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**Prepared for the U.S. Department of Energy
under Contract DE-AC06-76RLO 1830**

**Pacific Northwest Laboratory
Operated for the U.S. Department of Energy
by Battelle Memorial Institute**

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Battelle-Northwest

4. FP Brauer/RJ Brouns
5. TT Claudson
6. WJ Gray
7. RD Leggett

STATUS OF IRRADIATIONS PERFORMED BY
TESTING AND IRRADIATION SERVICES FOR BNW
AS OF JANUARY 19, 1969

L. V. Barker

February 11, 1969

Classification Cancelled and Changed To

DECLASSIFIED

By Authority of RM-0ten
CG-NMP-1 8-3-94

By J E Savely 9-20-94

Verified By Jerri Maly 9-20-94

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This report itemizes the irradiations performed by Testing and Irradiation Services for Battelle-Northwest. It lists the material being irradiated, awaiting disposition and material shipped during the report period. An explanation of the various columns in the report follows:

Identification

- a. TISR No. - This is the official number assigned by Testing and Irradiation Services to an experiment for purposes of identification.
- b. Request Number - Customer experiment identification number, if any.
- c. Material - The principle target material, if known, abbreviated or its chemical symbol in capital letters.
- d. Piece Number - Individual sample or assembly identification.

Operating Time (Days) - The number of full-power operating days the sample has been exposed.

CMK Absorbed - The total cmk absorbed by the sample. Does not include the facility.

Charge Date - Date and time sample charged into reactor or date and time reactor reached one-half equilibrium level if sample was charged during a reactor outage.

Location

- a. Facility - Test facility or process tube and reactor containing the experiment.
- b. Test Hole Position - Sample position in-reactor relative to a process tube.
- c. Position Factor - Location of sample in relation to front-to-rear cosine flux distribution. (This factor only applies to front-to-rear irradiations.)

NOTE: The actual shape may deviate from a cosine curve due to local perturbations. The actual shape will be provided upon request.

Exposure to Date - NVT - The total thermal neutron exposure per square centimeter received to date. This number is calculated from facility unperturbed flux and reactor operating time.

Discharge, Date and Time - Date and time samples were removed from the active portion of the reactor or date and time reactor was down to one-half equilibrium level if sample was discharged during a reactor outage.

Shipping Date - Date samples were shipped to the customer or otherwise disposed of.

L. V. Barker
Supervisor
Irradiation Testing

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LV Barker/k

IDENTIFICATION				OPERATING TIME (DAYS)	C M K ABSORBED	CHARGE		LOCATION			EXPOSURE TO DATE NVT	DISCHARGE		SHIPPING DATE
TISR NO.	REQUEST NUMBER	MATERIAL	PIECE NO.			DATE	TIME	FACILITY	TEST HOLE POSITION	POSITION FACTOR		DATE	TIME	
THE FOLLOWING IRRADIATIONS ARE IN PROGRESS,														
177		GRAPH	A0J3	424,0861		02-12-68	2150	BTH -C	0-2068	1,000	2,9+21			
177		GRAPH	A0J4	424,0861		02-12-68	2150	BTH -C	0-2065	1,000	2,9+21			
177		GRAPH	B0J6	91,0459		09-13-68	1100	BTH -C	0-2074	1,000	6,2+20			
177		GRAPH	B0J7	91,0459		09-13-68	1100	BTH -C	0-2077	1,000	6,2+20			
177		GRAPH	B0J8	91,0459		09-13-68	1100	BTH -C	0-2071	1,000	6,2+20			
177		GRAPH	B0K6	91,0459		09-13-68	1100	BTH -C	0-2080	1,000	6,2+20			
177		GRAPH	00J2	261,1502		02-12-68	2150	BTH -C	0-2059	1,000	1,8+21			
177		GRAPH	00K9	261,1502		02-12-68	2150	BTH -C	0-2062	1,000	1,8+21			
177		GRAPH	A0A6	389,7101		09-22-67	0608	3ATH-KE	0-2984	1,000	3,5+21			
177		GRAPH	A0D2	389,7101		09-22-67	0608	3ATH-KE	0-2977	1,000	3,5+21			
177		GRAPH	A0D3	389,7101		09-22-67	0608	3ATH-KE	0-2981	1,000	3,5+21			
222		U	P22	50,2458		11-28-68	0250	3674-KW		1,000	6,8+20			
222		U	P23	50,2458		11-28-68	0250	3674-KW		1,000	6,8+20			
236		ZR-NB	1V29	197,4034		04-01-68	0630	3ATH-KW		1,000	1,7+21			
236		ZR	4-28	420,7139		08-13-67	0615	3ATH-KE		1,000	3,8+21			
236		SS	1V36	145,0181		06-11-68	1400	3CTH-KW		1,000	1,7+21			
236		ZIRC	4-30	266,1575		01-14-68	2019	3CTH-KW		1,000	3,2+21			
236		ZIRCON	1V34	80,8111		10-15-68	0658	3DTH-KW		1,000	6,8+20			
236		ZIRC	4-25	266,1575		01-14-68	2019	3DTH-KW		1,000	2,4+21			
243		MOLY	00R3	62,2805		11-08-68	1535	2BTH-KE		1,000	6,8+20			
243		TENSIL	00A1	33,0236		12-15-68	0810	3CTH-KE		1,000	3,6+20			
243		VRS	0172	94,5740		07-30-68	1455	4CTH-KW		1,000	1,1+21			
243		CARBON	0177	44,7647		10-24-68	1345	4CTH-KW		1,000	4,9+20			
243		CARBON	0178	44,7647		10-24-68	1345	4CTH-KW		1,000	4,9+20			
259		HASTLY	0A-G	1081,1608		12-25-64	2255	ETH -C	0-2177	1,000	4,2+21			
259		HASTLY	0A-H	1081,1608		12-25-64	2255	ETH -C	0-2175	1,000	4,2+21			
259		HAST	0I-3	261,1507		02-12-68	2150	ETH -C		1,000	1,0+21			
376		VRS	0001	389,1101		09-22-67	0608	2DTH-KE	6-2273	1,000	3,5+21			
376		VRS	0002	389,1101		09-22-67	0608	2DTH-KE	6-2272	1,000	3,5+21			
376		VRS	0003	389,1101		09-22-67	0608	2DTH-KE	6-2271	1,000	3,5+21			
376		VRS	0004	389,1101		09-22-67	0608	2DTH-KE	6-2270	1,000	3,5+21			
376		VRS	0005	389,1101		09-22-67	0608	2DTH-KE	6-2269	1,000	3,5+21			
376		VRS	0006	389,1101		09-22-67	0608	2DTH-KE	6-2268	1,000	3,5+21			
376		VRS	0007	389,1101		09-22-67	0608	2DTH-KE	6-2267	1,000	3,5+21			
376		VRS	0008	389,1101		09-22-67	0608	2DTH-KE	6-2266	1,000	3,5+21			
376		VRS	0009	389,1101		09-22-67	0608	2DTH-KE	6-2265	1,000	3,5+21			
376		VRS	0010	389,1101		09-22-67	0608	2DTH-KE	6-2264	1,000	3,5+21			
376		VRS	0011	389,1101		09-22-67	0608	2DTH-KE	6-2263	1,000	3,5+21			

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IDENTIFICATION				OPERATING TIME (DAYS)	C M K ABSORBED	CHARGE		LOCATION			EXPOSURE TO DATE N V T	DISCHARGE		SHIPPING DATE
TISR NO.	REQUEST NUMBER	MATERIAL	PIECE NO.			DATE	TIME	FACILITY	TEST HOLE POSITION	POSITION FACTOR		DATE	TIME	
THE FOLLOWING IRRADIATIONS ARE IN PROGRESS,														
376		VRS	0012	389,1101		09-22-67	0608	2DTH-KE	6-2262	1,000	3,5+21			
376		VRS	0013	389,1101		09-22-67	0608	2DTH-KE	6-2261	1,000	3,5+21			
376		VRS	0014	389,1101		09-22-67	0608	2DTH-KE	6-2260	1,000	3,5+21			
376		VRS	0015	389,1101		09-22-67	0608	2DTH-KE	6-2259	1,000	3,5+21			
376		VRS	0016	389,1101		09-22-67	0608	2DTH-KE	6-2258	1,000	3,5+21			
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IDENTIFICATION			OPERATING TIME (DAYS)	C M K ABSORBED	CHARGE		LOCATION			EXPOSURE TO DATE NVT	DISCHARGE		SHIPPING DATE
TIR NO.	REQUEST NUMBER	MATERIAL			DATE	TIME	FACILITY	TEST HOLE POSITION	POSITION FACTOR		DATE	TIME	
THE FOLLOWING IRRADIATIONS ARE AWAITING DISPOSITION.													
222		U	93,7270		08-24-68	2324	3CTH-KE		1.000	1.1+21	12-08-68	2145	

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IDENTIFICATION				OPERATING TIME (DAYS)	C M K ABSORBED	CHARGE		LOCATION			EXPOSURE TO DATE NVT	DISCHARGE		SHIPPING DATE
TISR NO.	REQUEST NUMBER	MATERIAL	PIECE NO.			DATE	TIME	FACILITY	TEST HOLE POSITION	POSITION FACTOR		DATE	TIME	
THE FOLLOWING IRRADIATIONS WERE SHIPPED DURING THE MONTH														
172		PLASTC	1707	1,0000		01-16-69	1315	ATH -C		1,000	2,5+18	01-17-69	1315	01-20-69
172		PLASTC	1708	1,0000		01-16-69	1315	ATH -C		1,000	1,5+18	01-17-69	1315	01-20-69
172		PLASTC	1710	1,5069		01-17-69	2115	ATH -C		1,000	2,3+18	01-19-69	1000	01-19-69
172		PLASTC	1711	1,5069		01-17-69	2115	ATH -C		1,000	1,7+18	01-19-69	1000	01-19-69
172		VARIOS	1684	,0417		12-16-68	0858	2ATH-KW		1,000	3,5+17	12-16-68	0928	12-17-68
172		VARIOS	1685	,0417		12-16-68	0858	2ATH-KW		1,000	3,5+17	12-16-68	0928	12-17-68
172		VARIOS	1686	,0417		12-16-68	0858	2ATH-KW		1,000	3,5+17	12-16-68	0928	12-17-68
172		VARIOS	1687	,0417		12-16-68	0858	2ATH-KW		1,000	3,5+17	12-16-68	0928	12-17-68
172		VARIOS	1688	,0417		12-16-68	0858	2ATH-KW		1,000	3,5+17	12-16-68	0928	12-17-68
172		VARIOS	1691	,0208		12-21-68	1045	2ATH-KW		1,000	1,8+17	12-21-68	1115	12-23-68
172		VARIOS	1692	1,0104		01-06-69	1300	2ATH-KW		1,000	6,0+17	01-07-69	1315	01-08-69
172		VARIOS	1693	,0208		01-04-69	1003	2ATH-KW		1,000	1,8+17	01-04-69	1033	01-06-69
172		VARIOS	1694	,0208		01-04-69	1003	2ATH-KW		1,000	1,8+17	01-04-69	1033	01-06-69
172		VARIOS	1695	,0208		01-04-69	1003	2ATH-KW		1,000	1,8+17	01-04-69	1033	01-06-69
172		VARIOS	1696	,0208		01-04-69	1003	2ATH-KW		1,000	1,8+17	01-04-69	1033	01-06-69
172		VARIOS	1697	,0208		01-04-69	1003	2ATH-KW		1,000	1,8+17	01-04-69	1033	01-06-69
172		VARIOS	1698	,2500		01-07-69	1430	2ATH-KW		1,000	2,1+18	01-07-69	2030	01-08-69
172		BIO	1712	,0208		01-18-69	0845	2ATH-KW		1,000	1,8+17	01-18-69	0915	01-20-69
172		BIO	1713	,0208		01-18-69	0845	2ATH-KW		1,000	1,8+17	01-18-69	0915	01-20-69
172		BIO	1714	,0208		01-18-69	0845	2ATH-KW		1,000	1,8+17	01-18-69	0915	01-20-69
172		BIO	1715	,0208		01-18-69	0845	2ATH-KW		1,000	1,8+17	01-18-69	0915	01-20-69
172		BIO	1716	,0208		01-18-69	0845	2ATH-KW		1,000	1,8+17	01-18-69	0915	01-20-69
172		BIO	1717	,0208		01-18-69	0845	2ATH-KW		1,000	1,8+17	01-18-69	0915	01-20-69
172		BIO	1718	,0208		01-18-69	0845	2ATH-KW		1,000	1,8+17	01-18-69	0915	01-20-69
172		BIO	1719	,0208		01-18-69	0845	2ATH-KW		1,000	1,8+17	01-18-69	0915	01-20-69
172		VARIOS	1689	1,0021		12-19-68	1000	2DTH-KE		1,000	8,5+18	12-20-68	1003	12-23-68
172		VARIOS	1690	1,0021		12-19-68	1000	2DTH-KE		1,000	8,5+18	12-20-68	1003	12-23-68
172		TISSUE	1699	,0208		01-11-69	1255	2DTH-KE		1,000	1,8+17	01-11-69	1325	01-11-69
172		TISSUE	1700	,0208		01-11-69	1255	2DTH-KE		1,000	1,8+17	01-11-69	1325	01-11-69
172		TISSUE	1701	,0208		01-11-69	1255	2DTH-KE		1,000	1,8+17	01-11-69	1325	01-11-69
172		TISSUE	1702	,0208		01-11-69	1255	2DTH-KE		1,000	1,8+17	01-11-69	1325	01-11-69
172		TISSUE	1703	,0208		01-11-69	1255	2DTH-KE		1,000	1,8+17	01-11-69	1325	01-11-69
172		TISSUE	1704	,0208		01-11-69	1255	2DTH-KE		1,000	1,8+17	01-11-69	1325	01-11-69
172		TISSUE	1705	,0208		01-11-69	1255	2DTH-KE		1,000	1,8+17	01-11-69	1325	01-11-69
172		TISSUE	1706	,0208		01-11-69	1255	2DTH-KE		1,000	1,8+17	01-11-69	1325	01-11-69
172		CLOR	1709	,0021		01-17-69	1108	2DTH-KE		1,000	1,6+15	01-17-69	1111	01-18-69
184		PLASTC	6471	,0014		01-12-69	0850	ATH -C		1,000	2,1+15	01-12-69	0852	01-13-69
184		VARIOS	3230	.8854		12-15-68	0930	2ATH-KW		1,000	7,5+18	12-16-68	0645	12-16-68

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IDENTIFICATION				OPERATING TIME (DAYS)	CMK ABSORBED	CHARGE		LOCATION			EXPOSURE TO DATE NVT	DISCHARGE		SHIPPING DATE
TISR NO.	REQUEST NUMBER	MATERIAL	PIECE NO.			DATE	TIME	FACILITY	TEST HOLE POSITION	POSITION FACTOR		DATE	TIME	
THE FOLLOWING IRRADIATIONS WERE SHIPPED DURING THE MONTH														
184		VARIOS	3231	,8854		12-15-68	0930	2ATH-KW		1,000	7,5+18	12-16-68	0645	12-16-68
184		VARIOS	3232	,9062		12-17-68	0900	2ATH-KW		1,000	7,7+18	12-18-68	0645	12-18-68
184		VARIOS	3233	,9062		12-17-68	0900	2ATH-KW		1,000	7,7+18	12-18-68	0645	12-18-68
184		VARIOS	3247	,8854		01-12-69	0930	2ATH-KW		1,000	7,5+18	01-13-69	0645	01-13-69
184		VARIOS	3248	,8854		01-12-69	0930	2ATH-KW		1,000	7,5+18	01-13-69	0645	01-13-69
184		VARIOS	3249	,8958		01-13-69	0915	2ATH-KW		1,000	7,6+18	01-14-69	0645	01-14-69
184		VARIOS	3250	,8958		01-13-69	0915	2ATH-KW		1,000	7,6+18	01-14-69	0645	01-14-69
184		VARIOS	3251	,8854		01-15-69	0930	2ATH-KW		1,000	7,5+18	01-16-69	0645	01-16-69
184		VARIOS	3252	,8854		01-15-69	0930	2ATH-KW		1,000	7,5+18	01-16-69	0645	01-16-69
184		VARIOS	3234	,7569		12-18-68	1000	2DTH-KE		1,000	6,4+18	12-19-68	0630	12-19-68
184		VARIOS	3235	,7569		12-18-68	1000	2DTH-KE		1,000	6,4+18	12-19-68	0630	12-19-68
184		VARIOS	3236	,0007		12-19-68	0705	2DTH-KE		1,000	1,2+15	12-19-68	0706	12-19-68
184		VARIOS	3237	,8819		01-01-69	0945	2DTH-KE		1,000	1,5+18	01-02-69	0655	01-02-69
184		VARIOS	3238	,8819		01-01-69	0945	2DTH-KE		1,000	1,5+18	01-02-69	0655	01-02-69
184		VARIOS	3239	,8333		01-05-69	1045	2DTH-KE		1,000	7,0+18	01-06-69	0645	01-06-69
184		VARIOS	3240	,8333		01-05-69	1045	2DTH-KE		1,000	7,0+18	01-06-69	0645	01-06-69
184		VARIOS	3241	,9271		01-07-69	0830	2DTH-KE		1,000	7,8+18	01-08-69	0645	01-08-69
184		VARIOS	3242	,9271		01-07-69	0830	2DTH-KE		1,000	7,8+18	01-08-69	0645	01-08-69
184		VARIOS	3243	,8437		01-08-69	1030	2DTH-KE		1,000	7,1+18	01-09-69	0645	01-09-69
184		VARIOS	3244	,8437		01-08-69	1030	2DTH-KE		1,000	7,1+18	01-09-69	0645	01-09-69
184		VARIOS	3245	,8611		01-09-69	1005	2DTH-KE		1,000	7,3+18	01-10-69	0645	01-10-69
184		VARIOS	3246	,0002		01-10-69	0705	2DTH-KE		1,000	1,2+14	01-10-69	0706	01-10-69
184		PLASTC	6464	,0007		12-29-68	0915	2DTH-KE		1,000	5,3+14	12-29-68	0916	12-30-68
184		PLASTC	6465	,0007		12-29-68	0917	2DTH-KE		1,000	5,3+14	12-29-68	0918	12-30-68
184		PLASTC	6466	,0007		12-29-68	0920	2DTH-KE		1,000	5,3+14	12-29-68	0921	12-30-68
184		PLASTC	6467	,0007		12-29-68	0923	2DTH-KE		1,000	5,3+14	12-29-68	0924	12-30-68
184		PLASTC	6468	,0007		12-29-68	0926	2DTH-KE		1,000	5,3+14	12-29-68	0927	12-30-68
184		PLASTC	6469	,0007		12-29-68	0929	2DTH-KE		1,000	5,3+14	12-29-68	0930	12-30-68
184		PLASTC	6470	,0007		01-01-69	0940	2DTH-KE		1,000	5,3+14	01-01-69	0941	01-02-69
222		U	P-19	118,0360		05-18-68	0345	3674-KW		1,000	1,7+21	11-24-68	2400	01-21-69
222		U	P-20	118,0360		05-18-68	0345	3674-KW		1,000	1,7+21	11-24-68	2400	01-21-69
236		ZIRCON	1V35	71,6694		10-15-68	0658	2CTH-KW		1,000	6,1+20	01-08-69	2056	01-13-69
236		SS	1V37	33,3452		11-28-68	0250	3BTH-KW		1,000	3,7+20	01-08-69	2056	01-14-69
243		VRS	0162	31,9469		07-30-68	1455	4CTH-KW		1,000	3,9+20	10-04-68	2100	01-15-69
243		CARBON	0180	22,8819		10-24-68	1345	4CTH-KW		1,000	2,5+20	11-25-69	0000	12-31-68
271		AS	0113	,0139		12-18-68	0855	2ATH-KW		1,000	1,2+17	12-18-68	0915	12-20-69
271		DEP-U	0114	3,0000		01-02-69	1100	2DTH-KE		1,000	2,5+19	01-05-69	1100	01-08-69
271		DEP-U	0115	2,6354		01-16-69	1830	2DTH-KE		1,000	2,2+19	01-19-69	0945	01-19-69

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