

ENCLOSURE
DESCRIPTION OF VIOLATIONS

Chem-Nuclear Systems, Inc.
License No. 46-13536-01

Certain activities under your license appear to be in violation of regulation requirements as indicated below:

Violations considered to be of Category II severity were as follows:

- A. Condition 1C of the license establishes the requirement that up to 850 grams of uranium-235 may be possessed at any one time provided that no single package contains more than 15 grams of uranium-235.

Contrary to the above, on numerous occasions since July 1, 1973, packages of wastes for burial have been received which contained more than 15 grams of uranium-235. Included in this total were 91 packages received during the period of October 18 through October 31, 1974, which contained from 15.1 to 49.0 grams each of uranium-235.

- B. Condition 2 of the license references the application dated November 18, 1971 and the amendment dated February 24, 1972, which establish the requirement in Appendix 6 that the environmental monitoring program shall include sampling and analysis of water, soil, vegetation and animal material at established frequencies and locations.

Contrary to the above, the environmental monitoring program being conducted is not of the prescribed scope in that the required number of wells and municipal water supplies are not being sampled and no animal material sampling has been conducted.

files:

12/30/74

Attached are results of analysis of liquid samples which were collected during the 11/26/74 inspection of the Barnwell Burial Site (license no. 46-13536-01). The results do not appear to be above ~~levels~~ normal background levels.

AY Gibson
RO: II Sr. HP

U.S. ATOMIC ENERGY COMMISSION
IDAHO OPERATIONS OFFICE
ANALYTICAL CHEMISTRY BRANCH
SAMPLE RECORD SHEETREFERENCE: HEALTH SERVICES
LABORATORYROUTINE SPECIAL XSERIAL NO. 00277

SAMPLE			SAMPLE DESCRIPTION	ANAL. FOR	INST. USED	QUANT. USED ml	TIME CNTD.	COUNT TIME min	TOTAL COUNT	GROSS COUNT c/p	BKGD. c/p	NET COUNT c/p	RESULTS d/m/ml
N.	DATE	HOUR											
CN-1	11/26		Water	ROSS		50	12/11	100	70		16	60 \pm 10	< 0.06
				H ³	Scint.	10	12/12	100		40	22 c/p	5 \pm 1 c/p	2.3 \pm 0.4 $\times 10^{-6}$
				Y Scan			12/11						uCi/ml on 11/20
				Ce ¹⁴⁴	No. 3	400	1-48	202.35					< 5 $\times 10^{-8}$
				Cs ¹³⁷	"	"	"	"					2.1 \pm 0.5 $\times 10^{-6}$
				Co ⁶⁰	"	"	"	"					(1.0 \pm 0.4) $\times 10^{-6}$
CN-2	11/26		Water	ROSS		50	12/11	100	42		3	99 \pm 7	< 0.04
				H ³	Scint.	10	12/12	100		274/m	22 c/p	5 \pm 1 c/p	1.7 \pm 0.4 $\times 10^{-6}$
				Y Scan			12/11						uCi/ml on 11/20
				Ce ¹⁴⁴	No. 3	400	1539	973.42					< 5 $\times 10^{-8}$
				Cs ¹³⁷	"	"	"	"					< 3 $\times 10^{-7}$
				Co ⁶⁰	"	"	"	"					< 1 $\times 10^{-7}$
CN-3	11/26		Water	ROSS		50	12/11	100	43		14	40 \pm 8	< 0.04
				H ³	Scint.	10	12/12	100		7 c/p	224/m	5 \pm 1 c/p	1.7 \pm 0.4 $\times 10^{-6}$
				Y Scan			12/11						uCi/ml on 11/20
				Ce ¹⁴⁴	No. 3	400	1538	82.0					< 5 $\times 10^{-8}$
				Cs ¹³⁷	"	"	"	"					< 3 $\times 10^{-7}$
				Co ⁶⁰	"	"	"	"					< 1 $\times 10^{-7}$

NOTIFIED: TIME: RESAMPLING YES RECOMMENDED: NO APPROVED: SECTION CHIEF

U.S. ATOMIC ENERGY COMMISSION
IDAHO OPERATIONS OFFICE
ANALYTICAL CHEMISTRY BRANCHREFERENCE: HEALTH SERVICES
LABORATORYROUTINE SPECIAL X

SAMPLE RECORD SHEET

SERIAL NO. 00277-ASAMPLE FROM: EC-11 Co. CarolinaSAMPLES RECEIVED: 12/10/74ANALYZED BY: MD, L. L. L. J.COLLECTED BY: ANALYSIS COMPLETED: 12/13/74DATE SUBMITTED:

SAMPLE			SAMPLE DESCRIPTION	ANAL. FOR	INST. USED	QUANT. USED	TIME CNTD.	COUNT TIME	TOTAL COUNT	GROSS COUNT CF	BKGD. C/1% min	NET COUNT C/	RESULTS D/m/ml
N.	DATE	HOUR											
CN-4	11/26		Water	GROSS		50	12/11	1000	135		80	55.12	< 0.01
				H ³	Liq Scint	10	12/12	100		270/m	22 -/m	21 c/m	1.7 ± 0.4 x 10 ⁻⁶
				Y Scan			12/11						µCi/ml on 11/20
				Ce 144	No. 2	400	12/11	1537.07					< 6 x 10 ⁻⁶
				137	"	"	"	"					< 2 x 10 ⁻⁶
				60	"	"	"	"					< 1 x 10 ⁻⁶
CN-5	11/26		Water	GROSS		50	12/11	100	13		10	37.8	< 0.04
				H ³	Liq Scint	10	12/12	100		22 c/m	22 c/c	0.1 c/m	< 1 x 10 ⁻⁶
				Y Scan			12/11						µCi/ml on 11/20
				Ce 144	No. 1	400	12/11	1539	171.13				< 6 x 10 ⁻⁶
				137	"	"	"	"					< 6 x 10 ⁻⁶
				60	"	"	"	"					< 5 x 10 ⁻⁶
				5									

NOTIFIED: TIME: RESAMPLING YES RECOMMENDED: NO APPROVED: SECTION CHIEF