U.S. NUCLEAR REGULATORY COMMISSION OFFICE OF INSPECTION AND ENFORCEMENT

REGION III

Docket No. 50-331

IE Inspection Report No. 50-331/80-16 (Addendum)

Supplemental Results

The results of selective analyses performed on a liquid waste sample collected during the inspection and on spiked samples submitted by the NRC reference laboratory and RIII after the inspection indicate disagreements for Sr-89, Sr-90, and gross beta. The disagreements are in a conservative direction. The licensee has received a new low background counter, which he has calibrated for Sr-89 and beta, and has ordered a Sr-90 standard for the remaining calibration. Another spiked liquid sample will be submitted when calibrations are complete.

The licensee's quantification of Co-57 on a spiked charcoal adsorber was a factor of three low compared with the NRC reference laboratory. Co-57 is an insignificant (.01%) fraction of the airborne release and the error had an insignificant effect on the accuracy of release quantification. The licensee reported that a new gamma spectroscopy system is scheduled to be delivered and installed during the week of May 13, 1981, and calibrations will be made as soon as the equipment is determined to be operational. This matter will be reviewed during a future inspection.

These results were discussed by telephone on May 5, 1981, with Mr. R. Dye, Assistant Radiation Protection Engineer at the Duane Arnold plant.



TABLE III

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U S NUCLEAR REGULATORY COMMISSION

OFFICE OF INSPECTION AND ENFORCEMENT

CONFIRMATORY MEASUREMENTS PROGRAM FACILITY: DAEC FOR THE 3 QUARTER OF 1980

	ISOTOPE	NRC		LICENSEE		NRC:LICENSEE		
SAMPLE		RESULT	ERROR	RESULT	ERROR	RATIO	RES	Т
L WASTE	нз	8.6F-04	3-0E-06	9.2E-04	7.0E-06	1.1E+00	2.9E+02	۵
	SR AQ	1.2E=05	5.0F-07	3.8F=05	2.4E=07	3-2E+00	2.4E+01	D
	SR 90	1.8F=07	3.0F-08	6.8E-06	1.4E-07	3.8E+01	6.0E+00	Ď
	BETA	2.7E-04	1.0E=05	1.3E-03	1.3E-06	4.8E+00	2.7E+01	D
F SPIKED	CO 57	6.3E-04	2.0E-05	1.2E-03	3.9E-05	1.9E+00	3.1E+01	Ρ
	CS 134	1.4E-03	5.0E-05	1.8E-03	8.0E-05	1.3E+00	2.8E+01	A
	CS 137	4.1E-03	1.2E-04	5.2E-03	I.2E-04	1.3E+00	3.4E+01	Α
	CO 60	2.1E-03	6.0E-05	2.6E-03	1.2E-04	1.2E+00	3.5E+01	A
SPIKED	BA 133	6.7E+04	2.0E+03	4.5E+04	3.1E+02	6.7E-01	3.4E+01	Ρ
	CO 57	2.2E-03	9.0E-05	6.5E-04	5.8E-05	3.0E-01	2.4E+01	D
	CS 134	8.2E-03	3.0E-04	6.5E-03	1.3E-04	7.9E-01	2.7E+01	A
	CS 137	2.3E-02	7.0E-04	1.8E-02	2.0E-04	7.8E-01	3.3E+01	A
	CO 60	1.3E-02	5.0E-04	1.0E-05	2.2E-04	7.7E-01	2.6E+01	A
L SPIKED	НЗ	6.3E-03	6.0E-05	6.7E-03	3.3E-05	I.1E+00	1.0E+02	A
	SR 89	3.1E-03	1.2E-04	1.0E-02	6.6E-05	3.2E+00	2.6E+01	D
	SR 90	6.2E-03	2.4E-04	7.5E-04	8.8E-06	1.2E-01	2.6E+01	D
	CO 57	1.6E-04	5.0E-06	2.6E-04	7.8E-06	1.6E+00	3.2E+01	Ρ
	CO 60	1.1E=03	3.0E-05	1.3E-03	4.3E-05	1.2E+00	3.7E+01	A
	CS 134	8.6E-04	2.4E-05	6.6E-04	2.0E-05	7.7E-01	3.6E+01	A

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

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