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AN
EVALUATION OF RADIOLOGICAL
EMERGENCY RESPONSE PLANNING
FOR RYE

PREPARED FOR
THE BOARD OF SELECTMEN
THE SCHOOL BOARD
AND
THE PEOPLE OF RYE

PREPARED BY
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CIVIL DEFENSE DIRECTOR

JULY 1986

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1.0 INTRODUCTION AND BACKGROUND

The builders of Seabrook Station have applied for an operating license for the unit I Facility. As a requirement of licensing they must provide for the safety of the public in the event of an accident at the plant. That responsibility has been assumed by the New Hampshire Civil Defense Agency on behalf of the owners of Seabrook. A plan has been prepared for each town within the specified emergency zone, including Rye. This report contains the results of a detailed evaluation of the Rye plan, Rye's host community plan, the supporting plan of the state of New Hampshire, the federal planning guidance material, the relevant New Hampshire statutes, and the relevant federal regulations. The report was prepared at the request of the Board of Selectmen of Rye.

2.0 RELATED DOCUMENTS

The following documents of the exact issue indicated were included as subjects of the evaluation.

Radiological Emergency Response Plan, Town of Rye,
New Hampshire, Revision 1, June 1986, Control Copy 1.
(Rye RERP)

Radiological Emergency Response Plan, State of New
Hampshire, Revision 1, June 1986.

Volume 1, Parts 1.0 through 7.0 (NHRERP)
Volume 2, Appendices A through K (N.H. Appendix)
Volume 6, Seabrook Station Evacuation Time
Study (Time Study)

Host Plan, City of Dover, New Hampshire, Revision 1,
June 1986. (Host Plan)

The Revised Statutes, Annotated, of the State of
New Hampshire

Chapter 107, The Civil Defense Act
Chapter 107-A, Civil Defense Adult Education
Program
Chapter 107-B, Nuclear Planning and Response
Program

The Code of Federal Regulations, August 11, 1980.

Part 50, Domestic Licensing of Production and
Utilization Facilities
Part 50, Appendix E, Emergency Planning and
Preparedness for Production and Util-
ization Facilities
Part 70, Domestic Licensing of Special Nuclear
Material

Criteria for Preparation and Evaluation of Radio-
logical Emergency Response Plans and Preparedness
in support of Nuclear Power Plants, NUREG-0654;
FEMA-REP-1, Rev.1

3.0 BASIS FOR THE EVALUATION

3.1 RESPONSIBILITIES OF THE TOWN OF RYE

The responsibilities of the Town of Rye with respect to
public safety regarding Seabrook Station can be separated
into the following three basic groups

- 1.) Self-Imposed
- 2.) State-Imposed
- 3.) Federally Imposed

The people of the Town of Rye rightly expect the elected and appointed officials of the Town to act as vigorously as necessary to secure and preserve for the Town freedom from harm and the threat of harm which may result from the activities of individuals, groups, and corporations within and, as far as possible, outside the Town . This naturally includes protection from harm potentially resulting from an accident at Seabrook and constitutes the self-imposed responsibility of the Town.

The details of State-imposed responsibilities are to be found in RSA 107-B:1, I and II. A close reading of the language of the statute shows that all responsibility for nuclear emergency response planning is imposed on the New Hampshire Civil Defense Agency (NHCD) and none is directly imposed on municipalities. A specifically identified component of the NHCD responsibility is to act "in cooperation with affected local units of government". In RSA 107-B:2 the municipalities are assigned the responsibility to annually submit to NHCD their emergency response budgets for the ultimate purpose of assessment of the costs of emergency preparedness to the holder of the license for the facility which creates the danger. That is the total extent of Rye's state-imposed responsibility.

Federally imposed responsibilities are defined in 10CFR50. From the advisory language which prefaces the specific regulation it would appear that participation of units of local government is mandated. However, careful reading of the actual regulation makes clear that the total burden of responsibility for emergency preparedness is imposed on the applicant for the license. Although from the content of the Federal Register it is clear that the willing participation of local units of government has been presumed, the responsibility for satisfying the emergency response requirements has not been mandated to the towns or to the state.

In summary, there are no provisions of state law or of the federal regulations which impose responsibility on the Town of Rye. Town officials are therefore free, under law, to limit their activities to those that respond to the Town's self-imposed responsibility, except to annually provide budget information to NHCD.

3.2 AUTHORITY OF THE TOWN OF RYE

Because authority and responsibility are implicitly related, it is not surprising to discover that neither state law nor federal regulations directly confer any authority on the Town of Rye. However, because both state law and federal regulations presume the full and willing participation of municipalities it may be virtually impossible for the applicant to satisfactorily demonstrate "adequate" preparedness if that participation is withheld. That fact potentially confers a kind of authority-by-default to municipalities who can, in effect, block a license through refusal to participate. This authority-by-default has prevented the licensing and operation of the Shoreham Nuclear Station on Long Island, New York.

3.3 PLANNING OBJECTIVE FOR RYE

Common sense dictates that the objective of the Rye RERP must be to fulfill Rye's self-imposed responsibilities as discussed in section 3.1. It is therefore imperative that the conditions which would fulfill those responsibilities be identifiable so that a determination of whether or not those conditions have been achieved can be made.

A search of the relevant statutes and regulations leads to 10 CFR 50.47 (a)(1) which reads as follows:

"No operating license for a nuclear power reactor will be issued unless a finding is made by NRC that the state of onsite and offsite emergency preparedness provides reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency."

The operative section of the regulation clearly intends that the public shall not be exposed to the risk of harm until reasonable assurance of adequate protection from that harm exists. That is a philosophy which is generally consistent with the fulfillment of Rye's responsibilities to its residents. It is necessary, in order to make a determination of whether those conditions exist in fact or not, to define clear standards for "reasonable assurance" and for "adequate protection".

3.4 STANDARDS FOR THE EVALUATION

The dominant risk of harm to the public comes from the potential for exposure to emissions of radioactive materials from Seabrook Station during an emergency. It is the protection from exposure to radioactivity which must be adequate. A search of the statutes and regulations leads to 10 CFR 50.47 (h). That section of the regulations contains standards which emergency response plans for nuclear power reactors must meet.

Of the sixteen standards which are detailed the only one relating to radiological exposure is 10 CFR 50.47 (b)(11) which reads as follows:

"Means for controlling radiological exposures, in an emergency, are established for emergency workers. The means for controlling radiological exposures shall include exposure guidelines consistent with EPA Emergency Worker and Lifesaving Activity Protective Action Guides."

A standard for radiological exposures to members of the public other than emergency workers is not specified.

It is a demonstrated fact that background levels of radiation originating from ambient radioactive sources produce a measurable level of radiological exposure to all persons at all times. It is also a demonstrated fact that increased levels of radiological exposure produce increased probability of adverse health effects. The people of Rye are entitled to protection from adverse health effects which might result from radiological exposure due to an emergency at Seabrock Station. Therefore the following standard for adequacy of protection is adopted for this evaluation:

(1) Protective measures referred to in 10 CFR 50.47 (a)(1) are not adequate unless it is demonstrated that they insure that no member of the public will receive radiological exposure greater than background level as a result of a radiological emergency at Seabrock Station.

Similarly "reasonable assurance" that the above standard for adequacy of protection is achieved must exist. Therefore a standard defining what constitutes "reasonable assurance" must be established. The concept of reasonable assurance implicitly requires that there be an entity to be assured. The question of whether the assurance is reasonable can only be answered by that entity. Common sense and the principle of fairness dictate that those persons exposed to risk are the entity entitled to assurance of protection. Therefore the following standard for reasonableness of assurance is adopted for this evaluation:

(2) Reasonable assurance of protection satisfying the standard of adequacy defined above has not been provided until the Town of Rye affirmatively indicates to the contrary by majority vote of Town Meeting.

4.0 CRITERIA FOR EVALUATION OF PLANS

4.1 BACKGROUND OF THE NHCD PLANNING

The guidance followed by NHCD in its effort to respond to RSA 107-B is contained in NUREG-0654; FEMA-REP-1 entitled Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in support of Nuclear Power Plants. The criteria detailed in that document are the ones on which both FEMA and NRC findings are based. A finding by FEMA and NRC favorable

to the applicant would necessarily require that the criteria of NUREG-0654; FEMA-REP-1 be met, as a minimum. Although there is no indication in the law or in the federal guidance documents of an intention to limit preparedness and planning to only those minimum requirements the NHCD planning does not go beyond the minimum federal criteria.

4.2 FEDERAL PLANNING OBJECTIVE

The guidance documents prepared by NRC and FEMA are naturally directed at accomplishing an objective of planning which has been adopted by those agencies. A straightforward statement of that objective is given in NUREG-0654; FEMA-REP-1, I, D (P.6) and reads as follows:

"The overall objective of emergency response plans is to provide dose savings (and in some cases immediate life saving) for a spectrum of accidents that could produce offsite doses in excess protective action guides (PAGs)."

That objective clearly anticipates radiological exposure of the public due to accident-related emissions and is directed at reducing, but not eliminating, exposure.

4.3 CLASSIFICATION OF CRITERIA

The criteria with respect to which planning can be evaluated by units of government correspond to jurisdictional divisions as follows:

Local Criteria (Rye)
State Criteria (NHCD)
Federal Criteria (NRC/FEMA)

The federal criteria are defined and documented in NUREG-0654; FEMA-REP-1. Those criteria have been adopted by NRC and FEMA in a final version which was published as revision 1 in November 1980.

The state of New Hampshire, through NHCD, has adopted the federal criteria. NHCD has made no effort to develop any criteria to address interests and concerns which are unique to New Hampshire or which are inadequately addressed in the federal criteria.

The Town of Rye has not adopted criteria for its review of planning and preparedness. This report is intended to develop local criteria which address the interests of the Town in a more direct and comprehensive way than that of the federal criteria.

4.4 EVALUATION TO FEDERAL CRITERIA

The regulations of 10CFR50 and 10CFR70 and the guidance document NUREG-0654; FEMA-REP-1 contain descriptions of evaluation procedures. Those procedures do not require a critical evaluation of planning and preparedness by local units of government. Furthermore there is no requirement for a finding favorable to the applicant by local units of government. In view of these facts, and the fact that the

federal criteria have not been adopted by the Town of Rye, Rye need not concern itself with the question of whether federal criteria have been met.

4.5 CRITERIA FOR RYE

The basis for the following criteria is the standard for adequacy of protection developed in section 3.4 of this report which is as follows:

Protective measures referred to in 10CFR 101.47 (a)(1) are not adequate unless it is demonstrated that they insure that no member of the public will receive radiological exposure greater than background level as a result of a radiological emergency at Seabrook Station.

CRITERIA

- (1) The protective measures chosen shall have been shown by actual experience to provide a level of protection which limits radiological exposure of the public to a level no greater than the level of average outdoor background radiation in the state of New Hampshire.
- (2) The method of implementation for each type of protective measure chosen shall have been shown by actual experience to produce the specified level of protection within one half hour of the onset of accident conditions.
- (3) The method of implementation for each type of protective measure chosen shall have been shown by actual experience to provide the specified

level of protection to one hundred percent of Rye residents.

- (4) The protective measures chosen shall have been shown by actual experience to continue to provide the specified level of protection for an unlimited duration.
- (5) The means for implementation of protective measures shall be supported by evidence that those means will actually be available as anticipated. The evidence shall be in the form of signed contracts for service with each individual expected to provide emergency service whether a public employee, private citizen, or member of the military.

4.6 EVALUATION TO RYE CRITERIA

The ultimate evaluation and determination of adequacy of the Rye RERP is to be made by the Town of Rye and stated in an act of Town Meeting as described in the standard for reasonableness of assurance developed in Section 3.4 of this report.

In order to permit the Town to make an enlightened determination a program of public information is necessary. The following are objectives for the program.

- (1) To provide all residents of Rye with all information which may have a bearing on their assessment of preparedness and adequacy of protection.

- (2) To provide residents of Rye with an opportunity to question the planners and the providers of the means for implementing protective measures, for the purpose of clarification of the meaning of the plan language, and as a way to develop assurance of adequacy.
- (3) To conduct public hearings in order to receive comment from the public for inclusion in the plan.
- (4) To provide all residents of Rye with a copy of the final proposed plan sufficiently in advance of Town Meeting to permit assessment of the plan prior to a vote on its adequacy.

5.0 SUMMARY, CONSLUGIONS AND RECOMMENDATIONS

5.1 SUMMARY

Rye bears no responsibility, mandated by law or regulation, to support or participate in Seabrook-related emergency planning activities. The Town is, however, responsible to itself to provide an adequate level of safety for its people. To that end this report establishes standards for radiological exposure to members of the public and for reasonable assurance of adequacy of protection.

The Town is not endowed by law or regulation with direct authority to determine the course of the planning except insofar as NHCD is obligated to cooperate with local units

of government. In order to permit that cooperation to occur the Town must identify its concerns in a context and form which enables NHCD to fully address them. To that end this report establishes criteria to be applied at the state level to the plan provisions.

5.2 CONCLUSIONS

The current state of radiological emergency response plans prepared to provide safety to the people of Rye is not acceptable. That is due primarily to the fact that the federally-dominated planning process disregards the central questions of public safety. The federal process is based on a philosophy of best-effort planning and not on specific standards for radiological exposure. That philosophy serves the commercial interest of the nuclear industry to the detriment of the public interest.

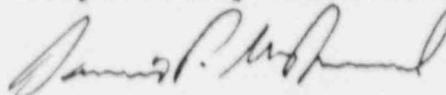
The issuance of a license to operate a nuclear power plant is not a right to which every applicant is entitled. It is, like any license issued by a government of free people, a privilege. That privilege to engage in an activity with the potential to bring instant fatal harm to an entire region of the country should only be granted when the life-safety, health and well being of the public has first been demonstrably guaranteed. That is the philosophy which underlyes the standards and criteria developed in this report.

The planning documents prepared in the name of the Town of Rye may or may not satisfy the federal criteria for their preparation. That question will be answered by the organizations which established the criteria. The federal criteria fall hopelessly short of guaranteeing real safety but they are minimum criteria. There is no obstacle in the law or regulations to prevent plan provisions which satisfy additional or more stringent criteria. Therefore the adoption of the local standards and criteria established in this report relies only on the will and good faith of NHCD to take the necessary action.

5.3 RECOMMENDATIONS

The Town of Rye should make every effort to ensure that the standards and criteria of this report are adopted in whole by NHCD. The obligation imposed by RSA 107-B on NHCD to cooperate with local units of government entitles Rye to the expectation of cooperation in this matter. Since the Attorney General of New Hampshire has expressed in writing his interest in assisting and cooperating with the Town of Rye it is reasonable to expect his full cooperation as well.

Respectfully submitted,



David P. MacDonald
Civil Defense Director

July 28, 1980.