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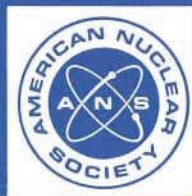
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**evaluation of ground water
supply for nuclear power sites**

an American National Standard

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AMERICAN NUCLEAR SOCIETY

555 North Kensington Avenue
La Grange Park, Illinois
60526-5592 USA

Tel: 708 / 352-6611
E-Mail: NUCLEUS@ans.org
<http://www.ans.org>
Fax: 708 / 352-0499

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for Evaluation of Ground Water
Supply for Nuclear Power Sites**

**Secretariat
American Nuclear Society**

**Prepared by the
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Standards Committee
Working Group ANS-2.9**

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Foreword

(This Foreword is not a part of American National Standard for Evaluation of Ground Water Supply for Nuclear Power Sites, ANSI/ANS-2.9-1980.)

The purpose of this document is to specify standards for evaluating the availability of ground water for safety and non-safety related supplies at power reactor sites. This standard was prepared by Working Group ANS-2.9 of ANS-2 Subcommittee, Site Evaluation, of the American Nuclear Standards Committee.

The initial meeting of the working group was held in October, 1974. At that meeting, the working group was designated as ANS-2.9, Standards for Evaluating Water Supply and Waterborne Radionuclide Transport for Nuclear Power Sites. This working group was subdivided into surface water and ground water sub-groups, and, the working group was formally subdivided at the March, 1975 meeting of the ANS-2 subcommittee into ANS-2.9, Standards for Evaluating Water Supply and Waterborne Radionuclide Transport for Power Reactor Sites: Ground Water, and ANS-2.13, Standards for Evaluating Water Supply and Waterborne Radionuclide Transport for Power Reactor Sites: Surface Water.

The draft standard, ANS-2.9, was balloted on May 31, 1977, by the ANS-2 Subcommittee with 12 approved, 10 approved with comments, 2 disapproved, 1 not voting, and 2 unreturned ballots. As a result of comments received during this balloting, the draft standard was further sub-divided into ANS-2.9, American National Standard for Evaluation of Ground Water Supply for Nuclear Power Sites, and ANS-2.17, American National Standard for Evaluation of Radionuclide Transport in Ground Water for Nuclear Power Sites. These draft standards, dated January, 1978, were transmitted to the ANS-2 Subcommittee in June, 1978, for information and informal comments. The draft standards were revised to incorporate these informal comments. As a result of these revisions, the two disapproved ballots were changed to approved with comments.

This standard covers parts of the material that meet the requirements of Section 2.4, Hydrologic Engineering, of the Standard Format and Content of Safety Analysis Report for Nuclear Power Plants, Regulatory Guide 1.70, issued by the Nuclear Regulatory Commission (NRC).

Before preparing the Safety Analysis Report (SAR) Section 2.4, for the licensing of nuclear power plants, the applicant should be aware of hydrologic work which has been done by others in the area of interest. Almost invariably, much work can be saved by utilizing all or parts of studies by local, state, and federal agencies. Such information as historical ground water levels, pumping tests, well logs, withdrawal and recharge rates, geologic data, hydraulic parameters of underlying formations, location and extent of aquifers, and water quality can be obtained from such sources.

Federal agencies which have useful data are the U.S. Geological Survey, Corps of Engineers, Bureau of Reclamation, Soil Conservation Service, Forest Service, Tennessee Valley Authority, Environmental Protection Agency, and the Nuclear Regulatory Commission. Most states have one or more agencies which are concerned with various aspects of water resources. Various local and interstate agencies, including soil and water conservation districts, irrigation districts, and river basin commissions, can be sources of information. SAR's for other nuclear facilities in the region can provide data.

It is also profitable to discuss the specific site in detail with the hydrology staff of the NRC prior to starting preparation of Section 2.4. In such discussions the scope of work can often be reduced and methodologies and procedures can be agreed upon, which will save many man-hours and dollars, both for the applicants and for the NRC staff.

Working Group ANS-2.9 of the Standards Committee of the American Nuclear Society had the following membership:

David L. Siefken, Chairman, *Sargent & Lundy*
Y. C. Chang, *Stone & Webster Engineering Company*
Stanley N. Davis, *University of Arizona*
James O. Duguid, *Battelle Memorial Institute*
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John A. McLaughlin, *Pacific Gas and Electric Company*
William M. McMaster, *Tennessee Valley Authority*
Thomas Nicholson, *U.S. Nuclear Regulatory Commission*

The chairman of the working group prior to preparation of Draft 4, dated December 1978, was Patrick J. Ryan, Bechtel, Inc. Prior to his retirement, Donald L. Milliken represented the U.S. Nuclear Regulatory Commission.

Subcommittee ANS-2, Site Evaluation, of the American Nuclear Society Standards Committee had the following members at the time of its approval of this standard:

R. V. Bettinger, Chairman, *Pacific Gas and Electric Company*
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Walter W. Hays, *U.S. Geological Survey*
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Karl Wiedner, *Bechtel Power Corporation*

The members of American Nuclear Society's Nuclear Power Plant Standards Committee (NUPPSO) at the time it balloted this standard in July 1979 were:

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M. D. Weber, Secretary

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