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TO: Director, Division of Production
USAEC, Washington 25, D. C.

FROM: J. E. Travis, Manager, Hanford Operations
Office, USAEC, Richland, Washington

SUBJECT: MONTHLY STATUS AND PROGRESS REPORT

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MONTHLY STATUS AND PROGRESS REPORT

MARCH 1959 *1959-03-01*

PART I

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U. S. ATOMIC ENERGY COMMISSION
HANFORD OPERATIONS OFFICE

[REDACTED]

MONTHLY STATUS AND PROGRESS REPORT
HANFORD OPERATIONS OFFICE

MARCH 1959

PART I

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HIGHLIGHT STATEMENT - MARCH 1959

OPERATIONS

CANNED FUEL ELEMENT PRODUCTION TOTALED 577 TONS, INCLUDING 86 TONS OF SOLID AND 465 TONS OF I&E NORMAL-URANIUM, AND 2 TONS OF SOLID AND 42 TONS OF I&E 94-METAL. THE 577 TONS TOTAL IS 118.2% OF FORECAST. YIELDS WERE 79% FOR SOLID AND 82% FOR I&E NORMAL, AND 81% FOR 94-METAL PIECES. THE CANNING LINE TIME-OPERATED EFFICIENCY WAS 94.9%.

IN-PILE PRODUCTION TOTALED 110.9% OF FORECAST, WITH AN AVERAGE TIME-OPERATED EFFICIENCY OF 81.7%. NEW MAXIMUM POWER LEVEL RECORDS WERE ESTABLISHED AT B, C, D, DR, H, KE, AND KW REACTORS. THERE WERE SIX FUEL ELEMENT FAILURES DURING THE MONTH, ALL I&E NORMAL-URANIUM PIECES.

TOTAL SEPARATIONS PLANT PLUTONIUM PRODUCTION WAS 119.6% OF FORECAST, WITH 91.2% OF THE TOTAL PRODUCED BY PUREX AND 8.8% BY REDOX.

PRODUCTION OF NORMAL UO_3 TOTALED 454 TONS, 113.5% OF FORECAST; PRODUCTION OF ENRICHED UO_3 TOTALED 95.0 TONS, 95.0% OF FORECAST.

PLANT ACQUISITION AND CONSTRUCTION

NEW PRODUCTION REACTOR - DESIGN AND DEVELOPMENT ARE CONTINUING. (SEE PART I, PAGE 13.)

REACTOR CONFINEMENT - OVERALL DESIGN IS 63% COMPLETE. (SEE PART I, PAGE 14.)

PRTR - DESIGN IS COMPLETE. CONSTRUCTION IS 21% COMPLETE VERSUS 16% SCHEDULED. (SEE PART I, PAGE 15.)

PLUTONIUM FABRICATION PILOT PLANT - DESIGN IS 87% COMPLETE AND CONSTRUCTION IS 48% COMPLETE VERSUS 47% SCHEDULED. (SEE PART I, PAGE 15.)

CITY HALL - DESIGN IS COMPLETE AND CONSTRUCTION IS 96% COMPLETE VERSUS 96% SCHEDULED. (SEE PART I, PAGE 15.)

COMMUNITY

DISPOSAL - 4,483 OF 4,806 HOUSES HAVE BEEN SOLD; 96 ADDITIONAL GOOD FAITH DEPOSITS HAVE BEEN MADE. (SEE PART II, PAGE 3.)

PLANT OPERATIONS

METAL PREPARATION

CANNING - THE NET PRODUCTION OF CANNED FUEL ELEMENTS WAS:

NORMAL URANIUM	
SOLID	68 TONS
I&E	465
94 METAL	
SOLID	2
I&E	42
TOTAL	577 TONS

THE 577-TON TOTAL OF CANNED FUEL ELEMENTS WAS 118.2% OF FORECAST^{1/}. NORMAL-URANIUM I&E PRODUCTION TOTALED APPROXIMATELY TWO TONS OF WATER MIXING PIECES.

YIELDS WERE 79% FOR NORMAL SOLID, 82% FOR NORMAL I&E, AND 81% FOR 94-METAL I&E PIECES. THE CANNING LINE TIME-OPERATED EFFICIENCY WAS 94.9%, LESS THAN 1% BELOW THE RECORD 95.6% ACHIEVED THE PREVIOUS MONTH.

AT MONTH END, THERE WAS ON HAND APPROXIMATELY A 1.5-MONTH SUPPLY OF CANNED FUEL ELEMENTS AND APPROXIMATELY A 1.5-MONTH SUPPLY OF BARE FUEL ELEMENTS.

THE AUTOMATIC WELDERS HAVE BEEN IN CONTINUOUS OPERATION ON THE PRODUCTION LINE SINCE MARCH 20 AND, EXCEPT FOR MINOR PROBLEMS AND ADJUSTMENTS, APPEAR TO BE PERFORMING VERY WELL.

AUTOCLOVE FAILURES - ONE NORMAL I&E FUEL ELEMENT FAILED THE AUTOCLOVE TEST IN MARCH. THE FAILURE WAS ATTRIBUTED TO A PINHOLE IN THE WELD HEAD THAT PERMITTED WATER ENTRY TO THE URANIUM CORE. THIS IS THE THIRD AUTOCLOVE FAILURE TO OCCUR SINCE THE SPIRE ETCH WAS ADOPTED IN PRODUCTION TO ELIMINATE THE NON-WET CAP PROBLEM. NONE OF THE THREE FAILURES ARE ATTRIBUTED TO NON-WETTING OF THE CAP.

SCRAP SHIPMENTS - SCRAP SHIPMENTS TO FERNALD TOTALED APPROXIMATELY SEVENTY-TWO TONS OF NORMAL URANIUM AND APPROXIMATELY TWO TONS OF 94 METAL. THE NORMAL-URANIUM SCRAP INCLUDED 41.2 TONS OF DINGOT METAL, WHICH WAS FOUND TO BE UNACCEPTABLE AS DISCUSSED LAST MONTH.

REACTOR OPERATION

DURING MARCH, REACTOR PRODUCTION RATES AS PERCENTAGES OF INDEX^{2/} WERE:

	<u>B</u>	<u>C</u>	<u>D</u>	<u>DR</u>	<u>F</u>	<u>H</u>	<u>KE</u>	<u>KW</u>	<u>TOTAL</u>
MAXIMUM POWER LEVEL DURING MONTH (INCLUDES ALL PRODUCTION)	108.3	108.0	107.6	111.8	108.0	111.1	107.3	105.4	108.0
AVERAGE LEVEL WHILE OPERATING (INCLUDES ALL PRODUCTION)	101.9	101.1	99.8	101.8	98.3	111.0	88.4	99.3	98.8
TIME-OPERATED EFFICIENCY	86.3	74.3	78.7	82.9	65.4	100.0	78.5	87.5	81.7

IN-PILE PRODUCTION FOR MARCH EXCEEDED FORECAST^{3/} BY 10.9% AND WAS THE SECOND HIGHEST PRODUCTION EVER ACHIEVED. AVERAGE TIME-OPERATED EFFICIENCY WAS 81.7%, AS COMPARED WITH 81% FORECAST. B, H, AND KW REACTORS ACHIEVED INDIVIDUAL MONTHLY PRODUCTION RECORDS WITH H REACTOR REACHING THE HIGHEST PRODUCTION EVER ATTAINED BY ONE OF THE SIX OLD REACTORS.

NEW MAXIMUM POWER LEVELS WERE ACHIEVED AT B, C, D, DR, H, KE, AND KW REACTORS. AT THE END OF THE MONTH, ALL REACTORS WERE LIMITED BY FUEL ELEMENT FAILURE CONTROL CONSIDERATIONS.

1/ TS DOCUMENT CLVI-605.
2/ TS DOCUMENT LXII-2211.
3/ TS DOCUMENT CLVI-605.

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PLANT OPERATIONS (CONT'D.)

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REACTOR OPERATIONS (CONT'D.)

SIX I&E NORMAL-URANIUM FUEL ELEMENT FAILURES OCCURRED DURING THE MONTH - TWO AT DR AND ONE EACH AT B, D, KE, AND KW REACTORS. THIS BRINGS THE CUMULATIVE NUMBER OF NORMAL-URANIUM RUPTURE INCIDENTS TO 1,080, INVOLVING 1,099 PIECES (INCLUDING 27 I&E FAILURES). THE CUMULATIVE NUMBER OF 94-METAL RUPTURE INCIDENTS REMAINS AT 62, INVOLVING 64 PIECES AND THE NUMBER OF DEPLETED-METAL RUPTURE INCIDENTS REMAINS AT 13, INVOLVING 13 PIECES.

FOLLOWING IS A SUMMARY OF MARCH REACTOR OUTAGES:

B REACTOR:

<u>DATE DOWN</u>	<u>DATE UP</u>	<u>OUTAGE HOURS</u>	<u>REMARKS</u>
2-26	3-1	75.2	COMPLETED CHARGE-DISCHARGE AND MISCELLANEOUS MAINTENANCE, FOLLOWING MANUAL TRIP BECAUSE OF A BROKEN BALL VALVE.
3-20	3-22	46.5	TRIPPED WHEN WATER FLOW TO BALL VALVE 1081 WAS ACCIDENTALLY REDUCED. CHARGE-DISCHARGE AND LEAK TESTING WERE COMPLETED.
3-22	3-22	0.3	PANELLIT TRIP.
3-23	3-24	25.8	REMOVAL OF A STUCK POISON COLUMN CONTROL FACILITY MACHINE FROM BALL VALVE 3562. INSUFFICIENT REACTIVITY DELAYED STARTUP. PERFORMED MISCELLANEOUS MAINTENANCE.
3-24	3-24	0.4	PANELLIT TRIP CAUSED BY AN OSCILLATING GAUGE.
3-24	3-24	1.1	REMOVAL OF A STUCK POISON COLUMN CONTROL FACILITY MACHINE FROM BALL VALVE 3669.
3-24	3-24	0.6	PANELLIT TRIP CAUSED BY AN OSCILLATING GAUGE.
3-31	STILL DOWN		PANELLIT TRIP. AN I&E REGULAR METAL FUEL ELEMENT FAILURE WAS REMOVED FROM TUBE 2765. CHARGE-DISCHARGE AND MISCELLANEOUS MAINTENANCE ARE IN PROGRESS.

C REACTOR:

<u>DATE DOWN</u>	<u>DATE UP</u>	<u>OUTAGE HOURS</u>	<u>REMARKS</u>
3-4	3-8	86.9	LEAK TESTING, CHARGE-DISCHARGE, AND MISCELLANEOUS MAINTENANCE.
3-8	3-8	4.8	POISON DISCHARGE.
3-21	3-22	40.8	LOSS OF RAW WATER BACK-UP. TWO BADLY LEAKING JOINTS ON THE EXPORT LINE WERE REPAIRED. PERFORMED MISCELLANEOUS MAINTENANCE.
3-29	STILL DOWN		SCHEDULED CHARGE-DISCHARGE AND MAINTENANCE. LEAK TESTING IS IN PROGRESS.

D REACTOR:

<u>DATE DOWN</u>	<u>DATE UP</u>	<u>OUTAGE HOURS</u>	<u>REMARKS</u>
3-13	3-18	118.1	REMOVAL OF AN I&E NORMAL-URANIUM FUEL ELEMENT FAILURE FROM TUBE 3391. CHARGE-DISCHARGE, TUBE REPLACEMENT, INSTALLATION OF ZONE TEMPERATURE MONITOR RESISTANCE TEMPERATURE DETECTORS, AND MISCELLANEOUS MAINTENANCE WERE PERFORMED.
3-18	3-19	0.9	PANELLIT TRIP.
3-22	3-22	0.3	TRIPPED BY NO. 5 PUMP AT 190 BECAUSE OF A FAULTY COIL ON THE MOTOR RELAY.
3-27	3-27	0.2	PANELLIT TRIP CAUSED BY INCORRECT JUMPERING OF A POISON COLUMN CONTROL FACILITY TUBE.
3-27	3-29	39.0	BECKMAN TRIP CAUSED BY EXCEEDING THE TRIP SETTING. COMPLETED CHARGE-DISCHARGE AND MISCELLANEOUS MAINTENANCE.

DR REACTOR:

<u>DATE DOWN</u>	<u>DATE UP</u>	<u>OUTAGE HOURS</u>	<u>REMARKS</u>
3-7	3-11	97.0	REMOVAL OF AN I&E NORMAL-URANIUM FUEL ELEMENT FAILURE FROM TUBE 1674 (THE FIRST "O" SIZE I&E NORMAL-URANIUM RUPTURE). COMPLETED CHARGE-DISCHARGE AND MISCELLANEOUS MAINTENANCE.

PLANT OPERATIONS (CONT'D.)

REACTOR OPERATION (CONT'D.)

DR REACTOR (CONT'D.)

<u>DATE DOWN</u>	<u>DATE UP</u>	<u>OUTAGE HOURS</u>
3-16	3-16	0.4
3-17	3-17	0.4
3-17	3-18	29.2

REMARKS

PANELLIT TRIP.
PANELLIT TRIP.
PANELLIT TRIP. AN I&E NORMAL-URANIUM FUEL ELEMENT FAILURE WAS REMOVED FROM TUBE 0970. COMPLETED CHARGE-DISCHARGE.

F REACTOR:

<u>DATE DOWN</u>	<u>DATE UP</u>	<u>OUTAGE HOURS</u>
3-2	3-8	152.9
3-16	3-20	104.4

REMARKS

LEAK TESTING, CHARGE-DISCHARGE, AND TUBE REPLACEMENT WERE PERFORMED. REPAIRED AN EFFLUENT LINE LEAK. RECOVERY WAS DELAYED BECAUSE OF THE TIP OF VSR NO. 27 REMAINING IN THE CHANNEL WHEN THE RODS WERE WITHDRAWN. LEAK TESTING, CHARGE-DISCHARGE, AND TUBE REPLACEMENT WERE PERFORMED. ALUMINUM DUMMIES, WHICH WERE FLUSHED FROM A POISON COLUMN CONTROL FACILITY TUBE INTO THE REAR ELEVATOR, WERE REMOVED USING THE FIRE HOSE. DURING THE DISCHARGE OF METAL, AN IRRADIATED PIECE LODGED IN THE REAR PIGTAILS AND HAD TO BE REMOVED.

KE REACTOR:

<u>DATE DOWN</u>	<u>DATE UP</u>	<u>OUTAGE HOURS</u>
2-28	3-3	52.1
3-3	3-3	8.2
3-3	3-3	0.5
3-3	3-3	0.3
3-13	3-15	31.1
3-24	3-26	36.4
3-26	3-26	0.7
3-29	3-30	24.2

REMARKS

COMPLETED CHARGE-DISCHARGE, FOLLOWING RUPTURE REMOVAL.
POISON DISCHARGE.
PANELLIT TRIP.
PANELLIT TRIP.
NO. 1 SAFETY CIRCUIT TRIP CAUSED BY A LOOSE FUSE HOLDER IN THE INSTRUMENT SUPPLY CIRCUIT OF KER LOOP 2. CHARGE-DISCHARGE AND REVISION OF REAR-FACE PIPING FOR TURCO DECONTAMINATION.
REMOVAL OF AN I&E NORMAL-URANIUM FUEL ELEMENT FAILURE FROM TUBE 3487. COMPLETED CHARGE-DISCHARGE. KER LOOPS 2 AND 3 WERE DISCHARGED BECAUSE OF SUSPECTED RUPTURES.
PANELLIT TRIP WHILE ADJUSTING A TOGGLE VALVE.
TRIPPED BECAUSE OF A BLOWN FUSE IN THE KER LOOP 1 INSTRUMENT SUPPLY CIRCUIT. PERFORMED MISCELLANEOUS MAINTENANCE.

KW REACTOR:

<u>DATE DOWN</u>	<u>DATE UP</u>	<u>OUTAGE HOURS</u>
3-24	3-26	57.9
3-26	3-27	4.8
3-29	3-30	30.5

REMARKS

SCHEDULED CHARGE-DISCHARGE. AN I&E NORMAL-URANIUM FUEL ELEMENT FAILURE WAS REMOVED FROM TUBE 1262.
POISON DISCHARGE.
PANELLIT TRIP CAUSED BY AN IMPROPER BY-PASSING PROCEDURE AT KE, CAUSING THE CROSS-TIE VALVE TO OPEN. COMPLETED CHARGE-DISCHARGE AND MISCELLANEOUS MAINTENANCE.

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PLANT OPERATIONS (CONT'D.)

REACTOR OPERATION (CONT'D.)

FUEL ELEMENT FAILURES - FOLLOWING IS A TABULATION OF MARCH FUEL ELEMENT FAILURES:

TABULATION OF RUPTURED URANIUM SLUGS							
TUBE NO.	DATE RUPTURED	TUBE POWER	CONCENTRATION	ASSIGNED LOSS		METAL	TYPE FAILURE
			(MWD/T)	(MWD)	(DAYS)		
(NORMAL)							
1674-DR	3-7-58	1010	828			I&E	INSIDE OTHER.
3391-D	3-13-58	876	793			I&E	INSIDE OTHER.
0970-DR	3-17-58	918	713			I&E	UNKNOWN.
3487-KE	3-24-58	1223	713			I&E	SIDE OTHER.
1262-KW	3-24-58	1274	711			I&E	UNKNOWN.
2765-B	3-31-58	1013	203			I&E	INSIDE OTHER.

EQUIPMENT EXPERIENCE - EIGHTY-FIVE PROCESS TUBES WERE INSTALLED - 49 AT F, 31 AT D, 3 AT C, AND 2 AT KE.

SEVEN TUBE AND FOUR VAN STONE LEAKS WERE CORRECTED.

VSR JOINT FAILURE AT F REACTOR - AT F REACTOR, APPROXIMATELY TWELVE FEET OF A VERTICAL SAFETY ROD REMAINED IN THE CHANNEL WHEN THE RODS WERE WITHDRAWN FOR STARTUP ON MARCH 7. ABOUT TWENTY-FOUR HOURS WERE REQUIRED TO RECOVER THE TIP AND ONE SECTION OF THE ROD AS IT WAS NECESSARY TO REMOVE THE BALL HOPPER AND STEP PLUG. INVESTIGATION OF THE FAILURE IS STILL UNDER WAY.

DUMMIES ON REAR ELEVATOR AT F REACTOR - DURING DISCHARGE OF A POISON COLUMN CONTROL FACILITY AT F REACTOR, ONE DUMMY STUCK IN THE REAR BALL VALVE. ASSUMING THIS TO BE THE LAST PIECE IN THE CHARGE, THE OPERATOR ON THE REAR ELEVATOR ASKED THE CONTROL ROOM TO DISLODGE THE PIECE BY OPERATING THE BALL VALVE. APPROXIMATELY TWENTY DUMMIES WERE FLUSHED ONTO THE REAR ELEVATOR. THE PIECES WERE REMOVED IN ABOUT TWO HOURS BY THE USE OF TONGS AND FIRE HOSE. THERE WERE NO OVER-EXPOSURE OF PERSONNEL.

LOSS OF CO₂ METER AT D REACTOR - FAILURE TO ISOLATE THE D REACTOR CO₂ FLOW METER DURING PURGING OF DR REACTOR CAUSED OVER-PRESSURIZING AND RUPTURE OF THE METER. FLYING METAL PIECES DAMAGED THE HELIUM FLOW METER LOCATED ABOUT ONE FOOT AWAY. THERE WAS NO PERSONNEL INJURY AND NO OUTAGE TIME RESULTED.

OPERATIONAL CHARGE-DISCHARGE - FOLLOWING THE SUCCESSFUL CHARGE-DISCHARGE OF 50 URANIUM COLUMNS BY THE OPERATIONAL CHARGE-DISCHARGE FACILITY AT C REACTOR LAST MONTH, MINOR REVISIONS HAVE BEEN MADE TO THE EQUIPMENT IN PREPARATION FOR TRAINING C REACTOR OPERATING PERSONNEL IN ITS USE.

THE 16-TUBE PROTOTYPE GAMMA SENSITIVE INDIVIDUAL TUBE RUPTURE DETECTION MONITOR WAS INSTALLED IN THE 112-TUBE OPERATIONAL CHARGE-DISCHARGE PATTERN AT C REACTOR AND PLACED IN OPERATION DURING THE MONTH. THE INSTRUMENTS APPEAR ADEQUATELY SENSITIVE; HOWEVER, PROOF OF THEIR ABILITY TO DETECT ON-REACTOR A FUEL ELEMENT FAILURE AWAITS A RUPTURE IN THIS PATTERN.

PU-240 PROGRAM - DEPLETED URANIUM IRRADIATED FOR THE HIGH PU-240 PROGRAM IS TO BE SEGREGATED INTO LOTS CONTAINING 0 - 13%, 13 - 15%, AND OVER 15% PU-240. THESE DIVISIONS ARE NOW ESTIMATED TO CONSIST OF 880, 694, AND 610 PIECES CONTAINING 2.6, 2.4, AND 4.5 KILOGRAMS OF PLUTONIUM, RESPECTIVELY.

1/ AT TIME OF RUPTURE.

PLANT OPERATIONS (CONT'D.)

SEPARATIONS

TOTAL SEPARATIONS PLANT PLUTONIUM PRODUCTION WAS 119.6% OF FORECAST^{1/}, WITH 91.2% OF THE TOTAL PRODUCED BY PUREX AND 8.8% BY REDOX.

PUREX - A NEPTUNIUM RECOVERY EFFORT WAS CONCLUDED ON MARCH 1. NORMAL OPERATION WAS DELAYED ABOUT 8 HOURS WHEN A FEED PUMP FAILED; BUT, FOLLOWING REPAIRS, THERE WAS UNINTERRUPTED PLUTONIUM PROCESSING UNTIL MARCH 28. AT THIS TIME, A SCHEDULED SHUTDOWN WAS MADE FOR NEPTUNIUM RECOVERY. FOLLOWING JUMPER CHANGES, THE RECOVERY BEGAN ON MARCH 30 AND WAS IN PROGRESS AT MONTH'S END.

SIX BATCHES OF URANIUM REQUIRED SILICA-GEL TREATMENT AT STARTUP. NEAR THE END OF THE OPERATING PERIOD, ADDITIONAL SILICA-GEL TREATMENT OF THE URANIUM PRODUCT WAS REQUIRED BECAUSE OF A LOSS IN DECONTAMINATION FACTOR RESULTING FROM PROCESS MODIFICATIONS BEING MADE TO ASSIST IN NEPTUNIUM RETENTION. A VENT LINE ALTERATION MADE ON THE PLUTONIUM ION EXCHANGE UNIT DURING SHUTDOWN PERMITTED CROSS CONTAMINATION OF THE PLUTONIUM PRODUCT FOLLOWING STARTUP. THE VENT WAS REDIRECTED, AND THE GAMMA ACTIVITY OF THE PRODUCT DECREASED. THREE BATCHES OF PLUTONIUM WERE REWORKED.

WASTE LOSSES WERE 0.05% OF THE URANIUM THROUGHPUT AND 0.18% OF THE PLUTONIUM THROUGHPUT.

IODINE EMISSIONS AVERAGED 0.55 CURIES PER DAY.

NEPTUNIUM RECOVERY - ABOUT ONE HUNDRED FORTY GRAMS OF NEPTUNIUM WERE SEPARATED DURING THE RECOVERY WHICH ENDED MARCH 1, AND APPROXIMATELY SEVEN HUNDRED GRAMS WERE STILL IN PLANT RECYCLING IN THE 3WB WASTE STREAM. AT MONTH'S END, THIS INVENTORY HAD INCREASED BY ONLY 100 TO 150 GRAMS.

SEVERAL FACTORS HAVE PREVENTED FULL RETENTION OF THE VIRGIN NEPTUNIUM GENERATED DURING PLUTONIUM PROCESSING IN MARCH. THE NITRITE BALANCE OF THE PROCESS SYSTEM WAS UPSET BY THE CHROMIC AND DICHROMATE IONS REMAINING IN THE BACKCYCLED WASTE STREAM FROM FEBRUARY'S NEPTUNIUM RECOVERY EFFORT. AN OVERFLOW OF A TURBOMIXER IN THE SOLVENT RECOVERY SYSTEM DESTROYED THE NITROUS ACID IN THE RECYCLED SOLVENT TO THE HA EXTRACTION COLUMN. AN ADJUSTMENT OF THE NITROUS ACID CONTENT CAUSED FURTHER NITRITE ION UNBALANCE. IN ADDITION, NEPTUNIUM WASTE LOSSES WERE HIGH AT STARTUP BECAUSE OF A FEED PUMP FAILURE, WHICH APPARENTLY ALLOWED THE NEPTUNIUM TO BUILD UP AND REFLUX IN THE HA EXTRACTION COLUMN. REWORK ALSO SEEMS TO CAUSE AN INCREASE IN THE NEPTUNIUM WASTE LOSSES.

REDOX - THE PROCESSING OF 94 METAL CONTINUED DURING THE MONTH. BASED UPON EXPERIMENTAL DATA FROM OAK RIDGE, THE SIZE OF THE 94-METAL CHARGES TO THE DISSOLVERS WAS REDUCED FROM 3.00 TO 1.75 TONS, WHICH RESULTED IN LONGER TIME CYCLES FOR THE METAL DISSOLUTION OPERATION. THIS RESTRICTION, TOGETHER WITH THE FACT THAT ONE OF THE THREE DISSOLVERS WAS OUT OF SERVICE FOR THE MONTH, NECESSITATED SEVEN-DAY, THREE-SHIFT DISSOLVER OPERATION TO ACHIEVE PRODUCTION SCHEDULES. THE EXTRACTION COLUMNS OPERATED PERIODICALLY DURING THE MONTH AS FEED WAS AVAILABLE. AN INCREASE TO A 2.0-TON BATCH LIMIT IS UNDER ACTIVE CONSIDERATION.

THE GAMMA ACTIVITY OF BOTH PRODUCT STREAMS REMAINED WITHIN SPECIFICATIONS THROUGHOUT THE MONTH. THE SODIUM CONTENT OF THE URANIUM PRODUCT WAS OUT OF SPECIFICATIONS FOR A CONSIDERABLE PART OF THE MONTH BECAUSE OF FLOWSHEET CHANGES MADE TO EFFECT OPERATING ECONOMIES. APPROXIMATELY FORTY TONS OF UNH WILL REQUIRE BLENDING BEFORE TRANSFER TO THE UO₃ PLANT. AT MONTH'S END, THE SODIUM CONTENT OF THE URANIUM PRODUCT WAS WITHIN SPECIFICATION.

WASTE LOSSES AVERAGED 0.21% OF THE URANIUM THROUGHPUT AND 0.53% OF THE PLUTONIUM THROUGHPUT. TWO BATCHES OF WASTE MATERIAL COLLECTED FROM SUMP WASTE AND CELL FLUSHINGS WERE REWORKED DURING THE MONTH.

IODINE EMISSIONS AVERAGED 0.0025 CURIES PER DAY.

THE C-2 DISSOLVER WAS REMOVED FROM THE CELL IN PREPARATION FOR THE INSTALLATION OF THE REPLACEMENT UNIT. BECAUSE OF TIME CONSUMING DIFFICULTIES WITH THE DECONTAMINATION AND REPAIR OF AN OLD INOPERABLE H-2 DISSOLVER, A NEW DISSOLVER IS NOW SCHEDULED FOR INSTALLATION EARLY IN MAY.

UO₃ - PLANT PRODUCTION OF NORMAL UO₃ TOTALED 454 TONS, 113.5% OF FORECAST. A TOTAL OF 95.0 TONS OF ENRICHED UO₃ WAS PROCESSED, 95.0% OF FORECAST. ALL SHIPPING SCHEDULES WERE MET.

OPERATING CONTINUITY WAS BROKEN FOR SIXTEEN HOURS EARLY IN THE MONTH BECAUSE OF THE FAILURE OF BOTH X-30 NORMAL-URANIUM FEED PUMPS. FOLLOWING REPAIRS, PROCESSING CONTINUED AS SCHEDULED UNTIL MARCH 26 WHEN ALL CALCINERS WERE SHUT DOWN FOR MAINTENANCE AND INVENTORIES.

A TOTAL OF 268 TONS OF NITRIC ACID WAS RECOVERED.

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REACTOR OPERATION FY-59

SUM OF MAXIMUM POWER LEVELS (UPPER LINE)

SUM OF AVERAGE POWER LEVELS WHILE OPERATING (LOWER LINE)

AVERAGE TIME OPERATED EFFICIENCY

* LXII - 2211

PRODUCTION FY-59

URANIUM ACCEPTABLY CANNED
(INCLUDES NORMAL & 94-METAL)

UO₃ PRODUCED

MWD PRODUCED (TOTAL)

PLUTONIUM SEPARATED

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PLANT OPERATIONS (CONT'D.)

RESEARCH AND DEVELOPMENT

NPR GRAPHITE TESTING - AS STATED LAST MONTH, IF RADIATION-INDUCED HIGH-TEMPERATURE CONTRACTION OF GRAPHITE RESULTS FROM A RELIEF OF STRESSES FROZEN IN DURING FABRICATION, ANNEALING SHOULD NOT CAUSE AN INCREASE IN LENGTH TO THE ORIGINAL VALUE. THE FIRST ANNEALING EXPERIMENTS ON PITCH COKE SAMPLES, WHICH CONTRACTED AT A HIGHER RATE THAN REACTOR-GRADE GRAPHITES, INDICATE THAT CONTRACTION DOES NOT ANNEAL. THIS SUBSTANTIATES BUT DOES NOT PROVE THE CURRENT THEORY OF THE CONTRACTION MECHANISM. FOUR PITCH COKE GRAPHITE SAMPLES, WHICH HAD CONTRACTED FROM 0.02% TO 0.05% DURING 742 MD/AT REACTOR IRRADIATION AT 450°C, WERE ANNEALED TO A MAXIMUM TEMPERATURE OF 2600°C AT ABOUT 500°C INTERVALS. THE LENGTHS OF THE SAMPLES REMAINED CONSTANT THROUGH STEP ANNEALS OF SIX HOURS EACH AT 1000°C, 1500°C, AND 2220°C. AFTER THERMAL TREATMENT AT 2600°C FOR 1.25 HOURS, ALL SAMPLES CONTRACTED ABOUT 0.01%. THIS TEMPERATURE EXCEEDED THE ORIGINAL GRAPHITIZATION TEMPERATURE, HOWEVER, AND THE CONTRACTION IS ASSUMED TO BE DUE TO FURTHER GRAPHITIZATION. ONLY MINOR OXIDATION (0.15% TO 0.20% WEIGHT LOSS) OCCURRED IN THE SAMPLES DURING ALL THE HEAT TREATMENTS.

COMPRESSION SET IN GRAPHITE SAMPLES OF THE TYPE PREPARED FOR HANFORD AND ETR IRRADIATIONS HAS BEEN OBSERVED. IN MAKING COEFFICIENT OF THERMAL EXPANSION DETERMINATIONS, IT WAS NOTED THAT SAMPLES WERE APPROXIMATELY 0.02% LONGER THAN THE ORIGINAL LENGTH AFTER HEATING TO 425°C AND THEN COOLING TO ROOM TEMPERATURE. SAMPLES ANNEALED TO 2600°C IN 500°C STEPS INCREASED IN LENGTH BY 0.19% OF THE UNANNEALED LENGTH. THE SET IS ATTRIBUTABLE TO A METHOD OF SAMPLE PREPARATION IN WHICH THE ROUGH STOCK IS MOUNTED BETWEEN HOLDERS WHICH APPLY A COMPRESSIVE FORCE. SAMPLES PREPARED ON A LATHE WITH A MINIMUM OF COMPRESSIVE RESTRAINING FORCE HAD A MAXIMUM INCREASE IN LENGTH OF 0.003% WHEN ANNEALED TO 425°C. IRRADIATION TESTS ARE PLANNED WHICH WILL DETERMINE WHETHER THE INITIAL EXPANSION BEFORE CONTRACTION, OBSERVED FOR HIGH TEMPERATURE IRRADIATIONS, IS THE RESULT OF ANNEALING A COMPRESSION SET.

PLUTONIUM RECYCLE PROGRAM - THE FIRST 19-ROD CLUSTER CERAMIC FUEL ELEMENT WAS ASSEMBLED THIS MONTH, AND ADDITIONAL RODS HAVE BEEN COMPLETELY PROCESSED FOR ASSEMBLING TWO OR MORE FUEL ELEMENTS. OTHER RODS ARE BEING PROCESSED THROUGH THE VARIOUS STEPS OF SWAGING, WELDING, TESTING, AND AUTO-CLAVING.

THE FIRST LOT OF ZIRCALOY TUBING FOR FABRICATING PRTR FUEL ELEMENTS HAS FAR BETTER PHYSICAL PROPERTIES THAN ANY PREVIOUSLY RECEIVED MATERIAL FROM WOLVERINE.

SCOPE DRAWINGS FOR A GAS LOOP IN THE PRTR WERE COMPLETED. THE IN-REACTOR TEST SECTION, CONSISTING OF TWO CONCENTRIC TUBES AND A LARGE PART OF THE LOOP PIPING EXTERNAL TO THE REACTOR, WILL BE FABRICATED FROM INCONEL-X. HELIUM GAS WILL FLOW IN THE ANNULAR SPACE BETWEEN THE OUTER PRESSURE TUBE OF THE LOOP AND THE ALUMINUM SHROUD TUBE OF THE REACTOR. LOSS OF HELIUM SHROUD COOLING DUE TO FAILURE OF ELECTRICAL POWER AND STEAM TURBINE BACK-UP WILL CAUSE WATER TO BE INJECTED INTO THE PRIMARY LOOP TO PREVENT OVERHEATING THE ALUMINUM SHROUD TUBE. INSTRUMENTATION WILL BE PROVIDED TO MAKE THE LOOP AUTOMATIC IN OPERATION.

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WITH DELETIONS

PLANT ACQUISITION AND CONSTRUCTION

PROJECT AND DESIGN STUDIES

NEW PRODUCTION REACTOR:

DESIGN - DESIGN CRITERIA ON THE PILE GAS SYSTEM AND THE ADMINISTRATION BUILDING ARE BEING REVIEWED. DETAILED DESIGN ON THE 105 FACILITY IS PROCEEDING ON GRAPHITE, GAS SYSTEM, HORIZONTAL ROD SYSTEM, BALL SAFETY SYSTEM, AND BUILDING STRUCTURAL AND ARCHITECTURAL. FINAL SCOPE DESIGN IS CONTINUING ON SUCH FEATURES AS INSTRUMENTATION SYSTEMS, METAL HANDLING, BUILDING HEATING, VENTILATING, ELECTRICAL, MECHANICAL, AND ELEVATORS. DETAILED DESIGN IS UNDER WAY ON SOME PART OF ALMOST ALL MAJOR FACILITIES OF THE HEAT DISSIPATION FACILITIES.

MECHANICAL DEVELOPMENT - THE EVALUATION LOOP IS IN PROCESS OF STARTUP. HYDROSTATIC TESTS UP TO 3750 PSI HAVE REVEALED SOME LEAKS AT FLANGED JOINTS AND INSTRUMENT CONNECTIONS. A CONCRETE BLAST BOX IS BEING ADDED TO CONTAIN JOINTS CONSIDERED MOST DANGEROUS. THE LOOP IS ARRANGED TO ADD FLEXURE AS WELL AS PRESSURE AND THERMAL CONDITIONS THAT MAY BE PRESENT ON THE COMPLETED REACTOR.

THE ROLLED TUBE-TO-NOZZLE JOINT PROVIDED BY CANADIAN GENERAL ELECTRIC HAS SURVIVED 1830 CYCLES BETWEEN 275⁰F AND 525⁰F AT 1325 PSI. THE FLARED JOINT WITH A SERRATED MATING FLANGE DEVELOPED SMALL LEAKS AFTER 2700 CYCLES. A BELL RING SEAL NOZZLE CLOSURE HAS RUN 1600 HOURS UNDER STATIC CONDITIONS WITH NO LEAKAGE. A SPIRAL WOUND GASKET FROM JOHNS-MANVILLE DEVELOPED SMALL LEAKAGE AFTER 1900 HOURS. A PROCESS TUBE CLOSURE, WHICH USES A THIN RING OF DUCTILE METAL TO FORM THE SEAL, HELD TO 14,900 PSI AT ROOM TEMPERATURES BUT FAILED AT 10,500 PSI AT 343⁰C. A TEST SECTION OF TWO BUTT-WELDED AND ONE FLASH-WELDED ZIRCALOY JOINTS (ANNEALED) REACHED 7500 PSI AND 350⁰C BEFORE SWELLING AND LEAKING OCCURRED.

A HYDRAULICALLY-DRIVEN HORIZONTAL CONTROL ROD HAS OPERATED QUITE SATISFACTORILY EXCEPT FOR A LACK OF SMOOTHNESS AT VERY LOW SPEEDS.

3X SYSTEM BALLS - CERAMIC BALLS CONTAINING 0.75% GADOLINIUM OXIDE HAVE BEEN RECEIVED. IF TRAPPED IN THE LATTICE, THE GADOLINIUM WILL "BURN OUT" AT A RATE OF 1% PER HOUR. ATTEMPTS ARE BEING MADE TO FABRICATE CERAMIC BALLS CONTAINING BORON.

FLUX MONITORING - A SYSTEM IS BEING DESIGNED TO PROVIDE FLUX MONITORING ON A THREE-DIMENSIONAL BASIS TO DETERMINE HOW MUCH THE FLUX IS DISTORTED FROM THE NORMAL COSINE DISTRIBUTION. THE SYSTEM WILL CONSIST OF TWO PARTS.

1. FIVE CHANNELS EQUIPPED WITH A TRAVELING WIRE MONITOR TO GIVE PERIODIC INDICATIONS OF FLUX.
2. FIVE GAMMA SENSITIVE OR NEUTRON SENSITIVE DETECTORS INSTALLED IN FIVE CHANNELS TO GIVE CONTINUOUS READINGS ON INSTRUMENTS IN THE CONTROL ROOM. A DEVELOPMENT CONTRACT HAS BEEN NEGOTIATED WITH BATTELLE MEMORIAL INSTITUTE TO IMPROVE THEIR THERMAL NEUTRON FLUX MEASURING DEVICE. THIS DEVICE CONSISTS OF TWO GEOMETRICALLY IDENTICAL CERAMIC BILLETS, ONE CONTAINING NATURAL URANIUM AND THE OTHER ENRICHED WITH U-235. THE FIRST WILL BE HEATED BY GAMMAS AND THE SECOND BY GAMMAS AND NEUTRONS. HEAT IS APPLIED TO THE FIRST BY AN ELECTRICAL HEATING UNIT TO GIVE THE SAME TEMPERATURE AS SECOND. THE ENERGY ADDED BY THE ELECTRICAL HEATING UNIT IS USED AS A MEASURE OF THE FLUX.

FUEL ELEMENTS - COEXTRUSIONS OF TUBE-IN-TUBE ELEMENTS BY NUCLEAR METALS, INC., HAVE VERY UNIFORM ZIRCALOY WALL THICKNESS, WITH A VARIATION WITHIN ONE OR TWO MILS. DUE TO THIS FACTOR, THE USE OF 20 MIL OR THINNER CLADDING IS BEING INVESTIGATED IN LIEU OF 30 MIL CLADDING. THE MOST IMPORTANT DEVELOPMENT PROBLEM IS PROVIDING A SUITABLE END CLOSURE.

A VERY PRELIMINARY INVESTIGATION WAS MADE OF A ZIRCALOY-CLAD DEFECTED ROD WITH AN ELECTRICAL HEAT SOURCE IN AN OUT-OF-PILE TEST. INDICATIONS ARE THAT AT COOLANT TEMPERATURE OF 300⁰C, COEXTRUDED ZIRCALOY-CLAD FAILURES ARE NO MORE SERIOUS THAN PRESENT ELEMENT FAILURES IN REACTORS.

ZIRCONIUM TUBES - PRICES ARE BEING OBTAINED FROM FOUR VENDORS, HARVEY ALUMINUM, ALLEGHENY LUDLUM, CHASE BRASS, AND BRIDGEPORT BRASS CO., FOR THE FABRICATION OF PILOT ORDERS OF NPR PROCESS TUBES. IT IS EXPECTED THAT THE BEST THREE OF FOUR PROPOSALS WILL BE ACCEPTED.

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HANFORD
DOCUMENT NO. 71736 *del*

PLANT ACQUISITION AND CONSTRUCTION (CONT'D.)

PROJECT AND DESIGN STUDIES (CONT'D.)

CONFINEMENT OF RADIOACTIVE PARTICULATE MATTER IN 105 BUILDING EXHAUST AIR - DESIGN IS 63% COMPLETE, WITH PHASE I (REAR-FACE FOG SPRAY) BEING 92% COMPLETE.

FABRICATION HAS BEEN INITIATED ON THE FOG SPRAY HEADER FOR 105-KE.

SEVERAL CONCERNS WERE INVESTIGATED TO PICK THE BEST QUALIFIED ONE FOR HALOGEN TESTING. THIS TESTING INVOLVES TESTING FILTER AND DRY HALOGEN REMOVAL COMPONENTS. OF THE COMPANIES EVALUATED, A. D. LITTLE APPEARS THE BEST ABLE TO CARRY ON THIS WORK.

PUMP TEST FACILITY - DESIGN FOR A FIXED-PRICE BID PACKAGE HAS BEEN COMPLETED. THE INVITATION IS TO BE DISTRIBUTED EARLY IN APRIL, AND THE BID OPENING WILL BE EARLY IN MAY. THIS FACILITY WILL TEST NEWLY DESIGNED PUMPS, IMPELLERS, AND MODIFICATIONS THAT MAY REPLACE THE 190-PUMPS ORIGINALLY PROCURED FOR THESE PROJECTS.

RMC BUTTON LINE - 234-5 BUILDING - SCOPING FOR ADDITIONAL SHIELDING IS UNDER WAY. A REVISED PROPOSAL IS BEING PREPARED FOR SUBMISSION LATE IN APRIL.

ADDITIONAL FIRE PROTECTION - 234-5 BUILDING - DESIGN CRITERIA ARE BEING PREPARED FOR THE WET SPRAY SYSTEM TO PERMIT ADVERTISING FOR A DESIGN AND CONSTRUCT CONTRACT ON THIS PORTION OF THE PROJECT. DETAILED DESIGN FOR THE DETECTION SYSTEM IS BEING CARRIED ON BY THE OPERATING CONTRACTOR TO PRODUCE A BID PACKAGE FOR FIXED-PRICE CONSTRUCTION.

PROCESSING NON-PRODUCTION POWER FUELS - A DIRECTIVE HAS BEEN ISSUED FOR THE DESIGN OF FACILITIES FOR RECEIVING AND STORAGE OF SPENT FUELS FROM NON-PRODUCTION REACTORS. THIRTY MONTHS CONSTRUCTION TIME IS ESTIMATED FOR THIS WORK.

IN-REACTOR STUDIES EQUIPMENT - DESIGN IS 9% COMPLETE. DRAWINGS FOR COMMENT HAVE BEEN REVIEWED TO COVER ARRANGEMENTS FOR PRESSURE, TEMPERATURE, AND STRAIN INDICATORS ON THE CONTROL PANEL. MECHANICAL DESIGN IS UNDER WAY FOR THE TEST SPECIMEN CAPSULE, AND SPECIFICATIONS HAVE BEEN WRITTEN FOR TEMPERATURE CONTROL AND RECORDING INSTRUMENTATION.

AUTOMATIC COLUMBIA RIVER MONITORING STATION; CENTRAL STORAGE FACILITY FOR 300 AREA; AND ANIMAL PENS, ISOLATION AND EXAMINING FACILITIES - A CONTRACT HAS BEEN NEGOTIATED FOR THE DESIGN OF FACILITIES FOR THESE THREE PROJECTS.

DEVELOPMENT:

ZIRCONIUM TUBES FOR B, D & F REACTORS - FOUR FIRMS, MALLORY-SHARON, TUBE REDUCING, HARVEY ALUMINUM, AND SUPERIOR TUBE CO., HAVE SUBMITTED ACCEPTABLE BIDS FOR PILOT ORDERS FOR TUBES. A TOTAL OF FROM 300-420 TUBES CAN BE ORDERED.

RECOMMENDATIONS ARE BEING REVIEWED FOR PLACING ORDERS WITH HARVEY ALUMINUM AND BRIDGEPORT BRASS FOR THE FABRICATION OF FIFTY RIBLESS TUBES.

PLANT ACQUISITION AND CONSTRUCTION (CONT'D.)

PLANT CONSTRUCTION

MAJOR CONSTRUCTION - THE STATUS OF MAJOR CONSTRUCTION IS INDICATED BELOW:

PROJECT	PROJECT PROPOSAL No.	MAJOR PROJECTS CONSTRUCTION				DESIGN	PRESENT WORKING ESTIMATE
		ACTUAL STARTING DATE	SCHED. COMPL. DATE	COMPLETION		%	(THOUSANDS)
				% SCHED.	% ACTUAL	ACTUAL COMPL.	
CITY HALL*	AEC-157	3-24-58	5- 1-59	96	96	100	\$ 635
PRTR	AEC-167	3- 6-58	8-30-60	16	21	100	14,000
PUREX WASTE FACILITY	CG-719	8-27-58	11-30-59	93	88	100	1,100
RMC BUTTON LINE 234-5	CG-734	2-18-58	1-31-60	63	61	100	1,480
RMC FAB. LINE 234-5	CG-745	2-18-58	7- 1-59	94	90	100	1,050
PLUTONIUM FABRICATION PILOT PLANT	CA-747	3- 6-58	11- 1-60	47	48	87	4,000
HIGH LEVEL RADIO- CHEMISTRY FAC.	CA-749	8-14-58	6-30-59	65**	55**	100	960

REACTOR PLANT MODIFICATIONS FOR INCREASED PRODUCTION, PHASE I - THE NEW DESIGN IMPELLER FROM BYRON JACKSON WAS REMOVED FROM DR-8 PUMP AND SHIPPED TO THE VENDOR FOR DIAMETER REDUCTION AND VANE TRIMMING.

VIBRATION TESTS TO DETERMINE THE CRITICAL RPM OF THE ROTATING ELEMENT ARE UNDER WAY ON OTHER PUMPS.

PLUTONIUM RECYCLE TEST REACTOR:

PHASE I (CONTAINMENT VESSEL) - THE CONTAINMENT VESSEL STEEL ERECTION AND WELDING IS COMPLETE EXCEPT FOR WELD REPAIR WORK.

PHASE II (SERVICE BUILDING) - BASIC BUILDING STRUCTURAL WORK IS COMPLETE.

COAL CAR SHAKE-OUT - 100-B, D, F, H, AND 200 WEST AREAS - THE PHYSICAL COMPLETION NOTICE FOR THIS PROJECT WAS SUBMITTED MARCH 9, 1959.

ADDITIONAL FIRE PROTECTION - 222-S - BENEFICIAL USE WAS OBTAINED MARCH 13, 1959 AND THE PROJECT IS COMPLETE WITH EXCEPTIONS.

CRIB AND TEST WELLS FOR 234-5 BUILDING WASTE - WORK ON THE LAST WELL WAS COMPLETED MARCH 24, 1959.

* CITY HALL IN INCLUDED IN DISPOSAL PROGRAM.

** CONTRACTOR'S SCHEDULE.

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TO: Director, Division of Production
USAEC, Washington 25, D. C.

FROM: J. E. Travis, Manager, Hanford Operations
Office, USAEC, Richland, Washington

SUBJECT: MONTHLY STATUS AND PROGRESS REPORT

SYMBOL: B:HRE

APP 1:1002

Enclosed herewith is Part II ("Official Use Only" portion)
of subject report for the month of March, 1959.
The "Secret" portion, Part I, is forwarded as a separate
report.

Enclosure:
Monthly Status and Progress Report, Part II

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MONTHLY STATUS AND PROGRESS REPORT

MARCH 1959

PART II

U. S. ATOMIC ENERGY COMMISSION
HANFORD OPERATIONS OFFICE

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MONTHLY STATUS AND PROGRESS REPORT

HANFORD OPERATIONS OFFICE

MARCH 1959

PART II

C O N T E N T S

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COMMUNITY OPERATIONS

<u>GOVERNMENT HOUSING:</u>	<u>MARCH 1</u>	<u>MARCH 31</u>
TOTAL HOUSES AVAILABLE FOR OCCUPANCY	598	390*
1. OCCUPIED	426	224
2. UNOCCUPIED	172	166
TOTAL APARTMENTS AVAILABLE FOR OCCUPANCY	134	134
1. OCCUPIED	133	134
2. UNOCCUPIED	1	0

THREE DORMITORIES ARE NOW IN OPERATION BY A COMMERCIAL OPERATOR.

PRIVATE HOUSING UNITS (WHERRY ACT):

	<u>COLUMBIA HEIGHTS</u>		<u>SPOKANE HOUSING</u>		<u>TOTAL UNITS</u>
	<u>HOUSES</u>	<u>APTS.</u>	<u>HOUSES</u>	<u>APTS.</u>	
TOTAL UNITS	280	220	400	100	1,000
RENTED	47	55	387	88	577
VACANT	233	165	13	12	423

MESSRS. JOE BROWN AND JOE SMITH OF HHFA IN WASHINGTON AND WARREN COX OF THE FHA LEGAL OFFICE IN WASHINGTON REQUESTED THAT HOO INITIATE TRANSFER DOCUMENTS TO FHA TO CONVEY BAUER-DAY (COLUMBIA HEIGHTS) LAND. THEY AGREED THEY WOULD SURVEY THE LAND AND ARE PLANNING TO SELL THE HOUSES INDIVIDUALLY. THEY ARE UNCERTAIN AS TO WHAT WILL BE DONE WITH THE APARTMENTS AND MAY CONSIDER TEARING THEM DOWN.

REPRESENTATIVES OF FHA FROM WASHINGTON, D. C., AND SPOKANE AND KENNEWICK, WASHINGTON MET WITH HOO REPRESENTATIVES TO DISCUSS DISPOSAL OF THE BAUER-DAY (COLUMBIA HEIGHTS) PROPERTIES. IT WAS AGREED THAT HOO WILL EXPEDITE TRANSFER OF JURISDICTION ON LEASED LAND. INDIVIDUAL SALE OF THE HOUSES WAS RECOMMENDED.

DISPOSAL - THE REPORT OF SALES AT THE END OF MARCH IS AS FOLLOWS:

<u>TYPE</u>	<u>NUMBER OFFERED</u>	<u>NUMBER SOLD TO 3-31-59</u>	<u>ADDITIONAL GOOD FAITH DEPOSITS</u>
SINGLE	3,788	3,640	84
DUPLEX	1,018	843	12
TOTAL	4,806	4,483	96
COMMERCIALS	39	4	3

A TOTAL OF 96 VACANT LOTS HAVE BEEN SOLD.

HHFA OFFERED ALL REMAINING VACANT RESIDENTIAL LOTS AND SEVERAL RESIDENTIAL PARCELS OF LOTS ON MARCH 10. THESE WERE OFFERED FOR SEALED BIDS, THE BIDS TO BE OPENED ON APRIL 15.

HHFA OFFERED 13 MORE COMMERCIAL PROPERTIES ON MARCH 30, AND ALSO FIVE NON-PROFIT PROPERTIES.

THE PERIOD FOR APPEALS ON SHUT-OUT DUPLEX TENANT PRIORITY APPLICATIONS ENDED AT MIDNIGHT, MARCH 30. NO APPEALS WERE RECEIVED. 271 APPLICATIONS FOR THE 164 HOUSES WERE RECEIVED AND ALL OF THE HOUSES WERE TAKEN; 18 APPLICATIONS WERE REJECTED. THE LIST OF SUCCESSFUL APPLICANTS WAS POSTED ON MARCH 19.

HHFA ADVISED THE COMMISSION THAT 800 BROCHURES ON RESIDENTIAL AND INDUSTRIAL LANDS IN RICHLAND WERE MAILED TO INTERESTED COMPANIES ALL OVER THE UNITED STATES.

* A TOTAL OF 3,640 SINGLE HOUSES AND 843 DUPLEXES (5,326 UNITS) HAVE BEEN SOLD.

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COMMUNITY OPERATIONS (Cont'd.)

MUNICIPAL - THE RICHLAND POLICE DEPARTMENT MOVED INTO THE NEW CITY HALL ON MARCH 23, 1959. THE REMAINDER OF THE CITY HALL IS NOW READY FOR OCCUPANCY, BUT NO MOVES CAN BE MADE DUE TO A STRIKE BY THE EMPLOYEES OF THE GENERAL TELEPHONE COMPANY.

REAL ESTATE - A CONFERENCE WAS HELD WITH REPRESENTATIVES OF THE DEPARTMENT OF JUSTICE, BUREAU OF RECLAMATION, CORPS OF ENGINEERS AND HOO TO DISCUSS THE BUREAU'S REQUEST THAT AEC TURN CERTAIN LANDS ALONG THE BOUNDARY OF THE CONTROL ZONE OVER TO THE BUREAU FOR IRRIGATION. THE WASHINGTON OFFICE OF THE DEPARTMENT OF JUSTICE STRONGLY OBJECTS TO THIS REQUEST. HOO ADVISED THAT THE COMMISSION MAY CONSIDER RETURNING CERTAIN LANDS WHICH THE BUREAU GAVE AEC ABOUT TWO YEARS AGO, BUT ARE RELUCTANT TO TURN ANY LANDS ACQUIRED BY AEC FOR THIS PURPOSE.

AWARDS MADE BY THE WAHLUKE SLOPE COMMISSIONERS ON 14 LAND TRACTS WERE ANNOUNCED. THE ASSISTANT U. S. ATTORNEY FILED AN OBJECTION TO THE AWARDED PRICES. AWARDS AVERAGED MORE THAN DOUBLE THE VALUES TESTIFIED BY GOVERNMENT WITNESSES.

PROPOSED STATE HIGHWAY - AN HOO REPRESENTATIVE ACCOMPANIED THE ROADS COMMITTEE OF THE RICHLAND CHAMBER OF COMMERCE AND THE COUNTY COMMISSIONERS TO OLYMPIA, WASHINGTON ON MARCH 11. THEY MET WITH THE DIRECTOR OF THE DEPARTMENT OF CONSERVATION AND DEVELOPMENT AND STATE REPRESENTATIVES TO DISCUSS THE POSSIBILITY OF A STATE HIGHWAY AT COLD CREEK. \$7,500 IS INCLUDED IN A BILL PASSED BY THE WASHINGTON STATE LEGISLATURE FOR A PRELIMINARY SURVEY OF A HIGHWAY ROUTE FROM HORN RAPIDS TO VERNITA THROUGH THE HANFORD RESERVATION.

OTHER CONSTRUCTION

MISCELLANEOUS:

CONTRACTS - THERE WERE FOUR (4) BID OPENINGS DURING THE MONTH OF MARCH. THE RESULTS OF THESE OPENINGS ARE LISTED BELOW:

<u>PROJECT No.</u>	<u>CONTRACT No.</u>	<u>NO. BIDS RECEIVED</u>	<u>GOVERNMENT ESTIMATE</u>	<u>HIGH BID</u>	<u>LOW BID</u>	<u>APPARENT LOW BIDDER</u>
CAR-814 W.O. No. A-62735	1437	4	\$100,700	\$121,628	\$ 99,497	ACME PAVERS
CGH-790	1442	4	93,700	121,800	104,900	JENSEN & RASMUSSEN
ER-90196	1444	5	17,000	39,000	11,760	PATTON & HILL
CA-744	1440	9	1,050,000	1,140,786	934,850	JENSEN & RASMUSSEN

PROCUREMENT - TWENTY-TWO AWARDS MADE BY GENERAL ELECTRIC WERE APPROVED IN THE AMOUNT OF \$1,154,516.56. THERE WERE 369 PURCHASE ORDERS IN THE TOTAL AMOUNT OF \$230,980.85 PLACED BY THE ATOMIC ENERGY COMMISSION.

PERSONNEL (ON-SITE)

	<u>MARCH 1</u>	<u>MARCH 31</u>
ATOMIC ENERGY COMMISSION	276	276
GENERAL ELECTRIC COMPANY	7,959	7,972
TOTAL CONSTRUCTION PERSONNEL	<u>666</u>	<u>668</u>
TOTAL PROJECT PERSONNEL	8,901	8,916

KEY PERSONNEL CHANGES - NONE.

CONFIDENTIAL

**DATE
FILMED**
8/3/92