

FEB 8 1973

R. C. DeYoung, Assistant Director for PWR's, L

POSITION STATEMENT ON INDIAN POINT UNIT 3

PLANT NAME: Indian Point Unit 3

LICENSING STAGE: OL

DOCKET NO.: 50-286

RESPONSIBLE BRANCH: PWR #1

APPLICANTS RESPONSE NECESSARY FOR

NEXT ACTION PLANNED ON PROJECT: ASAP

REVIEW STATUS: Accident Analysis Branch - OL review has stopped while awaiting data from applicant on means to be utilized to meet the site boundary dose requirements of 10 CFR Part 100

Our position on the unacceptability of the Indian Point Unit 3 doses is still unchanged from that described in our previous memo of November 6, 1972. With the use of on-site meteorological data, the 0-2 hour LOCA thyroid dose at the 330 meter site boundary is 438 Rem (Based on a X/Q value equivalent to Pasquill type "F" condition with a wind velocity of 0.7 meters/second). Unless the applicant adequately responds to question 14.11 (transmitted in the November 6, 1972 letter to the applicant), we can not complete our review on schedule for the staff input to the Safety Evaluation.

Attached is our status report on the LOCA doses for Indian Point 3 prepared by C. Ferrell of the Accident Analysis Branch and A. Kenneke, who was the previous Site Analyst assigned to the Indian Point Unit 3 site.

Original signed by
H. R. Denton

Harold R. Denton, Assistant Director
for Site Safety
Directorate of Licensing

8111190686 730208
ADOCK 05000286

Enclosure:
As stated

cc: See attached sheet

FEB 8 1973

R. C. DeYoung

- 2 -

cc: w/o encl.
A. Ciambusso
W. McDonald

cc: w/encl.
S. H. Hanauer
J. M. Hendrie
B. Grimes
D. Vassallo
H. Spector
C. Ferrell

DISTRIBUTION:

L:Docket File - 50-286

L:Rdg

L:XXXXAAB

L:AD/SS

OFFICE ▶	L:AAB	L:AAB	L:AD/SS		
SURNAME ▶	C Ferrell:bas	B Grimes	H R Denton		Memo
DATE ▶	2/8/73	2/8/73	2/8/73		

INDIAN POINT #3 LOCA DOSES - STATUS REPORT

We have completed our final LOCA dose analysis based on onsite meteorological data which was only recently furnished to the staff in supplement 10 dated January 19, 1973. Review of this data by the staff meteorologist indicates a 5-percentile condition equivalent to Pasquill type "F" condition with a wind velocity of 0.7 meters/second. This is a factor of 1.43 more conservative than used in our CP evaluation. The applicant at the time of the CP review in 1969 did not have long term data available on specific joint frequency of stability-wind-speed-wind direction persistence, and estimated meteorologic dispersion parametric corresponding to Pasquill type "F" and 1 meter/sec. wind speed were used.

The 0-2 hour site boundary dose calculated in 1969 for a 350 meter exclusion distance (reactor centerline to site boundary distance) is shown in the staff CP safety analysis to be 272 rem thyroid and 5.8 rem whole body. (Without credit for iodine removal by charcoal filters.)

Since the CP for Unit 3 was issued, several developments have occurred which modify the method of LOCA analysis of a PWR. These include:

1. Promulgation of Safety Guide #4;
2. Use of calculated 5-percentile on site meteorological condition for the 0-2 and 0-8 hour time periods;

3. More precise dose calculations (by computer);
4. Development of analysis of iodine source term in the form of elemental, organic, and particulate iodines;
5. More precise evaluation of filter and containment spray iodine removal factors;
6. Use of the edge of the containment structure, rather than the reactor centerline for determining the diffusion occurring in short distances to the site boundary;
7. Use of a building wake factor for the LPZ boundary dose calculation.

All of the above items have affected the LOCA site boundary doses and most of them contribute to the presently calculated higher doses. Our current dose computations are summarized in the enclosed table.

As for the record in this case, the applicant has been aware since the initial meeting in February 1971, that our calculated LOCA doses were in excess of the guideline limits of 10 CFR Part 100 and was put on notice that alternatives were needed. On December 22, 1971, a report was sent to the Reactor Project Branch #4 pointing out that even at 3025 MWt (not at the stretch power of 3216 MWt), the site boundary LOCA thyroid doses were still in excess of the limits of 10 CFR Part 100.

INDIAN POINT #3 DBA DOSES
(3216 Mwt)

	<u>Site Boundary (330M)</u>		<u>LPZ (1100M)</u>	
	Thyroid Rem	Whole Body Rem	Thyroid Rem	Whole Body Rem
LOCA	437.7	22.1	221.9	14.9
REFUELING	71	8	19	2
GAS DECAY TANK RUPTURE	0	8	0	2

INDIAN POINT #2 DBA DOSES
(3216 Mwt)

	<u>Site Boundary (500M)</u>		<u>LPA (1100M)</u>	
	Thyroid Rem	Whole Body Rem	Thyroid Rem	Whole Body Rem
LOCA	260	13.0	Same as Unit 3	

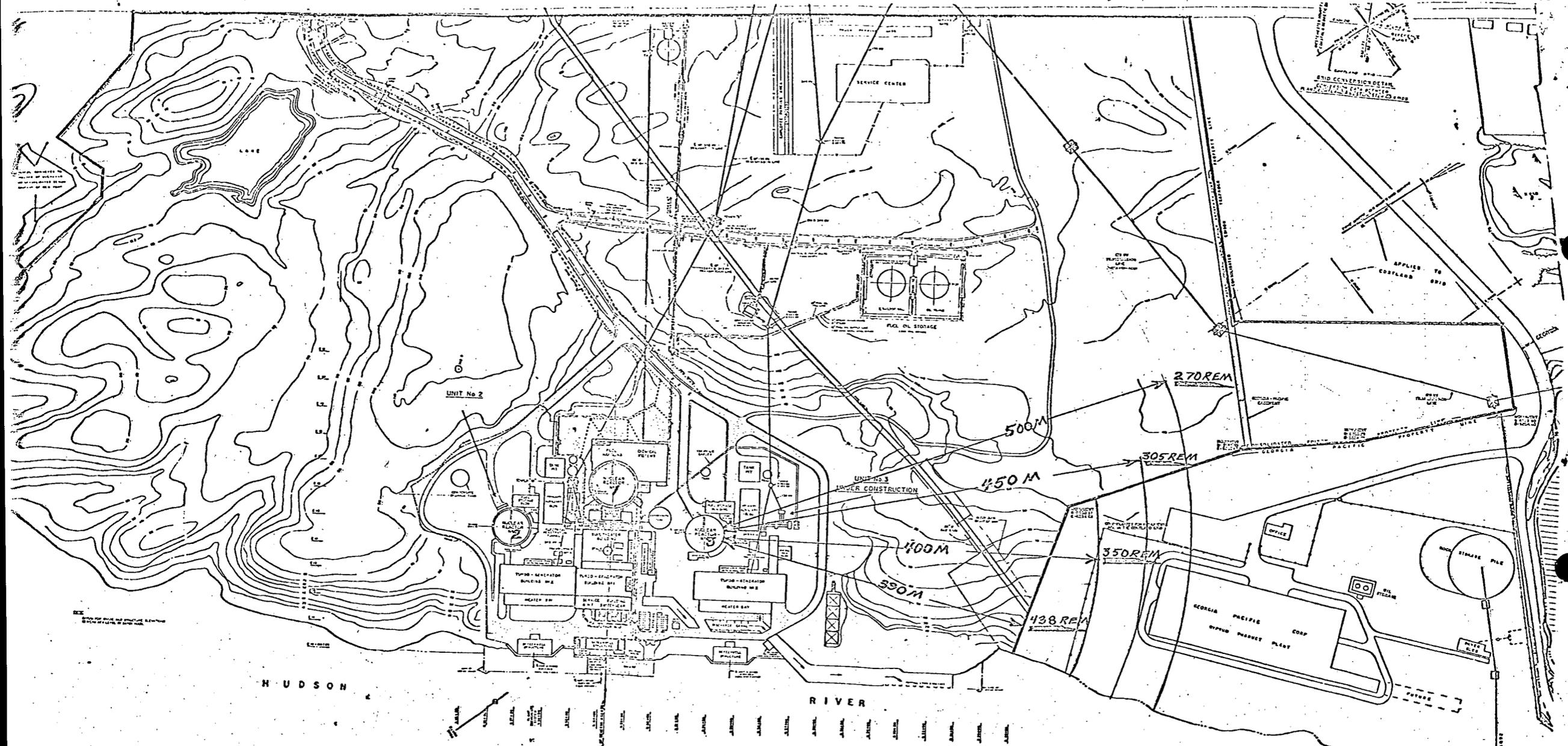
done in the case of the Zimmer facility (Docket No. 50-358). This is illustrated by the enclosed figure which indicates LOCA 0-2 hour thyroid doses as a function of distance.

We recommend that this matter be again brought to the applicant's attention, with an indication that an adequate solution cannot be further delayed without consequence to the review schedule.

The doses for Indian Point 2, while somewhat different from those presented in our Safety Evaluation because of certain model changes, remain within the dose guidelines of 10 CFR Part 100.

On November 6, 1972, when onsite meteorological data was still not available from the applicant, our memo based on Safety Guide No. 4 Meteorological Assumptions and a 330 meter exclusion area distance further indicated 0-2 hour site boundary doses in excess of 10 CFR Part 100. This information was relayed to the applicant in our letter of November 6, 1972 in item number 14.11. In addition, question number 2.13 requested the onsite meteorological data needed to complete the design basis accident dose analysis. The applicant has provided the meteorological data requested, but has not yet responded to question number 14.11 (concerning the action to be taken to meet the dose requirements of 10 CFR Part 100 at the site boundary). Unless the applicant can furnish a satisfactory response in the immediate future, we will be unable to provide a completed input for the ACRS report which has a presently scheduled due date of 3/2/73.

Unit 3 is roughly a duplicate of Unit 2 except that the minimum distance to the site boundary is 330 meters rather than 530 meters. The minimum distance for Unit 3 is toward the southwest boundary which borders the Georgia-Pacific Corp. gypsum product plant. One way of meeting the Part 100 guidelines would be for the applicant to obtain an easement granting emergency control over a portion of the Georgia-Pacific property as was



0-2 HOUR THYROID DOSES BASED ON PASQUILL "F", $\bar{u} = 0.7 \text{ M/SEC}$
 INDIAN POINT # 3

2/1/73
 0347