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



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By J E Sawley 11-15-94

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STATUS OF IRRADIATIONS PERFORMED BY  
FUEL & TARGET IRRADIATION TECHNOLOGY  
FOR BNW AS OF OCTOBER 31, 1969

L. V. Barker

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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.

*J. V. Barker*  
Supervisor  
Irradiation Services

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IDENTIFICATION				OPERATING TIME (DAYS)	C M K ABSORBED	CHARGE DATE	TIME	FACILITY	LOCATION		EXPOSURE TO DATE NVT	DISCHARGE DATE	TIME	SHIPPING DATE
TBR NO.	REQUEST NUMBER	MATERIAL	PIECE NO.						TEST HOLE POSITION	POSITION FACTOR				
THE FOLLOWING IRRADIATIONS ARE IN PROGRESS:														
177	BNW-177	GRAPH	GR-2	74.3181		07-24-69	0940	3DTH-KW		0=4366	1,000	6,3*20		
177	BNW-177	GRAPH	00-6	192.2955		01-25-69	0856	48TH-KE		0=4379	1,000	2,1*21		
177	BNW-177	GRAPH	0140	192.2955		01-25-69	0856	48TH-KE		0=4376	1,000	2,1*21		
177	BNW-177	GRAPH	0143	192.2955		01-25-69	0856	48TH-KE		0=4363	1,000	2,1*21		
177	BNW-177	GRAPH	0188	192.2955		01-25-69	0856	48TH-KE		0=4337	1,000	2,1*21		
177	BNW-177	GRAPH	0189	192.2955		01-25-69	0856	48TH-KE		0=4373	1,000	2,1*21		
177	BNW-177	GRAPH	0190	192.2955		01-25-69	0856	48TH-KE		0=4369	1,000	2,1*21		
177	BNW-177	GRAPH	0191	192.2955		01-25-69	0856	48TH-KE		0=4354	1,000	2,1*21		
177	BNW-177	GRAPH	0192	192.2955		01-25-69	0856	48TH-KE		0=4360	1,000	2,1*21		
177	BNW-177	GRAPH	0193	192.2955		01-25-69	0856	48TH-KE		0=4360	1,000	2,1*21		
236		SS	1V36	359.3425		06-11-68	1400	3CTH-KW			1,000	4,0*21		
236		ZIRC	4*30	480.4819		01-14-68	2019	3CTH-KW			1,000	5,6*21		
236	BNW-236	SS	4*40	37.2333		09-07-69	1740	2CTH-KW			1,000	4,1*20		
236	BNW-236-A	SS	4*38	96.2485		05-29-69	2312	3RTH-KW			1,000	1,1*21		
243		SS	0178	205.4133		10-24-68	1345	4CTH-KW			1,000	2,3*21		
271	BNW-271	CARBON	0132	73.5770		07-29-69	1348	2DTH-KE		6-2273	1,000	6,2*20		
384	BNW-384	STR	0005	116.4041		05-29-69	2312	38TH-KW			1,000	1,3*21		
384	BNW-384	BORCAR	0006	116.4041		05-29-69	2312	38TH-KW			1,000	1,3*21		
384	BNW-384	BORCAR	0002	136.4787		04-21-69	2113	3CTH-KE			1,000	1,5*21		
384	BNW-384	BORCAR	0003	136.4787		04-21-69	2113	3CTH-KE			1,000	1,5*21		

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IDENTIFICATION			OPERATING TIME (DAYS)		C M K ABSORBED	CHARGE		LOCATION			DISCHARGE		SHIPPING DATE
TISR NO.	REQUEST NUMBER	MATERIAL	PIECE NO.			DATE	TIME	FACILITY	TEST HOLE POSITION	POSITION FACTOR	EXPOSURE TO DATE NVT	DATE	TIME
THE FOLLOWING IRRADIATIONS ARE AWAITING DISPOSITION.													
177		GRAPH	A0A6	508.4286		09-22-67	0608	3ATH=KE	0-2984	1.000	4.5*21	07-03-69	1353
177		GRAPH	A0D2	508.4286		09-22-67	0608	3ATH=KE	0-2977	1.000	4.5*21	07-03-69	1353
177		GRAPH	A0D3	508.4286		09-22-67	0608	3ATH=KE	0-2981	1.000	4.5*21	07-03-69	1353
177	BWM-177	GRAPH	GP-1	58.5543		07-23-69	1450	3ATH=KW		1.000	4.3*20	09-25-69	1013
384	BWM-384	BUSBAR	0024	115.4597		05-29-69	2312	3BTH=KW		1.000	1.3*21	10-19-69	2145

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IDENTIFICATION			OPERATING TIME (DAYS)	CMK ABSORBED	CHARGE			LOCATION		DISCHARGE		SHIPPING DATE
TSR NO.	REQUEST NUMBER	MATERIAL			PIECE NO.	DATE	TIME	FACILITY	TEST HOLE POSITION	POSITION FACTOR	EXPOSURE TO DATE NVT	
THE FOLLOWING IRRADIATIONS WERE SHIPPED DURING THE MONTH												
172	BNN-172	VAR	2240	0208	10-04-69	0930	2ATH-KW	1:000	1.8*17	10-04-69	1000	10-07-66
172	BNN-172	VAR	2241	0208	10-04-69	0930	2ATH-KW	1:000	1.8*17	10-04-69	1000	10-07-66
172	BNN-172	VAR	2242	0208	10-04-69	0930	2ATH-KW	1:000	1.8*17	10-04-69	1000	10-07-66
172	BNN-172	VAR	2243	0208	10-04-69	0930	2ATH-KW	1:000	1.8*17	10-04-69	1000	10-07-66
172	BNN-172	VAR	2244	0208	10-04-69	0930	2ATH-KW	1:000	1.8*17	10-04-69	1000	10-07-66
172	BNN-172	VAR	2245	0208	10-04-69	0930	2ATH-KW	1:000	1.8*17	10-04-69	1000	10-07-66
172	BNN-172	VAR	2246	0208	10-04-69	1027	2ATH-KW	1:000	1.8*17	10-04-69	1057	10-07-66
172	BNN-172	VAR	2247	0208	10-04-69	1027	2ATH-KW	1:000	1.8*17	10-04-69	1057	10-07-66
172	BNN-172	VAR	2248	0208	10-04-69	1027	2ATH-KW	1:000	1.8*17	10-04-69	1057	10-07-66
172	BNN-172	VAR	2249	0208	10-04-69	1027	2ATH-KW	1:000	1.8*17	10-04-69	1057	10-07-66
172	BNN-172	VAR	2250	0208	10-04-69	1027	2ATH-KW	1:000	1.8*17	10-04-69	1057	10-07-66
172	BNN-172	VAR	2251	0208	10-04-69	1139	2ATH-KW	1:000	1.8*17	10-04-69	1209	10-07-66
172	BNN-172	VAR	2252	0208	10-04-69	1139	2ATH-KW	1:000	1.8*17	10-04-69	1209	10-07-66
172	BNN-172	VAR	2253	0208	10-04-69	1139	2ATH-KW	1:000	1.8*17	10-04-69	1209	10-07-66
172	BNN-172	VAR	2254	0208	10-04-69	1139	2ATH-KW	1:000	1.8*17	10-04-69	1209	10-07-66
172	BNN-172	VAR	2255	0208	10-04-69	1139	2ATH-KW	1:000	1.8*17	10-04-69	1209	10-07-66
172	BNN-172	VAR	2256	0208	10-04-69	1139	2ATH-KW	1:000	1.8*17	10-04-69	1209	10-07-66
172	BNN-172	VAR	2257	0208	10-04-69	1220	2ATH-KW	1:000	1.8*17	10-04-69	1250	10-07-66
172	BNN-172	VAR	2258	0208	10-04-69	1220	2ATH-KW	1:000	1.8*17	10-04-69	1250	10-07-66
172	BNN-172	VAR	2259	0208	10-04-69	1220	2ATH-KW	1:000	1.8*17	10-04-69	1250	10-07-66
172	BNN-172	VAR	2260	0208	10-04-69	1220	2ATH-KW	1:000	1.8*17	10-04-69	1250	10-07-66
172	BNN-172	VAR	2261	0208	10-04-69	1220	2ATH-KW	1:000	1.8*17	10-04-69	1250	10-07-66
172	BNN-172	BIC	2265	0208	10-18-69	0952	2ATH-KW	1:000	1.8*17	10-18-69	1022	10-20-66
172	BNN-172	BIC	2266	0208	10-18-69	0952	2ATH-KW	1:000	1.8*17	10-18-69	1022	10-20-66
172	BNN-172	BIC	2267	0208	10-18-69	0952	2ATH-KW	1:000	1.8*17	10-18-69	1022	10-20-66
172	BNN-172	BIC	2268	0208	10-18-69	0952	2ATH-KW	1:000	1.8*17	10-18-69	1022	10-20-66
172	BNN-172	BIC	2269	0208	10-18-69	0952	2ATH-KW	1:000	1.8*17	10-18-69	1022	10-20-66
172	BNN-172	BIC	2270	0208	10-18-69	0952	2ATH-KW	1:000	1.8*17	10-18-69	1022	10-20-66
172	BNN-172	BIC	2271	0208	10-18-69	0952	2ATH-KW	1:000	1.8*17	10-18-69	1022	10-20-66
172	BNN-172	BIC	2272	0208	10-18-69	0952	2ATH-KW	1:000	1.8*17	10-18-69	1022	10-20-66
172	BNN-172	BIC	2273	0208	10-18-69	0952	2ATH-KW	1:000	1.8*17	10-18-69	1022	10-20-66
172	BNN-172	BIC	2274	0208	10-18-69	0952	2ATH-KW	1:000	1.8*17	10-18-69	1022	10-20-66
172	BNN-172	BIC	2275	0208	10-18-69	0952	2ATH-KW	1:000	1.8*17	10-18-69	1022	10-20-66
172	BNN-172	BIC	2276	0208	10-18-69	0952	2ATH-KW	1:000	1.8*17	10-18-69	1022	10-20-66
172	BNN-172	BIC	2277	0208	10-18-69	0952	2ATH-KW	1:000	1.8*17	10-18-69	1022	10-20-66
172	BNN-172	VAR	2262	0007	10-06-69	1345	4BTH-KW	1:000	5.4*14	10-06-69	1346	10-07-66
172	BNN-172	VAR	2263	0208	10-09-69	0913	4BTH-KW	1:000	2.3*16	10-09-69	0943	10-10-66
172	BNN-172	VAR	2264	0208	10-09-69	0913	4BTH-KW	1:000	2.3*16	10-09-69	1013	10-10-66

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IDENTIFICATION				C M K ABSORBED	CHARGE		LOCATION		EXPOSURE TO DATE NVT	DISCHARGE		SHIPPING DATE,
TBR NO.	REQUEST NUMBER	MATERIAL	PIECE NO.		OPERATING TIME (DAYS)	DATE	TIME	FACILITY		TEST HOLE POSITION	POSITION FACTOR	
THE FOLLOWING IRRADIATIONS WERE SHIPPED DURING THE MON TH												
184	BWV-184	VAR	3463	.8646	10-08-69	1000	2ATH-KW		1.000	10-09-69	0645	10-09-69
184	BWV-184	VAR	3464	.8646	10-08-69	1000	2ATH-KW		1.000	10-09-69	0645	10-09-69
184	BWV-184	VAR	3465	.9167	10-12-69	0845	2ATH-KW		1.000	10-13-69	0645	10-13-69
184	BWV-184	VAR	3466	.9167	10-12-69	0845	2ATH-KW		1.000	10-13-69	0645	10-13-69
184	BWV-184	VAR	3467	.8229	10-13-69	1100	2ATH-KW		1.000	10-14-69	0645	10-14-69
184	BWV-184	VAR	3468	.8229	10-13-69	1100	2ATH-KW		1.000	10-14-69	0645	10-14-69
184	BWV-184	VAR	3469	.9132	10-15-69	0850	2ATH-KW		1.000	10-16-69	0645	10-16-69
184	BWV-184	VAR	3470	.9062	10-21-69	0900	2DTH-KE		1.000	10-22-69	0645	10-22-69
184	BWV-184	VAR	3471	.8437	10-22-69	1030	2DTH-KE		1.000	10-22-69	0645	10-22-69
184	BWV-184	VAR	3472	.8437	10-22-69	1030	2DTH-KE		1.000	10-22-69	0645	10-22-69
184	BWV-184	VAR	3473	.8437	10-26-69	1035	2DTH-KE		1.000	10-27-69	0650	10-27-69
184	BWV-184	VAR	3474	.8437	10-26-69	1035	2DTH-KE		1.000	10-27-69	0650	10-27-69
184	BWV-184	PLAS	6703	.0014	10-27-69	0926	2DTH-KE		1.000	10-27-69	0928	10-28-69
184	BWV-184	PLAS	6704	.0014	10-27-69	0928	2DTH-KE		1.000	10-27-69	0930	10-28-69
184	BWV-184	PLAS	6705	.0014	10-27-69	0930	2DTH-KE		1.000	10-27-69	0932	10-28-69
184	BWV-184	PLAS	6691	.0014	10-04-69	1040	4BTH-KW		1.000	10-04-69	1042	10-06-69
184	BWV-184	PLAS	6692	.0097	10-04-69	1143	4BTH-KW		1.000	10-04-69	1203	10-06-69
184	BWV-184	PLAS	6693	.0014	10-06-69	1350	4BTH-KW		1.000	10-06-69	1352	10-07-69
184	BWV-184	PLAS	6694	.0069	10-07-69	1251	4BTH-KW		1.000	10-07-69	1301	10-08-69
184	BWV-184	PLAS	6695	.0069	10-07-69	1251	4BTH-KW		1.000	10-07-69	1301	10-08-69
184	BWV-184	PLAS	6696	.0069	10-07-69	1251	4BTH-KW		1.000	10-07-69	1301	10-08-69
184	BWV-184	PLAS	6697	.0069	10-07-69	1251	4BTH-KW		1.000	10-07-69	1301	10-08-69
184	BWV-184	PLAS	6698	.0069	10-07-69	1251	4BTH-KW		1.000	10-07-69	1301	10-08-69
184	BWV-184	PLAS	6699	.0069	10-07-69	1251	4BTH-KW		1.000	10-07-69	1301	10-08-69
184	BWV-184	PLAS	6700	.0014	10-09-69	1016	4BTH-KW		1.000	10-09-69	1018	10-10-69
184	BWV-184	PLAS	6701	.0014	10-14-69	1015	4BTH-KW		1.000	10-14-69	1017	10-15-69
184	BWV-184	PLAS	6702	.0014	10-18-69	0940	4BTH-KW		1.000	10-18-69	0942	10-20-69
271	BWV-271	DEFO	0138	2.9965	10-23-69	1100	2DTH-KE		1.000	10-26-69	1055	10-27-69

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