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CRUTCHFIELD,D. Operating Reactors Branch 5

SUBJECT: Forwards assessment of SEP Topic II-1.A, "Exclusion Area Authority & Control." Assessment is modeled on NRC assessment of topic for Palisades & San Onofre Unit 1 plants.

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JOHN E. MAIER
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March 27, 1981

Director of Nuclear Reactor Regulation
Mr. Dennis M. Crutchfield, Chief
Operating Reactors Branch No. 5
Division of Licensing
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Subject: SEP Topic II-1.A, "Exclusion Area Authority and Control"
R. E. Ginna Nuclear Power Plant
Docket No. 50-244

Dear Mr. Crutchfield:

Enclosed is the Rochester Gas and Electric assessment for SEP Topic II-1.A, "Exclusion Area Authority and Control". This assessment for the R. E. Ginna site is modeled upon the NRC's assessments of this topic for Consumers Power Company's Palisades plant, issued by letter from Dennis L. Ziemann, NRC to Mr. David Bixel, CPCO, dated November 27, 1979, and for Southern California Edison's San Onofre Unit 1, issued by letter from Dennis L. Ziemann, NRC, to Mr. James H. Drake, SCE, dated November 7, 1979.

Very truly yours,

John E. Maier

John E. Maier

Attachment

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Attachment

R. E. Ginna

TOPIC II-1.A - Exclusion Area Authority and Control

The safety objective of this topic is to assure that appropriate exclusion area authority and control are maintained by the licensee as required by 10 CFR Part 100. The review was conducted in accordance with the guidance given in SRP 2.1.1. The capability of the plant to meet the dose criteria of 10 CFR Part 100 at the exclusion area boundary will be evaluated in the Design Basis Event phase of the SEP review.

The R. E. Ginna plant is located on the south shore of Lake Ontario 16 miles east of Rochester, New York, a city of 241,539 people (Rochester metropolitan area population is 701,745)[4]. The site exclusion area is completely within the plant boundaries. The distance from the containment to the nearest site boundary (excluding the boundary on the lake front) is 1550 feet but the minimum exclusion distance is assumed to be 450 meters or 1476 feet. The site boundary is shown in the attached Figure 1 of this evaluation (note that additional land to the west has been purchased since Figure 2.2-3 of the FSAR was submitted). No public highways or railroads traverse the exclusion area.

Rochester Gas and Electric Corp. owns and controls all of the land within the exclusion area. Regarding the lakeshore frontage within the exclusion area, RG&E, by New York State procedures, owns the land above 243.8' msl.[6] This is well below the average lake stage of 246 feet msl, but is above the Extreme

Low Water Level of 242.23 feet msl and the lowest regulated level of 243 feet msl.[1] However, since the low period is generally in the winter and the high period in the summer, it is not expected that there would be any "beach use" of this area. Previous experience confirms this; thus, no special precautions for potential beach users are in place. The exclusion area is not defined over the waters of Lake Ontario adjacent to the R. E. Ginna site. The NRC staff in recent cases involving shore front sites has interpreted the definition of an exclusion area in 10 CFR Part 100 as applying to the entire area surrounding a reactor including the overwater portion. In these cases, applicants have been required to make appropriate arrangements to control water traffic within the exclusion area in the event of a plant emergency. While RG&E has not specifically defined an exclusion area over the water, arrangements have been made with the U.S. Coast Guard, as documented in the Ginna Plant Radiation Emergency Plan[5], for the control of water traffic in the event of a plant emergency.

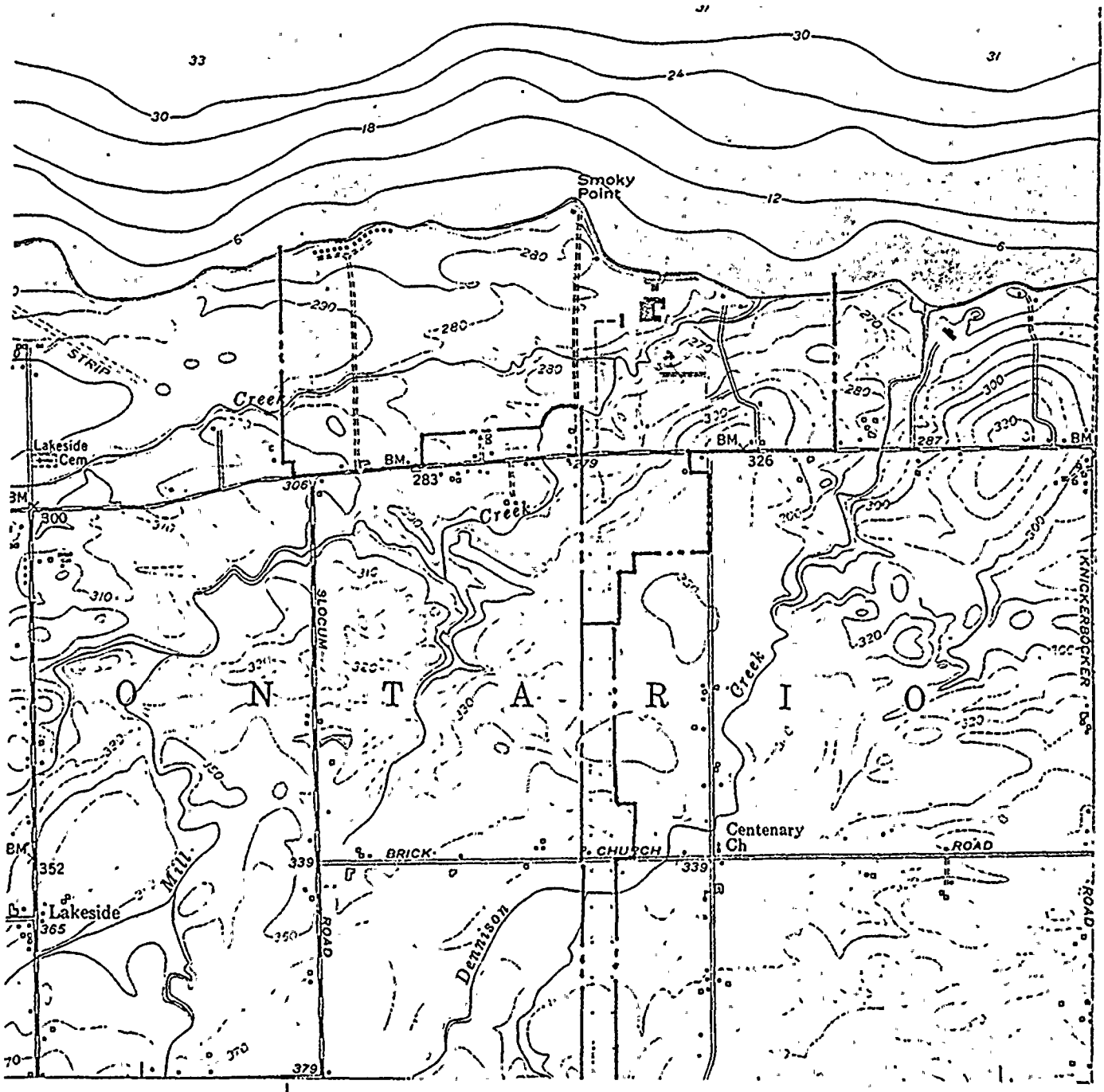
The lack of a defined exclusion area over the water adjacent to the plant site is a deviation from the staff's current interpretation of the criteria in 10 CFR Part 100. However, the arrangements made by RG&E with the U.S. Coast Guard meet the intent of the criteria and, therefore, it is considered that the lack of a defined exclusion area over the water does not constitute a significant safety issue for the SEP review. The issue of defining an exclusion area offshore, as it might affect the atmospheric dispersion characteristics of the site will be evaluated under SEP Topic II-2.C.

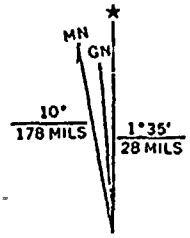
The conclusion can be made that RG&E has the proper authority to determine all activities within the exclusion area, as required by 10 CFR Part 100.

This completes the evaluation of this SEP topic. Since the R. E. Ginna Plant site suitably meets current licensing criteria, no additional SEP review is required.

References

1. Rochester Gas and Electric Corporation, Robert Emmett Ginna Nuclear Power Plant Unit No. 1 - Final Facility Description and Safety Analysis Report (FSAR), Sections 1.1, 2.1, 2.2 and Appendix 2C.
2. Rochester Gas and Electric Corporation, R. E. Ginna Nuclear Power Plant Unit No. 1, Environmental Report, Volume 1, Section 2.1.
3. Nuclear Regulatory Commission NUREG-75/087, Standard Review Plan, Section 2.1.2, September 1975.
4. "Official Preliminary 1980 Census Figures," taken from the Rochester "Times-Union," September 15, 1980.
5. RG&E Procedure "Radiation Emergency Plan" (SC-1).
6. New York State Policy as established by the Land Utilization Department within the NYS Office of General Services.





UTM GRID AND 1969 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

GINNA SITE

(Rochester Gas and Electric Corporation)
Approximately 540 Acres.

QUADRANGLE LOCATION

FURNACEVILLE, N.Y.
NE/4 MACEDON 15' QUADRANGLE
N4315—W7715/7.5

1952
PHOTOREVISED 1969
AMS 5570 IV SE-SERIES V821

SCALE 1:24 000

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 .5 0 1 KILOMETER

CONTOUR INTERVAL 10 FEET
DATUM IS MEAN SEA LEVEL
DEPTH CURVES AND SOUNDINGS IN FEET-DATUM IS LOW WATER 244 FEET