Community

During the month of January, 58 releases of information were made by the News Bureau. Of this number, 31 were sent to the "Local List", 9 to the "Daily List" and the others to individual media, generally in response to requests.

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 CHRONICLE, Hanford Works NEWS, Walla Walla UNION-BULLETIN, Pasco NEWS, Yakima MORNING HERALD, Lind LEADER, radio stations KPKW, KWIE, and KIT, 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 releases was sent from this office is indicated below).

1/4 Three coming power outages were announced.

1/5 Four organizational appointments in Technical Divisions, including the naming of an Administrative Assistant to the Technical Services Division Head, were announced.

1/9 Photographs of two Richland children who are recovering from polio after receiving treatment at Kadlec Hospital were released to local newspapers.

1/9 A resume' of Richland's experience with polio in 1949 was prepared by Special Programs and released to the local list. Each case was reviewed and treatment that had been given was explained.

1/10 Biographical information about the vice president in charge of Employee and Community Relations was prepared and given to local press representatives at a press conference held for Mr. Boulware during the visit here.

1/10 Complaints from residents of damage caused by B-B guns in the hands of children were pointed out and parents were urged to caution children to use the guns carefully.

1/11 It was announced that Curtis Middlebrook, a private consulting firm from Seattle, is conducting a housing survey in the vicinity of Richland for the purpose of forecasting the housing that will be available for the next five years.

1/11 Two power outages scheduled for the coming week were announced.

1/12 The Community Patrol Chief stated in an informative release that automobiles with 1949 license plates would be stopped, effective immediately, and arrest citations issued.

1/13 Residents were warned to be especially watchful for fire hazards because deep snow hampered operations of the Fire Department.

1195295

DECLASSIFIED

DECLASSIFIED

Employee and Community Relations Divisions

1/13 An analysis of the traffic accidents in Richland during 1949 was given and a favorable comparison with the record for 1948 was drawn in a local release.

1/16 The Community Safety Supervisor quoted a list of safe driving rules for winter driving for local release.

1/17 The election of the Yakima Valley Peace Officer's Association was reported. Members of Richland Patrol were elected to two offices.

1/17 It was announced that the Internal Revenue Department will assist Richlanders by giving free help with income tax returns here at Richland during a two week period.

1/18 Residents were requested to cooperate with garbage collectors so that they could keep on schedule in spite of deep snow.

1/19 Mortality, birth, contagious disease, and other health rates experienced in Richland in 1949 were divulged by the Manager of the Hanford Works Medical Divisions.

1/19 Three power outages scheduled for Richland during the coming week were revealed.

1/19 Postponement of the beginning of the G.E. Education Program spring semester was announced.

1/19 A photo of a food store being built at Duportail and Wright was released with a cut line.

1/23 Parents and children were urged by Community Patrol to follow certain safety rules for the protection of bicycle riders.

1/23 A photo of first repainted bus was revealed. All Community buses are to be repainted.

1/24 A coming power outage was announced.

1/24 Two explosions in furnaces in Richland homes were explained to probably have been caused because the tenant permitted his oil tank to become empty. It was stated that damage caused by explosions in oil furnaces because of insufficient oil is not the responsibility of the project.

1/24 It was pointed out that applications for loans and scholarships available to employees and children of employees of G.E. are now being accepted for the school year 1950-1951.

1/24 Photos of participants in a weight lifting class sponsored by Community Activities Division was released.

1/25 A statement by the Community Manager was released. He stated that help to persons in nearby communities is and always has been available at Richland in time of emergency.

1195296

Employee and Community Relations Divisions

1/25 A new garbage, trash and refuse disposal pit will be located between the Columbia River and George Washington Way just north of the sewage disposal plant, according to this local release. The reasons for abandoning the old site and choosing this particular location for a new one were explained in detail.

1/26 It was announced that a State Patrol clerk would be on duty at Community Patrol headquarters for several successive Mondays to renew driver's licenses and give driving tests.

1/30 Photos of trucks and automobiles being pulled from flooded Yakima near Enterprise by G.E. personnel and equipment were released.

1/31 Assistant General Manager of the Nucleonics Department R. S. Neblett has neen assigned additional responsibility as Business and Construction Manager of the Knolls Atomic Power Laboratories according to this local release.

VILLAGER Only

1/3 The announcement of the beginning of construction on Richland's new theater was re-written and different detail was added at the request of the VILLAGER, so that the story in the weekly would not appear "dated".

1/11 An accident between two project buses in 200-West area was reported.

1/12 Information concerning the number of houses in Richland, the population of the town, the population of North Richland, the number living in dorms in Richland and the number of G.E., A.E.C. and facility employees was given to the VILLAGER for use in a letter to national advertisers.

1/17 In answer to a question, it was explained that special buses are not run between the two business districts because adequate bus service is provided by the present system.

1/30 In answer to a request, an account of the rescue of a stranded family from flood waters upstream from Enterprise was released.

1/30 A story about the progress of the sale of tract houses was given to the VILLAGER at its request. The number sold, how they were moved, the sales prices, and the type of firms and persons buying was revealed. A photograph of a typical tract house on skids ready to be moved was taken and given to the VILLAGER.

1/30 Considerable detail about problems caused by intensely cold weather in Richland homes was obtained from the Housing Division Superintendent and given to the VILLAGER at their request.

TRI-CITY HERALD Only

1/3 At the request of the HERAID a release was written naming the number of freeze-ups in Richland homes over the previous week end. It was

1195297

DECLASSIFIED 245

DECLASSIFIED

pointed out that residents had better service in answer to calls than plumbers in other towns were able to give.

1/3 In response to an inquiry, the position of the Company was stated regarding telephone toll charges between the tri-cities.

1/4 The question was answered: When will telephone pole in middle of driveway in front of Hanson Building be removed?

1/9 A copy of a story from the New York TIMES quoting Mr. Boulware in regard to the Company's economics education program was prepared and released to the HERALD.

1/19 A shortage of power in Pasco and Kennewick brought on the following questions which were answered by the News Bureau: Is Richland having a power shortage? Does Richland and Hanford Works have a priority over power coming into this area?

1/26 Answers regarding the assignment of the old Tri-City HERALD building to Public Works sub-contractors after it had been requested for office space by a union representative were answered in an exclusive release. The inability of the same union representative to obtain housing was explained in the same story by explaining G.E.'s housing policy.

Walla Walla UNION-BULLETIN Only

1/27 The details of the rescue by G.E. employees of the family stranded by high water in the Yakima above Enterprise was explained.

Spokane CHRONICLE Only

1/5 The use expected to be made of North Richland Hospital during the coming construction program was explained in answer to a question.

Other Special Requests

A request was received by telephone from Associated Press in Seattle for photographs and all available information on housing in Richland. It was explained that A.P. in Washington, D.C. had requested all possible information on government housing in the Northwest. A considerable amount of information was accumulated and telephoned to the Seattle A.P. representatives. Eight photographs of typical Richland housing units were taken and were sent with cut lines via air mail to A.P. in Seattle.

1/9 A round-up of important happenings at Hanford Works during 1949 was prepared and sent to the Seattle JOURNAL OF COMMERCE at their request. An air view of Richland was sent with the release.

1/31 Data about Richland's business district were brought up-to-date at the request of a free lance writer who visited here in November. Last month he was placing stories written when he was here and he wanted accurate figures for population, number of businesses, etc.

1195298

21

Employee and Community Relations Divisions

"Public Information"--General

Informative newspaper releases were sent to 72 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:

1/3 The first 25 lots of scrap material stored in the Army General Depot at Pasco will be sold January 9, according to a statement by the Company's Scrap Disposal Section.

1/5 The beginning of construction of a 1200 seat theater in the uptown business district was announced.

1/5 Notice of the appointment of an Assistant Community Manager and a new Community Accountant was released to the general list of media. Photos of the Assistant Community Manager were sent to 12 papers in the Northwest and to Schenectady when he was formerly employed.

1/6 Commercial expansion in Richland during 1949 was explained in detail in an informative release.

1/18 An apparent low bid of $21,590.00 was announced after the opening of bids on the contract to put new siding on the Hanford Works Administration Building.

1/20 An informative release explained that there were over 5,600 jobless construction workers in the tri-city area. Other workers were urged not to come to this area until hiring picked up.

1/20 The remarkable safety record chalked up at Hanford Works in 1949 was reviewed and compared with previous safety achievements.

1/23 Announcement that doctors and dentists in Richland will enter private practice this year was made by the Manager of the Medical Divisions.

1/26 Richland's 1949 fire record--average cost per inhabitant, 33 cents; the nation's average per person $4.47-- was reviewed in a release sent to the general list.

Press Conferences

During vice president Boulware's visit to Hanford Works, a press conference was arranged for representatives of the Richland VILLAGER, the Spokane CHRONICLE, Walla Walla UNION-BULLETIN and the Tri-City HERALD. Mr. Boulware explained the Company's community relations program and answered questions. The Nucleonics Department General Manager, the Division Head, Community and Public Relations and the News Bureau Supervisor attended the conference.

The announcement that Richland doctors and dentists will go on their own was made by the Manager of the Medical Divisions at a press conference

DECLASSIFIED

at Kadlec Hospital. The press representatives mentioned above attended. A prepared statement by the Medical Divisions Manager was distributed as well as a news release. The newspaper people read the statement and then asked questions of hospital officials in attendance.

Films

During January, four G.E. films were obtained from the Advertising and Publicity Office in Portland, Ore., for showing to groups in Richland.

Other Activities

"A Guide to Richland", a publication prepared by Community Activities Division that lists all organizations in town, their officers, meeting times and places and the purpose of each organization, was sent to all local media with a letter explaining that the booklet contained information helpful to any news gathering agency.

A display featuring maps of Richland's business districts and shopping areas and photographs of parts of those areas was placed in the display case in front of the Municipal Building. A legend identifies buildings under construction and the sites of buildings that will be built. This information will be changed regularly so that the information will be accurate and can give an observer at any time an idea of accomplished and projected commercial expansion.

A representative of the Seattle TIMES was in Richland during January gathering information for a series of articles. The News Bureau arranged for an interview between the gentleman and a representative of Health Instrument Division. The usual procedure of accompanying the visitor on the interview was followed. Arrangements were also made, at the request of the TIMES reporter, for an interview with a typical worker from the areas. A two-hour interview took place with a Chief Operator in the Power Division. The Operator gave the reporter a view of this operation through the eyes of a man who has been here since 1944.

Letters were sent to all media representatives on all mailing lists giving them the correct telephone numbers and addresses of the News Bureau Supervisor and the Division Head, Community and Public Relations. Home telephone numbers and addresses were also included and it was pointed out that inquiries about happenings here are welcomed at all times.

Copies of the long feature story on Richland churches that was sent to the Yakima MORNING HERALD last month were sent, with photos to five church papers and magazines with national circulations. An accompanying letter stated that they were welcome to use the material and that additional information was available upon request.

A report of the accomplishments of the News Bureau during 1949 and its objectives for 1950 was prepared during January. Job descriptions for each of the four News Bureau employees were also written up during the month.

Employee and Community Relations Divisions

"Employee Information"--Special Programs

Considerable time was spent by Special Programs in assisting Employee Services in the formulation of a proposed G.E. Employees Services Fund for Hanford Works employees. Special Programs assisted in the writing of a proposed set of by-laws and a constitution for the organization, and prepared an outline of various Fund considerations for use in explaining the need for and advantages of the Fund to bargaining unit officials. A letter from Employee and Community Relations Divisions Manager was sent to all Supervisors informing them of plans for presenting the Fund to employees; and samples of promotional materials were obtained from other G.E. plants at which similar funds are in effect. These samples were of assistance in preparing a promotion plan for presenting the Fund to Hanford Works employees.

In line with Special Programs responsibility for assisting the Medical Divisions in the community relations activities, the fact that Richland doctors and dentists will enter private practice this year was afforded publicity through a press conference of local newspaper representatives with the Medical Divisions Manager. A news story and a written statement concerning the forthcoming change-over to private practice were prepared by Special Programs and released to newspapers through the News Bureau.

The Medical Divisions' annual report, which revealed that the death rate per 1,000 population in Richland is about that one-fourth that of the state and nation as a whole, was prepared as a news story by Special Programs and released to the local press through the News Bureau. Throughout the report and the news release, it was pointed out that the health of the community is far above that found elsewhere in the state or nation. The health record of Richland for 1949 which was revealed in the report reflected, of course, the excellent medical care afforded residents through the Medical Divisions and Kadlec Hospital.

A statement by the Medical Divisions' manager concerning the close cooperation between the National Infantile Paralysis Foundation and the Medical Divisions was prepared by Special Programs and released by the News Bureau. Within the release, the complete care which is afforded Richland polio victims and the modern equipment and techniques utilized at Kadlec hospital were pointed out. Pictures showing the hospital physiotherapist treating a polio case were prepared through Special Programs and released to the local press through the News Bureau.

A letter from the Nucleonics Department General Manager commending all Hanford Works employees for the remarkable Hanford Works safety performance during 1949 was prepared through Special Programs and arrangements for distribution were made during January.

Special Programs activities in connection with the Status Report meeting of Supervisors on January 25 included: preparation and production of the printed program; writing and production of a letter from Vice President to supervisors, copies of which were inserted in the programs; obtaining stage properties; stage force assistance; and editorial assistance with portions of script. The letter to supervisors summarized Nucleonics Department accomplishments during the Wilson 50th Anniversary Program.

1195301

DECLASSIFIED

DECLASSIFIED

Employee and Community Relations Divisions

Photographs depicting some of the major Nucleonics Department activities and accomplishments during the Wilson 50th Anniversary Program were prepared through Special Programs with suitable photo identifications, and mailed to W.D. Haylon of the New York Office for inclusion in a book describing Company activities during the 50th Anniversary Program. The book will be presented to Mr. Wilson.

Designing of a new printed cover for Health Instrument Divisions reports was accomplished through Special Programs during January. Close liaison with the Health Instrument Divisions was maintained to assure a suitable cover design, and special type was purchased to carry out the design. In designing the cover, the Community Relations Division commercial artist revised the H.I. crest for use as part of the cover design.

Community safety publicity handled by Special Programs during January included preparation of a news release giving rules for safe driving on snow and ice, and a news story which emphasized the need for extra driving caution due to the increased number of children riding bicycles in Richland. Both news stories were released to local press through the News Bureau.

A member of Special Programs staff attended the January meeting of the plant Health Activities Committee. He will assist in publicizing the health topics of the month. Works NEWS publicity on the January health topic included a series of pictures of a health meeting in which the various steps which can be taken to prevent colds were acted out by the various members of a group.

Special Programs assisted in publicizing the newly painted Village Bus System buses, and the weight lifting class sponsored by the Community Activities Division through news photographs which were released to local press through the News Bureau.

A list of technical periodicals and papers published by other departments of the Company and by affiliated companies were expanded during January. Additional samples of such materials, which can be made available to Hanford Works people were received in response to previous requests. A memorandum concerning the current status of the mailing list also was prepared.

Production of "Guide to Richland", a booklet containing descriptions of each of Richland's community organizations and which lists representatives of each, was completed during January through Special Programs for Community Activities Division. Special Programs assistance included revising copy material from a community relations standpoint, arranging for design and drawing of the cover by the Community Relations Division commercial artist, and assisting in the production of the booklet.

Classified personnel recruiting advertisements were prepared and placed by Special Programs in the following newspapers on the dates indicated.

Typists and Stenographers--
Spokane CHRONICLE, and SPOKESMAN-REVIEW -- Jan. 10, 11, 12, 13

1195302

25

Employee and Community Relations Divisions

Draftsmen and Design Draftsmen--
Portland OREGONIAN, and OREGON JOURNAL -- Jan. 15, 16, 17, 18
Seattle TIMES, and POST-INTELLIGENCER -- Jan. 15, 16, 17, 18
Spokane CHRONICLE -- Jan. 16, 17, 18
Spokane SPOKESMAN-REVIEW -- Jan. 15, 16, 17

Stenographers:

Denver POST, and ROCKLY MOUNTAIN NEWS -- Jan. 22, 25, 26, 27
Portland OREGONIAN -- Jan. 24, 25, 26, 27
Portland JOURNAL -- Jan. 23, 24, 25, 26

Special Programs is also responsible for obtaining the necessary vouchers and advertising tear sheets to effect payment for recruiting advertising.

"Employee Information" - WORKS NEWS

During the month of January 7900 copies of the WORKS NEWS were published each week.

In the issue of January 6 announcement was made that the G.E. Supply Corporation had granted a franchise to the Davis Furniture Company for sale of General Electric appliances under the G.E. Employee Sales Plan. Included was a complete review of the sales plan procedure with all the recent changes since it was introduced at Hanford Works. Complete publicity was given to the current Maintenance Division Safety Derby. This issue marked the third appearance of the "Can You Tell Me?" column which was inserted in the first week of January because of space limitations of the preceding week of a 4-page paper. Announcement of the spring training of the G.E. Education Program was given through a full-page announcement of classes being offered, an editorial cartoon, and the inclusion of a registration form of the classes offered Hanford Works people. This registration form was included in each of the succeeding issues of the paper for the month of January. A full-page spread of pictures was given to the festivities of plant employees during the holiday season. Coverage was afforded the Womens' Amateur Basketball Associations fourth annual Jamboree with a story and picture spread. "Candid Camera" was included in this issue.

A lead story was run in the January 13 issue quoting the General Manager's commendations of the excellent safety record accomplishments in 1949 by Hanford Works people. Second lead story was given to an announcement of the first quarter winner of the Maintenance Safety Derby. Publicity was given to the March of Dimes Drive through an editorial cartoon. Complete schedule of classes offered to the Adult Evening School was included together with information of registration. A feature story built around a syndicated mat from New York on the life and achievements of Lucile Lomen, Hanford Works woman attorney, was enclosed on the Women's page together with a reproduction of the mat.

The opening of the March of Dimes Campaign was published in the issue of January 20 with a lead story and picture. It also offorded publicity to the availability of loans and scholarships to G.E. employees and their

26 1195303

DECLASSIFIED

DECLASSIFIED

children through the G.E. Education Committee. Additional publicity was also given on spring classes of the G.E. Education program at Hanford Works and was supported by an editorial stressing the importante of adult education. Realities column in this issue included complete specification for the building of garages in Richland. In accordance with arrangements made with the Safety Division the first of a series of articles by safety engineers of each area on needs for safety improvement within the plant was included in this issue.

Announcement that doctors and dentists will enter private practice this year was included in the January 27 issue. As a convenience to Hanford Works car owners the provisions of the new Washington State Financial Responsibility Law were included. At the request of the HAMTC representatives complete publicity was given to action being taken by the Company to maintain a comfortable temperature within area buses during the cold weather. This included a statement by a representative of the Transportation Division who discussed in detail all steps that were being taken to improve the heating system within the buses. The story resulted from grievances being discussed between the Company and HAMTC at the Step II level. The "Can You Tell Me?" column appeared in this issue with a definite statement on G.E.'s overall policy with regard to all questions including the certified bargaining unit at Hanford Works. In the interest of good citizenship the WORKS NEWS printed a box message urging Hanford Works voters to participate in the local election on February 4. Enclosed in this issue was the monthly telephone directory supplement.

Due to a change of printers by the publisher considerable time and effort was spent during the month training the new printer with respect to G.E. style and make-up.

'Employee Information" -- Women's Features

Three women's pages appeared in the four issues of the WORKS NEWS during the month of January.

G.E.'s woman lawyer in Richland was the subject of the women's page feature appearing on January 13. Basis for the article, called "This G-E Career Woman Chooses Law", was an advertisement which appeared in the "Scholastic" magazine throughout the country. Called "Atomic Town Attorney", the ad and the story pointed out that there are opportunities with General Electric for young people seeking careers.

"G-E Women Step-Off Miles in Daily Mail Runs", women's page feature for January 20, described work done by special messengers who travel throughout the plant daily. Pictures of three special messengers were included with the feature.

Six free knitting patterns were offered in a feature called "Hand Knits are a Family Affair". An article on the subject of knitting gave a few tips on equipment needed and where instructions and help may be obtained in Richland on knitting projects. One hundred twenty-five patterns for men, women and children's sweaters were sent to readers at their request as the result of this feature.

Employee and Community Relations Divisions

A General Electric Consumer's Institute mat on how to make a salad was the second feature on this page of January 27.

A recreation feature was prepared in cooperation with the Women's Amateur Basketball Association for the January 6 issue of the WORKS NEWS and appeared on the sports page of that issue. The article promoted a Basketball Jamboree held January 7 as an opener to the season's play. Two photographs were included with the article.

Arrangements were made with the Community Fire Marshal to contribute material to be used as a basis for an occasional feature on home safety features. The first of these features will appear in the February 10 issue of the WORKS NEWS on the Women's Page.

Every week a feature appears in the WORKS NEWS as a service to persons seeking rides or riders to nearby week end or vacation spots. During the month of January 130 requests were received for the following destinations: Spokane, Portland, Seattle, Walla Walla, Yakima, Hood River, Los Angeles, Omaha, Pocatello and Moscow. A drop in requests for Share a Rider service is attributed to general bad weather conditions and a slack season for vacationers.

Community Divisions Public Information

A Community Relations Program for the Community Divisions was outlined in January, for the purpose of setting a flexible pattern to be followed in carrying-out the community relations activities of that Division, and the further intention of acquainting the community manager and his staff with the functions of the newly-formed section, Community Divisions Public Information. This program has been approved by the Division Head, Community and Public Relations Division, and will be presented to the community manager for his comments, suggestions, and approval.

The G.E. Educational Assistance Program was discussed last month with the Student Counselors of Columbia High School. The accomplishments of this meeting have been reported in written form to the Division Head, Community and Public Relations Division, and, in turn, will be forwarded to all interested parties in the plant and Company.

During January, the annual statements from the Community and Public Relations Division, the Employee Relations Division, and the Labor Relations and Wage Rates Division were compiled into one Employee and Community Relations report, for forwarding to all interested parties within the plant and Company.

A feature article intended to explain the relationship between the Company, the Atomic Energy Commission, and local schools, was written last month for publication in the Richland VILLAGER.

A list of books and periodicals concerned with community and public relations work was compiled in January, and will serve as a guide in choosing those publications which it is believed should become a permanent part of the Division library.

29 1195305 DECLASSIFIED

DECLASSIFIED

Employee and Community Relations Divisions

Public Functions and Services

A complete auditorium program was prepared by Public Functions to augment the General Manager's Status Report to Supervisors on Wednesday evening, January 25. The objective was to launch the Source and Fissionable Materials Accountability Program which was initiated by the General Manager and Assistant General Manager. The feature presentation was a reconstruction of the Joint Congressional Committee Hearings on Atomic Energy Project held in the Caucus Room, Senate Building, Washington, D.C. in June, 1949. Script was prepared following a review and condensation made from the printed report. Following this a cost and reproduction staff composed of Hanford Works Supervisory-Management personnel was selected and staging planned which included procurement and erection of a public address system, spotlights, stage properties and equipment. Eight rehearsals were scheduled and conducted prior to the presentation. A supplementary skit and film slide showing of various daily newspaper headlines of 1949 were also presented to complete the stage production. Numerous favorable comments received following the program indicated achievement of objectives and a desire for further programs of similar nature. Appreciation letters were recommended and prepared for distribution to the cast and production staff from the Division Manager. A recording was made of the excellent report made by the General Manager, transcript made and submitted to him for review following which stencils were prepared and mimeographed for record purposes.

A text and other necessary details for a recorded presentation on the Source and Fissionable Materials Accountability Program by the Assistant General Manager for use of the Training and Program Development Staff in Supervisors' meetings is being developed by this group.

Preliminary surveys and tests are being conducted of slide film projection equipment, public address systems, tape recording equipment and other apparatus required for speaker forums, employee relations programs, supervisors' meetings, "Family Nights", radio and auditorium programs being developed for future efficiency stimulation presentations.

Present efforts are being directed in collaborating with our Security Division in the preparation of a color slide film presentation depicting the daily activities of a Hanford Works secretary involving "right and wrong" methods of disseminating classified information. This venture, incidentally, is serving the purpose of determining the possibility of producing slide films on programs being planned as stated above as well as those on orientation proceedings, policies, plans and procedures.

During January, the Hanford Works Photo House devoted twenty-four consecutive hours to the Instrument Division on a special assignment involving the application of complex methods of photography under unusual conditions to obtain photographs of process instrumentation. Additional time will be required for the project each month and will necessitate the use of motion picture and still camera work in color film. The Safety Division transferred several items of motion picture equipment, formerly assigned to them, to this section in order that a wider range of serivces requiring this type of apparatus can be utilized by experienced

personnel on a plant-wide scale. This is further substantiation of the widened scope of activities and services of this section which is also reflected by the increase in number of negatives and prints in the statement of finished work. Several Divisions have expressed their appreciation for the helpful attention rendered and the excellent quality of work. In availing themselves of these services many Divisions have required additional efforts on our part to effect graphic recordings of experiments, tests and procedures in process developments.

An additional room for drying, copying and storage of equipment was acquired for the Photo House on a temporary basis from Employee Relations Division who have stipulated it shall be relinquished immediately upon notice should they require it for interviewing additional personnel. Request for this room, however, was predicated mainly on the Safety factors involved in a needed escape feature for development room operation.

The Transportation Division requisitioned 190 special safety citation certificates on which were affixed the regular size badge photographs of their bus and truck driver personnel and these were laminated for protective purposes.

The commercial art services rendered during the month included the regular quota of photograph layouts, editorial and security cartoons for the Hanford Works NEWS. In addition, a design of a page head for the Women's Page is nearing completion. Work for the General Electric News Bureau included the design and completion of a 3-panel display, consisting of two 20" x 30" maps of Richland commercial areas designating buildings under construction, those completed; space presently leased; space available for leasing and occupancy; neighborhood shopping areas; light-industrial areas; all for the community display case. Included was explanatory lettering work. Work for the Special Programs section included designing and completing all necessary art work on cover and contents for the Health Instrument Divisions' technical manual and three color reproduction process art work for December Safety Award Plan poster. During the month an assignment procedure was established wherein a weekly schedule was developed to gain smoother operating functions for divisional requirements. The divisions and sections affected by this procedure included the Hanford Works NEWS whose assignments will be handled on Mondays and Tuesdays with Special Programs section assignments receiving attention on Wednesdays and Thursdays along with the News Bureau and Community Relations Divisions. Fridays will be devoted to general plant-wide requirements. Any deviations from the schedule will be referred to the Supervisor for decisions.

DECLASSIFIED

30 1195307

Hanford Works Photo House Production During January

DIVISIONS	TYPE OF PRINTS								
	8" x10"	5"x7"	2" x 4"	2" x2"	Negatives	Slides	Prefab. "A" Badge	PH-28	Cards Laminated and Passes
MEDICAL		30			30				
PURCHASING & STORES	45				45				
TECHNICAL	60				17				
DESIGN & CONSTRUCTION	465				5				
A.E.C.	14								
COMMUNITY ENGINEERING	4				4				
PATROL		9			9				
HEALTH INSTRUMENT					8	4			
MANUFACTURING (TRANSP.)	36				36				
EMPLOYEE & COMMUNITY RELATIONS DIVISIONS									
EMPLOYEE RELATIONS			318	2372	177		318	72	190
COMMUNITY RELATIONS SPECIAL PROGRAMS	35				9				
NEWS BUREAU	52				28				
WORKS NEWS	98				77				
H.W. PHOTO HOUSE	53				48	14			
TOTALS	862	39	318	2372	493	18	318	72	190

TOTAL PRINTS 3591 TOTAL NEGATIVES 492 TOTAL APPOINTMENTS FOR PHOTOS - 40

DECLASSIFIED

1195308

DECLASSIFIED

COMMUNITY DIVISIONS

SUMMARY-JANUARY,1950

ORGANIZATION AND PERSONNEL

Number of employees on roll:	Beg.of Month	End of Month
Community Administration	5	6
Community Accounting	28	26
Community Public Works	420	416
Community Safety	3	3
Community Commercial Facilities	16	16
Community Housing	40	40
Community Fire	128	128
Community Patrol	83	83
Community Activities	12	12
	735	730

Changes in the force of the Community Divisions during the month of January, 1950, were as follows:

	Reduced	Increased
Community Administration	-	1
Community Accounting	2	-
Community Public Works	4	-
Community Safety	-	-
Community Commercial Facilities	-	-
Community Housing	-	-
Community Fire	-	-
Community Patrol	-	-
Community Activities	-	-
	6	1

TOTAL DECREASE, January, 1950 = 5

GENERAL

As a result of the sub-normal temperatures excessive freezing of water pipes, difficulty of supplying coal to the Power House operation, icy thoroughfares, and other similar circumstances were experienced during the month of January. Considerable overtime and other additional costs were necessary as a result.

Two new commercial facilities began operation.during the month.

No appreciable changes were apparent in reported sales of basic items for January.

Housing applications increased from one hundred seventy-six (176) to one hundred ninety-seven (197) during January.

1195309

MTBinns/jak
2/10/50

DECLASSIFIED

COMMUNITY DIVISIONS
PUBLIC WORKS DIVISIONS
JANUARY 1950

ORGANIZATION AND PERSONNEL

	EXEMPT	NON-EXEMPT	TOTAL
Number of employees on payroll			
December 31 1949	59	361	420
January 31 1950	58	358	416
Personnel changes made during month:			
Transfers from Transportation		1	
Transfers from Minor Construction		8	
Transfers to Instrument Division		1	
Transfers to Minor Construction		3	
Leave of Absence		1	
Retirement		1	
Terminations	1	6	

GENERAL

The development of a work program for the Public Works Divisions for Fiscal Years 1951 and 1952 is progressing very well. Some replies have been received from our customer divisions with others expected at an early date.

The importance of a work program in connection with budget preparation is being emphasized in each section within the Public Works Divisions.

Explosions occurred in two Sunbeam oil furnaces and investigation showed that the cause of these explosions was a combination of low oil in storage tank and intermittent ignition. Housing Division accepted a recommendation of maintenance section that these furnaces be changed to constant ignition to eliminate repetition of this type accident and this conversion is now in progress.

Approximately 700 orders to thaw frozen water services in Village homes were received from January 1 1950 to January 29, 1950. An analysis of these freeze ups shows the following breakdown. There were 1032 orders for this work up to and including February 2 1950.

Prefabs	53%
Precuts	36.5%
All other types	10.5%

It is obvious from this breakdown that corrective measures are necessary on prefab and precut houses to eliminate this yearly expenditure and the maintenance section has been working closely with Housing and Engineering Divisions toward the end that this problem may be solved.

1195310

Community Public Works Divisions

PROJECTS

C-146 - Extension to Irrigation System - Cost of excess pipe was credited to this project and added to inventory accounts. Project completion report was issued.

C-164 - Construction and Expansion of Parking Compounds - Project completion report prepared closing out the engineering work.

C-203-III - Water Supply and Sewage Facilities for Richland Village and North Richland Construction Camp - Drawings and specifications were transmitted to Contract Section.

C-232 and C-233 - School Irrigation - Necessary plans and specifications are being prepared for installation of irrigation systems at Carmichael and Spalding School grounds.

C-253 - North Reservoir Roof Replacement - Project completion report re-issued January 12, 1950.

C-282-R - Richland Community Dust and Pollen Control Program - Weather conditions curtailed the work on this project during the month.

C-288 - Projects
C-288-B - The Light Industrial Area was inspected December 18, 1950 for acceptance. Many exceptions were listed.
C-288-C - Final inspection of the North Commercial Area has been scheduled, but postponed due to weather conditions.
C-288-D - Final inspection made on the Neighborhood Shopping Area at Swift and Wright on December 17, 1950. Exceptions were listed and a report issued.

C-311 - Water to Tract Houses - Project completion report revised and re-issued.

C-345-R - Insulation of Heat Ducts - Precut Houses - Job was completed by contractor January 19, 1950. Final inspection work is in progress.

C-348 - Asbestos Siding and Trim Painting - 703 Building - Fair price estimate of cost was prepared and issued. Bids were opened January 17, 1950. AEC approved award of contract to Roof Service, Inc. of Seattle was on February 1, 1950.

C-351-R - Installation of Irrigation System - Public Grounds - Project approved by A&B Committee, presently awaiting directive from AEC. Letter was written on "Influence of Operating Expense".

C-356 - Recreation Facilities - Equipment for Schools and Public Areas, Parks - Final project proposal was prepared and issued.

C-357 - Additional Capacity of Richland Sewage Lift - Project is awaiting AEC approval. Letter written on "Influence of Annual Operating Expense",

DECLASSIFIED

DECLASSIFIED

PROJECTS (CONTD)

C-359 - Duane Avenue Street Improvement - Project is awaiting AEC approval. Letter was written on "Influence of Annual Operating Expense".

"S" PROJECTS

S-86 - Water Shut-Off Valves and Sewer Cleanouts in "U" and "V" Type Houses - Request for informal approval #32 revised, was approved.

S-147 - Addition to Fire Station #1 - Cost report prepared and issued by Engineering.

S-149 - Addition to Fire Station #2 - Cost report prepared and issued by Engineering.

S-216 - Rehabilitation of Irrigation Ditch West of Columbia High School - Specifications were revised and issued for comments.

S-229 - Furnace Cleaning - AEC approved award to R.A. Pringle Company, January 10, 1950.

S-240 - Prefab Roof Maintenance- Field release was prepared and issued. Due to inclement weather, we have requested Contract Section to extend completion date of contract.

S-290 - Automatic Traffic Signals - Letter written regarding "Influence on Annual Operating Costs". Design drawings and specifications being prepared.

ENGINEERING DIVISION

Organization and Personnel

	EXEMPT	NON-EXEMPT	TOTAL
December 31, 1949	17	12	29
January 31, 1950	17	12	29

Miscellaneous

The following routine items were processed during the month:

Requisitions	50
Store Stock Requests	11
Store Stock Adjustment Requests	7
Purchase Orders Expedited	21

One member of Community Engineering attended the Lumberman's Convention in Portland, Oregon, Tuesday, January 24, 1950.

Floor renovation machines and supplies were secured for Tenant Service Section for use in re-working floors in the dormitories. Samples of several different materials were secured for trial by Community Maintenance Division.

Community Public Works Divisions

Miscellaneous (Contd)

The following number of jobs were completed on continuous engineering service requests:

ESR #97-CH - Elec. & Struct. Insp	6
ESR #98-CH - Alteration Inspections	3
ESR #100-CH - Back Charge Estimates	4
ESR #118-CF - Approved Alter. Permits	2

The following Engineering Service Requests were completed or cancelled:

Job No	Description	Date Completed
190-CA	Junior High School #2	1-6-50
191-CA	New Elementary School	1-6-50
245-CH	New Wells, Tract Houses	1-30-50
257-CH	Chimney Capacity - K-833 or 26-X	1-13-50
267-CA	Addition to Sacajawea School Cafeteria	1-6-50
316-PS	Unsafe Floors - 720 Building	1-20-50
317-CA	Cost of Providing Steam for Heating John Ball School	1-5-50
318-SS	Voided	
328-CF	Occupancy map for Light Industrial Area	1-17-50

Technical information and instructions were furnished the following prospective facility operators, clubs, churches, and schools:

Roller Skating Rink - Prospective operator
Amusement Park - Prospective operator

The status of Commercial Facility Division sponsored Construction is as follows:

Theater - Construction started 12-14-49 - 2% completed

National Bank of Commerce - Construction started 10-31-49 - 70% complete

Demonaz - Construction started 9-16-49 - 90% complete

Diettrich Food Store - Construction started 11-3-49 - 70% complete

Barnhart's Bakery - Approved 8-29-49 - Awaiting information

Kaiser & Johnson Food & Drug - Construction started 10-17-49 - 95% complete

Cascade Radio Station - Awaiting information

Multiple Business Building - Construction started 11-2-49 - 80% complete

Morgan & Oldberg Drugstore - Approved 10-18-49 - Awaiting detailed plans

DECLASSIFIED

DECLASSIFIED

Community Public Works Divisions

Commercial Facility Sponsored Construction (Contd)

Ellis Photographic Studio - Approved 10-13-49 - Awaiting start of construction

Stone & Garmo Food Store - Awaiting Preliminary Plans

The Status of Community Activities Division Sponsored Construction is as follows:

Latter Day Saints Church - Construction started 2-5-49 - 70% complete

South Side United Protestant Church - Construction started 11-5-48 - 99% complete. (Building in use - minor exceptions to clear)

Assembly of God Church - Approved 5-16-49 - Awaiting start of construction

Church of Nazarene - Construction started 4-12-49 - 95% complete

Church of Christ - Construction started 12-19-49 - 30% complete

Swimming Pool Association - Awaiting detailed plans

Reorganized Latter Day Saints Church - Construction started 8-22-49 - 14% complete

Christian Science Society - Awaiting preliminary plans

Alteration Permit Progress is as follows:

Facility	Description	Approved	Remarks
Robley Johnson Studio	Extend front porch	3-23-49	95% complete
Hanson's Enterprise	Installation of sign	10-11-49	100% complete
Robley Johnson Studio	Alter. to dark room	9-20-49	90% complete
The Mart - Cafeteria	General Alterations	10-3-49	85% complete
New City Cleaners	Install gas pump & storage tank	11-23-49	95% complete
Union Oil	Install Neon Sign		100% complete
Diettrich's Food Market	Install Neon Sign	1-9-50	Awaiting start of construction
Tri-City Herald	Install Elec.sign	1-13-50	100% complete

5. 1195314

DECLASSIFIED

Community Public Works Divisions

The following work was done on leased areas:

Lot was staked for Ellis Photographic Studio

Plot plans were prepared for the Richland Lutheran Church and the Catholic Church

The following work was done on streets and storm sewers:

Transportation Division has moved their crusher and set up near the "Y" Bridge on the East side of George Washington Way. They are to crush some mineral aggregate for the Community Divisions.

Lee Boulevard was accepted from Design and Construction Division.

A field check-up on ice conditions was made to determine damage and probable damage which might occur when the ice goes out.

It was necessary to haul more sand for street sanding purposes. Most of the month was spent either sanding, or removing snow which created a very heavy unexpected expense.

Work done on Irrigation is as follows:

Assistance was given the Labor Division regarding the replacement of mowing and sprinkler equipment, parts, and estimating requirements for additional acreage to be placed under irrigation in 1950.

Materials required for the installation of the By-Pass Shelterbelt irrigation system were ordered or set-up in shop for project forces to install.

Emergency Blow Areas, Dust Control - W.O. E-03703

Informal approval was received from AEC to proceed.

During the last big dust storm much emergency work was necessary.

a. Rainmaker and invasion pipe were hurridly put in to curb some blow areas. This was partially successful in some placed, and in other places it held the dust entirely. These areas are seeded to rye grass and will when warmer weather pervails, eventually hold the dust without further watering

b. Where water is not available and sand moves only with severe winds, an attempt has been made to curb the movement with brush.

DECLASSIFIED

Community Public Works Divisions

Emergency Blow Areas (Contd)

c. 2243 cubic yards of gravel for stabilization have been hauled to the Bonneville Power Station area near the By-Pass and Thayer Drive.

d. 2722 cubic yards of gravel have been hauled to the sand hill area at Elm Street and Swift. This work is approaching completion.

Follow-up on Unit Price Contractor is being made and reports submitted weekly by members of the Community Engineering Division.

OPERATION AND MAINTENANCE DIVISION
MAINTENANCE SECTION

Organization and Personnel

Number of employees on payroll:	EXEMPT	NON-EXEMPT	TOTAL
December 31, 1949	19	189	208
January 31, 1950	19	188	207

Personnel changes made during the month:

Transfers from Maintenance	8
Transfers to Maintenance	3
Retired	1
Terminations	5

Miscellaneous

Interior renovations were completed in 42 vacant houses during the month, 29 of these being in conventional houses and the remainder (13) in prefabs. The work involved in these orders included 18 complete paint jobs, 21 partial paint jobs, and miscellaneous repairs and cleaning as necessary to bring the houses up to Community standards. There are 34 outstanding renovation orders on hand at the close of January and five painters have been loaned to this group so that this number of open orders can be reduced.

Apartments 201 and 101, and reception room and first floor hallway of apartment house W-13 were completely repainted to correct damage caused by rupture of water line in Apartment 201.

Interior painting (and necessary preparatory carpentry work) was continued in Divisions IV and V and a total of 89 living units were completed during the month, this figure raising the grand total completed in this program to 207.

The utility rooms in 66 prefabs were lined with celotex on walls and ceilings and linoleum on floors to control or eliminate condensation formation.

DECLASSIFIED

1195316

DECLASSIFIED

Miscellaneous (Contd)

Thirty-three (33) precut houses were re-enforced and leveled to correct binding of doors and sash, and checking of walls caused by excessive deflection of floor joists. Fifty-one (51) prefab foundations were also inspected, leveled and repaired.

Activities in connection with excessing of equipment and material by Stores Division were resumed in January and carpentry work necessary to prepare 28 carloads for shipment was completed.

The installation of a drop-skirt around foundation of Building 760 was completed early in the month, and this work will eliminate or minimize freezing of water lines located under this building.

Fire-stop partitions were installed at five locations in the attic of The Mart, this work being necessary to bring the building to standards recommended by Fire Prevention Section.

Alterations to Nurses Station, central supply room, and records room at Kadlec Hospital were completed this month, and these renovated locations are now back in service.

Leaking or cracked concrete bathtubs were replaced with metal tubs and "tyle-board" installed in 23 houses. In addition to these 23 installations of "tyle-board" in connection with bath tub replacement, "tyle-board" was installed in 70 other houses, or a total of 93 "tyle-board" installations.

New shower stalls fabricated of stainless metal and "tyle-board" was installed in 18 prefab dwellings.

Installation of a Sunbeam furnace, duct work, new chimney and storage tank at 1007 Gillespie was completed and the system placed in operation about the middle of the month.

Overhauling of domestic pump at Building 1182, and #13 domestic well is now in progress, and remaining domestic well and irrigation pumps will be overhauled as soon as weather moderates.

Installation of a septic tank and drain field was completed at Tract House K-718.

Alterations and repairs on fire doors at Pasco Warehouses are approximately 75% complete, total completion having been delayed by severe cold weather.

A record of miscellaneous work performed during January includes replacement of 27 laundry trays, 10 electric water heaters, 5 kitchen sinks, 1 toilet, 1 wash basin, 6 stop and waste valves, and 1 refrigerator unit; repair or replacement of linoleum on 93 floors and 92 sink boards; repair of 9 refrigerators, 11 screen doors, 89 roofs, 14 chairs, 12 dressers; recovering of 26 chairs; rebuilding of 8 electric ranges; sanding and refinishing of floors in 10 houses; and refinishing of approximately 100 furniture items.

1195317

Community Public Works Divisions

Miscellaneous (Contd)

The Service Order Group completed a total of 4150 Service Orders during the month. 88.7% of this work being done for Housing, 4.8% for General, 5.3% Concessions, 1.2% Public Works, and the remainder for various other Divisions.

The following is a status report of service orders:

On hand at beginning of month	452 orders
Received during month	4211 orders
Completed during month	4150 orders
On hand at end of month	513 orders

Economies Effected

Replacement of linoleum on sink tops requires that the faucets be removed, and on re-installation of these faucets, the old tubing and slip-joints are being replaced with pipe and pipe fittings. This work is being accomplished without adding to the plumbing labor cost of linoleum crews, and eliminates all future cost for repair to slip joints and tubing at these locations. This change to pipe and pipe fittings is also being made when services of plumbers are required to repair leaks in tubing to these kitchen faucets.

As the result of a suggestion turned in by an employee of maintenance section, work orders have been issued to us to re-caulk between recessed kitchen sinks and sink boards, and replace existing edging around sink with a type which binds down the edge of linoleum, thereby extending the life of the linoleum. Linoleum life in flush-type sink installation is being increased by cementing down the edge around the sink. (The principal behind this work is the elimination of entry of water between linoleum and sink board.)

UTILITIES SECTION

Organization and Personnel

Number of employees on payroll:	EXEMPT	NON-EXEMPT	TOTAL
December 31, 1949	9	56	65
January 31, 1950	9	56	65

Steam

Operations at the Central Steam Plant have been rather abnormal most of the month. On January 4th it was necessary to put a fourth boiler in operation to handle the increased steam load due to increased heating steam requirements because of unusually low temperatures.

A considerable amount of difficulty has been encountered in keeping a coal supply to the boilers at the Central Steam Plant. Coal received in cars has been very wet and frozen in the cars. This caused some difficulty in removing coal from cars and in plugging up conveyor equipment.

DECLASSIFIED

1195318

DECLASSIFIED

Steam (Contd)

The outboard bearing on the coal crusher burned out and was replaced. This was the third bearing failure on the crusher in a short time. A thorough check indicated that the bearing was loose on the shaft. The new bearing installation was shimmed to fit. As soon as the crusher can be made available, it will be completely overhauled.

Operations at the 1131 Boiler House were normal throughout the month.

Central Steam Plant

Steam Generated	48,340 M lbs.
Steam Sent Out	41,858 M lbs.
Coal Consumed	7,436 M lbs.

Domestic Water

The difficulties caused by the cold weather have been negligible to date.

The No. 13 well pump was pulled for a complete overhaul. It was found that the pump bowls were completely worn out. A new pump turbine will be installed as soon as the weather permits. Other repairs to the water system have been minor during this period.

Domestic Water System

	Well Production Million Gallons	Avg. Daily Production	Total Consumption Million Gallons	Avg. Daily Consumption
Richland	117.7230	3.7975	99.0622	3.1956
North Richland			29.4733	0.9508
Columbia Field	42.0011	1.3549		
300 Area			31.4881	1.0157
	159.7241	5.1524	160.0236	5.1621

Sewerage

On January 3, 1950, the hydraulic valve on flow line to the wet well in pump house sewage plant failed. The valve shaft had been badly scored, apparently due to hydraulic mechanism and valve assembly being out of alignment. The stem was turned down, a new packing gland made and the hydraulic mechanism was aligned. Since then the valve operation has been satisfactory.

The cold weather as yet has caused very little difficulty. Desired digester temperatures have been maintained.

1195319

Community Public Works Divisions

Sewerage (Contd)

Sewerage

	Total Sewage Flow Million Gallons	Average Daily Flow Million G.P.D.	Average Rate Flow Gals. per Min.
Plant 1	36.600	1.1806	820
Plant 2	46.000	1.4839	1030
Total	82.600	2.6645	1850

Pasco Warehouse Area

Because of the continued cold weather and consequently the icing up of pump sump at the river pump station, some difficulties have been encountered in keeping pumps free of ice. It has been necessary for operators to constantly check and operate all pumps to keep them from freezing up.

LABOR SECTION

Organization and Personnel

	EXEMPT	NON-EXEMPT	TOTAL
Number of employees on payroll:			
December 31, 1949	10	102	112
January 31, 1950	9	100	109

Personnel changes made during month:

Transfers from Transportation	1
Transfers to Instrument	1
Removed from Roll	1
Terminations	1

Miscellaneous

The garbage and refuse collection continued as usual, with the residential trash collection Wednesday of each week. The garbage and refuse collection of commercial areas daily except Sunday. The new garbage pit site south of the old Labor Yard was put into use January 12, 1950.

Work was halted during January on Project C-282, Shelter Belt and Street Tree Planting, due to frost conditions.

Twenty-two acres of orchard brush were cut and hauled on blow areas at Carmichael Junior High School and at the intersection of Thayer and the By-Pass Highway.

Pruning and cutting out of dead wood in Village orchards started in January.

1195320

DECLASSIFIED

DECLASSIFIED

Miscellaneous (Contd)

1926 hours were expended during the month of January, 1950 on snow and ice control due to sub-normal weather conditions.

Twelve shipments of personal furniture were handled. Two men were required on handling government furniture and fixtures during the month. The above group was used during slack periods on snow and ice control.

Spalding School irrigation installation is complete with the exception of the backfill which is being held up on account of frozen soil.

Approximately 20 Work Orders on excavation and backfill of utilities have been completed. At present we have several excavation and backfill jobs, but due to existing weather conditions these jobs are being held up.

The brushing of the blow area around the sub-station at the By-Pass Highway and on the West side of Thayer Drive is 75% complete. This brush is being hauled from old prune orchards.

Work on the irrigation canal for the past three weeks has been seriously hampered by the snow and ice conditions which make it practically impossible to burn vegetation or remove silt from the canal bottom

Approximately 3300 yards of put run gravel was used in covering the area at Swift and Elm. The cost per yard of this operation, including overhead and one operator from Transportation Division was .80¢ per yard.

The Transportation Division worked part of one day crushing road materials. The cold weather made it necessary for them to halt operations as the efficiency of the crusher crew was about 75%. Operations will be resumed as soon as the weather permits.

Materials handled this month:

Sand on icy streets and walks	900 yards
Salt on streets and walks	15,600 lbs.
Pit run gravel on blow areas	3,300 yards
Sand stock piled in yard	1,000 yards
3/4 to 1/2 chips in yard	70 yards
1/2 to 0 chips to yard	80 yards

Coal delivered from the 700 Area Storage:

Pasco T-131	12 tons
1131 Garage	80 tons
#2 Fire Station	2 tons
Pasco Garage	6 tons
1182 Pump Station	5 tons
Pasco Power	6 tons

Community Public Works Divisions

Miscellaneous (Contd)

Coal delivered from Hanford storage:

Pasco T-131	6 tons
1131 Garage	6-1/2 tons
#2 Fire Station	1 ton
Pasco Power	5 tons
Pasco Patrol	1 ton
1133 Stores	5 tons
M-S Warehouse	1 ton
#3 Renovation Hutment	2 tons

DECLASSIFIED

1195322

DECLASSIFIED

COMMUNITY COMMERCIAL FACILITIES DIVISION

January, 1950

ORGANIZATION AND PERSONNEL — JANUARY

Number of employees on payroll:

Beginning of month	16
End of month	16

COMMERCIAL FACILITIES:

The following figures indicate trends in commercial activities as related to various basic items:

	December	January
Percent of room day occupancy - Desert Inn	45%	52%
Gallons of ice cream sold	2;649	2;168
Carnation milk & cream deliveries	65;883	51;731
Darigold milk & cream deliveries	2;841	2;934
Morning Sun Dairy milk & cream deliveries	15;059	13;205
Theater customer count	45;415	46;330
Gallons of gasoline sold	188,560	193,585

Total number of Commercial Facility Operators' employees, full- and part-time as of January 31: 1,011 (This shows a net decrease of 69 over last month's 1,080.)

Dick and Jerry's Fine Foods opened for business January 2 in the McVicker Building located in the Uptown Business District.

Kaiser's Market and Johnson's Drugstore opened for business January 27.

The following routine items were processed:

Work Orders	54
Back Charges	24
Service Orders	50
Alteration Permits	1

CONTRACTS AND NEGOTIATIONS:

Supplemental Agreements were entered into with the following firms and/or individuals:

Richland Thrifty Drugs - Supplemental Agreement No. II, dated December 29, 1949, to provide for fuel allowance to the Operator and to effectuate a revised compensation schedule for the Pennywise Drugstore

Midstate Amusement Corporation - Supplemental Agreement No. I, dated December 19, 1949, to provide for a change in the legal description to conform to the plans for the theater, change in monthly rental and extension of time required to construct the building.

1195323

Richland Motor Company - Supplemental Agreement No. II, dated January 3, 1950, to provide for an increase in compensation on gasoline sales, retroactive to July 1, 1949.

Hanson Enterprises, Inc. was authorized to sublet space in its building, formerly occupied by Sullivan's Cleaners and S. J. Patterson Accounting Service, to Jerry Bell and Barlow Ghirardo, a partnership, for the operation of a shop for wholesaling and retailing Spudnuts.

Fred R. Stipe was authorized to sublet the fountain operation in the Village Pharmacy to Leo France of Kennewick, Washington.

Robert Kaiser was authorized to sublet space in his new building to Robert L. Johnson for a drugstore.

Supplemental Agreement covering the operation of Richland Motor Company was assigned by W. A. Simonds, as an individual, to Richland Motor Company, a corporation.

The facility formerly known as American Fuel Company, Inc. has changed its name to Richland Fuel & Lumber Company.

A Commercial Facility Lease, dated December 20, 1949, was entered into with Kennell-Ellis Studios, covering the construction, operation and maintenance of a photographic studio in the Uptown Business District.

Invitations to Submit Proposals were forwarded January 23, 1950, to prospective bidders for the construction of a building on part of a plot of ground lying west of Stevens Drive and south of Swift Boulevard, Richland, Washington. (Space considered suitable for skating rink, miniature golf course, youth amusements or other facility which does not require business street frontage.)

Invitations to Submit Proposals were forwarded January 23, 1950, to prospective bidders for the construction of a business building in Block 4, Uptown Business District, Richland, Washington.

Invitations to Submit Proposals were forwarded January 26, 1950, to prospective bidders for the construction of a Super-Market Food Store, Uptown Business District, Richland, Washington, to occupy all or a major portion of available 100' frontage.

COMMERCIAL FACILITIES EXPANSION PROGRAM:

Number of businesses operating as of December, 1949	90
New facilities opened for business this month	4
Businesses terminated	2
* Total Commercial Facilities in operation	92
New facility buildings under construction	5
New ground leases awarded	0

* 1 Business operating in temporary quarters

DECLASSIFIED

DECLASSIFIED

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
Beverage Store
Cabinet Shop
Children's Playground
Construction Bldg.
Food Store
Garage
Insurance
Laundry
Metal Products
Men's Wear
Riding School
Self-Service Laundry
Service Station
Shoe Repair Shop
Variety Store

1195325

COMMUNITY DIVISIONS

COMMUNITY HOUSING DIVISION

January, 1950

ORGANIZATION AND PERSONNEL

Number of employees on payroll	January
Beginning of month	40
End of month	40

RICHLAND HOUSING

ousing Utilization as of Month End

ouses Occupied by Family Groups	Conventional	Block	T	Pre-Cut	Ranch	Pre-Fab	Apts.	Tract	Total
Operations	2212	268		377	834	1138	61	41	4931
Commercial Facilities	99	6		26	69	65		4	269
Community Activities	10			2	7	5	1	2	27
Post Office	5				3	14		3	25
Government	102	35		12	31	26	2	4	212
Schools	41			5	13	49	1		109
Kellex Corporation	1	5		3		1			10
Atkinson-Jones	9	16		5	11	3	3		47
J. G. Turnbull	1	2		3	5	7	1		19
C. T. Main Co.				1			1		2
J. A. Terteling			10	1	2				13
Newberry Neon	2	1		1					4
Vernita Orchards								3	3
Morrison-Knudsen				1					1
Urban-Smythe & Warren					1				1
TOTAL HOUSES OCCUPIED	2432	333	10	437	976	1308	70	57	5673
ouses assigned - awaiting tenants	12			12	18	14	4	3	63
Houses assigned - (Leases written)	6			1	6	10			23
TOTAL HOUSES	2500	333	10	450	1000	1332	74	60	5759

DECLASSIFIED

1.

1195326

DECLASSIFIED

COMMUNITY HOUSING DIVISION

Housing Turnover During Month	Begin Month	Moved In	Moved Out	Month End	Difference
Conventional Type	2435	29	32	2432	Minus 3
Block Type	332	1	0	333	Plus 1
T Type	10	0	0	10	None
Precut Type	439	15	17	437	Minus 2
Ranch Type	984	15	23	976	Minus 8
Prefab Type	1312	27	31	1308	Minus 4
Apartments	70	9	9	70	None
Tract	60	0	3	57	Minus 3
TOTAL	5692	96	114	5673	Minus 19

Dormitory Statistics

Dormitories		Occupants	Vacancies	Total Beds
Men- Occupied	13	467	49	516
Men- Unoccupied				
Women- Occupied	13	*446	**185	631
Women-Unoccupied	2			

Women's Dormitories occupied by:

G. E. Office	1
Education	1
Apartments	1
	31

* This includes space of 4 beds in W-9 being used for supply rooms and dormitory offices.

**This includes 100 beds in "Standby Condition" in W-17 and W-20.

GENERAL — Allocation Section Statistics

Total houses allocated to new tenants	31
Exchanged houses	34
Moves (within the Village)	27
Total New leases signed	96
Turnovers	10
Houses sent to renovation	53
Houses assigned "As IS"	25
Terminations	44
Total Cancellations	114
Applications pending	197

The lease on JJ-649 # 2, which was completely destroyed by fire on December 28, 1949, occupied by Vernita Orchards Company, was cancelled January 18, 1950.

As a result of the storm on Friday, December thirteenth, Dormitories W-17 and W 20 were opened for the purpose of accommodating employees from the surrounding communities who might be snowbound in Richland. Four women and ten men took advantage of these facilities.

Tract houses L-854 and K-764 were vacated during the month.

Ice jams and high water in the Yakima River threatened to undermine Van Giesen St. west of the Village, making it necessary to move the tenants from Tract houses L-883 and L-947 into the Village.

On January 26th a General Electric employee living off the project, near the Yakima River, was evacuated from his home when high water threatened, and given housing in Richland.

1195327

TENANT RELATIONS

Processing of Service Orders, Work Orders and Service Charges

	Issued from Dec. 31 to January 31.	Incomplete January 31	Issued previous Month
Service Orders	4685	513	2542
Work Orders	866	1393	1017
Service Charges	225	7	285

89 Conventional houses were painted on the interior by Project forces as compared to 84 the previous month.

18 Bathrooms were repaired and painted as compared to 26 the previous month.

10 Houses had cracks repaired. Cracks were caused by settlement of house.

15 Conventional houses had floors sanded and refinished.

33 Precuts were jacked up and shimmed.

51 Prefab foundations were repaired and leveled.

ITEMS OF INTEREST	TOTAL OUTSTANDING	TOTAL OUTSTANDING PREVIOUS MONTH
Laundry Tubs	15	29
Bathtubs	116	76
Sink Linoleum	107	99
Bathroom Tileboard	181	165
Bathroom Linoleum	14	95
Kitchen Floor Linoleum	36	12

Alterations permits issued during the month of January totaled 38 as compared to 36 the month of December.

Fences	3	Automatic Washers	7
Refinish floors	3	Move Coal Bin	1
Thermostatic control of furnance	2	Remove broom closet	1
Back door in prefab	1	Automatic stoker in furnace	1
Water softener	2	Fluorescent light in living room	1
Electric dryer	5	Door between basements B House	1
Humidifier in furnace	1	Partition in basement	1
Basement excavation	4	Hang Plywood ceiling	1
Storage shed	3		

1126 Inspections were made during the month of January, 1950. A breakdown of the inspections shows the following distribution:

Window shades	42	General Inspections	198
Lot Lines	9	Top Soil	2
Check bathrooms	78	Floor Boards	40
Sidewalks	7	Leaking basements	5
Alteration Permits	52	Miscellaneous	420
Linoleum	144	Walls	129

In addition to the above, Field clerks have made roof inspections on Ranch Houses, contacted tenants on precut insulation, and obtained tenants' signatures on service charges.

1195328
DECLASSIFIED

TENANT RELATIONS

FREEZE-UPS

Starting on December 30, 1949 and including January 31, 1950, a total of 833 freeze-ups were recorded. In 1949 in the month of January, 852 were recorded.

PREFAB	PRECUT	A & J	CONVENTIONAL	TRACT	RANCH	TERTELING	APTS.	DORMS
441	304	38	10	12	17	6	3	1

The heaviest days were on January 13th with 154 and January 29th with 147. No freeze-ups occurred on December 31, January 1,2,7,8,9,10,11,12,20,21,22 and 23.

DORMITORIES

Changes in electrical panels in Dorms W-15,16,17,20 and 21 were completed this month Dorms W-17 and W-20 were opened for emergency use on January 13 and are still ready.

M. S. WAREHOUSE

	ITEMS	AMOUNT	
Received Inventory Items	121	287.90	
Received on store order	4734	3116.96	
Received on purchase requisition	119	204.61	
Disbursed Inventory Items			
Dorm Furniture	207	2163.61	
Free Issue	790	1366.04	
Cash	23	48.43	
Dorm Supplies	3759	818.59	
Warehouse Supplies	69	51.71	
Dorm Linens	2882	813.62	
Dorm Shades	57	58.12	
INVENTORY ITEMS BALANCE			68,177.99
GRAND TOTAL INVENTORY			105,374.86

Dormitory Furniture Exchanged	72 Pieces
Ranges Exchanged	6
Refrigerators Exchanged	5
Sent to Maintenance	126
Received from Maintenance	149

DECLASSIFIED

1195329

DECLASSIFIED

COMMUNITY SAFETY DIVISION
JANUARY 1950

ORGANIZATION AND PERSONNEL

Number of employees on Payroll	January
Beginning of month	3
End of month	3

GENERAL

The Twenty-Four Sheet Highway bulletins mentioned in December's report still have not been painted, due to the weather conditions. They will be painted as soon as the weather permits, and a new poster posted around the tenth to the twenty-fifth of February.

The bicycle campaign which was mentioned in the last two month's reports, and with reference to the Parent-Student Council, is well underway. The council has met and the organization formed. Their first objective will be the bicycle problem. Serious consideration is being given to the organization of bicycle clubs in each school, and search for a sponsor from one of the local organizations or the P.T.A.. The purpose of the clubs will be to promote bicycle education among the children. The council plans on putting each child who is a member of the club on an Honor System whereby they will encourage respect for bicycle regulations on their own. The future program will be interesting to watch.

The Richland Safety Council did not meet in January as planned. A definite date will be set around the middle of February for this meeting.

The "Highway Highlights", a monthly publication put out by the National Highway Users Conference in Washington, D.C., devoted two-thirds of the third page to the Richland Motor Manners campaign of last November.

During this month the Annual Inventory of Traffic Safety Activities has been prepared by the various divisions concerned. It is planned to have this entry completed by the third of February.

This office reviewed the final plans for the Chief Joseph Junior Highschool for Fire and Safety aspects, and recommendations have been made. Also a number of minor construction plans were reviewed by this office.

One hundred and twenty column inches were used in local newspapers, publicizing various phases of safety features for the month of January.

One personal interview was given over KWIL, and a number of spot announcements relative to traffic safety and winter driving hazards

1195330

COMMUNITY DIVISION REPORT

COMMUNITY FIRE DIVISION

January 1950

Organization and Personnel

Number of employees on payroll	January
Beginning of the month	128
End of month	128

	Richland	North Richland
Response to alarms	28	3
Fire loss (estimated)		
Hanford Works	$77.00 *	0.0
Personal	5.00 **	0.0
Investigation of minor fires and incidents	17	4
Safety Meetings	16	8
Outside drills	0	0
Inside drills	76	34
Alarm boxes tested	173	74

* Estimate subject to revision. Two additional losses not estimated at time of this report.

** Two minor personal losses not estimated at time of this report.

Fire Department Activities

1. Performed salvage and overhaul operations in 705 Building to prevent water damage by broken pipe.

2. Furnished aerial ladder truck with one man to replace light on hangar at Government Airport.

3. Tested 67 Richland fire hydrants in three different spot checks in search for frozen hydrants.

4. Three Boy Scouts given examination for merit badge in Firemanship.

5. Spot checks of North Richland fire hydrants made in search of frozen hydrants.

6. Equipment furnished and set up for flooding an ice skating rink at 8th and "M" Avenue in North Richland.

7. Twenty sections of 2½ inch hose, iron coupling, excessed by North Richland station.

1195331

DECLASSIFIED

DECLASSIFIED

Richland Fire Prevention

Fire Inspections:

700 Area Buildings	38
1100 Area Buildings	42
Commercial Facilities (Gov't owned Bldgs.)	44
Government Airport Bldgs.	16
Schools, Clubs, Churches	12
Total:	152

Fire Extinguishers:

Inspected	418
Recharged (CO2)	26
Refilled	10
Defective	2

Miscellaneous Activities:

1. Fire Extinguishers:

   Still awaiting directive on disposal of 242 fire extinguishers declared excess.

   Vendor's agreement to replace all defective fire extinguishers of their make not completed as of January 31st.

2. Investigations:

   Conducted an investigation of overheated steam boiler in Lewis and Clark School. Lack of water ruined boiler beyond use, replacement required.

   Investigated a fire at 1105 McPherson and submitted full report to Housing Division.

   Investigated cause for frequent furnace blowouts at 1419 Judson. Adjustments made in draft control and tenant advised to call if blowouts continued. No calls received to date.

3. Fire Prevention Survey of Government Buildings:

   The Atomic Energy Commission's Safety Office requested survey was completed and reports forwarded to Community Safety Supervisor.

4. Special Activities During Sub-Zero Weather:

   Periodic inspections of ice and snow conditions at exit doors and on fire escapes of schools, clubs, dormitories and public buildings were conducted during heavy snow and sub-zero weather. Where necessary, personnel in charge of buildings were requested to make immediate corrections.

Buildings equipped with sprinkler systems were carefully checked for frozen sprinkler pipes during sub-zero weather. Recommendation for additional protection on some systems to avoid freezing were necessary. Even with the above precautions, an open outside door underneath "A" Wing of Kadlec Hospital caused the sprinkler valve to freeze and burst.

All outside foam fire extinguishers mounted in boxes and houses, equipped with light bulbs for heat, were inspected twice weekly for freezing.

5. General:

Recommended film storage vault and certain alterations be made in 705 Building photography section to comply with code.

Surveyed proposed changes in "D" Wing Kadlec Hospital sprinkler system.

Reviewed plans for Chief Joseph School and submitted recommendations for additional fire protection to Community Safety Division.

Three water pump can fire extinguishers, damaged by freezing due to insufficient heat in buildings, were replaced.

Fire stop walls recommended by this office were installed in The Mart attic during Januray.

Recommended approved film storage vault for X-ray film be installed in Kadlec Hospital.

Recommendations were submitted to Community Engineering for additional fire hyrants at site of proposed chief Joseph School.

Recommended bolder print for listing emergency telephone numbers in new directory being prepared. Also submitted fire slogans for use as "fill-ins" on partly vacant pages.

DECLASSIFIED

1195333

DECLASSIFIED

COMMUNITY DIVISIONS

COMMUNITY PATROL

JANUARY 1950

ORGANIZATION AND PERSONNEL

Number of employees on payroll:	January
Beginning of month	83
End of month	83

GENERAL

On January 2, 1950, the Special Orders were combined with the Daily Bulletin. This eliminated the necessity for a separate report on personnel attendance.

On January 4, 1950, in the interest of public safety, a floodlight was installed at the entrance to the 770 building.

On January 4, 1950, Sgt. A. L. Reil was appointed to the committee to draft the Articles of Incorporation and By-Laws for the supervisor's association now in the process of organization.

On January 10, 1950, Capt. J. S. Johnson spoke to the Rotary Club on Juvenile Delinquency and the methods in which such cases are handled by Community Patrol. Capt. Johnson also spoke on this same subject to the Spaulding Grade School P. T. A. on January 24.

Effective January 11, 1950, the Community Patrol was assigned the duty of opening the 705 Building each morning at 7:30 A. M., Monday through Friday. A key for this purpose is kept at the Desk Sergeant's office.

Capt. C. F. Klepper was appointed Secretary and Treasurer of the Yakima River Peace Officers Association at a meeting of the association held in Yakima on January 12.

Community Patrol assisted and transported all children to their homes who were seen on their way from school during the extreme blizzard on January 13, 1950.

On January 26, 1950, Capt. J. S. Johnson attended a meeting of the Parent and Student Council.

During the inclement weather, the Washington State Patrol was contacted daily by this department for the latest reports on road conditions in the state. This information was available at the Desk Sergeant's office for the convenience of those concerned.

The Community Patrol rendered aid and assistance to residents of Enterprise, Washington, during the recent flood emergency which was caused by the ice jam on the Yakima River near the Van Giesen Street bridge. Services rendered by us consisted of moving families from flooded areas, assistance in moving stock and other animals from such areas, and expediting transportation equipment and facilities to the affected areas. Patrol also stationed a radio equipped vehicle and patrolman in the area for temporary periods to provide constant contact in case additional help was needed. General observation has been maintained by the Community Patrol Division for any changes in the river situation, and any information obtained has been forwarded regularly to the proper authorities.

Arrangements were made with the Transportation Division to furnish wrecker service on request of Patrol when it became necesssary to move vehicles from the traffic right of way, since the private wrecker service formerly rendered by the Richland Motor Company was discontinued.

During the month, 87 Traffic Violation Reports were received which consisted mainly of Accidents, Invalid License Plates, and Speeding. A total of 74 other reports were received which consisted mainly of Petit Larceny, Family Disturbance, and Investigation.

During the month, a total of 108 letters were received, consisting of 99 inquiries on arrests and 9 requests for assistance.

During the month, 11 prisoners were processed through the Richland Jail.

During the month, 20 gun registrations were taken by Richland Patrol.

TRAFFIC

On January 26, 1950, Capt. A. E. Barron was appointed chairman of the Community Safety Committee.

Traffic accidents in Richland increased from 16 in December to 33 in January. Approximately 80 per cent of the total number were caused by inclement weather and road conditions. The majority of the accidents were of minor nature, consisting of damaged fenders, etc. There were no injuries reported.

Three accidents were reported in North Richland during January. All were of property damage nature and there were no injuries. Causes were attributed to ice and snow covered streets.

A copy of the annual traffic summary was forwarded to the National Safety Council, covering traffic accident statistics for the year of 1949. After receiving the report, Mr. Lew Wallace, Vice-president of the NSC, forwarded a letter to the Patrol complimenting Richland on the low traffic accident and "No Death" record for the past year. Copies of the summary were also forwarded to the State Accident Prevention Bureau and to the A. E. C. Safety Department.

TRAINING

Subjects covered in the lieutenant's training classes for the month of January were as follows:

Court Citation Tickets
Uses of Iron Money Wagon
False Arrest
Law of Arrest

Advance training for Community Patrol members at the small arms range for the period in field instruction was as follows:

Pistol 2 hours

The 38 caliber revolver was used in double action firing. No score was kept.

A total of 33 men reported to the Range for training.

1195335

DECLASSIFIED 283

DECLASSIFIED

ACTIVITIES AND SERVICES (RICHLAND)

	November	December	January
Check on absentees	8	6	10
Persons assisted *	145	186	184
Doors & windows found open in commercial facilities	33	30	29
Lost children found	11	8	5
Ambulance runs	23	29	26
Lost dogs reported	7	8	9
Dog, cat, loose stock complaints	70	56	43
Persons injured by dogs	6	4	3
Bank escorts & details	33	40	41
Fires investigated	17	23	28
Miscellaneous escorts	15	16	17
Complaints investigated	153	126	29
Natural deaths reported		3	2
Missing persons reported	2	4	
Suicide investigated	0	1	
Totals	523	540	426

ACTIVITIES AND SERVICES (NORTH RICHLAND)

	November	December	January
Check on absentees	0	0	1
Persons assisted *	63	64	101
Doors & windows found open in commercial facilities	17	19	65
Lost children found	0	1	0
Ambulance runs	0	0	0
Lost dogs reported	0	0	0
Dog, cat, loose stock complaints	2	0	0
Persons injured by dogs	1	1	2
Bank escorts & details	16	20	21
Fires investigated	1	3	4
Miscellaneous escorts	8	10	7
Complaints investigated	23	33	0
Natural deaths reported		0	0
Missing persons reported	0	0	
Suicide investigated		0	
Totals	131	151	201

*Includes: Assisting other departments, assisting outside police agencies, assisting private persons, delivering emergency messages, etc.

NOTE: Effective this month the following changes in the Activities & Services report have been made: Complaints investigated - includes those where no enforcement action was taken. Those with such action are shown in the Crime Report. Missing persons - included in Crime Report. Suicide investigated - included in Crime Report. Doors & windows found open in commercial facilities - includes all warehouses, schools, & commercial facilities.

3

1195336

COMMUNITY PATROL DIVISION

FORCE REPORT

JANUARY 1950

Patrol		Entire Patrol 12-31-49	Entire Patrol 1-31 50
Patrol Supervisor		1	1
Captains		5	5
Lieutenants		8	8
Sergeants		11	11
Patrolmen		54	54
	Totals	79	79
Clerical			
Steno-Typists		2	2
Clerks		2	2
	Totals	4	4
	Grand Totals	83	83

DECLASSIFIED

1195337

COMMUNITY PATROL DIVISION
RICHIAND JUSTICE COURT CASES

JANUARY 1950

VIOLATION	NO.OF CASES	NO.OF CONV.	NO.OF FORF.	CASES CON'T.	CASES DISM.	WARR. ISS.	TOTAL FINES	TOTAL SUSP.	TOTAL BAIL	SENT. JAIL	SENT. SUSP.	LIC.. REV.	AVER. AMOUNT
												1	$52.50
Drunken Driving	1	1					$52.50						$24.16
Negligent Driving *	6	5	1				$117.50		$27.50				$8.86
Speeding **	11	4	6	1			$37.50		$60.00				$6.25
F.T.Y.R.O.W.	2	1	1				$12.50		$12.50				$6.50
Stop Sign	2		2						$13.00				
Improper Backing	1	1					$5.50	$5.50					$5.50
Driver's License	1	1					$5.50						$7.50
Illegal Use of Lic. Plates	1	1					$7.50						$8.26
Improper License Plates ***	13	3	10				$27.50		$80.00				$1.31
Illegal Parking ****	6	5	3				$17.50	$17.50	$10.50				$5.83
Public Intoxication	3	2	1				$25.00	$12.50	$17.50				$10.00
Public Nuisance *****	2	2					$20.00			1	1		
TOTALS:	51	26	24	1			$328.50	$35.50	$221.00	1	1	1	

* 1 Case reduced from Drunken Driving and 1 - case reduced from Reckless Driving.
** 2 Driver's License cases included with this violation.
*** 2 Driver's License cases included with this violation.
**** 1 Vehicle Unattended and No Lights, case, included with this violation.
***** 1 Willful Distruction of Personal Property, case included with this violation.

1 - Case, Straggler from U.S. Navy - Taken to Prosser 1-17-50, to await Naval Auth's.
1 - Case, Grand Larceny, three boys paroled to parents.
1 - Case, Carnal Knowledge of a Minor, held over to Superior Court, following hearing in Justice Court, 2-1-50. Released on $1000.00 bail.

1195338

COMMUNITY PATROL DIVISION

NORTH RICHLAND JUSTICE COURT CASES

JANUARY 1950

VIOLATION	NO. OF CASES	NO. OF CONV.	NO. OF FORF.	CASES CON'T	WARR. ISS.	TOTAL FINES	TOTAL SUSP.	TOTAL BAIL	SENT. JAIL	SENT. SUSP.	LIC. REV.	AVER. AMOUNT PAID
Negligent Driving *	1	1			1	$52.50						$52.50
Speeding	1					$5.50						$5.50
Stop Sign	1	1				$57.50	$30.00					$3.91
Improper Lic. Plates **	7	7										
Failure to Flare	1				1							
Stalled Car						$12.50						$12.50
Public Intoxication	1	1										
TOTAIS:	11	10			2	$128.00	$30.00					

* 1 Case reduced from Drunken Driving.
** 1 Case, Driver License, included with this violation.

DECLASSIFIED

1195339

COMMUNITY PATROL DIVISION
RICHLAND CRIME REPORT
JANUARY, 1950

Classification of Offenses	Offenses Known or Reported to Patrol	Offenses Unfounded	Actual Offenses December	Actual Offenses January	Offenses Cleared by Arrest	Offenses Cleared by Other Action	Perpetrators Involved	
Assault	0	0	1	0	0	0	0	
Burglary	1	1	2	0	0	0	0	
Breaking & Entering	0	0	1	0	0	0	0	
Larceny (Except Auto & Bike)								
Over $50.00	5	1	8	4	1	0	3	a
Under $50.00	20	1	26	19	0	4	4	b
Forgery	1	0	2	1	0	1	1	c
Bike Theft	4	0	20	4	0	9	u	
Dest. of Personal Property	2	0	3	2	0	0	u	
Dest. of Government Property	1	0	2	1	0	0	u	
Loss or Theft of Gov't. Prop.	0	0	1	0	0	0	0	
Investigation	6	0	6	6	0	6	10	d
Suicide	0	0	1	0	0	0	0	
Disturbance	4	0	7	4	0	4	4	e
Public Intoxication	3	0	6	3	3	0	3	
Public Nuisance	2	0	4	2	2	0	2	
Pickup for Outside Agency	1	0	0	1	1	0	1	
Offense Against Family & Child.	6	0	2	6	0	6	6	
Missing Persons	2	0	2	2	0	2	2	f
Carnal Knowledge of Minor	1	0	0	1	1	0	1	
Indecent Liberties With Minor.	0	0	1	0	0	0	0	
Vandalism	1	0	6	1	0	1	1	g
Malicious Mischief	3	0	4	3	0	1	1	h
Auto Theft	1	0	0	1	0	1	u	
Prowlers	2	0	5	2	0	1	2	i
Counterfeit Money	1	0	0	1	0	0	u	
Obtaining Money UFP	1	0	0	1	0	0	u	
TOTALS	68	3	110	65	8	36	41	

(Continued on Page Two)

DECLASSIFIED

1195340

COMMUNITY PATROL DIVISION—RICHLAND CRIME REPORT—JANUARY, 1950—

a—1 Case Perpetrated by 3 Juveniles, Ages 16, 17, & 19.
b—1 Case Perpetrated by 2 Juveniles, Ages 16 & 18.
1 Case Perpetrated by 1 Juvenile, Age 12.
c—1 Case Perpetrated by 1 Juvenile, Age 17.
d—1 Case Perpetrated by 1 Juvenile, Age 13.
1 Case Perpetrated by 1 Juvenile, Age 16.
e—1 Case Perpetrated by 5 Juveniles, Ages 9,11,11,12, & 13.
1 Case Perpetrated by 1 Juvenile, Age 11.
1 Case Perpetrated by 1 Juvenile, Age 10.
f—1 Case Perpetrated by 2 Juveniles, Ages 15 & 17.
g—1 Case Perpetrated by 1 Juvenile, Age 10.
h—1 Case Perpetrated by 1 Juvenile Age 10.
i—1 Case Perpetrated by 2 Juveniles, Ages 15 & 17.

u—Represents Unknown.
Property Recovered for the Month—$532.00 (4 Bikes)
No Colored Persons Involved.

DECLASSIFIED

259

1195341

COMMUNITY PATROL DIVISION
NORTH RICHLAND CRIME REPORT
JANUARY, 1950

Classification of Offenses	Offenses Known or Reported to Patrol	Offenses Unfounded	Actual Offenses December	Actual Offenses January	Offenses Cleared by Arrest	Offenses Cleared by Other Action	Perpetrators Involved
Larceny (Except Auto Theft & Bike)							
Over $50.00	0	0	0	0	0	0	0
Under $50.00	3	0	1	3	0	0	u
Offense Against Family & Children	0	0	1	0	0	0	0
Public Intoxication	1	0	5	1	1	0	1
TOTALS	4	0	7	4	1	0	1

There were no Juveniles Involved and No Colored Persons, Involved.

DECLASSIFIED

1195342

COMMUNITY PATROL DIVISION
CRIME COMPARISON REPORT
JANUARY, 1950

Number of offenses known to police per 25,000 inhabitants in cities of 25,000 inhabitants:

Class.	Wash. Oregon & Calif. Six Months (Jan–June 1949)	Wash. Oregon & Calif. One Month Average	Richland Six Months (Jan–June 1949)	North Richland Six Months (Jan–June 1949)	Richland December 1949	Richland January 1950	North Richland December 1949	North Richland January 1950
Murder.....	.60	.10	0	0	0	0	0	0
Robbery.....	15.80	2.63	0	1	0	0	0	0
Aggrav. Asslt.	10.15	1.69	4	16	1	0	1	0
Burglary.....	90.90	15.15	8	5	2	0	0	0
Larceny.....	254.22	42.37	181	97	34	23	1	3
Auto Theft....	38.4	6.40	4	5	0	1	0	0

Number of offenses known to police per 25,000 inhabitants regardless of whether offenses occurred in cities or rural districts:

Class.	State of Washington Six Months (Jan–June 1949)	State of Washington One Month Average	Richland Six Months (Jan–June 1949)	North Richland Six Months (Jan–June 1949)	Richland December 1949	Richland January 1950	North Richland December 1949	North Richland January 1950
Murder.....	.79	.13	0	0	0	0	0	0
Robbery.....	11.25	1.87	0	1	0	0	0	0
Aggrav. Asslt.	3.82	.63	4	16	1	0	1	0
Burglary.....	74.35	12.39	8	5	2	0	0	0
Larceny.....	241.60	40.26	181	97	34	23	1	3
Auto Theft...	38.05	6.34	4	5	0	1	0	0

The Portion of offenses committed by persons under the age of 25 years, is shown by the following figures:

Class.	National Average Six Months (Jan–June 1949)	Richland Six Months (Jan–June 1949)	North Richland Six Months (Jan–June 1949)	Richland December 1949	Richland January 1950	North Richland December 1949	North Richland January 1950
Robbery	53.4	0	0	0	0	0	0
Burglary	59.9	1	0	0	0	0	0
Larceny	45.1	25	44	0	3	0	0
Auto Theft	67.8	3	0	0	0	0	0

Note: Statistics of Juvenile offenses throughout the United States were taken from the Uniform Crime Report published by the Federal Bureau of Investigation, which states: "It should be remembered that the number of arrests recorded is doubtless incomplete in the lower age groups because of the practice of some jurisdictions not to fingerprint youthful offenders."

DECLASSIFIED 1195343

PATROL DIVISION - TRAFFIC CONTROL STATISTICS
January - 1950

MOTOR VEHICLE ACCIDENTS:

	Total Number		Fatalities		Major Injuries		Minor Injuries	
	Dec.	Jan.	Dec.	Jan.	Dec.	Jan.	Dec.	Jan.
Richland	16	33	0	0	0	0	1	0
North Richland	0	3	0	0	0	0	0	0
Totals	16	36	0	0	0	0	1	0

ACCIDENT CAUSES:

	Negligent Driving		Failure to Yield Right of Way		Reckless & Drunken Driving		Other Causes	
	Dec.	Jan.	Dec.	Jan.	Dec.	Jan.	Dec.	Jan.
Richland	2	4	4	10	1	1	9	18
North Richland	0	0	0	2	0	0	0	1
Totals	2	4	4	12	1	1	9	19

PLANT WARNING TRAFFIC TICKETS ISSUED:

	Speeding		"Stop" Sign		Parking		Imp. License		Def. Equipment		Other Violations		Totals	
	Dec.	Jan.	Dec.	Jan.	Dec.	Jan.	Dec.	Jan.	Dec.	Jan.	Dec.	Jan.	Dec.	Jan.
Richland	0	0	0	0	89	34	0	1	2	2	0	0	91	37
North Rich.	0	0	0	1	23	21	0	1	4	3	0	0	27	26
Totals	0	0	0	1	112	55	0	2	6	5	0	0	118	63

TRAFFIC CHARGES AND COURT CITATION TRAFFIC TICKETS ISSUED:

	Speeding		"Stop" Sign		Drunken Dr.		Reckless Dr.		Right of Way V.		Neg. Dr.		Parking V.		Other V.		Totals	
	Dec.	Jan.	Dec.	Jan.	Dec.	Jan.	Dec.	Jan.	Dec.	Jan.	Dec.	Jan.	Dec.	Jan.	Dec.	Jan.	Dec.	Jan.
Richland	22	12	9	2	6	2	5	1	4	2	10	4	20	8	7	22	83	53
N. Rich.	5	0	0	1	2	1	0	0	0	0	4	1	0	1	2	8	13	12
	27	12	9	3	8	3	5	1	4	2	14	5	20	9	9	30	96	65

TRAFFIC VOLUME: No traffic count taken during January due to ice and snow on the streets.

Note: Traffic Control Statistics show ORIGINAL CHARGES ONLY.

232

1195344

DECLASSIFIE

COMMUNITY DIVISIONS

COMMUNITY - ACTIVITIES DIVISION
January

ORGANIZATION AND PERSONNEL

Number of employees on roll

Beginning of month		12
Additions	0	
Terminations	9	
End of month		12

SCHOOLS

The following is a tabulation of full-time paid School District #400 personnel as of January 31, 1950:

Administration	6
Principals & Supervisors	18
Clerical	16
Teachers	246
Health Audiometer	1
Building Custodians	51
Cooks	38
Nursery School & Ex. Day Care	11
Bus Drivers	2
	389

CLUBS AND ORGANIZATIONS

As of January 31, 1950, organization's personnel include:

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	52
Veterans Administration	2
Girl Scouts	2
Masonic Lodge	1
Justice of Peace	1
	77

1195345

DECLASSIFIED

DECLASSIFIED

Community-Activities Division

The Tri-City Kiwanis Clubs held their Fifth Annual Officer Installation Banquet in the Recreation Hall on Tuesday evening January 3. Dr. E. T. Allen, Past Lieutenant Governor presented the major address.

The American Red Cross Bloodmobile collected 60 pints of blood from Richland residents during the January visit.

Miss Maurine Miller has been appointed Executive Director of the Richland Girl Scout Council. Miss Miller succeeds Mrs. Betty Watts who resigned as Director after serving two years in that capacity.

The Richland March of Dimes, which began January 16, has been extended through February 5. Bad weather had hampered many of the activities throughout the first week of the drive.

Five thousand toys were given to the Ride of Toys Drive by children in the Richland schools. The drive was sponsored by the American Legion and collections were made on January 6.

On January 18, the Activities Division issued a work order to clear off several areas of snow so that the Richland Rod and Gun Club could distribute feed for the wild birds. The deep snows were preventing the birds from foraging their own food. Fifty pounds of feed packed in five pound packages provided by the club were given out by the Activities Division to those people that came in and were interested in distributing it in areas not covered by the club.

Mac Morgan was the guest artist at the second Community Concert held Friday evening, January 20. Mr. Morgan presented the concert before a capacity house.

The Activities Division issued 34 Work Orders to the Community-Public Works Division during the Month of January.

Twenty-four Service Orders were issued by the Activities Division during the month.

The Atomic Energy Commission approved the appointment of five new members to the Recreation Advisory Committee on January 10, 1950. In the Atomic Energy Commission approval letter it was approved that a member of the Community Council be appointed as an observer at all meetings.

On January 17, 1950, the regular monthly meeting of the Recreation Advisory Committee was held. The minutes of the December 13, meeting were approved by the Atomic Energy Commission On December 26, 1949. Mr. C. T. Johnson was elected Chairman for the next six months. The Community-Crime Prevention Section and the Activities Division Recreation Section are to make a study of the existing problems regarding juvenile leisure time. The proposed revised schedule of charges for the use of school facilities was reviewed. No action was required. It was suggested that the School District present sufficient publicity to justify the increase in rates. Organizations receiving Atomic Energy Commission approval on January 30, 1950, include: Hi-Spot Advisory Board, Whitman Alumni Association, Richland Ramblers, and Yakima Guitar Center.

1195346

Community-Activities Division

The Contract of Sale for the office equipment in the Hanford Atomic Metals Trades Council at 1319 Lee Blvd. was approved by the Atomic Energy Commission on January 23, 1950.

The Organization and Records Division of the Activities Division have issued leases to the following organizations: Southside United Protestant Church, Church of the Nazarene, Red Cross, American Legion, Sacajawea Rifle & Pistol Club, Youth Council, Villagers, Inc. Library and Office.

On January 26, 1950, the Atomic Energy Commission approved the leases for the Richland Riders Club and the Castle Club.

CHURCHES

The following is a tabulation of full-time paid church personnel, as of January 31, 1950:

	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
Foursquare Gospel	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 - Southside	1	0	1
United Protestant - Northwest	1	0	1
	19	7	26

Dedication services for the Church of the Nazarene were held Sunday, January 29, in their newly constructed church building. Dr. D. I. Vanderpool and Rev. E.E. Zachary conducted the dedication services.

The Church of Christ, who are constructing their church on the corner of Thayer Drive and Swift Blvd., have the building about 30% completed. The adverse weather conditions have held up the construction to some extent.

Dr. H. A. Zimmerman, Pastor of the Richland Baptist Church, resigned from his position on January 15. Guest ministers have been invited to present services each Sunday until a new pastor is assigned.

DECLASSIFIED

1195347

DECLASSIFIED

CHURCH	DATE STARTED	ESTIMATED % COMPLETE	OCCUPANCY DATE
Nazarene Church	April 12, 1949	98%	11/30/49
Latter Day Saints	Feb. 5, 1949	65%	
Latter Day Saints (Reorganized)	August 22, 1949	15%	
U. P. Southside	Nov. 5, 1948	98%	4/10/49
Richland Baptist	Nov. 27, 1949	98%	4/17/49
Church of Christ	Dec. 21, 1949	30%	

RECREATION

The number and types of organizations presently served by the Community - Activities Division include:

Business and Professional Clubs		19
Churches & Church Organizations		25
Civic Organizations		4
Fraternal Organizations		20
Music & Art Associations		8
Recreation & Hobby Groups		38
Schools & Parent Teachers Associations		13
Social Clubs & Organizations		11
Veteran & Military Organizations		12
Welfare		6
Youth	Boy Scouts	19
	Camp Fire Girls	36
	Girl Scouts	49
	Misc.	9
Miscellaneous		7
	Total	276

The "Guide to Richland" a booklet describing the various community organizations listed above, together with a directory of the representatives of these various groups was mailed to Project employees who are on exempt payroll and to each organization mentioned in the "Guide". The information contained in the booklet was either assembled or composed by the Activities Division.

Interest directed toward the winter recreation program sponsored by the Recreation Section is encouraging. Participatinn in the program was good in spite of the inclement weather. Attendance figures for January are as follows:

	Number of nights	Attendance
Weightlifting	9	180
Women's Sport Night	3	91
Co-Rec Night	3	105
Men's Sport Night	4	128
Fencing	4	33
Ice Skating	4	600
	27	1137

1195348

Community-Activities Division

Ice Skating was provided at the municipal rink and the activity was encouraged by announcements through the newspapers and schools. Participation was not as great as anticipated due to unfavorable and unpredictable weather conditions.

Scrap books containing a history of the activities of the Activities Division and other information relative to the subject of recreation are being brought up to date.

Two rugs, 9 ' x 19' have been secured from Excess to serve as a back stop for the proposed indoor archery range to be located in the girls' gym at the Columbia High School. It has been decided that this fast growing sport will be sponsored by the Recreation Section with the cooperation of the Roving Bowmen Association and School District #400.

The Richland Hoop Shoot was successfully completed January 31. This program was jointly sponsored by the Recreation Section and Villagers, Inc. and enjoyed the cooperation of School District #400. Participation was school-wide and city-wide. Men and women, school boys and girls of all ages tested their skill at the free throw line. Winners were named in five separate divisions.

The winter recreation program is to be expanded by the addition of another open gym night beginning February 3, and continuing each Friday night thereafter at the Spalding Grade School. Badminton play will be stressed. Ping pong will also be made available. A limited amount of equipment is being provided.

A public relations and news forum has been tentatively set for an early date in March. This program will be sponsored by the Recreation Section and assistance given to it by the Community-Relations Division, Villagers, Inc., and the Tri-City Herald. Its purpose is to educate the public in the proper procedure regarding publicity and news release to the press.

A meeting to discuss the formation of municipal sports federation in Richland was held January 26, in the office of the Recreation Section. The representative group of sports-minded persons who attended the meeting recommended further study on the question and additional meetings.

Community Service

The Community Council and School District #400 Board elections, February 4, has involved planning and attention to numerous details. Nearly all of the arrangements are similar to the election of last year. School District #400 has agreed to pay a maximum of $251.00 or one-half the combined election costs. Contact with the Benton County Auditor effected the loan of voting booths, ballet boxes, and flags. Two hundred election talley sheets and 5,500 election ballots are being printed. Election clerks have been secured. This division is set up to disseminate voting information and will tabulate election results. Work schedules have been adjusted to permit this specific assignment.

DECLASSIFIED

1195349

DECLASSIFIED

Under the supervision of the Recreation Section the tennis courts at the Columbia Playfield were converted into an ice skating rink. Park benches, fire wood, night lights and sound amplification with music were provided. The night skating was supervised. The ice was kept in as good condition as possible by frequent application of water spray.

It was necessary to provide additional electrical outlets and rewiring at the Community House.

Shuffleboard courts in the Community House were repainted and varnished.

On January 12, at the Columbia High School the Richland Tennis Club presented a movie program featuring National Amateur and Davis Cup championships. Tennis instructional films were also shown. The meeting was open to the public.

Park Development

A study was made of the budget for school ground development

A program was considered for the $100,000 construction budget item and Engineering Service Request was made to set up projects on same.

A revision was made of the breakdown of the park system lands which reduce the total and shows types of areas in acreage.

The irrigation designs of the play areas at Carmichael and Spalding Schools were checked with Community-Engineering with respect to their construction being transferred to the Community Division from the Design and Construction Division.

A close check was made on the temporary emergency irrigation system at the Spalding playfield

In December the $50,000 Project (B625) for Playground Equipment was presented to the A. & B. Committee for approval at which time it was approved with recommendations to delete certain minor items. During January the Project was revised to incorporate these recommendations and is now awaiting approval.

MAJOR EVENTS FOR THE MONTH

January 3	Tri-City Kiwanis Clubs Installation	Community House
4	Red Cross Blood-mobile	Red Cross
6	Ride of Toys Drive	Village
12	Tennis Club movies	Columbia High School
16 -		
Feb. 5	Polio Drive	Village
18	Polio Basketball Game	Columbia High School
20	Community Concert - Mac Morgan	Carmichael Jr. Hi.
28	Polio Dance	Columbia High School
31	Final Hoop Shoot	Columbia High School

1195350

GENERAL ELECTRIC COMPANY
HANFORD WORKS
COMMUNITY ACCOUNTING DIVISION

MONTHLY REPORT FOR JANUARY, 1950

ORGANIZATION

Employees - Beginning of Month	27	Exempt	4	Male	8
New Hire	1	Non-Exempt	22	Female	18
Transfers	2	Total	26		26
Total - End of Month	26				

A Steno-Typist was transferred to the Technical Personnel Division and the former Community Accountant was transferred as Assistant Community Manager. A Steno-typist was hired to relieve the over-load in the Cost Division.

The Community Accountant attended a meeting of representatives of the Communities of Oak Ridge, Los Alamos, and Richland which was held at Los Alamos the week of January 23. Problems of mutual interest were discussed by Community Managers, Accountants and other Staff members.

Rents	January	December
House Leases Processed		
New Leases	97	124
Modifications	4	7
Cancellations	104	120
Total Active House Leases	5706	5713
Dormitory		
New Assignments	79	72
Removals	59	87
Total Occupancy	927	907
Rental Revenue was as follows:		
Equipment	$ 60.07	$ 38.41
*Houses	255,297.02	257,155.95
*Dormitories	12,580.20	12,702.77
*Facilities	49,658.54	39,653.81
	$317,595.83	$309,550.94
Unoccupied Dormitory Revenue Loss	3,217.30	3,094.73
Unoccupied House Revenue Loss	3,775.48	1,916.55
	$324,588.61	$314,562.22

* Includes Utilities furnished which are collected as a part of the rental.

Eight facility operators still have equipment on a rental basis, which accounts for the equipment revenue.

1195351

DECLASSIFIED

DECLASSIFIED

Telephone	January	December
Number of work Orders processed	526	333
Number of working phones	3356	2946
Revenue including services	$11,809.65	$10,772.28

The delinquent notices normally sent to subscribers who have not paid their account in full by the 25th of the current month for which statements are usually sent no later than the tenth of the month have caused a little grief among some cash paying customers. Because of delays in receiving the toll information from Spokane, the statements have also been delayed, with the result that there was little grace period allowed between the time the telephone statement was sent and the delinquent notice received. This situation has been corrected by adjusting the monthly toll period to assure the statement being prepared and in subscriber's hands by the tenth of the month. When this is not possible, the delinquent notices also will be held until a justifiable span of time has elapsed.

Miscellaneous	January	December
Invoices Issued	209	221
Miscellaneous Revenue	$751.68	$969.45

The following building permits (alterations) were issued during the month:

Lessee	Amount
Kard and Conrad Diettrich	$ 15.00
Scott Publishing Company	4.00
Total January Revenue	19.00
Previously reported	5,267.51
Total to Date	$5,286.51

Government-owned equipment was sold during the month to the Hanford Atomic Metal Trades Council at an agreed upon price of $ 350.00

Previous Sales	105,089.97
Total to Date	$105,439.97

General

There were fifty-three collection letters written during the month resulting in the collection of twenty-seven accounts totaling $944.08.

There were thirteen small miscellaneous telephone balances totaling $2.93 written-off the books during the month.

One account covering willful damage to a residence which involves a terminated employee, hospitalized, was considered of an uncollectible nature and the AEC's approval was received to remove it from the accounts receivable file.

1195352

The Richland Plumbing and Heating account in the current amount of $864.36 is still an outstanding obligation and we are awaiting clarification of the status of this contract before taking further action.

ACCOUNTS PAYABLE

STATISTICS	January	December
Accounts Payable Vouchers Processed	178	174
Freight Bills Processed	13	13
Purchase Orders Received	59	63
Net Amount of Purchase Orders	$7,598	$26,636

A summary of the active Community subcontracts is shown below:

Subcontractor	Sub-Contract Number		Amount Awarded	Paid this Month	Total Paid	Amount Retained
Frederickson, Dr. J. L.	-----	*$	1,344.00	$ 167.00	$ 1,344.00	$ -0-
Newland Cafeteria	-----	*	5.58	-0-	5.58	-0-
Richland Maintenance Co.	-----	*	63,412.94	6,697.08	63,412.94	-0-
West Coast Painters Co.	G-219		58,526.79	-0-	43,974.85	2,926.34
Abrams Aerial Survey Corp.	G-268		14,208.41	-0-	-0-	-0-
Tacoma Asbestos Company	G-281		12,667.35	9,708.06	9,708.06	1,068.19
Holaday & Edworthy, Inc.	G-284		4,700.00	-0-	--0-	-0-
			$154,865.07	$16,572.14	$118,445.43	$3,994.53

* Total amount of contract will be total of estimates as submitted.

The Community Divisions Obligations and Expenditures report, Compilation of B & O Tax, and Report on Overtime meals was submitted for consolidation to the General Division.

The Community Division's estimate of Cash Receipts for January amounted to $96,500 and estimated cash disbursements were $58,700.

COST

Reports

The December Cost Report was completed and issued on January 19, 1950. The Comptroller's Appropriation Report for December was issued on January 20, 1950.

Budget

Graphs of Budget amounts versus actual amounts covering functions shown on our Prime Operating Report for Fiscal Year 1950 were completed for comparison with other AEC installations in a meeting at Los Alamos the

1195353

DECLASSIFIED

DECLASSIFIED

week of January 23, 1950.

The budget amounts for reporting purposes have been revised in accordance with the Mid-Year budget review.

Work Orders

A summary of work order statistics for the last two months is listed below.

Craft	Service Orders Dec.	Service Orders Jan.	Total December	Total January
1. Plumbing	659	775	$1,545.49	$ 1,943.67
2. Electrical	1,853	2,295	4,421.29	6,049.25
3. Heat & Vent	690	939	2,275.62	3,588.90
4. Glazing	62	58	289.01	300.43
5. Lock & Key	237	184	627.62	541.94
6. Carpentry	233	327	679.73	761.26
9. Sheet Metal	6	12	49.63	87.20
	3,740	4,590	$9,888.39	$13,272.65

New Work Order forms meeting the approval of Community Accounting and the Public Works Division were ordered. Work on the procedure is continuing.

Statistics covering regular work orders:

	December	January	Net Change
Active Routine	476	484	
Active Normal	1,182	1,372	/ 198
	1,658	1,856	
Work Orders Received	1,277	1,291	
Work Orders Completed	1,199	1,093	
	/ 78	/ 198	

GENERAL LEDGER

	No.	Amount Debit	Amount Credit
Second Class Invoices Received	77	439,261.55	224,859.33
Second Class Invoices Issued	31	99,684.01	1,138.20

The December trial balance and supporting financial statements were forwarded to the General Division for Consolidation on January 18, 1950.

1195354

DECLASSIFIED

[redacted]

DESIGN AND CONSTRUCTION DIVISIONS

January, 1950

ORGANIZATION AND PERSONNEL

Number of employees on payroll:	
Beginning of month	534
End of month	554
Net increase	20

INVENTIONS OR DISCOVERIES

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 discoveries or inventions.

INVENTOR	TITLE
R. J. Schier	An alloy of gadolinium, oxygen and titanium or gadolinium and titanium up to about 5% gadolinium by weight for control rods in thermal reactors

REACTOR DIVISION

I SUMMARY

Control Rods

It was decided to change from the sheet to the round control rods for reasons contained in HDC-1598. This change affected the design of the moderator rod and drive assembly, top shield and the ball 3-X adapter section which mates with the rod slot. The change also brought the drop tests to a halt in order to modify the experimental set-up to accommodate round rods and the modified ball 3-X system. Test modifications are progressing satisfactorily.

Heat Transfer Test

All major items of equipment for both the short length and full scale tests have been ordered. However, the orders for the installation of the equipment have been held up again because it has been decided that this work must be done by a construction contractor rather than by the Minor Construction Division as originally planned.

[redacted]

1195355

II STATISTICAL AND GENERAL

Shielding

The shielding test program at Hanford will have to be increased and given added impetus because ORNL will not be able to provide the assistance originally anticipated. However, it is felt that sufficient test data is available from ORNL to justify the decision to use a poured concrete shield on the "G" reactor. Additional specific design data will have to be obtained.

Gas Cooling of Control Rods

Preliminary calculations of cooling gas requirements for sheet rods have been completed and are reported for record purposes in HDC-FT-104. The analyses for cooling around rods has been started and a preliminary result may be obtained by approximately March 15, 1950.

Ball 3-X System

Design studies have been initiated to adapt the ball 3-X system to the slot for the round rods. Detail drawings have been started of a complete test assembly.

Control Rods

A design study has been started of a round rod assembly which includes such items as: (a) a friction drive to raise the rod, (b) an inverted thimble which also serves as a pneumatic cylinder, (c) the round rod with a piston which operates in the cylinder for deceleration purposes, and, (d) a gate valve used during rod removal. An analysis was started on the decelaration characteristics of this assembly.

Metal Handling

Two Committee meetings were held during the month on the general subject of "segmented discharge". The next meeting will be held after the committee members have reviewed a forthcoming Technical Division report on the subject.

A report covering the committee's discussions on "continuous charging" is now in preparation.

The detail drawings of the charging and discharging machines are approximately 90% complete. The Drafting Section has been requested to prepare design layouts of both machines.

Moderator

The moderator design has been modified to include the round control rods. Tests have been started to determine the comparative strength of round vs square graphite keys.

End Cap Temperatures

End cap temperatures were investigated and are reported by G. M. Roy in

End Cap Temperatures - Continued

Document HDC-1584, "Maximum Temperature of Aluminum End Cap". A value of 278° F. was calculated for the "G" design and represents the highest temperature of the aluminum end cap in contact with the uranium slug.

100-G Heat Transfer Test

Semi-monthly progress reports have been received from the General Engineering and Consulting Laboratory covering the period up to January 16. The work has been preliminary in nature and the scheduled completion date of April 15 appears likely. The aluminum alloy 52 S was selected as first material choice for the heater tube. Supplementary instructions concerning the thermo test unit and the full scale heat transfer tests were transmitted, and a sample of process tubing was sent to General Engineering and Consulting Laboratory. Two process tubes 23' 6" in length complete with gunbarrels and gunbarrel flanges are being prepared for shipment.

100-G Water Plant

An analysis of the overall Water Plant selection problem is being made to point out any important problems upon which attention should be focused at an early date to permit detailed scoping of the work to commence as scheduled on September 1, 1950.

Recirculation Test (Test Project #20)

The present status of this test is as follows:

Drawings	60%
M & E List	60%
Equipment Requisitions	100%
Material Requisitions	50%
Construction	0

III ORGANIZATION AND PERSONNEL

Number of employees on payroll:

Beginning of Month	41
End of Month	41
Net Change	0

SEPARATIONS DIVISION (D & C)

I DESIGN

MJ-1 Redox Production Facilities

On January 5 a decision was reached to proceed with design on the basis of the present location of the Production Plant in the West Area. The data on

1195357 DECLASSIFIED

MJ-1 - continued

which the decision was based appears in a report from F. A. Hollenbach to File dated 1/3/50, INDC 3945.

The Kellex narrative report on main Production Plant, Stack and Mock-Up for the month of January has not been received. The scheduled percentage completion of design as of January 31, is 28.5. The expected completion is 27.5%. Engineering Flow Diagrams for Aqueous Make-Up and Architectural Scope Drawings have been approved and returned by the AEC. The Mock-Up Building has been re-located from the East Area to the West Area and the scope drawings have been revised to show the new location, and have been submitted to the AEC for approval. Scope drawings covering the architectural heating and ventilating for the 202-S Building have been commented upon and are ready for final approval. Approximately 125, or 5% of the total, Kellex drawings for construction have been received; most of these were received toward the end of the month. Of those received about 20% have been approved for construction. The approved drawings have been distributed within the General Electric.

Kellex Operating Galleries Piping Diagrams are being reviewed. Some difficulty has been experienced in interpreting the Kellex drawings with regard to apparent differences between the Kellex drawings and the General Electric scope drawings. The Kellex process representative is expected to be in Richland, Thursday, February 2, to assist in this work. Kellex Piping Gallery study drawings are being reviewed. A rearrangement of the gang valves is anticipated. Comments on Aqueous Make-Up drawings and heat exchanger duties have been sent to Kellex.

W. B. Webster, J. H. Carlin and H. E. Hanthorne spent one week in New York for the purpose of expediting interchange of engineering information, particularly in regard to piping.

C. E. Kent and R. G. Barnes spent one week in New York on the matter of special equipment design i.e. heat exchangers, towers and concentrators.

Purchase requisitions for engineered items began to flow from Kellex during this month. The total number of requisitions received as of January 31 is 62. 36 purchase requisitions have been forwarded to Procurement, the balance are being reviewed by General Electric or corrected by Kellex. Included among the requisitions sent to Procurement are three items of major importance, namely, switch gear and motor control centers for the 202-S Building, a bulk requisition covering all pipe connectors being designed by the Crane Company and a bulk purchase requisition for all electrical connectors being designed by Pyle-National Company. In order to expedite the design of the latter two items, T. Williams and J. C. Cartmell were to make on-the-spot approval of a number of Crane drawings in Chicago January 30 and 31.

Of the 19 construction specifications being prepared by Kellex, 10 have been approved and issued, the balance are in the preparation or approval stage. Specification HW-4302 "Plain and Reinforced Concrete", as approved by General Electric and transmitted to the AEC for approval November 11, 1949, has not been received back from the AEC as of this date.

MJ-1 - continued

All of the Outside Auxiliary Facilities being designed by General Electric will have been scoped by the Separations Division and the basic design information will have been transmitted to Power and Mechanical Division not later than January 30, for all items except Propane Storage, due February 3, and Mock-Up Building Utility Connections due February 10. This will enable work on auxiliary facilities to proceed more rapidly. MJ-1 Outside Utilities scope work is approximately 85% complete and construction design is approximately 35% complete as of January 31.

MJ-1 Waste Disposal Facilities

Invitations to bid are being prepared by the Contract Division for the 241-S Tank Farm, Retention Basin and Waste Disposal Cribs. A fair estimate for bid comparison is being prepared for the Contract Division.

MJ-2 234-5 Building Program

Phase I	(Portion after July 31, 1949) Actual, based on cost - 74%	Scheduled - 100% *
Phase II	Actual, based on cost 107.9%	Scheduled - 87.1% *
Phase III	Actual, based on cost - 45.8%	Scheduled - 67.2%
R. M. Line	Actual, based on expenditures to 1-13-50 - 95.1%	Scheduled - 97%

* New estimate and schedule being prepared

A rough draft of a "Schedule of Shipping To Hanford" was submitted by Schenectady which contained information as to when installation data will be available, and their recommendation as to which equipment should be installed first in the building. The final data will be available by 5-15-50.

A tentative schedule for the R. M. Line installation was prepared. This was reviewed by the Working Committee and submitted to the Separations Committee.

A revised schedule on Project 432 by tasks was submitted by Schenectady. This schedule was based on proceeding in the most economical manner and reflected the effects of changes already authorized by Hanford. This revised schedule permits them to spend more time on engineering before initiating procurement, which will tend to keep expenditures for materials and subcontracting more nearly in line with the present quotation.

A drawing list and schedule were prepared for the remaining drawings to be issued for the work to be done in Richland.

Five items of the 47 Design Modifications were reclassified and are now in the 1A classification, which includes items requiring immediate action that are necessary to make the R. M. Line operable. It appears that all Design Modifications presently authorized, along with the items which may be authorized in the future, will not cost more than $125,000.

MJ-2 - continued

AEC approved the completion of Room 161 and Maintenance Shop "D" as outlined in the justification letters. These approvals were reviewed by the Separations Committee, and Room 161 is to be released for construction.

A work order was issued to the Electrical Division covering the completion of the ADT Alarm System at Richland Patrol Headquarters.

Preliminary copies of the process area arrangement were received from Schenectady showing the arrangement of process hoods as affected by Design Change #22 (Relocation of stairwell #6)

MJ-3 A Rala Facility

Authorization to proceed with the GE & C design and development of the electrolytic cell has been forwarded to Schenectady.

Flow sketch and layout work is substantially complete on Cell 5 equipment and designs for Cell 5 equipment are in process. Flow sketch and layout work on Cell TA installation is substantially established and agreement in detail should be reached within the next week or two. Flow sheet and layout work in the Cell TB installation in which special metals and extremely difficult design are encountered has been generally determined; however, completion of this work will be delayed by the engineering difficulties inherent in it.

An initial study on sampling devices and sample carriers for samples from larger size solutions is nearing completion. It will probably be necessary to construct lucite models of this equipment for mechanical tests. No feasible equipment has yet been developed by study for samples from the smaller solution.

Scope design work has been initiated on the 291-T fan installation and on the 272-E mock-up installation.

Scope design of the laboratory has not yet begun but will begin as soon as design requirements are received from the Analytical Section of the Technical Division.

A preliminary scope and detailed design drawing list has been issued. These drawing lists will be revised as soon as adequate information is available.

The design of temporary construction facilities is under way. Work orders for the erection of these facilities are expected to be prepared by the first week in February.

MJ-4 Waste Metal Recovery

Design Instruction, including a Preliminary Engineer's Flow Sketch have been prepared covering removal of waste from one cascade in the 241-U Tank Farm. This will serve as a basis for a firm design proposal to be submitted by an Architect-Engineer.

[redacted]

1195360

MJ-4 - continued

The feasibility of underground pipe line transfer of radioactive material between the 200-East and 200-West areas has been checked with the Security and H. I. Divisions. Cost estimates are being prepared on this scheme and on transfer by shielded tank car. When this work is completed a choice as to transfer method can be made.

Equipment arrangement and piping studies for conversion of U canyon have been initiated.

Preliminary column specifications received from the Technical Divisions indicate that at least four, possibly six, cell floors will have to be lowered by about twenty feet. The effect this would have on the structural stability of the 221 Building is still to be evaluated.

Metal Sweetening and Conversion Facilities

No further design work is contemplated by the MJ-1 Project Group on UO_3 conversion until complete process information and authorization to proceed have been received.

Redox Analytical and Plant Assistance Laboratory

The Architect-Engineer reports design at approximately 87 per cent complete as of January 31, 1950. Architectural and Structural drawings were issued by the Architect Engineer for review and comment. These are preliminary and are not final completed drawings.

The preliminary construction schedule and a design schedule were transmitted to the AEC and interested parties January 27, 1950 for information. Completion of the building design by the Architect-Engineer is scheduled for February 6, 1950. This date does not allow for General Electric approval and possible required changes. Completion of equipment design is tentatively scheduled for March 1, 1950 and final completion date for approved drawings and specifications for April 1, 1950.

Construction cost estimates were transmitted to AEC by the Manager, Technical Divisions January 24, 1950 and also transmitted to AEC, "Attention, Mr. R. W. Stuck", January 30, 1950. Outline plans and specifications transmitted to AEC December 20, 1949 have not been approved.

Redox Laboratory Waste Disposal Facilities

The budget responsibility for the Laboratory Waste System, 219-S, and the Dry Waste Disposal Vault, 232-S, has been assumed by the Technical Division. The MJ-1 Project Group has been assigned the responsibility for design. Engineers Flow Sketches for the Laboratory Waste System have been approved and Engineering Flow Diagrams have been prepared and are awaiting the approval of the Technical Division's Laboratory Contact Engineer. It is expected that the latter will resolve any questions concerning common usage of Facilities by Technical and Manufacturing Divisions concerned with disposals of Laboratory wastes.

1195361 DECLASSIFIED

Health Instrument Control and Development Laboratory

The Architect-Engineer report design at approximately 60 per cent complete as of January 31, 1950. This report for December was in error and actual completion as of December 31, 1949 as reported by the Architect-Engineer was 55.3 per cent.

Design of this building will be expedited on completion of the Redox Laboratory by the Architect Engineer.

The Architect Engineer submitted the claim in the amount of $250 for additional work on it's subcontract G-259 as directed by the General Electric Company. This claim has been submitted to the AEC Construction Office for approval prior to requesting a contract modification by the Contract Division.

II CONSTRUCTION

MJ-1 Production Plant

Presently anticipated date for start of construction of this facility is April 15, 1950.

MJ-1 Waste Disposal Facilities

Estimated date for start of construction of this facility by a lump sum contract is April 15, 1950.

MJ-2

Construction:

Phase I (Portion remaining to be completed after July 31, 1949)
Actual, based on cost - 27.4% Scheduled - 64.5%

MJ-3

A Directive has been received for the procurement and construction of MJ-3 facilities and cost codes have been established.

Work orders for clean-up work in the 221-T Building have been issued and temporary construction at the "T" Plant area is scheduled for February 15, 1950. Requisitions for certain special laboratory equipment have been issued.

Redox Analytical and Plant Assistance Laboratory

Preliminary construction schedule for this building indicated start of construction of February 15, 1950. Present weather conditions may cause a delay in the start of construction beyond this date.

Personnel Meters and Records Building

Stop charge and completion notice on this facility was issued Jan.27,1950.

1195362

III ORGANIZATION AND PERSONNEL

Number of employees on payroll:

Beginning of Month	65
End of Month	73
Net Increase	8

Arrangements have been made with the Kellex Corporation to furnish eight engineers to the Separations Division for scoping of MJ-4. Three of these men reported during January.

POWER AND MECHANICAL DIVISION (D & C)

I SUMMARY

Construction progress on the various projects outside the barricade was practically nil during the month of January due to extreme cold weather which prevailed through the month beginning January 3.

Excavation work on the DR Water works proceeded on a reduced basis, also due to the abnormally cold weather and unusual amount of snow fall. As of January 31, approximately 220,000 cubic yards of earth have been removed on the DR excavation work, with completion scheduled for the end of this week.

The Contract Division is negotiating with Architect-Engineers and others to obtain the services of additional draftsmen required for the scheduled increased load requirements due to early design completion dates set up by the Separations Division on Projects C-187-D, C-198, and C-343. A contract will be set up to cover a maximum of 40 men per month and a minimum of 10 men per month. The present plan is to supplement our present drafting force to the extent of approximately 120 man-months.

Analysis of the time applied to major projects by the engineers in the General Engineering Group of the Power and Mechanical Division shows that 33 per cent of the total time was spent on Separations Division projects: 31 per cent on other projects behind the barricade; 24 per cent on Village and vicinity projects and the remaining 12 per cent on clean up work on completed projects or other miscellaneous engineering work.

DECLASSIFIED

1195363

II STATISTICAL AND GENERAL

C-185: Railroad Connection South of Richland

The per cent completion of this project as reported last month is approximately 60 per cent. The inclement weather has prevented the subcontractor from working. It is estimated that, barring too unfavorable and unusual weather, completion of this job can be expected July 1, 1950.

C-288-A, B, C, D: Richland Village Improvements

Construction work on these four projects as previously reported is substantially complete. Work will resume when weather permits.

C-234: Marcus Whitman Grade School

Paving work is approximately 40 per cent complete and will continue when weather permits.

C-233: Spalding Elementary School

There has been no change in the per cent completion of paving for this project -- physical completion 90 per cent.

C-232: Carmichael Junior High School

Since the initial work on this project last month, no paving, sidewalk or grading work has been done during January. Physical Completion for such work - 5 per cent.

C-328: Lee Boulevard Improvements

Preliminary acceptance of construction was received December 30, subject to minor items of construction to be completed when weather permits. "As built" prints were forwarded to the Design Section on January 12.

C-203: Sewage Disposal System

No paving work has been done during the month on this minor project.

C-342: DR Water Works

Excavation started December 19, 1949 with a small amount of equipment, and it was not until December 21 and 22 that the bulk of the earth-moving equipment was moved on to the site. To date, approximately 220,000 cubic yards of earth have been moved. The cold weather encountered since January 3 has retarded the construction progress.

Temporary construction was started on January 4 and is now approximately 60 per cent complete to date.

[redacted]

1195364

C-289: - continued

The Commission has requested certain modifications. Drawings to take care of these modifications are in progress and will be complete by February 3. The project proposal was signed by W. E. Johnson and transmitted to G. G. Lail January 31.

C-352: Jadwin Avenue Relocation

Authorization was received to prepare plans and specifications for improving and extending Jadwin Avenue. This work is now in progress.

C-353: Richland Water Study

Authorization has been received to conduct a study on the additional water supply facilities required for Richland. The Contract Section has been requested to secure the services of an Architect-Engineer for this study.

III ORGANIZATION AND PERSONNEL

Number of employees on payroll:

Beginning of the Month	198
End of the Month	196
Net Decrease	2

CONSTRUCTION SERVICES DIVISION (D & C)

I SUMMARY

A decision was made during the month by top management that certain of the Labor Relations functions, heretofore handled in the Design and Construction Divisions would be transferred to the Community and Employee Relations Division. This change was brought about as the result of management's desire to centralize project Labor Relations. B. K. Phillips of the Construction Services Division Labor Relations section, in line with the new division of responsibility will be transferred to the Community and Employee Relations Division February 1, 1950.

Certain responsibilities of the Manager, Construction Services Division, by mutual agreement, were assigned to other D & C Divisions during the month. Changes are as follows:

Responsibility for operation and maintenance of White Bluffs from Construction Services Division to Power and Mechanical Division.

Responsibility for supplying field inspectors by the Construction Services Division to the Line Divisions has been reassigned and Line Divisions will directly employ inspectors required by them.

[redacted]

II STATISTICAL AND GENERAL

NORTH RICHLAND CONSTRUCTION CAMP

	Beginning of Month	End of Month	Net Change
Camp Population	2267	2397	+ 130
(Barracks 238)			
(Trailers 1594)			
(Houses 565)			

Barracks in use

7 wings, one story male barracks
1 wing, one-story female barracks

Trailer Lots

Occupied -- 567

Houses

Of the 201 houses available in North Richland Camp, 33 were vacant at the end of the month. Sixteen houses were assigned during the month and 30 vacated.

Maintenance

The construction contractor's maintenance force at the end of the month totaled 49 employees.

Work Order Control:

Number brought forward 12/28/49	30		
Issued in January	99		129
Completed in January		91	
Voided in January		2	93
Balance carried forward 1/27/50			36

Steam Generating Plant

The following is a resume of the operation of the steam generating plant from December 28, 1949 through January 27th, inclusive:

Steam Generated, M Pounds	29;186
Oil Consumed, Gallons	19;631
Coal Consumed, Tons	1,812.30
Boiler Efficiency, Average Per cent	80.36
Steam Cost, per M Pounds	.824

Commercial Facilities

There were 17 commercial facilities operating at the close of the month.

Commercial Facilities - continued

The request of Hand's Buy Rite Drugs to establish a cocktail bar has been approved by the Atomic Energy Commission and a tentative rent agreement has been forwarded to AEC for approval.

From the information available at this time the trend of business has not improved noticably over last month.

OFFICE SERVICES

Services performed during the month by this section included the following:

Ditto Masters Processed	2;877	Copies 56,019
Stencils Processed	2;247	Copies 141,218
Mail Handled (pieces)	159,834	
Mail Registered (pieces)	71	
Teletypes sent and received	377	
Telegrams sent and received	120	
Orders issued for Stationery	84	
Stationery issued (requests)	1,112	
Phone Installation Requested	29	
Phone Moves Requested	63	
Office Furniture Moved (pieces)	586	
P.I.T. Processed	12	
Special Messenger Runs	99	
Office Machines Delivered Repair Shop	14	
Service Calls	640	
Work Orders Issued	15	
Requisitions Approved	27	
Reports Prepared	5	
Checks Distributed	84	

During the month a new system for repair of office machines was established. A repair shop was set up in the 3000 Area and practically all repair work will be handled through this shop instead of utilizing the facilities of the 700 area. This change has effected a saving in manpower, loss of time and will increase the efficiency of the service rendered.

SECURITY ADMINISTRATION

A summary of activities is as follows:

Visitor passes issued	115
Badge Number changes	198
Lost Badges	5
New Hires (Contractor)	435
Terminations (Contractor)	126
Number of Subcontractors and Vendor Employees as of 1-27-50	1,669

C-342: DR Water Works - continued

Work on the 230 KV line change-over is approximately 70 per cent complete with work initiated December 28, 1949. This work is presently scheduled for completion February 7, 1950.

No concrete has been poured to date. However, the subcontractor plans to start pouring foundation concrete approximately February 20, weather conditions permitting.

Estimated design progress as of January 31 for Chas. T. Main is 66 per cent.

Chas. T. Main's cost report shows that design, although approximately 9 per cent behind the estimated schedule, is within the cost estimate on a percentage basis. No delays are anticipated in construction work from lack of approved construction drawings in the forseeable future.

The H. I. and Security Divisions have requested that the temporary construction fence at 100-DR be moved from present indicated location to include all temporary construction buildings, thus requiring all men and material to be checked through the Badge House between the construction area and office-shop area.

C-312: Technical Center

Study GET-14, Radiochemistry Building: Preparation of a preliminary cost estimate was initiated January 16.

Study GET-15, Radiometallurgy Building: New scope drawings sufficient for estimating are in preparation. This work started on January 24.

Study GET-16, Plot Plan and Utilities: Preliminary field work was started January 25. Preliminary plot plan is now in preparation.

Preliminary work toward selection of an Architect-Engineer has been started. A list of potential firms is being compiled and their qualifications tabulated.

MC-964: Records Depository

Project proposal awaiting approval of the Atomic Energy Commission.

C-204-B: Additions to Kadlec Hospital and Medical Arts Building

A study is under way which will define the new scope of work and will include new project proposal keeping the cost within presently authorized funds.

C-289: Additional Laundry Facilities, 200 West

Plans and specifications were revised to make suitable for lump sum bidding and were submitted to the Atomic Energy Commission January 16.

DECLASSIFIED

1195365

SECURITY ADMINISTRATION - continued

"FP" Clearances Requested	25
Received this month	37
"Q" Clearances Requested	164
Received this month	272
"P" Clearances Requested	74
Visitor Clearances Requested	27
Total Clearances Requested	290
Total Clearances Received	309

A	IN				OUT		
Area Badges Authorized:	A	V.O.D.	B	T	A	V.O.D.	B
100 DR Water	279	0	4	0	21	0	0
100 D Opr.	0	0	0	7	0	0	0
100 F Opr.	0	8	0	0	0	0	0
200 W Opr.	0	2	0	4	0	0	0

The transition to the new type laminated construction badge has been completed and orders have been issued that the old type construction badges will no longer be honored.

Because of security reasons the AEC has issued a directive that a fence shall be installed between the water treatment construction section of 100 DR and the operating section of 100 DR. This fence is being erected as rapidly as possible to separate the Construction Area from the Operating Area.

MAJOR CONSTRUCTION EQUIPMENT

Equipment Assignment as of January 30:

Atkinson & Jones	509 pieces
Design & Construction Divisions	113 pieces

SAFETY REPORT

Construction Injuries	C.P.F.F. Contractors	Lump Sum Subcontractors
Major Injuries	1	0
Sub-Major Injuries	1	0
Minor Injuries	28	4

No motor vehicle accidents or fires were reported during the month. Minor damage to the roof of the Boilerhouse in the 3000 Area resulted from ice and snow dropping from the higher roof level to a lower roof level breaking transite off in several places.

LABOR RELATIONS

No work stoppages occurred during the month.

[redacted]

LABOR RELATIONS - continued

An agreement was reached with Boilermakers craft in Seattle on January 27. Highlights of the agreement which were applied to employees of all construction subcontractors on the project are:

a. No change in isolation pay.

b. One round trip travel from Seattle to Richland for certain craftsmen.

c. Double time for Saturday work on a scheduled 5 day work week.

A Reimbursement Authorization was issued by the AEC covering office workers applicable to AJ and their C.P.F.F. subcontractors.

Meetings were held with the Technical Engineers, Ironworkers, Boilermakers, and Sheetmetal Workers pertaining to claims for additional benefits for workers under the jurisdiction of these unions. No definite agreement has been reached with any of these.

III ORGANIZATION AND PERSONNEL

Number of employees on payroll:

Beginning of the Month	101
End of the Month	108
Net Increase	7

CONTRACT DIVISION (D & C)

I SUMMARY

The scope of work for the Atkinson-Jones Contract G-133 was completely restated in a proposed Modification 11. All prior modifications were incorporated and the revised scope classified by the following groups: (1) Work Completed, (2) Major Jobs Now in Process and (3) Minor Jobs Now in Process. The revised scope of work though requiring 20 pages has reduced the former scope from a complicated wording to a clearer and more understandable presentation.

Study is now in progress to cover by change orders all minor changes of work on CPFF contracts. This will eliminate belated information which has caused delay and misunderstanding in the past.

DECLASSIFIED

1195370

DECLASSIFIED

II STATISTICAL AND GENERAL

Eighteen contract items were completed during the month. Fifty-six contract items remained open at the end of month.

III ORGANIZATION AND PERSONNEL

Number of employees on payroll:

Beginning of the month	23
End of the month	23
Net Change	0

[redacted]

1195371

PROJECT & RELATED PERSONNEL - JANUARY - 1950

	12-30-49		1-31-50	
GOVERNMENT EMPLOYEES				
Civilian Personnel - Atomic Energy Comm.	338		341	
Civilian Personnel - G. A. O.	8		8	
Total		346		349
RICHLAND VILLAGE PERSONNEL				
Commercial Facilities (Includes No. Richland)	1080		1011	
Organizations, Clubs, Etc.,	76		77	
Schools	388		389	
Churches	26		26	
Total		1570		1503
CONSTRUCTION SUB-CONTRACTORS				
Atkinson & Jones	792		1000	
Newberry Neon	93		96	
Urban, Smyth Warren Co.,	6		12	
Kellex Corp..	391		397	
J. A. Terteling & Son	121		40	
Troxell	7		6	
Howard P. Foley	5		-	
Charles T. Main Inc.,	101		103	
No. Electric Mfg. Co.,	3		2	
Great Lakes Carbon	137		-	
Graham Anderson, Probst & White Inc., & J. Gordon Turnbull	33		23	
McCorkle Const. Co.,	43		39	
Dayley Bros.	3		-	
Curtis Sand & Gravel	7		10	
Bergman' Lampson	29		26	
Consolidated Western Steel	15		15	
Total		1786		1769
GENERAL ELECTRIC PERSONNEL		7405		7431
GRAND TOTAL		11107		11052

DECLASSIFIED