



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

NRC PDR

FEB 04 1981

Ms. Lisa Cownoyer
Snohomish High School
Mr. Bates' Class
Corner of 5th Avenue and Dee Avenue
Snohomish, Washington 98290

Dear Lisa:

This is in reply to your letter of December 3, 1980, regarding the requirements that a utility must meet to get a license for construction of a nuclear power plant.

Enclosed is a description of the licensing process. I trust that this will serve your purpose.

A handwritten signature in cursive script, reading "Gary G. Zech".

Gary G. Zech, Chief
Technical Support Branch
Planning & Program Analysis Staff
Office of Nuclear Reactor Regulation

Enclosure:
As stated



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THE LICENSING PROCESS

Obtaining an NRC construction permit—or a limited work authorization, pending a decision on issuance of a construction permit—is the first objective of a utility or other company seeking to operate a nuclear power reactor or other nuclear facility under NRC license. The process is set in motion with the filing and acceptance of the application, generally comprising ten or more large volumes of material covering both safety and environmental factors, in accordance with NRC requirements and guidance. The second phase consists of safety and environmental factors, in accordance with NRC requirements and guidance. The second phase consists of safety, environmental, safeguards and antitrust reviews undertaken by the NRC staff. Third, a safety review is conducted by the independent Advisory Committee on Reactor Safeguards (ACRS); this review is required by law. Fourth, a mandatory public hearing is conducted by a three-member Atomic Safety and Licensing Board (ASLB), which then makes an initial decision as to whether the permit should be granted. This decision is subject to appeal to an Atomic Safety and Licensing Appeal Board (ASLAB) and could ultimately go to the Commissioners for final NRC decision. The law provides for appeal beyond the Commission in the Federal courts.

As soon as an initial application is accepted, or "docketed," by the NRC, a notice of that fact is published in the *Federal Register*, and copies of the application are furnished to appropriate State and local authorities and to a local public document room (LPDR) established in the vicinity of the proposed site, as well as to the NRC-PDR in Washington, D.C. At the same time, a notice of a public hearing is published in the *Federal Register* and local newspapers which provides 30 days for members of the public to petition to intervene in the proceeding. Such petitions are entertained and adjudicated by the ASLB appointed to the case, with rights of appeal by the petitioner to the ASLAB.

The NRC staff's safety, safeguards, environmental and antitrust reviews proceed in parallel. With the guidance of the Standard Format (Regulatory Guide 1.70), the applicant for a construction permit lays out the proposed nuclear plant design in a Preliminary Safety Analysis Report (PSAR). If and when this report has been made sufficiently complete to warrant review, the application is docketed and NRC staff evaluations begin. Even prior to submission of the report, NRC staff conducts a substantive review and inspection of the applicant's quality assurance program covering design and procurement. The safety review is performed by NRC staff in accordance with the Standard Review Plan for Light-Water-Cooled Reactors, initially published in September 1975 and updated periodically. This plan states the acceptance criteria used in evaluating the various systems, components and structures important to safety and in assessing the proposed site, and it describes the procedures used in performing the safety review.

The NRC staff examines the applicant's PSAR to determine whether the plant design is safe and consistent with NRC rules and regulations; whether valid methods of calculation were employed and accurately carried out; whether the applicant has conducted his analysis and evaluation in sufficient depth and breadth to support staff approval with respect to safety. When the staff is satisfied that the acceptance criteria of the Standard Review Plan have been met by the applicant's preliminary report, a Safety Evaluation Report is prepared by the staff summarizing the results of their review regarding the anticipated effects of the proposed facility on the public health and safety.

Following publication of the staff Safety Evaluation Report, the ACRS completes its review and meets with staff and applicant. The ACRS then prepares a letter report to the Chairman of the NRC

presenting the results of its independent evaluation and recommending whether or not a construction permit should be issued. The staff issues a supplement to the Safety Evaluation Report incorporating any changes or actions adopted as a result of ACRS recommendations. A public hearing can then be held, generally in a community near the proposed site, on safety aspects of the licensing decision.

In appropriate cases, NRC may grant a Limited Work Authorization to an applicant in advance of the final decision on the construction permit in order to allow certain work to begin at the site, saving as much as seven months time. The authorization will not be given, however, until NRC staff has completed environmental impact and site suitability reviews and the appointed ASLB has conducted a public hearing on environmental impact and site suitability with a favorable finding. To realize the desired saving of time, the applicant must submit the environmental portion of the application early.

The environmental review begins with a review of the applicant's Environmental Report (ER) for acceptability. Assuming the ER is sufficiently complete to warrant review, it is docketed and an analysis of the consequences to the environment of the construction and operation of the proposed facility at the proposed site is begun. Upon completion of this analysis, a Draft Environmental Statement is published and distributed with specific requests for review and comment by Federal, State and local agencies, other interested parties and members of the public. All of their comments are then taken into account in the preparation of a Final Environmental Statement. Both the draft and the final statements are made available to the public at the time of respective publication. During this same time period NRC is conducting an analysis and preparing a report on site suitability aspects of the proposed licensing action. Upon completion of these activities, a public hearing, with the appointed ASLB presiding, may be conducted on environmental and site suitability aspects of the proposed licensing action (or a single hearing on both safety and environmental matters may be held, if that is indicated).

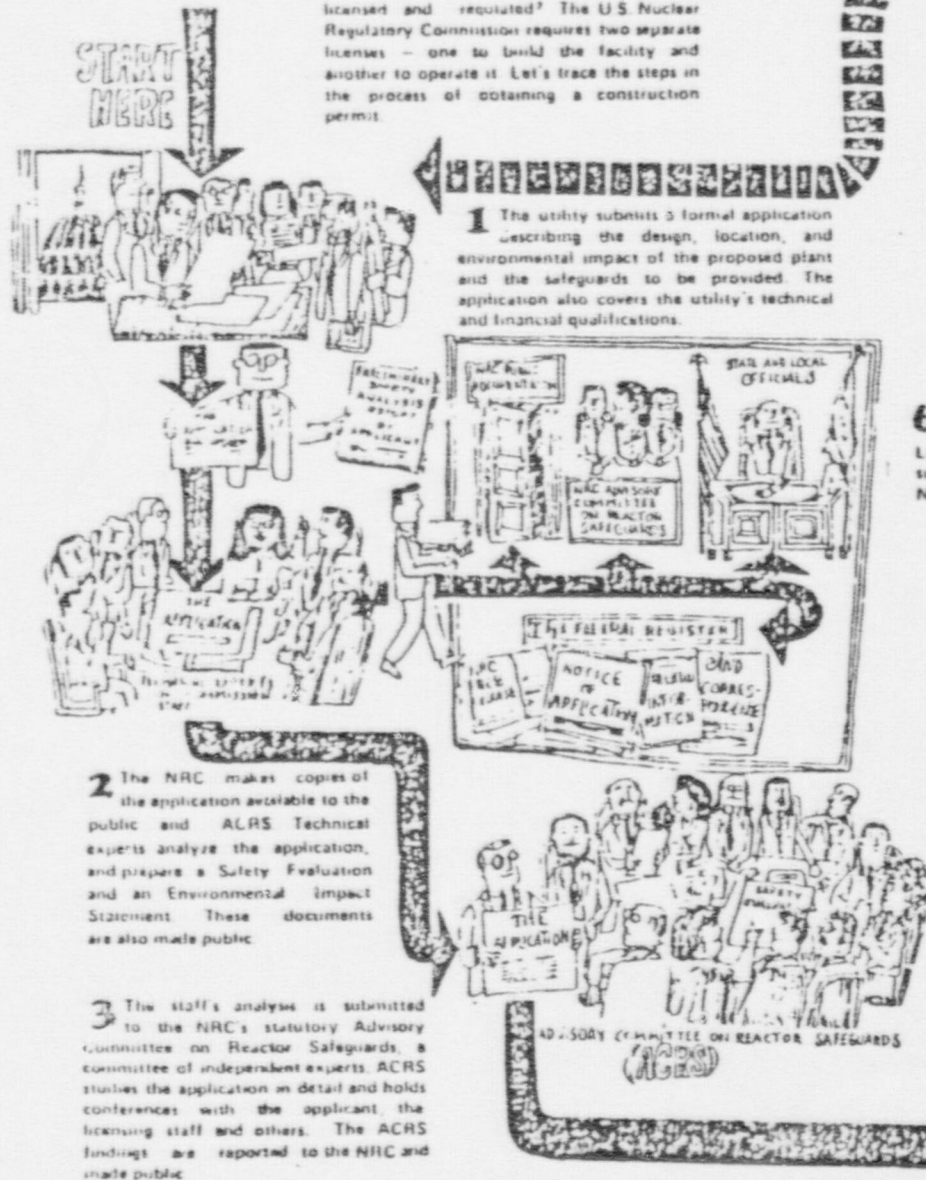
The antitrust reviews of license applications are carried out by the NRC and the Attorney General in advance of, or concurrently with, other licensing reviews. If an antitrust hearing is required, it is held separately from those on safety and environmental aspects.

About two or three years before construction of the plant is scheduled to be complete, the applicant files an application for an operating license. A process similar to that for the construction permit is followed. The application is filed, NRC staff and the ACRS review it, a Safety Evaluation Report and an updated Environmental Statement are issued. A public hearing is not mandatory at this stage, but one may be held if requested by affected members of the public or at the initiative of the Commission. Each license for operation of a nuclear reactor contains technical specifications which set forth the particular safety and environmental protection measures to be imposed upon the facility and the conditions that must be met for the facility to operate.

Once licensed, a nuclear facility remains under NRC surveillance and undergoes periodic inspections throughout its operating life. In cases where the NRC finds that substantial, additional protection is necessary for the public health and safety or the common defense and security, the NRC may require "backfitting" of a licensed plant, that is, the addition, elimination or modification of structures, systems or components of the plant.

LICENSING OF POWER REACTORS

How are central station atomic power plants licensed and regulated? The U.S. Nuclear Regulatory Commission requires two separate licenses - one to build the facility and another to operate it. Let's trace the steps in the process of obtaining a construction permit.



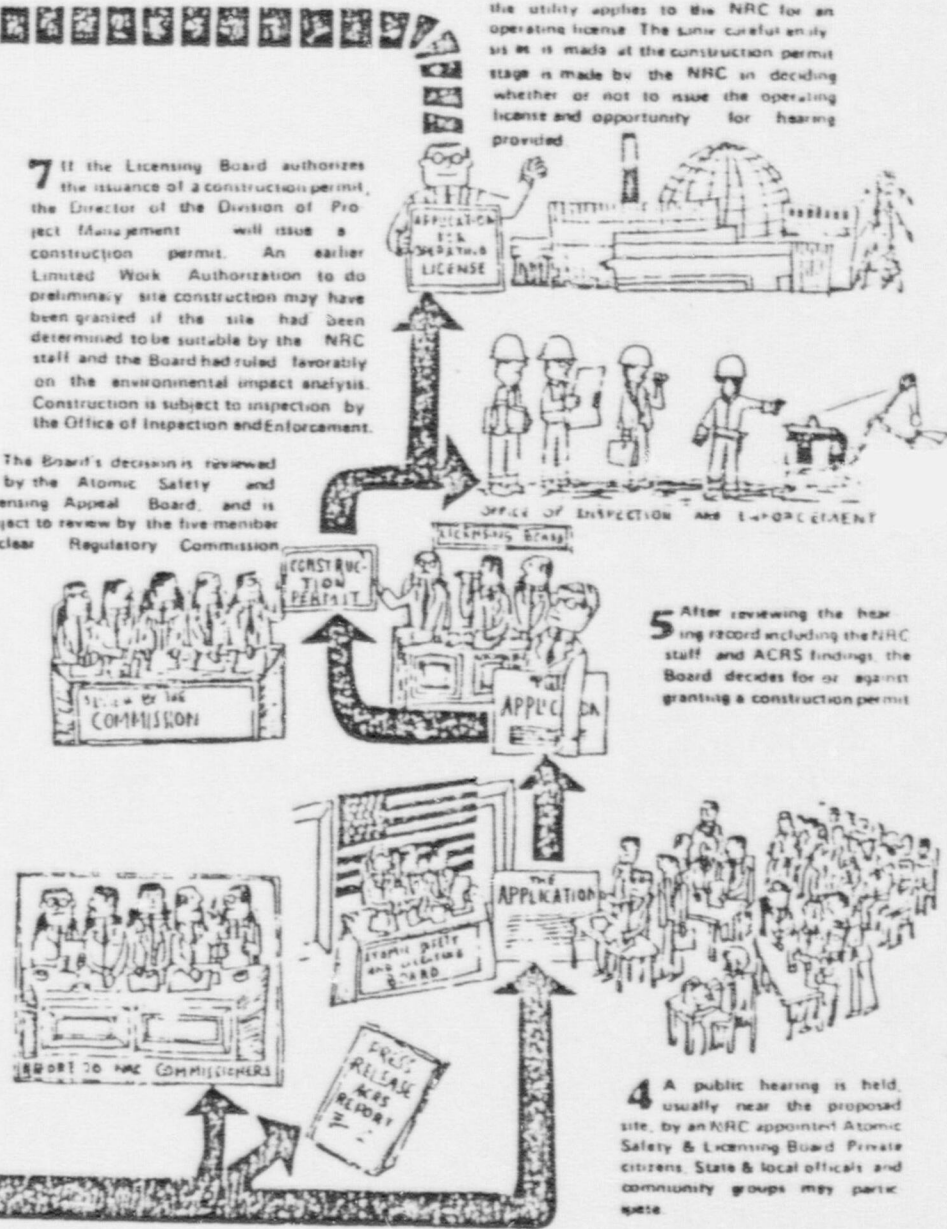
1 The utility submits a formal application describing the design, location, and environmental impact of the proposed plant and the safeguards to be provided. The application also covers the utility's technical and financial qualifications.

2 The NRC makes copies of the application available to the public and ACRS Technical experts analyze the application, and prepare a Safety Evaluation and an Environmental Impact Statement. These documents are also made public.

3 The staff's analysis is submitted to the NRC's statutory Advisory Committee on Reactor Safeguards, a committee of independent experts. ACRS studies the application in detail and holds conferences with the applicant, the licensing staff and others. The ACRS findings are reported to the NRC and made public.

7 If the Licensing Board authorizes the issuance of a construction permit, the Director of the Division of Project Management will issue a construction permit. An earlier Limited Work Authorization to do preliminary site construction may have been granted if the site had been determined to be suitable by the NRC staff and the Board had ruled favorably on the environmental impact analysis. Construction is subject to inspection by the Office of Inspection and Enforcement.

6 The Board's decision is reviewed by the Atomic Safety and Licensing Appeal Board, and is subject to review by the five-member Nuclear Regulatory Commission.



8 As construction progresses, additional information is developed and the utility applies to the NRC for an operating license. The same careful analysis as is made at the construction permit stage is made by the NRC in deciding whether or not to issue the operating license and opportunity for hearing provided.

5 After reviewing the hearing record including the NRC staff and ACRS findings, the Board decides for or against granting a construction permit.

4 A public hearing is held, usually near the proposed site, by an NRC appointed Atomic Safety & Licensing Board. Private citizens, state and local officials and community groups may participate.

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Asa Courmeyer,
Mr. Bath's class
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Snodgrass, Wash.
98130

Nuclear Regulatory Commission
Office of Nuclear Reactor Regulation
Washington D.C. 20555

Dear Sirs,

I am a student and a group I am in is
conducting an experiment concerning
Nuclear Power Plants.

We are concerned about the proper
guide lines and rules that have to be
met by an utility organization in order
for them to undertake construction on a
Nuclear power plant.

We are also wondering who makes the
decisions on what the rules are, what
does it take for a licence to be issued?

Sincerely,
Asa Courmeyer

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