

TABLE 1

U S NUCLEAR REGULATORY COMMISSION
 OFFICE OF INSPECTION AND ENFORCEMENT
 CONFIRMATORY MEASUREMENTS PROGRAM
 FACILITY: DRESDEN
 FOR THE 4 QUARTER OF 1978

SAMPLE	ISOTOPE	-----NRC-----		---LICENSEE---		---NRC:LICENSEE---		
		RESULT	ERROR	RESULT	ERROR	RATIO	REG	T
OFF GAS	XE 133	1.3E-01	6.0E-03	9.2E-02	1.0E-03	7.1E-01	2.2E+01	P
	XE 133M	6.0E-03	6.0E-04	7.4E-03	1.0E-04	1.2E+00	1.0E+01	A
	KR 85	4.7E-04	1.0E-04	0.0	0.0	0.0	4.7E+00	D
L WASTE	H 3	6.9E-03	2.0E-05	6.5E-03	7.0E-04	9.4E-01	3.4E+02	A
	BETA	2.5E-06	1.0E-07	4.8E-06	1.0E-07	1.9E+00	2.5E+01	P
P FILTER	XE 133	3.4E-05	1.1E-04	0.0	0.0	0.0	3.4E-01	N
	CE 141	1.6E-04	1.4E-05	4.9E-05	6.0E-06	5.6E-01	1.7E+01	P
	I 131	1.8E-03	8.4E-05	1.2E-03	1.0E-04	6.7E-01	2.1E+01	P
	BA 140	7.4E-03	3.1E-04	4.2E-03	1.0E-04	5.7E-01	2.4E+01	D
	CS 137	1.5E-04	1.3E-05	8.5E-05	3.0E-06	5.7E-01	1.2E+01	P
	CO 60	2.0E-04	2.1E-05	1.6E-04	1.0E-05	8.0E-01	9.5E+00	A
C FILTER	I 131	1.5E-02	5.1E-04	1.6E-02	1.0E-03	1.1E+00	2.9E+01	A

T TEST RESULTS:
 A=AGREEMENT
 D=DISAGREEMENT
 P=POSSIBLE AGREEMENT
 N=NO COMPARISON

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ATTACHMENT 1

CRITERIA FOR COMPARING ANALYTICAL MEASUREMENTS

This attachment provides criteria for comparing results of capability tests and verification measurements. The criteria are based on an empirical relationship which combines prior experience and the accuracy needs of this program.

In these criteria, the judgment limits are variable in relation to the comparison of the NRC Reference Laboratory's value to its associated one sigma uncertainty. As that ratio, referred to in this program as "Resolution", increases, the acceptability of a licensee's measurement should be more selective. Conversely, poorer agreement should be considered acceptable as the resolution decreases. The values in the ratio criteria may be rounded to fewer significant figures to maintain statistical consistency with the number of significant figures reported by the NRC Reference Laboratory, unless such rounding will result in a narrowed category of acceptance. The acceptance category reported will be the narrowest into which the ratio fits for the resolution being used.

<u>RESOLUTION</u>	<u>RATIO = LICENSEE VALUE/NRC REFERENCE VALUE</u>		
	<u>Agreement</u>	<u>Possible Agreement "A"</u>	<u>Possible Agreeable "B"</u>
<3	No Comparison	No Comparison	No Comparison
>3 and <4	0.4 - 2.5	0.3 - 3.0	No Comparison
>4 and <8	0.5 - 2.0	0.4 - 2.5	0.3 - 3.0
>8 and <16	0.6 - 1.67	0.5 - 2.0	0.4 - 2.5
>16 and <51	0.75 - 1.33	0.6 - 1.67	0.5 - 2.0
>51 and <200	0.80 - 1.25	0.75 - 1.33	0.6 - 1.67
>200	0.85 - 1.18	0.80 - 1.25	0.75 - 1.33

"A" criteria are applied to the following analyses:

Gamma spectrometry, where principal gamma energy used for identification is greater than 250 keV.

Tritium analyses of liquid samples.

"B" criteria are applied to the following analyses:

Gamma spectrometry, where principal gamma energy used for identification is less than 250 keV.

Sr-89 and Sr-90 determinations.

Gross beta, where samples are counted on the same date using the same reference nuclide.