NRC FORM 366 (7-77)

U. S. NUCLEAR REGULATORY COMMISSION

LICENSEE EVENT REPORT

CONTROL BLOCK: | | | | | | | (1) (PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION)

Line	Field	Value
01	LICENSEE CODE (9–14) (2)	N Y N M P 1
01	LICENSE NUMBER (15–25) (3)	0 0 - 0 0 0 0 0 - 0 0
01	LICENSE TYPE (26–30) (4)	4 1 1 1 1
01	CAT (57–58) (5)	
01 CON'T	REPORT SOURCE (60) (6)	L
01 CON'T	DOCKET NUMBER (61–68) (7)	0 5 0 0 0 2 2 0
01 CON'T	EVENT DATE (69–74) (8)	1 2 1 5 8 0
01 CON'T	REPORT DATE (75–80) (9)	1 2 2 9 8 0

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)

02 Monthly milk sample tests taken on 11/3/80 showed detectable I-131 at
03 three sample locations. Further samples taken on 11/26 & 12/1/80 showed
04 I-131 results at the nearest downwind location only. These findings have
05 no significant environment effect. It is expected future sample results
06 will have no detectable I-131. See attachment for further details.
07
08

Line	Field	Value
09	SYSTEM CODE (9–10) (11)	X X
09	CAUSE CODE (11) (12)	X
09	CAUSE SUBCODE (12) (13)	Z
09	COMPONENT CODE (13–18) (14)	Z Z Z Z Z Z
09	COMP. SUBCODE (19) (15)	Z
09	VALVE SUBCODE (20) (16)	Z
(17) LER/RO REPORT NUMBER	EVENT YEAR (21–22)	8 0
	(23)	—
	SEQUENTIAL REPORT NO. (24–26)	0 2 8
	(27)	/
	OCCURRENCE CODE (28–29)	0 4
	REPORT TYPE (30)	T
	(31)	—
	REVISION NO. (32)	0
	ACTION TAKEN (33) (18)	X
	FUTURE ACTION (34) (19)	X
	EFFECT ON PLANT (35) (20)	Z
	SHUTDOWN METHOD (36) (21)	Z
	HOURS (37–40) (22)	0 0 0 0
	ATTACHMENT SUBMITTED (41) (23)	Y
	NPRD-4 FORM SUB. (42) (24)	N
	PRIME COMP. SUPPLIER (43) (25)	Z
	COMPONENT MANUFACTURER (44–47) (26)	Z 9 9 9

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)

10 The detection of I-131 is attributed to deposition from a nuclear weapons
11 test conducted by the Peoples Republic of China in October. The continued
12 detection in a single downwind location is atributed to this farmers
13 extended grazing period. Samples have been instituted weekly until no
14 further detection is present. Evaluation of plant release data indicates no plant accountability for the detected levels.

Line	Field	Value
15	FACILITY STATUS (9) (28)	E
15	% POWER (10–12) (29)	0 9 2
15	OTHER STATUS (13–44) (30)	N/A
15	METHOD OF DISCOVERY (45) (31)	B
15	DISCOVERY DESCRIPTION (46–80) (32)	Test Results
16	ACTIVITY RELEASED (9) (33)	Z
16	CONTENT OF RELEASE (10) (34)	Z
16	AMOUNT OF ACTIVITY (11–44) (35)	N/A
16	LOCATION OF RELEASE (45–80) (36)	N/A
17	PERSONNEL EXPOSURES NUMBER (9–11) (37)	0 0 0
17	TYPE (12) (38)	Z
17	DESCRIPTION (13–80) (39)	N/A
18	PERSONNEL INJURIES NUMBER (9–11) (40)	0 0 0
18	DESCRIPTION (12–80) (41)	N/A
19	LOSS OF OR DAMAGE TO FACILITY (43) TYPE (9) (42)	Z
19	DESCRIPTION (10–80)	N/A
20	PUBLICITY ISSUED (9) (44)	N
20	DESCRIPTION (10–68) (45)	N/A
20	NRC USE ONLY (69–80)	

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GPO 917-926

ATTACHMENT A

I. SUMMARY

Milk samples for I-131 are required to be taken monthly by NMP-1 ETS. Samples collected on 11/3/80 demonstrated positive I-131 detection at two off-site locations and the control location (the control location result was greater than four times the other location results). This fact was reported to Region I (Dr. R. Bores) and was determined to be due to the Chinese Nuclear Weapons Test in October 1980. Samples collected for I-131 on 11/26/80 and 12/1/80 demonstrated positive I-131 results at the nearest downwind location only. Region I (Cheryl Sakenas) was informed of these results as well (12/11/80). As a result of a preliminary investigation it was determined that the results could be explained by a difference in farming practices (personal communication with the farms in question). During the beginning of November 1980, all sampling farms had cows off pasture except the farm in question with the positive I-131 result. Sample results are included in Attachment C.

II. General Description

Deposition from a nuclear weapons test conducted by the Peoples Republic of China in October 1980 was scheduled to fall on New York State on October 21-26, 1980. Milk samples collected from the six (6) milk sampling locations on October 27 were negative as far as I-131 detection is concerned. Samples collected on November 3 revealed positive I-131 detection at off-site and the control locations (this location had the highest amount of I-131; greater than 4 times the off-site locations). See Attachment C. This data was interpreted to mean that the effect of the weapons test fallout was missed on October 27 sampling date but detected on the November 3 sampling date since off-site as well as control locations had detectable I-131. USNRC Region I was notified of this (11/26/80 - Dr. R. Bores and S. Hudson, USNRC Site Inspector).

Milk samples for I-131 were scheduled to be collected again on November 26. Results from these samples revealed positive I-131 at the closest off-site location only (see Attachment C). This one (1) positive result was 17.87 times the control result. Scheduled samples on December 1 also revealed positive I-131 at the closest off-site location. This one (1) positive result was 31.2 times the control result. This information was phoned to Region I on December 11 (Cheryl Sakenas).

For purposes of investigation, weekly sampling was initiated. The next scheduled sample was December 12. The data for I-131 for this date was negative, that is, all sampling locations did not have any detectable I-131 (all values were LLDs). Actual data is not available to include on Attachment C since the information was acquired via telephone.

Attachment A (cont'd)

III. General Description of the Cause

The cause of detectable I-131 in milk on November 26, and December 1 at the closest off-site location and not at the other off-site or control locations is due to two (2) factors.

First the I-131 detected is due to the Chinese Weapons Test of October 1980. November 3, I-131 results revealed detection at locations southeast and west of the site. Wind data between October 26 and November 3 was reviewed and resulted in southerly and northwesterly directions. Analysis of air iodine samples and air gross beta samples around the site for both off-site and on-site locations revealed no detection of I-131 and no significant increases in gross beta counts.

A more detailed analysis of air particulate composites (on-site and off-site) revealed positive I-131 detection as well as significant amounts of Ce-144, Ru-103, Ba-140, Zr-95, Ce-141, La-140, Nd-147 ($T_{\frac{1}{2}}$=10 days) and, Nb-95 ($T_{\frac{1}{2}}$=3.5 days). These results were not observed initially since individual stations are counted separately utilizing short count times. Apparently, by combining the individual samples, i.e. compositing, into on-site and off-site samples and utilizing long count times, the sensitivity of the instrumentation was increased significantly. The presence of these nuclides (they are associated with nuclear weapons testing) is not usually detected in air particulate composites at the site. When considering the half life of Nd-147 and Nb-95 , the detection of fallout from the October Chinese Test is positive. Further, review of NMPNPS and JAFNPP stack and vent release or effluent rate data did not reveal any increases that could account for the detected levels of I-131 in milk samples (these results were arrived at through dose equations using Reg. Guide 1.109. Finally, I-131 was detected at Salem Nuclear Power Plant, Peach Bottom Nuclear Power Plant, and Susquehanna Nuclear Power Plant. Although I-131 was not detected at Indian Point or Ginna Nuclear Power Plants in New York State, this fact is explained below.

Secondly, I-131 detection at the closest off-site location and not the other off-site or control locations is due to a difference in farming or in this specific case, grazing practices. Through personal communications with the owners of the milk sampling locations (information acquired through our biological contractor), it was determined that at all locations cows were off pasture approximately November 1, except at the closest off-site location (#25). According to the owner at location #25, his cow (he only has one) was left to feed on pasture as long as possible for economic reasons until shortly after December 1. At the other locations, cows were fed grain, hay, etc., indoors and allowed to exercise 3-4 hours per day. At these locations it was determined that there was only insignificant amounts of pasture grass left, therefore pasture feeding was very limited during exercise periods. Finally, I-131 detection at location #25 (closest off-site farm) was negative after December 1, since the one cow was not exposed to any I-131 deposition due to the Chinese Test fallout. Considering the biological half-life, the presence of I-131 should be negative after 25 days, as was demonstrated by the data.

ATTACHMENT A (cont'd)

Therefore, it can be determined through observation and review of the facts that I-131 from weapons testing fallout was being detected on November 3. This detection is thought to be in the initial phases of the biological buildup. The levels increase on November 26 and December 1 but was detected at location #25 only since this was the only location that had cows (actual only one cow) on pasture. At the other locations, cows were not exposed to any I-131 deposition due to indoor feeding and thus milk results were nil.

ATTACHMENT B

Corrective Action

Weekly sampling at all milk locations was initiated as per NMP-1 ETS requirements. Sampling will continue until I-131 results are negative in milk samples or less than 2.4 pCi/liter.

An investigation was initiated covering all possible paths of contamination including plant operations. This investigation has reviewed the pertinent data and determined the cause of I-131 in milk to be due to nuclear weapons testing. Data from this investigation will remain on file at the plant.

As required by NMP-1 ETS, the USNRC Region I was notified by telephone as well as by this document and will be advised of any significant developments.