RNW Blanket

DEPARTMENT OF THE NAVY
NAVAL AMMUNITION DEPOT
CRANE, INDIANA 47522

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From: Commanding Officer, Naval Ammunition Depot, Crane, Indiana
To: National Aeronautics and Space Administration, Goddard Space Flight Center (Code 761.2, Mr. T. J. Hennigan), Greenbelt, Maryland 20771

Subj: Monthly Progress Report on National Aeronautics and Space Administration Space Cell Test Program (4 copies)

Ref: (a) NASA Purchase Order W12-397 of 19 January 1967 to NAD Crane

Encl: (1) Explanation of Data
(2) Information on Active Tests as of 15 April 1971
(3) Information on Completed Tests as of 15 April 1971
(4) Data Available

1. The monthly status report of the Spacecraft Cell Testing program being done at NAD Crane for the National Aeronautics and Space Administration, under the direction of Goddard Space Flight Center, is submitted in accordance with reference (a). This status report lists the types of cells on test and their test parameters; and includes those cells which have completed tests.

2. Enclosure (1) is an explanation of the symbolic names used for the information on each pack listed in enclosures (2) and (3).

3. Enclosure (2) contains information on current tests; and enclosure (3) contains that on cells which have completed tests.

4. Data available in the form of printed lines, punched cards, or magnetic tape is listed in enclosure (4).

C. G. LYNCH
By direction

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EXPLANATION OF DATA

1. An explanation of the symbolic names used on line one of enclosures (2) and (3) follows:

a. TYPE: This stands for the type of cells in the pack. The following is a list of the symbols for the various types of cells.

(1) AGCD: Silver-Cadmium Cells.

(2) AGZN: Silver-Zinc Cells.

(3) NICD: Nickel-Cadmium Cells.

(4) PBCA: Lead-Calcium Cells.

(5) PBH+: Lead-Acid Cells.

b. AMPHR: This stands for the ampere-hour capacity of the individual cells as rated by the manufacturer. Cells tested in this program have ranged in rated capacity from 1.25 to 50 ampere-hours.

c. PEROD: This is the total time (in hours) for one charge-discharge period during automatic cycling. The various cycle periods are listed below with the corresponding charge and discharge times.

Cycle Period	Charge Time	Discharge Time
1.5 hr.	1.0 hr.	0.5 hr.
3.0 hr.	2.5 hr.	0.5 hr.
8.0 hr.	7.0 hr.	1.0 hr.
12.0 hr.	11.5 hr.	0.5 hr.
24.0 hr.	23.0 hr.	1.0 hr.

d. DEPTH: This is the depth of discharge. The depth of discharge is given as a percentage of the manufacturer's rated ampere-hour capacity to be removed during discharge. The depths of discharge at which cells are presently being cycled range from 10 to 75 percent.

e. TEMP: This is the ambient temperature at which the cells undergo automatic cycling. The various ambient temperatures at which cells are currently cycling are -20°, 0°, 20°, 25° and 40° C.

f. MANFR: This stands for the manufacturer of the cells. The manufacturer is represented by one of the following symbols:

(1) ASTRO: Astropower Laboratory, McDonnell-Douglas.

(2) CD: C&D Batteries.

(3) DL: Delco Remy.

(4) ELMIT: Electromite Corporation.

(5) EP: Eagle-Picher.

(6) ESB: ESB, Incorporated.

(7) GE: General Electric.

(8) GO: Gould-National Batteries, Inc.

(9) GU: Gulton Industries, Inc.

(10) NF: NIFE, Jungner of Sweden.

(11) SO: Sonotone Corporation.

(12) YD: Yardney Electric Corporation.

g. SPSYM: This stands for special symbol. These symbols are used to describe special types of cells. They also indicate new charge control methods and devices used during automatic cycling.

(1) AE: Auxiliary electrode cells.

(2) AE-GE: General Electric type.

(3) AE-GU: Gulton type.

(4) AE-RE: Auxiliary electrode and recombination electrode.

(5) AE13: General Electric type AB13.

(6) AE14: General Electric type AB14.

(7) CC: Commercial cells.

(8) CHSP: "Chemsorb" separator.

(9) CLM: Coulometer in series with cells to effect charge control.

(10) CO-NI: Ni-Cd cells with cobalt addative and polyprophylene or pellon separators.

(11) CPSP: Cellophane separator.

(12) C3SP: C3 separator.

(13) FRS: Folded seal, same type of seal as RS below.

(14) HSAD: Hermetically sealed adhydrode.

(15) IM: Cells with improved material and methods used in construction.

(16) IPD: Cells containing an internal pressure device.

(17) NB: NIMBUS cells.

(18) NBPT: NIMBUS cells with pressure transducers.

(19) PLSP: Pellon separator.

(20) PS: Polymerized neoprene terminal to cover seal.

(21) PT: Pressure transducer.

(22) RCPSP: Radiated cellophane separator.

(23) RS: Vulcanized neoprene terminal to cover seal.

(24) ST: Stabistors used for charge control of cells.

(25) WNSP: Woven nylon separator.

(26) 2SR: Two-step regulator used for charge control of cells.

(27) 3S: Triple seal between terminals and cover (ceramic between glass).

h. PACK: This stands for pack identification number. The numeric part of the number was assigned arbitrarily and is for convenient identification of the pack. The alphabetic character indicates the chronological order in which the packs were run. That is, pack 1A completed automatic cycling prior to starting pack 1B.

i. PRCHG: This represents the percent recharge. It is the charge following discharge, and is given as a percentage of the ampere-hours removed on the previous discharge. The percent recharge will range from 100 to 200 percent.

j. CHGCU: This represents the specified charging current in amperes.

k. DISCU: This represents the specified discharging current in amperes.

l. VOLIM: This is the specified per cell on charge voltage limit. Cells on test are connected in electrical series. The average cell voltage must not exceed this value during charging. The value is given in volts. Not all batteries on test have a per cell voltage limit. However, for those that do, the voltage limits will range from 1.45 to 1.60 volts per cell for nickel-cadmium cells; and from 1.97 to 2.05 volts per cell for silver-zinc cells.

m. NUMCP: This is the total number of cells connected in electrical series initially to form the pack.

n. STARTED: This is the date the pack was put on automatic cycling.

o. CYCLES: This is the number of charge-discharge cycles completed as of the end of the month by the active packs listed in enclosure (2). On the inactive packs, enclosure (3), this is the total number of charge-discharge cycles completed at the time the pack was removed from automatic cycling.

p. CELLS: This is the total number of cells still on automatic cycling at the end of the month.

q. FAILURES: This gives the total number of cells failed during the month.

r. COMPLETED: This is the date the pack was removed from automatic cycling.

DATA AVAILABLE

1. The lists of data available, with the approval of Goddard Space Flight Center, are listed below. This information is stored on magnetic tape files at NAD Crane and must be obtained through the use of computer programs. Since the computer programs are time consuming a time lapse of several weeks between the request and the receipt of the data can be expected.

a. Additional copies of this report.

b. Serial numbers of cells in the various packs.

c. Capacity check information; parameters and results.

d. Cell failure analysis.

e. Data recorded from packs during automatic cycling.

f. Determination of number of cells in pack, middle and end of discharge voltages, end of charge voltage and percent recharge. This is all calculated from the data in paragraph 1.e. above.

INFORMATION ACTIVE TESTS

TYPE	AMPHR	PEROD	DEPTH	TEMP	MANFR	SPSYM	PACK	PRCHG	CHGCU	DISCU	VOLIM	NUMCP	STARTED	CYCLES	CELLS	FAILURES
AGCD	11.00	24.0	18	00	YD	AE-GU	057D		0.25	2.00	1.51	5	2-14-68	1125	4	0
AGCD	7.00	8.0	30	20	ELMI		104C		3.00	3.00	1.56	5	12-23-70	338	3	0
NICD	20.00	1.5	25	20	SO	IPD	010B		7.00	10.00	1.46	10	5-13-70	5251	1	0
NICD	20.00	1.5	25	20	GU	HSAD	048D	105	10.00	10.00		6	7- 9-70	3958	6	0
NICD	20.00	1.5	15	20	GU		012E		8.00	6.00	1.42	5	5-13-70	5220	4	0
NICD	20.00	1.5	15	25	GU	AE	019B		8.00	6.00		5	3-23-68	17795	3	0
NICD	20.00	1.5	15	10	GU		023B		8.00	6.00		10	2- 4-71	1106	5	0
NICD	20.00	1.5	15	10	GU	AE-PT	035B		8.00	6.00	1.45	5	2- 4-71	1106	10	0
NICD	20.00	1.5	15	00	GU	MULTI	068B		8.00	6.00	1.49	5	10-18-70	2858	5	0
NICD	20.00	1.5	15	00	GE	AE	7B		8.00	6.00		5	2-27-70	6555	5	0
NICD	20.00	1.5	15	00	GU	AE	054B		8.00	6.00		5	3-23-68	17736	5	0
NICD	20.00	1.5	15	00	GE	AE	067B		8.00	6.00		5	2-27-70	6555	5	0
NICD	12.00	3.0	25	00	GE	NONE	125A	115	1.38	6.00	1.55	5	1- 4-64	20382	5	0
NICD	12.00	3.0	15	00	GE	NONE	111A	115	0.83	3.60	1.55	5	1- 4-64	20089	5	0
NICD	12.00	1.5	25	00	GU	AE	070A	NONE	6.00	6.00	NONE	5	2-10-67	23665	5	0
NICD	12.00	1.5	25	00	GU	NONE	101B	115	3.45	6.00	1.55	5	12-19-64	35399	3	0
NICD	12.00	1.5	15	00	GU	NONE	016B	115	2.07	3.60	1.55	5	2-20-65	34626	5	0
NICD	12.00	1.5	15	00	GE	NONE	110A	115	2.07	3.60	1.55	5	1- 4-64	39782	5	0
NICD	6.00	24.0	60	40	GE		091B		0.30	3.60	1.44	5	3-18-71	39	5	0
NICD	6.00	24.0	60	20	GE		109B		0.30	3.60	1.49	5	3-18-71	37	5	0
NICD	6.00	24.0	60	0	GE		123B		0.30	3.60	1.52	5	3-18-71	35	5	0
NICD	6.00	24.0	60	-20	6E		075E		0.30	3.60	1.55	5	3-18-71	37	5	0
NICD	6.00	1.5	50	40	GU		027D		6.00	6.00		5	9-21-70	3243	6	0
NICD	6.00	1.5	50	20	GU		003C		6.00	6.00		5	9-21-70	3276	6	0
NICD	6.00	1.5	50	00	GU		063B		6.00	6.00		5	9-21-70	3245	6	0
NICD	6.00	1.5	50	-20	GU		039D		6.00	6.00		5	9-22-70	1259	6	0
NICD	6.00	1.5	25	40	GE		106B	125	3.00	3.00	1.38	5	3-16-71	503	5	0

INFORMATION ACTIVE TESTS

TYPE	AMPHR	PEROD	DEPTH	TEMP	MANFR	SPSYM	PACK	PRCHG	CHGCU	DISCU	VOLIM	NUMCP	STARTED	CYCLES	CELLS	FAILURES
NICD	6.00	1.5	25	20	GE		095B	110	3.00	3.00	1.42	5	3-17-71	516	5	0
NICD	6.00	1.5	25	20	EP	AE	022C		1.80	3.00	1.50	6	2-17-71	913	6	0
NICD	6.00	1.5	25	20	EP	AE	025D		1.80	3.00	1.50	8	2-17-71	912	8	0
NICD	6.00	1.5	25	20	EP	AE	031C		1.80	5.00	1.50	6	2-17-71	886	6	0
NICD	6.00	1.5	25	20	EP	AE	038F		1.80	3.00	1.50	6	2-17-71	913	6	0
NICD	6.00	1.5	25	20	EP	AE	046C		1.80	3.00	1.50	6	2-17-71	906	6	0
NICD	6.00	1.5	25	20	EP	AE	049B		1.80	3.00	1.50	6	2-17-71	912	6	0
NICD	6.00	1.5	25	20	GU	AE	028D		0.40	2.10	1.51	3	6- 9-71	4745	5	0
NICD	6.00	1.5	25	20	GU	AE	040D		3.00	3.00	1.56	5	6- 9-70	325	5	0
NICD	6.00	1.5	25	20	GU	AE	052D		3.00	3.00	1.56	5	6- 9-71	4388	5	0
NICD	6.00	1.5	25	25	GE		001C		3.50	2.50		8	7-22-70	4255	8	0
NICD	6.00	1.5	25	25	GU		018D		3.50	2.50		8	7-22-70	4252	8	0
NICD	6.00	3.0	25	00	GU	CLM	066B	NONE	3.00	3.00	NONE	5	11-18-66	12543	5	0
NICD	6.00	1.5	25	00	GE		092B	106	3.00	3.00	1.49	5	3-17-71	501	5	0
NICD	6.00	1.5	25	*	GU	HSAD	058D		3.00	3.00		5	1-11-69	12410	4	0
NICD	6.00	1.5	25	00	GU	IM	013B	115	1.73	3.00	1.55	5	2-22-65	34738	3	0
NICD	6.00	1.5	25	00	GE	AE	050B		3.00	3.00		5	5-20-68	16837	5	0
NICD	6.00	1.5	25	-20	GE		081B	103	3.00	3.00	1.52	5	3-17-71	371	5	0
NICD	6.00	1.5	15	*	GU	AE	060B	NA	1.80	1.80	NONE	5	4-25-67	22923	5	0
NICD	6.00	1.5	15	*	GU	HSAD	036D		1.80	1.80		5	1-11-69	12430	4	0
NICD	6.00	1.5	10	00	GU	NONE	061B	110	0.66	1.20	1.55	10	6- 7-67	21829	10	0
NICD	6.00	1.5		20	GU		051B		0.30	0.10		10	2-27-69	11952	10	0
NICD	5.60	1.5	25	-20	GU	FRS	044B	115	1.61	2.80	1.60	5	1- 2-66	29750	4	0
NICD	5.60	1.5	25	00	GU	RS	090C	115	1.61	2.80	1.55	5	12-27-65	30125	4	0
NICD	5.60	1.5	25	00	GU	FRS	100B	115	1.61	2.80	1.55	5	12-17-65	29853	4	0
NICD	5.00	1.5	40	40	GU	CO-NI	033D		2.20	4.00	1.46	10	9- 2-70	3554	10	0
NICD	5.00	1.5	40	25	GU	CO-NI	069C		2.20	4.00	1.50	10	9- 2-70	3570	10	0

INFORMATION ACTIVE TESTS

TYPE	AMPHR	PEROD	DEPTH	TEMP	MANFR	SPSYM	PACK	PRCHG	CHGCU	DISCU	VOLIM	NUMCP	STARTED	CYCLES	CELLS	FAILURES
NICD	5.00	1.5	25	40	GU	CO-NI	009H		1.40	2.50	1.4	10	9- 2-70	3571	10	0
NICD	5.00	1.5	25	25	U	CO-NI	045E		1.40	2.50	1.50	10	9- 2-70	3571	10	0
NICD	5.00	1.5	25	00	GU	CO-NI	021E		1.40	2.50	1.56	10	9- 2-70	3571	10	0
NICD	5.00	1.5	25	00	GE	NBPT	107A	110	1.38	2.50	1.49	5	6- 5-65	33127	3	0
NICD	5.00	1.5	15	00	GE	NB	103A	110	0.83	1.50	1.49	5	4-24-65	33723	5	0
NICD	5.00	1.5	15	00	GU	NB	117A	110	0.83	1.50	1.49	5	5- 8-65	33294	5	0
NICD	4.00	1.5	25	00	GU	CC	126B	115	1.15	2.00	1.55	5	7-25-64	38011	5	0
NICD	4.00	1.5	15	00	GU	CC	115B	115	0.69	1.20	1.55	5	7-25-64	36055	5	0
NICD	3.50	1.5	40	00	GU	PS	099C	115	1.61	2.80	1.55	5	12-24-66	24433	5	0
NICD	3.50	1.5	25	00	GU	PS	122C	115	1.01	1.75	1.55	5	12-24-66	31428	5	0
NICD	3.50	1.5	10	00	SO	NONE	015B	110	0.39	0.70	1.55	10	6- 7-67	20474	10	0
NICD	3.00	1.5	15	00	SO	3S	043B	115	0.52	0.90	1.55	5	6-24-65	32287	4	0
NICD	1.25	1.5	25	-20	GU	NONE	088D	NONE	1.00	0.63	NONE	5	3- 3-66	26691	3	0
NICD	1.25	1.5	25	-20	GU	NONE	074B	NONE	1.00	0.63	NONE	5	3- 3-66	27481	4	0
NICD	1.25	1.5	25	00	GU	NONE	108B	NONE	1.25	0.63	NONE	5	3- 4-66	27504	5	0

FOOTNOTE

* THESE CELLS ARE IN AMBIENT TEMPERATURE, WHICH VARIES SINUSOIDALLY FROM ZERO TO FORTY DEGREES CENTIGRADE WITHIN A PERIOD OF 48 HOURS.

* PACKS 15B AND 61B HAVE RECEIVED 22,900 CYCLES AT 10 PERCENT DEPTH OF DISCHARGE, AND AT -10 DEGREES CENTIGRADE BEFORE CYCLE ONE WAS STARTED AT N.A.D. CRANE

MULTI THESE PACKS CONTAIN TWO CELLS WITH THIRD ELECTRODES, A COULOMETER PRESSURE TRANSDUCERS, AND PRESSURE GAGES

INFORMATION ON COMPLETED TESTS

TYPE	AMPHR	PEROD	DEPTH	TEMP	MANFR	SPSYM	PACK	PRCHG	CHGCU	DISCU	VOLIM	NUMCP	STARTED	COMPLETED	CYCLES
AGCD	12.00	24.0	50	40	YD	NONE	033A	NONE	0.60	6.00	1.50	10	2-14-64	9-20-64	210
AGCD	12.00	24.0	43	40	YD	AE-GE	009F	NA	0.50	5.20	1.51	5	6-16-67	5-28-68	310
AGCD	12.00	24.0	50	00	YD	NONE	057A	NONE	0.60	6.00	1.50	10	2-14-64	9- 3-64	168
AGCD	12.00	24.0	43	00	YD	AE-GE	021D	NA	0.50	5.20	1.51	5	6-16-67	8-14-67	61
AGCD	12.00	1.5	25	25	YD	NONE	082B	130	3.90	6.00	1.55	5	1-17-66	11-27-66	4559
AGCD	12.00	1.5	25	-20	YD	NONE	085B	130	3.90	6.00	1.60	5	1-19-66	3-25-67	2375
AGCD	12.00	1.5	25	00	YD	NONE	097B	130	3.90	6.00	1.58	5	1-19-66	3-15-67	4481
AGCD	11.00	24.0	40	25	YD	NONE	021B	157	0.30	4.40	1.51	10	11- 5-66	1-13-67	69
AGCD	11.00	24.0	18	25	YD	AE-GU	069B		0.25	2.00	1.51	5	2-14-68	7-10-69	507
AGCD	11.00	24.0	40	00	YD	NONE	045B	157	0.30	4.40	1.51	10	11- 5-66	3-13-67	121
AGCD	11.00	8.0	27	25	YD	PLSP	021C	117	0.50	3.00	1.51	5	3-28-67	4- 9-67	37
AGCD	11.00	8.0	27	25	YD	WNSP	045C	117	0.50	3.00	1.51	5	3-28-67	4-22-67	70
AGCD	11.00	24.0	18	40	YD	AE-GU	033C		0.25	2.00	1.51	5	2-14-68	5-15-69	447
AGCD	10.00	8.0	30	25	YD	NONE	045D	117	0.50	3.00	1.51	5	5- 3-67	11-21-68	1759
AGCD	8.00	8.0	25	25	ESB	AE	001B	175	0.50	2.00	1.51	5	9- 9-66	6- 8-70	3875
AGCD	5.00	24.0	20	40	YD	C3SP	045A	NONE	0.30	1.00	1.50	5	9-27-65	11-16-65	61
AGCD	5.00	24.0	20	40	YD	NONE	128B	NONE	0.30	1.00	1.50	5	1-19-67	11- 4-67	269
AGCD	5.00	24.0	20	25	YD	RCPSP	009C	NONE	1.00	10.00	1.97	10	10-27-65	12- 1-65	34
AGCD	5.00	24.0	20	25	YD	C3SP	021A	NONE	0.30	1.00	1.50	5	9-17-65	12-25-65	98
AGCD	5.00	24.0	20	25	YD	CPSP	033B	NONE	0.30	1.00	1.49	5	10-17-65	11- 4-67	720
AGCD	5.00	24.0	20	25	YD	PLSP	069A	NONE	0.30	1.00	1.50	5	10-27-65	7-17-67	610
AGCD	5.00	24.0	20	25	YD	NONE	105B	NONE	0.30	1.00	1.50	5	1-12-67	4-19-67	77
AGCD	5.00	24.0	20	25	YD	NONE	077B	NONE	0.30	1.00	1.50	5	1-12-67	11-12-68	661
AGCD	5.00	8.0	20	25	YD	NONE	118C	NONE	0.30	1.00	1.50	5	1-17-67	7- 3-68	1505
AGCD	5.00	24.0	20	00	YD	C3SP	057B	NONE	0.30	1.00	1.50	5	9-17-65	6-17-66	267
AGCD	5.00	24.0	20	00	YD	NONE	113B	NONE	0.30	1.00	1.50	5	1-22-67	2-19-71	2542
AGCD	5.00	8.0	20	00	YD	NONE	114B	NONE	0.30	1.00	1.50	5	1-22-68	6-25-68	14966

INFORMATION ON COMPLETED TESTS

TYPE	AMPHR	PERCD	DEPTH	TEMP	MANFR	SPSYM	PACK	PRCHG	CHGCU	DISCU	VOLIM	NUMCP	STARTED	COMPLETED	CYCLES
AGCD	3.00	1.5	16	25	YD	NONE	002C	260	1.30	1.00	1.52	9	9-16-66	12-12-67	7039
AGZN	5.00	1.5	25	40	MD		047D		1.60	2.50	2.03	10	12- 4-69	4-16-70	20130
AGZN	40.00	24.0	25	25	DL	NONE	075B	NONE	25.00	10.00	1.97	5	10-28-64	3-15-65	139
AGZN	25.00	24.0	40	25	DL	2SR	009D	NONE	1.00	10.00	1.97	10	12-13-65	4-18-66	121
AGZN	25.00	24.0	40	25	DL	2SR	009E	NONE	1.00	10.00	1.97	10	10- 5-66	1- 4-67	90
AGZN	25.00	24.0	40	25	DL	NONE	075A	NONE	15.00	10.00	1.97	5	8-18-64	9-18-64	32
AGZN	25.00	24.0	40	25	DL	NONE	089A	NONE	15.00	10.00	1.97	5	9-18-64	12- 8-64	80
AGZN	25.00	3.0	40	25	DL	NONE	088B	NONE	15.00	20.00	1.97	5	3- 1-65	3-16-65	120
AGZN	25.00	3.0	40	25	DL	NAOH	088C	NONE	15.00	20.00	1.97	5	3-26-65	5- 6-65	325
AGZN	16.00	24.0	31	25	YD	NONE	057C	230	0.50	5.00	2.00	10	12- 2-66	8-30-67	281
AGZN	12.00	24.0	42	25	YD	NONE	009A	NONE	0.50	5.00	1.97	10	5- 7-65	7- 7-65	58
AGZN	5.00	1.5	25	20	MD		025B		1.60	2.50	2.05	10	12- 4-69	2- 1-70	681
NICD	50.00	1.5	25	40	GU	NONE	081A	NONE	14.33	25.00	1.55	5	7- 5-64	7-12-65	4
NICD	50.00	1.5	25	40	GU	NONE	109A	160	14.33	25.00	1.55	5	7-11-64	7-26-64	165
NICD	50.00	1.5	25	00	GU	NONE	095A	115	14.38	25.00	1.55	5	6- 8-64	2- 9-65	3227
NICD	50.00	1.5	15	40	GU	NONE	123A	160	12.00	15.00	1.45	5	6- 8-64	11-11-64	1878
NICD	20.00	3.0	40	25	SO	IPD	046A		20.00	16.00	1.50	10	9-20-67	10- 7-69	3501
NICD	20.00	1.5	75	25	SO	IPD	072B		20.00	30.00	1.50	10	9-20-67	4- 5-69	1143
NICD	20.00	1.5	75	20	SO	IPD	072C		20.00	30.00	1.46	10	5-13-70	2-22-71	4381
NICD	20.00	1.5	40	25	SO	IPD	034B		20.00	16.00	1.50	10	9-20-67	7-14-69	5768
NICD	20.00	3.0	40	25	GO	NONE	119A	125	4.00	16.00	1.49	5	2- 1-64	9-27-64	1793
NICD	20.00	3.0	40	25	GU	NONE	088A	125	4.00	16.00	1.49	5	2- 1-64	3-21-64	359
NICD	20.00	3.0	25	40	GO	NONE	122A	160	3.20	10.00	1.45	5	1-24-64	7- 2-64	983
NICD	20.00	3.0	25	40	GU	NONE	091A	160	3.20	10.00	1.45	5	1-24-64	10-14-65	4480
NICD	20.00	3.0	25	25	GO	NONE	105A	125	2.50	10.00	1.49	5	1-21-64	3-17-66	5690
NICD	20.00	1.5	25	*	GU	MULTI	036C		10.00	10.00		5	2- 8-68	8-14-68	966
NICD	20.00	1.5	25	0/4	GU	MULTI	048C		10.00	10.00		6	5-26-69	3-24-70	1984

INFORMATION ON COMPLETED TESTS

TYPE	AMPHR	PEROD	DEPTH	TEMP	MANFR	SPSYM	PACK	PRCHG	CHGCU	DISCU	VOLIM	NUMCP	STARTED	COMPLETED	CYCLES
NICD	20.00	3.0	25	25	GU	NONE	074A	125	2.50	10.00	1.49	5	1-21-64	9-27-64	1755
NICD	20.00	1.5	25	25	SO	IPD	010A	140	7.00	10.00	1.49	10	9-20-67	10- 7-69	7188
NICD	20.00	1.5	25	25	SO	IPD	022A		20.00	10.00	1.50	10	9-20-67	10- 7-69	6664
NICD	20.00	3.0	25	00	GO	NONE	094A	115	2.30	10.00	1.55	5	1-24-64	2-13-68	11162
NICD	20.00	3.0	25	00	GU	NONE	116A	115	2.30	10.00	1.55	5	2-11-64	2-13-68	10971
NICD	20.00	1.5	15	*	GU	MULTI	012D		10.00	6.00		5	2- 8-68	5-13-69	7262
NICD	20.00	3.0	15	40	GO	NONE	108A	160	1.92	6.00	1.45	5	1-24-64	8-31-65	4273
NICD	20.00	3.0	15	00	GO	NONE	080A	115	1.38	6.00	1.55	5	1-24-64	2-13-68	11378
NICD	20.00	3.0	15	00	GU	NONE	102A	115	1.38	6.00	1.55	5	1-24-64	2-13-68	11212
NICD	20.00	1.5	40	25	GO	NONE	118A	125	10.00	16.00	1.49	5	2- 1-64	9- 7-64	2937
NICD	20.00	1.5	40	25	GU	NONE	087A	125	10.00	16.00	1.49	5	2- 1-64	4- 7-64	627
NICD	20.00	1.5	40	*	GU	MULTI	058C		10.00	16.00		5	2- 8-68	3- 2-68	131
NICD	20.00	1.5	25	40	GO	NONE	126A	160	8.00	10.00	1.45	5	1-16-64	5-23-64	1574
NICD	20.00	1.5	25	40	GU	NONE	090A	160	8.00	10.00	1.45	5	1-18-64	11-12-64	4045
NICD	20.00	1.5	25	25	GU	NONE	073A	125	6.25	10.00	1.49	5	1-16-64	6-30-65	7763
NICD	20.00	1.5	25	25	GO	NONE	104A	125	6.25	10.00	1.49	5	1-16-64	8-20-64	2980
NICD	20.00	1.5	25	00	GO	NONE	098A	115	5.75	10.00	1.55	5	1-21-64	1-14-66	10641
NICD	20.00	1.5	25	00	GU	NONE	115A	115	5.75	10.00	1.55	5	1-16-64	6-24-64	2291
NICD	20.00	1.5	15	40	GU	AE	036B	NONE	5.00	6.00	NONE	5	3-11-67	9- 5-67	2740
NICD	20.00	1.5	15	40	GU	AE	038E		8.00	6.00		5	3-23-68	1- 6-69	4520
NICD	20.00	1.5	15	40	GU	NONE	076A	160	1.92	6.00	1.45	5	1-18-64	10-15-65	9348
NICD	20.00	1.5	15	40	GU	NONE	077A	160	1.92	6.00	1.45	5	1-21-64	4-20-66	6032
NICD	20.00	1.5	15	40	GO	NONE	112A	160	4.80	6.00	1.45	5	1-16-64	2-15-65	5213
NICD	20.00	1.5	15	25	GU	AE	012C	NONE	5.00	6.00	NONE	5	3- 9-67	1-25-68	4934
NICD	20.00	1.5	15	00	GU	AE	058B	NONE	5.00	6.00	NONE	5	4- 8-67	1-25-68	4081
NICD	20.00	1.5	15	00	GO	NONE	084A	115	3.45	6.00	1.55	5	1-16-64	2-13-68	22448
NICD	20.00	1.5	15	00	GU	NONE	101A	115	3.45	6.00	1.55	5	1-16-64	9-20-64	3631

INFORMATION ON COMPLETED TESTS

TYPE	AMPHR	PEROD	DEPTH	TEMP	MANFR	SPSYM	PACK	PRCHG	CHGCU	DISCU	VOLIM	NUMCP	STARTED	COMPLETED	CYCLES
NICD	12.00	24.0	50	25	GE	NONE	093A	115	0.52	6.00	1.45	5	3-28-64	4-28-65	349
NICD	12.00	3.0	40	25	GE	NONE	097A	125	2.40	9.60	1.49	5	1- 4-64	11- 8-65	5002
NICD	12.00	3.0	25	40	GE	NONE	100A	160	1.92	6.00	1.45	5	1- 4-64	9-24-65	4424
NICD	12.00	1.5	25	40	GU	AE	047B	NONE	6.00	6.00	NONE	5	1- 5-67	6-15-68	6537
NICD	12.00	1.5	40	25	GU	AE	011B	NONE	6.00	9.60	NONE	5	10-17-66	1- 3-69	11933
NICD	12.00	3.0	15	40	GE	NONE	086A	160	1.15	3.60	1.45	5	12-29-67	1- 4-64	10661
NICD	12.00	1.5	40	40	GE	AE	034A	NONE	6.00	9.60	NONE	5	1-27-67	2- 3-67	65
NICD	12.00	1.5	40	25	GE	AE	024A	NONE	9.60	9.60	NONE	5	10- 2-65	11-19-65	665
NICD	12.00	1.5	40	25	GE	AE	024B	NONE	6.00	9.60	NONE	5	1- 5-67	2-10-67	38
NICD	12.00	1.5	40	25	GE	NONE	096A	125	6.00	9.60	1.49	5	1- 4-64	10- 2-64	4020
NICD	12.00	1.5	40	25	GU	NONE	096B	125	6.00	9.60	1.49	5	12- 2-64	11- 9-65	5152
NICD	12.00	3.0	25	25	GE	NONE	083A	125	1.50	6.00	1.49	5	1- 4-64	1-29-69	13897
NICD	12.00	1.5	40	00	GU	AE	071B	NONE	6.00	9.60	NONE	5	1- 6-67	10- 6-69	15275
NICD	12.00	1.5	40	00	GE	AE	072A	NONE	6.00	6.00	NONE	5	1-20-67	2- 2-67	304
NICD	12.00	1.5	25	00	GE	NONE	124A	115	3.45	6.00	1.55	5	1- 4-64	11- 2-69	34343
NICD	12.00	1.5	25	40	GE	AE	036A	NONE	6.00	6.00	NONE	5	1-27-67	2- 3-67	75
NICD	12.00	1.5	25	40	GE	NONE	099A	160	4.80	6.00	1.45	5	1- 9-64	1- 5-65	4853
NICD	12.00	1.5	25	40	GU	NONE	090B	160	8.00	10.00	1.45	5	12- 5-64	11-10-65	5124
NICD	12.00	1.5	25	25	GE	AE	012A	NONE	6.00	6.00	NONE	5	7-20-65	12- 1-65	1698
NICD	12.00	1.5	25	25	GE	AE	012B	NONE	6.00	6.00	NONE	5	1- 6-67	2-10-67	404
NICD	12.00	1.5	25	25	GU	NONE	027B	125	3.75	6.00	1.49	5	1-28-65	9- 5-67	14250
NICD	12.00	1.5	25	25	GE	NONE	082A	125	3.75	6.00	1.49	5	1- 4-64	12-30-65	10878
NICD	12.00	1.5	25	00	GE	AE	048A	NONE	9.60	9.60	NONE	5	10-12-65	2-10-67	5110
NICD	12.00	1.5	25	00	GE	AE	058A	NONE	6.00	6.00	NONE	5	1-20-67	2-10-67	136
NICD	12.00	1.5	25	00	GE	AE	060A	NONE	6.00	6.00	NONE	5	10- 6-65	10-20-66	5650
NICD	12.00	1.5	15	40	GE	NONE	085A	160	2.88	3.60	1.45	5	1- 9-64	11- 8-65	9710
NICD	12.00	1.5	15	40	GU	NONE	078A	160	2.88	3.60	1.45	5	12-22-64	1- 4-66	11081

INFORMATION ON COMPLETED TESTS

TYPE	AMPHR	PEROD	DEPTH	TEMP	MANFR	SPSYM	PACK	PRCHG	CHGCU	DISCU	VOLIM	NUMCP	STARTED	COMPLETED	CYCLES
NICD	10.00	1.5	25	40	GU	AE	006B	NONE	5.00	5.00	NONE	5	11-27-67	3-14-68	5685
NICD	10.00	1.5	25	25	GU	AE	008B	NONE	5.00	5.00	NONE	5	11-27-67	5- 6-68	2414
NICD	20.00	3.0	40	20	SO	IPD	046B		15.00	16.00	1.46	10	5-13-70	11-21-70	1488
NICD	20.00	1.5	40	20	SO	IPD	034C		15.00	16.00	1.46	10	5-13-70	4-10-71	5163
NICD	6.00	1.5	40	*	GU	AE	048B	NA	4.80	4.80	NONE	5	4-25-67	7- 9-68	6156
NICD	6.00	1.5	25	*	GU	AE	024C	NA	3.00	3.00	NONE	5	4-25-67	5-24-70	17328
NICD	6.00	24.0	50	25	GU	NONE	079A	115	0.20	3.00	1.49	5	3-28-64	10-13-65	545
NICD	6.00	3.0	25	40	GU	CLM	029B	NONE	3.00	3.00	NONE	5	11-18-66	9-24-69	7941
NICD	6.00	1.5	25	40	GE	AE	042C		3.00	3.00		5	5-20-68	2- 5-70	9590
NICD	6.00	3.0	40	25	GU	NONE	018A	125	1.20	4.80	1.49	10	12-31-63	8-18-64	1550
NICD	6.00	1.5	25	40	GE	AE	006C		3.00	3.00		5	6- 6-68	11-10-69	8072
NICD	6.00	1.5	25	40	GE	PLSEP	027C	NON	4.80	4.80	NONE	5	11- 7-68	12-16-68	559
NICD	6.00	1.5	25	40	GE	RDSEP	009G	NONE	4.80	4.80	NONE	5	11- 7-68	11-21-68	143
NICD	6.00	3.0	25	40	GU	NONE	042A	160	1.20	3.00	1.45	10	12-31-63	8-23-65	4133
NICD	6.00	1.5	25	25	GE	AE	005B		3.00	3.00		5	5-20-68	12- 7-70	13254
NICD	6.00	3.0	25	25	GU	NONE	017A	125	0.75	3.00	1.49	10	12-20-63	1-31-65	2885
NICD	6.00	1.5	25	25	GE	AE	017B		3.00	3.00		5	5-20-68	2-21-71	15945
NICD	20.00	1.5	25	20	SO	IPD	022B		15.00	10.00	1.46	10	5-13-70	11-21-70	3018
NICD	6.00	1.5	25	20	EP	AE	002D		1.80	3.00	1.50	6	2-15-71	3-23-71	376
NICD	6.00	1.5	25	20	EP	AE	014E		1.80	3.00	1.50	6	2-15-71	4-18-71	997
NICD	6.00	1.5	25	20	EP	AE	026D		1.80	3.00	1.50	6	2-15-71	3- 7-71	25
NICD	6.00	1.5	25	00	GU	AE	059A	NONE	3.00	3.00	NONE	5	4-15-67	2-28-68	14863
NICD	6.00	3.0	25	00	GU	NONE	066A	115	0.69	3.00	1.55	10	12-31-63	8-31-65	4414
NICD	6.00	1.5	15	40	GE	AE	047C		1.80	1.80		5	7-18-68	7-28-69	5842
NICD	6.00	3.0	15	40	GU	NONE	041A	160	0.58	1.80	1.45	10	12-31-63	9-14-64	1689
NICD	6.00	3.0	15	00	GU	NONE	065A	115	0.41	1.80	1.55	10	12-31-63	2-15-68	11208
NICD	6.00	1.5	40	25	GU	IM	018B	125	3.00	4.80	1.49	5	2-22-65	7-21-66	7577

INFORMATION ON COMPLETED TESTS

TYPE	AMPHR	PEROD	DEPTH	TEMP	MANFR	SPSYM	PACK	PRCHG	CHGCU	DISCU	VOLIM	NUMCP	STARTED	COMPLETED	CYCLES
NICD	6.00	1.5	40	25	GU	AE	011A	NONE	4.80	4.80	NONE	5	2- 5-65	7- 9-66	7743
NICD	6.00	1.5	40	00	GU	AE	071A	NONE	4.80	4.80	NONE	5	4-15-65	5-18-66	5754
NICD	6.00	1.5	25	40	GU	NONE	038A	160	2.40	3.00	1.45	10	12-30-63	5-22-64	1377
NICD	6.00	1.5	25	40	GU	IM	038B	160	2.40	3.00	1.45	5	2-22-65	3-31-66	5766
NICD	6.00	1.5	25	40	GU	AE	047A	NONE	3.00	3.00	NONE	5	5-16-67	5-11-66	5521
NICD	6.00	1.5	25	40	GU G	CLM	038C	NONE	3.00	3.00	1.45	5	5- 7-66	9-20-66	4059
NICD	6.00	1.5	25	25	GU	NONE	013A	125	1.88	3.00	1.49	10	12-31-63	11-11-64	4021
NICD	6.00	1.5	25	25	GU	NONE	014A	125	3.00	4.80	1.49	10	12-30-63	6-19-64	2086
NICD	6.00	1.5	25	25	GU	AE	023A	NONE	3.00	3.00	1.49	5	2- 5-65	1-24-68	15713
NICD	6.00	1.5	25	*	GE	AE	062B		3.00	3.00		5	7- 4-68	3-26-70	2332
NICD	6.00	1.5	25	*	GE	AE	065B		3.00	3.00		5	7- 4-68	1-31-71	14392
NICD	6.00	1.5	25	00	GU	NONE	062A	115	1.72	3.00	1.55	10	12-30-63	2-15-68	22779
NICD	6.00	3.0	25	-20	GU	CLM	041B	NONE	3.00	3.00	NONE	5	11-18-66	3-15-71	10399
NICD	6.00	1.5	15	40	GU	AE	035A	NONE	1.80	1.80	1.45	5	6-28-65	11-30-67	12511
NICD	6.00	1.5	15	40	GU	NONE	037A	160	0.14	1.80	1.45	10	12-31-63	4-14-65	6064
NICD	6.00	3.0	25	25	GU	CLM	018C	NONE	3.00	3.00	NONE	5	11-18-66	6- 3-70	9633
NICD	6.00	1.5	15	25	GE	AE	028C		1.80	1.80		5	7-18-68	4- 8-70	99870
NICD	6.00	1.5	25	00	GE	AE	052C		3.00	3.00		5	6- 6-68	3-14-70	9957
NICD	6.00	1.5	15	00	GE	AE	053B		1.80	1.80		5	7-19-68	3-26-70	9230
NICD	6.00	1.5	15	00	GU	NONE	061A	115	1.04	1.80	1.55	10	12-31-63	12-17-65	10146
NICD	5.60	1.5	25	40	GU	RS	030B	160	2.24	2.80	1.45	5	12- 3-65	3- 8-66	1275
NICD	5.60	1.5	25	40	GU	FRS	042B	160	2.24	2.80	1.45	5	12- 3-65	9-10-66	3798
NICD	5.60	1.5	25	25	GU	FRS	076B	125	1.75	2.80	1.49	5	12-10-65	1- 2-68	11158
NICD	5.60	1.5	25	25	GU	RS	096C	125	1.75	2.80	1.49	5	12-10-65	9-19-67	9791
NICD	5.60	1.5	25	-20	GU	RS	032B	115	1.61	2.80	1.60	5	1- 2-66	3- 4-70	23297
AGZN	5.00	12.0	5	40	ASTR		037D		0.35	2.50	2.03	10	2-10-70	9- 6-70	391
AGZN	5.00	12.0	5	20	ASTR		025C		0.35	2.50	2.03	10	2-10-70	11-27-70	567

INFORMATION ON COMPLETED TESTS

TYPE	AMPHR	PEROD	DEPTH	TEMP	MANFR	SPSYM	PACK	PRCHG	CHGCU	DISCU	VOLIM	NUMCP	STARTED	COMPLETED	CYCLES
NICD	5.00	3.0	40	25	SO	NONE	006A	125	1.00	4.00	1.49	10	1- 2-64	12-13-65	5211
NICD	5.00	3.0	25	40	SO	NONE	030A	160	0.80	2.50	1.45	10	12-31-63	8- 7-65	4141
NICD	5.00	3.0	25	25	SO	NONE	005A	125	0.62	2.50	1.49	10	12-31-63	2-12-68	11092
NICD	5.00	1.5	25	25	SO	AE	014D	NONE	2.50	1.47	1.50	5	11-37-67	2- 4-68	1179
NICD	5.00	3.0	25	00	SO	NONE	054A	115	0.58	2.50	1.55	10	12-31-63	2- 7-68	11331
NICD	5.00	3.0	15	40	SO	NONE	029A	160	0.48	1.50	1.45	10	12-31-63	4-17-66	5975
NICD	5.00	3.0	15	00	SO	NONE	053A	115	0.35	1.50	1.55	10	12-31-63	2-13-68	11427
NICD	5.00	1.5	40	25	SO	NONE	002A	125	2.50	4.00	1.49	10	12-17-63	4-24-65	6671
NICD	5.00	1.5	40	25	SO	ST	087B	NONE	5.00	4.00	NONE	5	8-12-65	1-27-66	2392
NICD	5.00	1.5	40	-20	SO	ST	089B	NONE	5.00	4.00	NONE	5	10-24-65	2-26-66	1530
NICD	5.00	1.5	40	00	SO	ST	122B	NONE	5.00	4.00	NONE	5	9- 5-65	9-24-66	5190
NICD	5.00	1.5	25	40	GE	NBPT	114A	130	1.63	2.50	1.49	5	6-12-65	12-19-66	8273
NICD	5.00	1.5	25	40	GU	NBPT	128A	130	1.63	2.50	1.49	5	6-12-65	8-18-66	6345
NICD	5.00	1.5	25	40	SO	NONE	026A	160	2.00	2.50	1.45	10	12-17-63	10-15-64	3625
NICD	5.00	1.5	25	40	SO	ST	099B	NONE	5.00	2.50	NONE	5	8-23-65	7- 9-66	4388
NICD	5.00	1.5	25	25	SO	NONE	001A	125	1.56	2.50	1.49	10	12-17-63	2-27-66	11745
NICD	5.00	1.5	25	25	GE	NBPT	104B	120	1.50	2.50	1.49	5	6-10-65	11-15-67	13149
NICD	5.00	1.5	25	25	GU	NBPT	118B	120	1.50	2.50	1.49	5	6-10-65	11-22-66	8108
NICD	5.00	1.5	25	25	SO	ST	073B	NONE	5.00	2.50	NONE	5	8-12-65	4-15-66	3742
NICD	5.00	1.5	15	25	GE	NB	106A	120	0.90	1.50	1.49	5	4-24-65	12-31-69	26148
NICD	5.00	1.5	15	25	GU	NB	120A	120	0.90	1.50	1.49	5	5- 2-65	11- 3-70	29753
NICD	5.00	1.5	25	-20	SO	ST	075C	NONE	5.00	2.50	NONE	5	10-24-65	4- 5-66	2145
NICD	5.00	1.5	25	00	SO	NONE	050A	115	1.44	2.50	1.55	10	12-17-63	2-15-68	22525
NICD	5.00	1.5	25	00	SO	ST	092A	NONE	5.00	2.50	NONE	5	9- 5-65	5-24-67	8774
NICD	5.00	1.5	25	00	GU	NBPT	121A	110	1.38	2.50	1.49	5	6- 5-65	3- 5-69	20861
NICD	5.00	1.5	15	40	GE	NB	113A	130	0.98	1.50	1.45	5	4-24-65	3-15-66	4998
NICD	5.00	1.5	15	40	GU	NB	127A	130	0.98	1.50	1.45	5	4-29-65	5-24-67	10638

INFORMATION ON COMPLETED TESTS

TYPE	AMPHR	PEROD	DEPTH	TEMP	MANFR	SPSYM	PACK	PRCHG	CHGCU	DISCU	VOLIM	NUMCP	STARTED	COMPLETED	CYCLES
NICD	5.00	1.5	15	40	SO	NONE	025A	160	1.20	1.50	1.45	10	12-17-63	10-31-65	9328
NICD	5.00	1.5	15	40	SO	ST	112B	NONE	5.00	1.50	NONE	5	8-23-65	4- 1-66	3294
NICD	5.00	1.5	15	00	SO	NONE	049A	115	0.86	1.50	1.55	10	12-31-63	2-15-68	23112
NICD	4.00	1.5	15	40	GU	CC	028B	160	0.96	1.20	1.45	5	8- 4-64	7- 6-68	20227
NICD	4.00	1.5	25	00	GU	CLM	052B	NONE	2.00	2.00	1.48	5	3- 3-67	3- 4-68	5671
NICD	4.00	1.5	60	25	GU	CLM	038D	NONE	3.20	3.20	1.44	5	2-18-67	6-27-67	1927
NICD	4.00	1.5	40	25	GU	CC	014B	125	2.00	3.20	1.49	5	8- 4-64	3-19-66	8474
NICD	4.00	1.5	40	25	GU	CLM	037C	NONE	4.80	4.80	1.44	5	3- 4-67	5- 5-67	790
NICD	4.00	1.5	25	40	GU	CLM	039C	NONE	2.00	2.00	1.38	5	3- 3-67	6-20-67	1508
NICD	4.00	1.5	25	40	GU	CC	040B	160	1.60	2.00	1.45	5	8- 4-64	6-22-66	10360
NICD	4.00	1.5	25	25	GU	CC	004B	125	1.25	2.00	1.49	5	8- 4-64	10-13-70	35111
NICD	4.00	1.5	25	25	GU	CLM	014C	NONE	2.00	2.00	1.44	5	3- 3-67	8- 8-67	2428
NICD	4.00	1.5	15	25	GU	CLM	026C	NONE	1.20	1.20	1.44	5	2-18-67	2-28-69	11455
NICD	4.00	1.5	25	-20	GU	CLM	040C	NONE	2.00	2.00	1.56	5	3- 4-67	3- 4-67	2
NICD	3.90	1.5	25	25	NIFE	NONE	085C	107	1.07	2.00	1.50	5	9-29-67	6-18-69	9356
NICD	3.90	1.5	25	00	NIFE	NONE	097C	107	1.07	2.00	1.50	5	9-29-67	4- 6-71	20009
NICD	3.60	1.5	40	25	GU	CLM	039B	NONE	3.60	2.88	1.49	10	11-11-65	12- 6-66	5399
NICD	3.50	3.0	40	25	GO	NONE	008A	125	0.75	2.80	1.49	10	12-20-63	11-29-64	2494
NICD	3.50	3.0	25	40	GO	NONE	032A	160	0.56	1.75	1.45	10	12-20-63	6-10-64	975
NICD	3.50	1.5	40	25	GU	PS	073C	125	1.75	2.80	1.49	5	12-23-66	10-28-68	9978
NICD	3.50	1.5	25	40	GU	PS	112C	160	1.40	1.75	1.45	5	1- 2-67	1- 3-69	11155
NICD	3.50	3.0	25	25	GO	NONE	007A	125	0.44	1.75	1.49	10	12-20-63	7-26-65	4173
NICD	3.50	3.0	25	00	GO	NONE	056A	115	0.40	1.75	1.55	10	12-20-63	2-15-68	11897
NICD	3.50	1.5	25	-20	GU	PS	089C	110	0.96	1.75	1.56	5	12-24-66	3-13-71	23831
NICD	3.50	3.0	15	40	GO	NONE	031A	160	0.34	1.05	1.45	10	12-20-63	1- 3-65	2517
NICD	3.50	3.0	15	00	GO	NONE	055A	115	0.24	1.05	1.55	10	12-20-63	2-15-68	11546
NICD	3.50	1.5	25	00	GO	NONE	052A	115	1.00	1.75	1.55	10	12- 5-63	6-11-66	13730

INFORMATION ON COMPLETED TESTS

TYPE	AMPHR	PEROD	DEPTH	TEMP	MANFR	SPSYM	PACK	PRCHG	CHGCU	DISCU	VOLIM	NUMCP	STARTED	COMPLETED	CYCLES
NICD	3.50	1.5	40	25	GO	NONE	004A	125	1.72	2.80	1.49	10	12- 5-63	7- 9-64	3164
NICD	3.50	1.5	25	40	GO	NONE	028A	160	1.40	1.75	1.45	10	12-12-63	5-29-64	1811
NICD	3.50	1.5	25	25	GO	NONE	003A	125	1.09	1.75	1.49	10	12- 6-63	10-31-64	4751
NICD	3.50	1.5	25	25	GU	PS	087C	125	1.09	1.75	1.49	5	12-23-66	9- 2-70	20866
NICD	3.50	1.5	15	40	GO	NONE	027A	160	0.84	1.05	1.45	10	12-12-63	11- 4-64	4485
NICD	3.50	1.5	15	00	GO	NONE	051A	115	0.60	1.05	1.55	10	12- 5-63	2-15-68	22364
NICD	3.50	1.5	40	-20	GU	PS	075D	110	1.54	2.80	1.56	5	12-24-66	9-28-69	14197
NICD	3.00	3.0	40	25	GE	NONE	020A	125	0.60	2.40	1.49	10	12-20-63	1- 8-66	5410
NICD	3.00	3.0	25	40	GE	NONE	044A	160	0.48	1.50	1.45	10	12-20-63	9-14-65	4487
NICD	3.00	3.0	25	25	GE	NONE	019A	125	0.38	1.50	1.49	10	12-20-63	2-12-68	10768
NICD	3.00	3.0	25	00	GE	NONE	068A	115	0.34	1.50	1.55	10	12-20-63	2-13-68	11740
NICD	3.00	3.0	15	40	GE	NONE	043A	160	0.29	0.90	1.45	10	12-20-63	12-26-64	2656
NICD	3.00	3.0	15	00	GE	NONE	067A	115	0.21	0.90	1.55	10	12-20-63	2-15-68	11532
NICD	3.00	1.5	40	25	GE	NONE	016A	125	1.50	2.40	1.49	10	12- 5-63	11-18-64	5014
NICD	3.00	1.5	40	25	SO	3S	002B	125	1.50	2.40	1.49	5	7-10-65	7-26-66	5399
NICD	3.00	1.5	25	40	GE	NONE	040A	160	1.20	1.50	1.45	10	12-12-63	7- 9-64	2511
NICD	3.00	1.5	25	40	SO	3S	037B	160	1.20	1.50	1.45	5	7-10-65	8- 4-66	5625
NICD	3.00	1.5	25	25	GE	NONE	015A	125	0.94	1.50	1.49	10	12- 6-63	11- 6-65	10382
NICD	3.00	1.5	25	25	SO	3S	003B	125	0.94	1.50	1.49	5	6-25-65	8-23-67	11726
NICD	3.00	1.5	25	00	SO	3S	031B	115	0.96	1.50	1.55	5	6-24-65	8-10-70	28074
NICD	3.00	1.5	25	00	GE	NONE	064A	115	0.86	1.50	1.55	10	12- 5-63	2-14-68	23441
NICD	3.00	1.5	15	40	GE	NONE	039A	160	0.72	0.90	1.45	10	12-12-63	6-19-65	8109
NICD	3.00	1.5	15	40	SO	3S	026B	160	0.72	0.90	1.45	5	7-10-65	10- 4-66	6285
NICD	3.00	1.5	15	00	GE	NONE	063A	115	0.52	0.90	1.55	10	12- 6-63	2-15-68	22923
NICD	1.25	1.5	60	00	GU	NONE	098B	NONE	1.25	1.50	NONE	5	3- 4-66	5-28-68	12247
PBCA	5.00	1.5	40	25	CD	NONE	009B	NONE	2.39	2.39	2.25	5	8-23-65	9-21-65	39

FOOTNOTE

* THESE CELLS ARE IN AMBIENT TEMPERATURE, WHICH VARIES SINUSOIDALLY FROM ZERO TO FORTY DEGREES CENTIGRADE WITHIN A PERIOD OF 48 HOURS.

* PACKS 158 AND 618 HAVE RECEIVED 22,900 CYCLES AT 10 PERCENT DEPTH OF DISCHARGE, AND AT -10 DEGREES CENTIGRADE BEFORE CYCLE ONE WAS STARTED AT N.A.D. CRANE

MULTI THESE PACKS CONTAIN TWO CELLS WITH THIRD ELECTRODES, A COULOMETER PRESSURE TRANSDUCERS, AND PRESSURE GAGES