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MANUFACTURING SECTION
SEMIANNUAL SUMMARY REPORT
(PERIOD ENDING JUNE 30, 1966)

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MANUFACTURING SECTION
SEMIANNUAL SUMMARY REPORT
(PERIOD ENDING JUNE 30, 1966)

By

D. L. DeNeal
Manufacturing Section

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MANUFACTURING SECTION
SEMIANNUAL SUMMARY REPORT
(PERIOD ENDING JUNE 30, 1966)

INTRODUCTION

This is the second semiannual issue of reactor and power operations data. Summary data from the first issue⁽¹⁾ are repeated for comparison. Experience during each succeeding six months period will be added to these data in later reports until two full years of operating experience are shown. For comparison purposes, the two years of experience will then continue to be shown by dropping and adding a six months period with each semiannual issue.

STATISTICAL SUMMARY

The most significant statistics shown by individual reactors on the attached pages are summarized on pages 3 and 4 for the small reactors (B-C-D) and for the K Reactors (KE-KW). Significant achievements are shown below.

Reactor input plutonium production for FY-1966, 4116.0 KMWDs, was a record high exceeding by 2.2 percent the previous record (FY-1965) for the five operating reactors. A new monthly input production record, 414.9 KMWDs, for the five operating reactors was established during March, 1966, exceeding the May, 1964 record by 6.6 percent.

During May, 1966, the B Reactor achieved an input production record of 60.1 KMWDs for that reactor, exceeding their own record of December, 1965 by 13.6 percent. Also at B Reactor, a FY-1966 production of 566.6 KMWDs represents a new record at that reactor which is 6.6 percent above their FY-1964 record. A monthly time operated efficiency of 100 percent was achieved at B Reactor during May, 1966 for the first time since startup in September, 1944.

In January, 1966, C Reactor achieved a new monthly input production record of 66.7 KMWDs which is 3.6 percent above their May, 1963 record.

The KE Reactor established an input production record during FY-1966 for a K Reactor, exceeding the FY-1965 record, also at KE, by 5.0 percent.

New maximum power level records (held for 24 hours) were attained at B - 2110 megawatts in March, at C - 2490 megawatts in March, and at D - 2165 megawatts in February.

D. L. DeNeal, Specialist
Production Reports & Administration

DLD:bm

(1) DUN-850, "Manufacturing Section Semiannual Summary Report (July-December, 1965)," April 1, 1966, D. L. DeNeal.

Reactor Statistical Summary

	<u>Jul-Dec</u> <u>1965</u>	<u>Jan-Jun</u> <u>1966</u>	
<u>Production (Input)</u>			
<u>Plutonium - KMWDs</u>			
Small (B, C, & D)	787.6	932.4	
Ks (KE & KW)	1,209.2	1,186.8	
Combined	1,996.8	2,119.2	
<u>Plutonium - Kgs</u>			
Small	626.6	747.6	
Ks	1,021.0	1,000.0	
Combined	1,647.6	1,747.6	
<u>Uranium U-233 - Grams</u>			
Small	23,913	25,014	
Ks	49,944	51,706	
Combined	73,858	76,720	
<u>Polonium 210 - Curies</u>			
Small	53,000	29,745	
Ks	0	0	
<u>Power Level</u>			
<u>Maximum - (Average) - MW</u>			
B & D	1,875	2,010	
C	2,152	2,423	
KE & KW	4,348	4,400	
<u>Average Operating - MW</u>			
B & D	1,788	1,986	
C	2,000	2,329	
KE & KW	4,225	4,312	
<u>Time Operating Efficiency - (TOE %)</u>			
Small	77.0	81.8	
Ks	77.8	76.0	
Combined	77.3	79.5	
<u>Reactor Outages - No.</u>			
	<u>Small</u>	<u>Ks</u> <u>Total</u>	<u>Small</u> <u>Ks</u> <u>Total</u>
Scheduled	7	4 11	13 7 20
Unscheduled	28	16 44	10 16 26
Scrams	17	18 35	20 13 33
<u>Process Tubes Replaced</u>			
Small	111	161	
Ks	10	14	
Total	121	175	
<u>Process Tube Leaks (Incl. V.S.)</u>			
Small	20	13	
Ks	0	2	
Total	20	15	

Reactor Statistical Summary - Contd.

	<u>Jul-Dec</u> <u>1965</u>			<u>Jan-Jun</u> <u>1966</u>		
	<u>Small</u>	<u>Ks</u>	<u>Total</u>	<u>Small</u>	<u>Ks</u>	<u>Total</u>
<u>Fuel Element Failures</u>						
I&E Natural U.	12	5	17	3	1	4
I&E Enriched U.	11	4	15	2	2	4
Other	1	3	4	0	1	1
<u>Helium Usage - CFD</u>						
Small		22,608			26,964	
Ks		16,631			22,309	
Total		39,239			49,273	
<u>Outage Work - % Time Allocation</u>	<u>Small</u>	<u>Ks</u>	<u>Total</u>	<u>Small</u>	<u>Ks</u>	<u>Total</u>
Charge-Discharge	7.6	10.4	8.8	7.7	8.7	8.1
Rupture Removal	1.9	1.5	1.7	0.3	0.5	0.4
Tube Leaks	1.9	1.0	1.5	1.0	0.8	0.9
Tube Replacement	1.7	0.5	1.2	1.9	0.4	1.3
Other Maintenance	6.7	4.2	5.7	3.5	9.1	5.7
Standard Check	0.8	1.1	0.9	0.6	0.9	0.7
Production Test	1.3	2.1	1.6	1.1	1.7	1.3
Project Work	-	0.2	0.2	1.1	-	0.7
Other	1.1	1.3	1.1	1.0	1.9	1.4
Total	23.0	22.3	22.7	18.2	24.0	20.5

REACTOR STATISTICS

	B				C				D			
	Jul-1965	Dec-1965	Jan-1966	Jun-1967	Jul-1965	Dec-1965	Jan-1966	Jun-1967	Jul-1965	Dec-1965	Jan-1966	Jun-1967
PRODUCTION (Input basis)												
KMWD - In Nat. U	197.8		227.7		165.1		207.7		185.0		220.2	
KMWD - In Enr. U	77.1		64.0		94.3		132.4		68.3		80.4	
KMWD - Total	274.9		291.7		259.4		340.1		253.3		300.6	
KMWD - % of Forecast	103.6		114.9		92.0		111.4		98.8		105.4	
Pu (kg) - In Nat. U	163.9		191.0		141.7		178.9		155.0		185.9	
Pu (kg) - In Enr. U	53.1		44.3		65.7		92.3		47.2		55.2	
Pu (kg) - Total	217.0		235.3		207.4		271.2		202.2		241.1	
Conv. Ratio - In Nat. U	0.829		0.839		0.858		0.861		0.838		0.844	
Conv. Ratio - In Enr. U	0.689		0.692		0.697		0.697		0.691		0.687	
Polonium - Curies	20,300		2,968		15,500		9,733		17,200		17,044	
Uranium-233 - Grams	8,239		7,389		7,909		9,540		7,765		8,085	
OPERATING EFFECTIVENESS (a)												
Power Level, Max - MW	1,861		2,034		2,152		2,423		1,888		2,096	
Power Level, Avg - MW	1,787		1,942		2,000		2,329		1,789		2,030	
Level Efficiency - %	96.0		95.5		92.9		96.1		94.8		96.9	
Time Oper. Effic. - %	83.6		83.0		70.5		80.7		77.0		81.8	
Production Effic. - %	80.3		79.3		65.5		77.6		73.0		79.3	
Effective Cent. Tubes	1,438		1,485		1,521		1,587		1,528		1,522	
Non-Eq. Loss/Startup	0.35		0.30		0.35		0.30		0.27		0.13	

(a) Max. PL is Avg. of Monthly Maximums; LE = Avg. PL + Max. PL; PE = LE X TOE.
 ECT = Equil. PL + Avg. Power of 10 Most Productive Tubes. NE Loss/Startup is
 Expressed as Days of Equilibrium Operation (Derived by R&E).

REACTOR STATISTICS

	KE			KW			TOTAL		
	Jul-Dec 1965	Jan-Jun 1966	Jul-Dec 1966	Jan-Jun 1967	Jul-Dec 1965	Jan-Jun 1966	Jul-Dec 1966	Jan-Jun 1967	
<u>PRODUCTION (Input basis)</u>									
KMWD - In Nat. U	422.8	396.9			369.9	347.6	1,340.6	1,400.1	
KMWD - In Enr. U	220.4	248.0			196.1	194.3	656.2	719.1	
KMWD - Total	643.2	644.9			566.0	541.9	1,996.8	2,119.2	
KMWD - % of Forecast	104.9	105.2			90.3	103.8	97.7	107.1	
Pu (kg) - In Nat. U	371.9	363.1			333.9	316.5	1,166.4	1,235.4	
Pu (kg) - In Enr. U	166.4	179.2			148.8	141.2	481.2	512.2	
Pu (kg) - Total	538.3	542.3			482.7	457.7	1,647.6	1,747.6	
Conv. Ratio - In Nat. U	0.880	0.915			0.903	0.911	0.870	0.882	
Conv. Ratio - In Enr. U	0.755	0.723			0.759	0.727	0.733	0.712	
Polonium - Curies	0	0			0	0	53,000	29,745	
Uranium-233 - Grams	25,465	29,197			24,479	22,509	73,858	76,720	
<u>OPERATING EFFECTIVENESS(a)</u>									
Power Level, Max - MW	4,362	4,400			4,334	4,400	14,597	15,353	
Power Level, Avg - MW	4,260	4,341			4,190	4,282	14,026	14,924	
Level Efficiency - %	97.7	98.7			96.7	97.3	96.1	97.2	
Time Oper. Effic. - %	82.1	82.1			73.4	69.9	77.3	79.5	
Production Effic. - %	80.2	81.0			71.0	68.0	74.3	77.3	
Effective Cent. Tubes	2,341	2,247			2,237	2,191	-	-	
Non-Eq. Loss/Startup	0.24	0.14			0.26	0.15	0.29	0.20	

(a) Max. PL is Avg. of Monthly Maximums; IE = Avg PL ÷ Max. PL; PE = IE X TOE.
 ECT = Equil. PL ÷ Avg. Power of 10 Most Productive Tubes. NE Loss/Startup is
 Expressed as Days of Equilibrium Operation (Derived by R&E).

REACTOR STATISTICS

	B				C				D			
	Jul-Dec 1965	Jan-Jun 1966	Jul-Dec 1966	Jan-Jun 1967	Jul-Dec 1965	Jan-Jun 1966	Jul-Dec 1966	Jan-Jun 1967	Jul-Dec 1965	Jan-Jun 1966	Jul-Dec 1966	Jan-Jun 1967
<u>REACTOR OUTAGES (Number, by cause)</u>												
Charge-Discharge	4		6		-		4		1		2	
Tube Replacement	-		-		-		-		-		-	
Fuel Ruptures	4		-		12		2		7		2	
Tube Leaks (Incl. Van S)	-		-		2		1		1		1	
Project Work	-		-		-		1		-		1	
Production Tests	-		-		-		-		-		1	
Front Face Leaks	-		1		1		-		-		-	
Rear Face Leaks	-		2		-		-		-		-	
Rods - Horiz. & Vert.	-		1		1		-		-		3	
Reactor Hardware	-		2		1		1		2		1	
Panel/it System	-		-		6		5		3		-	
Other Instrumentation	-		1		-		-		-		1	
Electric Power	-		1		-		1		-		-	
Water Flow (105 Bldg.)	-		-		-		-		-		-	
190 Building	-		2		-		-		1		-	
Reactivity Control	-		-		-		-		-		-	
Temperature Control	-		-		-		-		-		-	
Other	-		-		-		-		6		-	
Total Outages	8		16		23		15		21		12	
Outage Recap:												
Scheduled Outages(a)	4		6		1		5		2		2	
Unsched. Shutdowns	4		3		15		3		9		4	
Scrams	0		7		7		7		10		6	

(a) Excluding those which followed scrams or unscheduled outages.

REACTOR STATISTICS

	KE				KW				TOTAL			
	Jul-Dec 1965	Jan-Jun 1966	Jul-Dec 1966	Jan-Jun 1967	Jul-Dec 1965	Jan-Jun 1966	Jul-Dec 1966	Jan-Jun 1967	Jul-Dec 1965	Jan-Jun 1966	Jul-Dec 1966	Jan-Jun 1967
<u>REACTOR OUTAGES (Number, by cause)</u>												
Charge-Discharge	2	4			1	2			8	18		
Tube Replacement	-	-			-	-			-	-		
Fuel Ruptures	6	1			5	3			34	8		
Tube Leaks (Incl. Van S)	-	-			2	1			5	3		
Project Work	-	-			-	-			-	1		
Production Tests	2	-			-	-			2	1		
Front Face Leaks	-	1			-	1			1	4		
Rear Face Leaks	-	-			-	-			-	2		
Rods - Horiz. & Vert.	-	-			-	2			1	3		
Reactor Hardware	-	2			1	3			4	11		
Panelit System	3	3			3	7			15	16		
Other Instrumentation	2	-			1	-			3	1		
Electric Power	-	-			-	1			-	4		
Water Flow (105 Bldg.)	-	1			-	-			-	1		
190 Building	-	-			-	-			1	2		
165 Building	-	-			1	-			1	-		
Reactivity Control	-	-			1	-			1	-		
Temperature Control	-	-			-	1			-	1		
Other	5	1			3	2			14	3		
Total Outages	20	13			18	23			90	79		
Outage Recap:												
Scheduled Outages (a)	2	5			2	2			11	20		
Unsched. Shutdowns	8	4			8	12			44	26		
Scrams	10	4			8	9			35	33		

(a) Excluding those which followed scrams or unscheduled outages.

REACTOR STATISTICS

	B			C			D		
	Jul-Dec 1965	Jan-Jun 1966	Jul-Dec 1966	Jan-Jun 1967	Jul-Dec 1965	Jan-Jun 1966	Jul-Dec 1965	Jan-Jun 1966	Jul-Dec 1966
OUTAGE WORK (% time allocation, including cooling time and startup preparation)(a)									
Charge-Discharge	7.0	7.5			10.1	7.9	5.8	7.6	
Rupture Removal	1.3	-			3.8	0.5	0.6	0.4	
Tube Leaks (inc. Van S)	1.4	1.7			1.5	0.4	2.8	1.2	
Tube Replacement	2.1	1.6			1.5	0.9	1.4	3.1	
Other Maintenance	3.2	3.8			8.7	3.8	8.1	2.8	
Standard Check	0.7	0.7			1.1	0.4	0.6	0.7	
Production Test	0.5	0.2			0.1	1.2	3.3	1.8	
Project Work	-	-			0.1	3.3	0	0.1	
Other	0.2	1.5			2.6	0.9	0.4	0.5	
Total	16.4	17.0			29.5	19.3	23.0	18.2	
SCRAMS (Number, by cause)									
Reactor Operations: (b)									
Equip. Failure - 105	-	3			-	1	4(c)	3(c)	
" - 190	-	1			-	-	-	-	
Improp. Proced. - 105	-	-			-	-	1	-	
" - 190	-	-			-	-	-	-	
Unexplained Trips	-	-			6	4	4	2	
Other Inst. Trips	-	1			-	-	-	-	
Manual Trips	-	-			1	1	-	-	
Subtotal	0	5			7	6	9	5	
Test Facilities	-	-			-	-	-	-	
Elect. Power Supply	-	2			-	1	1	1	
Total Scrams	0	7			7	7	10	6	

(a) Allocation per standard "Reactor Outage Time Reporting Procedure."

(b) Excluding scrams due to fuel failures and process tube leaks

(c) Includes two scrams due to orifice screen plugging.

REACTOR STATISTICS

	KE		KW		TOTAL				
	Jul-Dec 1965	Jan-Jun 1966	Jul-Dec 1965	Jan-Jun 1966	Jul-Dec 1965	Jan-Jun 1966	Jul-Dec 1966	Jan-Jun 1967	1967

OUTAGE WORK (% time allocation, including cooling time and startup preparation)(a)

Charge-Discharge	8.7	9.1	12.2	8.4	8.8	8.1			
Rupture Removal	1.2	0.3	1.8	0.7	1.7	0.4			
Tube Leaks (incl. Van S)	-	-	1.9	1.5	1.5	0.9			
Tube Replacement	0.1	0.4	0.9	0.4	1.2	1.3			
Other Maintenance	3.6	3.5	4.9	14.8	5.7	5.7			
Standard Check	0.8	0.8	1.3	0.9	0.9	0.7			
Production Test	1.9	1.2	2.3	2.2	1.6	1.3			
Project Work	0.3	-	0.2	-	0.2	0.7			
Other	1.3	2.6	1.1	1.2	1.1	1.4			
Total	17.9	17.9	26.6	30.1	22.7	20.5			

SCRAMS (Number, by cause)

Reactor Operations: (b)									
Equip. Failure - 105	#1	-	-	-	5	7			
" - 190	-	-	-	-	-	1			
Improp. Proced. - 105	4	1	2	1	7	2			
" - 190	-	-	-	-	-	-			
Unexplained Trips	3	3	3	6	16	15			
Other Inst. Trips	-	-	-	-	-	1			
Manual Trips	-	-	3	1	4	2			
Subtotal	8	4	8	8	32	28			
Test Facilities	2	-	-	-	2	-			
Elect. Power Supply	-	-	-	1	1	5			
Total Scrams	10	4	8	9	35	33			

*Plugged Venturi

- (a) Allocation per standard "Reactor Outage Time Reporting Procedure."
- (b) Excluding scrams due to fuel failures and process tube leaks.

REACTOR STATISTICS

	B			C			D		
	Jul-Dec 1965	Jan-Jun 1966	Jul-Dec 1966	Jan-Jun 1966	Jul-Dec 1966	Jan-Jun 1966	Jul-Dec 1965	Jan-Jun 1966	Jul-Dec 1966
<u>OUTAGE TIMES (Hours, average)</u>									
Charged to Scrams	-	10.2		8.1	8.1		1.3	6.6	
Cooling Time	8.2	6.3		4.9	5.7		4.3	5.0	
Startup Preparation	6.2	4.0		4.1	3.9		3.2	3.8	
<u>OTHER STATISTICS</u>									
Equil. Recov. Time (a)	14	2		23	21		11	1	
Charge-Disch. Rate (b)	16.2	18.7		12.1	13.2		16.9	17.9	
Tubes Replaced - Total	30	31		20	8		61	122	
Water Leaks:									
Process Tube	1	0		2	1		7	2	
Van Stone Flange	2	8		0	1		8	1	
Water Coll. - Gallons	261	399		5,296	2,645		4,645	1,002	
" - Days >10 gals.	9	19		97	53		89	26	
Failures - I&E Nat. U	3	0		8	2		1	1	
Failures - I&E Enr. U	1	0		4	0		6	2	
Failures - Other	-	-		1	-		-	-	
Disch. Expos. - Nat. U(c)	617	625		605	610		634	599	
" - Enr. U(c)	802	844		802	836		813	904	

(a) Minutes, average, as defined and reported by Research & Engineering.

(b) Tubes/hour, average for standard charging of regular fuel as defined in the "Reactor Outage Time Reporting Procedure."

(c) MWD/T.

REACTOR STATISTICS

	K3			K4			TOTAL				
	Jul-Dec 1965	Jan-Jun 1966	Jul-Dec 1966	Jan-Jun 1967	Jul-Dec 1965	Jan-Jun 1966	Jul-Dec 1966	Jan-Jun 1966	Jul-Dec 1965	Jan-Jun 1966	Jan-Jun 1967
OUTAGE TIMES (Hours, average)											
Charged to Scrums	3.2	11.7			3.6	3.4	3.2	8.0			
Cooling Time	4.3	5.3			4.0	3.3	5.1	5.1			
Startup Preparation	4.8	6.9			4.0	4.0	4.5	4.5			
OTHER STATISTICS											
Equil. Recov. Time (a)	16	0			16	0	-	-			
Charge-Misch. Rate (b)	17.5	21.7			14.8	16.8	15.3	17.0			
Tubes Replaced - Total	3	5			7	9	121	175			
Water Leaks:											
Process Tube	0	0			0	1	10	4			
Van Stone Flange	0	0			0	1	10	11			
Water Coll. - Gallons	0	0			7,107	1,551	-	-			
" " - Days > 10 gals.	0	0			82	48	-	-			
Failures - I&E Ret. V	3	0			2	1	17	4			
Failures - I&E Bar. V	0	0			4	2	15	4			
Failures - Other	3	1			-	-	4	1			
Misch. Expos. - Ret. V (c)	747	659			641	710	660	643			
Misch. Expos. - Bar. V (c)	947	976			1,009	899	903	914			

(a) Minutes, average, as defined and reported by Research & Engineering.

(b) Tubes/hour, average for standard charging of regular fuel as defined in the "Reactor Outage Time Reporting Procedure."

(c) MBT/T.

REACTOR STATISTICS

	B			C			D		
	Jul-Dec 1965	Jan-Jun 1966	Jul-Dec 1967	Jul-Dec 1965	Jan-Jun 1966	Jul-Dec 1967	Jul-Dec 1965	Jan-Jun 1966	Jul-Dec 1967
<u>OTHER STATISTICS - contd.</u>									
Helium Loss-CF/day	6,319	7,835		10,113	12,085		6,176	7,044	
Fuel Charge: (At end of period)									
Tons Nat. U	154.5	154.4		125.7	127.6		149.0	143.4	
" Enr. U	53.7	53.9		76.7	75.9		57.7	61.5	
Tube Loadings: (At end of period)									
Nat. U Elms/tube	31	31		31	31		31	31	
Enr. U Els/tube (sh)	33	33		34	34		33	33	
Enr. U Els/tube (lg)	43	43		42	42		43	43	
Mixers/tube	1	1		1	1		1	1	
Dry Channels	1	2		4	4		4	4	
Water Tubes	7	7		11	4		12	6	
Graph. Stringers	8	8		10	10		8	9	
Non-fuel Productive Tubes:									
In Blanket	168	168		167	167		168	167	
Elsewhere	5	-		5	-		4	10	

REACTOR STATISTICS

	KE			KV			TOTAL					
	Jul-Dec 1965	Jan-Jun 1966	Jul-Dec 1966	Jan-Jun 1967	Jul-Dec 1965	Jan-Jun 1966	Jul-Dec 1966	Jan-Jun 1967	Jul-Dec 1965	Jan-Jun 1966	Jul-Dec 1966	Jan-Jun 1967
OTHER STATISTICS - contd.												
Helium Loss-CF/day	8,211	12,493			8,420	9,816			39,239	49,273		
Fuel Charge: (At end of period)												
Tons Nat. U	115.8	330.3			117.4	334.0			662.4	1,089.7		
" Bar. U	273.1	101.2			271.1	97.1			732.3	389.6		
Tube Loadings: (At end of period)												
Nat. U Elements/tube	38				38				-	-		
Bar. U EIs/tube (sh)	46				46				-	-		
Bar. U EIs/tube (lg)	51				51				-	-		
Mixers/tube	1				1				-	-		
Dry Channels	2				2				13	14		
Water Tubes	6				5				41	27		
Graph. Stringers	6				6				38	41		
Non-fuel Productive Tubes:												
In Blanket	192	193			193				888	888		
Elsewhere	221	-			217	-			452	10		

DECLASSIFIED WATER PLANT STATISTICS

	B			C			D		
	Jul-Dec 1965	Jan-Jun 1966	Jul-Dec 1967	Jul-Dec 1965	Jan-Jun 1966	Jul-Dec 1967	Jul-Dec 1965	Jan-Jun 1966	Jul-Dec 1967
WATER PLANT OPERATIONS									
River Water Pumped-MMG	52,214	53,452		(Included with B)			21,630	22,561	
Water Exported-MMG	4,030	3,989					-	-	
Water Treated-MMG	19,205	19,844		28,915	29,594		21,034	21,982	
Chem. Consumption-Pym:									
Alum	0.463	0.043		0.081	0		1.268	0.148	
Bauxite	4.507	4.701		4.911	4.869		4.242	4.463	
Chlorine	0.886	0.713		0.546	0.613		0.873	0.806	
Sulfuric Acid	22.834	24.610		22.045	24.991		24.540	27.409	
Filter Conditioner	0.021	0.024		0.017	0.013		0.017	0.018	
Process Water-MMG									
Proc. Water-GHM, Normal	20,659	20,521		21,600	22,935		19,790	20,649	
Process Water Analysis:	89,600	89,500		103,750	106,900		90,300	92,300	
Turbidity-Pym	.004	.004		.005	.004		.005	.006	
PH	6.62	6.65		6.66	6.65		6.61	6.61	
Cl Residual-Pym	0.09	.18		0.07	.23		0.06	.10	
Dichromate-Pym	0.993	.97		0.991	.97		0.949	1.00	
STEAM PLANT OPERATIONS									
Generation-MMG lbs.	332.2	341.7		(Included with B)			207.3	207.9	
Gener.-lbs/hr., Max.	89,000	103,700		"	"		95,300	85,500	
" -lbs/hr., Avg.	74,700	79,300		"	"		46,000	47,900	
Ibs. Steam/Lb. Coal	9.08	9.04		"	"		8.53	8.28	

DECLASSIFIED

DECLASSIFIED

PLANT STATISTICS

	KW			TOTAL		
	Jul-Dec 1965	Jan-Jun 1966	Jul-Dec 1967	Jul-Dec 1965	Jan-Jun 1966	Jul-Dec 1967
WATER PLANT OPERATIONS						
River Water Pumped-MMG	51,155	50,054		47,491	46,742	172,490
Water Exported-MMG	-	-		-	-	4,030
Water Treated-MMG	51,119	50,013		47,491	46,742	167,764
Chem. Consumption-ppm:						
Alum	16.243	15.769		6.038	10.078	12.407 ^(a)
Bauxite	-	-		-	-	13,023 ^(a)
Chlorine	0.941	0.803		1.033	0.802	4,596
Sulfuric Acid	14.474	16.879		19.748	19.350	4,697
Filter Conditioner	0.012	0.025		0.005	0.019	0.884
Process Water-MMG	47,589	46,551		42,474	41,253	0.759
Proc. Water-GPM, Normal	209,700	212,800		209,100	213,500	19,562
Process Water Analysis:						20,605
Turbidity-ppm	.005	.004		.006	.005	0.013
pH	6.67	6.66		6.67	6.79	0.020
Cl Residual-ppm	0.20	.19		0.19	.19	152,112
Dichromate-ppm	0.933	.90		0.946	.90	151,909
STEAM PLANT OPERATIONS						
Generation-MMG lbs.	163.2	224.6		149.5	186.4	852.2
Gener.-lbs/Hr., Max.	42,000	69,700		42,000	64,200	268,300
" -lbs/Hr., Avg.	37,500	52,200		33,700	43,400	191,900
Lbs. Steam/lb. Oil	114.6	104.8		107.2	100.0	102.5
Lbs. Steam/lbs. Coal	-	-		-	-	8.80

(a) K Reactors only.

DECLASSIFIED

REACTORS OPERATED SIMULTANEOUSLY

* REACTOR AVAILABILITY

B REACTOR

C REACTOR

D REACTOR

*Percent of time reactors operated

KE REACTOR

KW REACTOR

COMBINED

END

DATE
FILMED
7/9/93