Administrative Information for the Exelon Generation Company, LLC Early Site Permit

Contents

1. Introduction 1-1
1.1 Purpose of Early Site Permit Submittal 1-2
1.2 Generic Industry Activities 1-3

2. Application Format and Content 2-1
2.1 Site Safety Analysis Report 2-2
2.2 Environmental Report 2-3
2.3 Emergency Plan 2-5
2.4 Site Redress Plan 2-7

3. General Corporate Information 3-1
3.1 Name of Applicant 3-1
3.2 Address of Applicant 3-1
3.3 Description of Applicant's Business 3-1
3.4 Organization and Management 3-2
3.4.1 U.S. State of Incorporation 3-2
3.4.2 Descriptions of Organization and Management of Applicant 3-2
3.4.3 Period of Time for Which the License Is Sought 3-2
3.4.4 Local News Publications 3-2
3.4.5 Contact Information 3-3
3.4.6 Rights and Control over the Property that is the Subject of this Application 3-3

4. Application Summary 4-1

Appendix

A Acronyms and Abbreviations

Table

3-1 Officers of Exelon Generation Company 3.T-1

CHAPTER 1

Introduction

The Early Site Permit (ESP) process, offered under Title 10 Code of Federal Regulations (CFR) Part 52, Subpart A, was promulgated by the United States (U.S.) Nuclear Regulatory Commission (USNRC) in 1989 to address industry concerns with the former licensing process under 10 CFR 50. Previously, the licensing process required large expenditures of time and money by utilities well before key environmental, site safety, and emergency planning issues could be resolved. As envisioned, the ESP process is meant to resolve the key environmental, site safety and emergency planning issues well in advance of when a decision is made to build a nuclear power facility and before substantial capital is invested in the construction of a new nuclear facility.

When the decision is made to proceed, having a preapproved site can dramatically shorten the time to bring a new plant to market. When the ESP is used with the USNRC's combined construction and operating license, the time required to build and start up a new plant can be shortened further. The USNRC introduced ESPs and the combined construction and operating license (COL) as part of a more effective licensing process (10 CFR 52) for new nuclear power plants. Congress affirmed and strengthened the new licensing process in the 1992 Energy Policy Act.

Historically, the NRC has reviewed proposed sites and designs in combination and approved the site/design combination simultaneously. Part 52 provides for the option to secure separate early approvals for proposed sites, designs or both. In particular, the Part 52 ESP process reflects the longstanding Commission objective to decouple siting from design and is central to the early resolution of safety and environmental issues, a principal policy objective of Part 52.

Moreover, Part 52 recognizes that it is possible to obtain approval of site for future nuclear power plants as a separate matter from, and well in advance of, decisions on what and when to build. In those instances where the ESP applicant has not selected a particular technology, ESP applications may nonetheless use the Plant Parameter Envelope (PPE) approach as a surrogate for actual facility information to support required safety and environmental reviews. Under the PPE approach, applications would not reference any specific reactor technology with the intent that the resulting ESP would be applicable for a range of reactor designs, including NRC certified designs, designs for which NRC certification is currently in progress or contemplated, and future designs.

Strong policy basis exists for the PPE approach. First, it provides combined operating license (COL) applicants with essential flexibility to select the best technology available at the time the decision to build is made. An ESP that would limit this flexibility would not be in the public interest and would be of severely diminished value to prospective applicants. Second, it provides the NRC with the information necessary for its review and issuance of ESPs. Third, the PPE approach facilitates the combined license process by clearly identifying the set of parameters on which the acceptability of a specific design for a particular site will be based. The EGC ESP Application is based on the PPE approach.

Reference in this document to a "proposed" facility, site, or project should not be construed to be restrictive to the reactors discussed, but rather encompasses any design bounded by the PPE developed, or the associated environmental impacts evaluated, through consideration of those reactor designs.

1.1 Purpose of Early Site Permit Submittal

The purpose of this Application for an ESP is to set aside the proposed site for future energy generation and sale on the wholesale energy market. This site will be reserved for a nuclear facility to be operated as a merchant generator plant. In addition, a component of the site redress plan supports (limited work) authorization for approval of construction activities in accordance with 10 CFR 50.10(e)(1) and 10 CFR 52.17(c).

Exelon Generation Company (EGC), Limited Liability Company (LLC) is the Applicant for this ESP and will hereafter be referred to as the EGC or Applicant. The Applicant has selected a site located approximately 700 feet (ft) south of the existing Clinton Power Station (CPS) Facility for the proposed location of the EGC ESP Facility. The specific reactor type has not been identified or selected. Technical information from various designs has been used to develop and envelop the facility characterization necessary to evaluate the suitability of the site for the construction and operation of a nuclear power plant.

The CPS is located in Harp Township, DeWitt County, approximately 6 miles (mi) east of the City of Clinton, in central Illinois. It is a single unit nuclear generating plant capable of producing approximately 950 net megawatts electric (MWe). The boiling water reactor (BWR), designed by General Electric (GE) has been producing electricity for customers since 1987. In December of 1999, the CPS was sold by the Illinois Power Company to AmerGen Energy Company, (AmerGen), LLC, of which EGC is now (2005) the sole owner. AmerGen owns and operates the CPS as well as the contiguous property that would be the EGC ESP Site.

This co-location strategy will prove beneficial because this existing nuclear site is already developed and dedicated to nuclear use. The advantages of co-location are described below.

- Existing CPS documents for development of the various parts of this Application for the EGC ESP; e.g., the CPS updated safety analysis report (CPS USAR), environmental report (ER), and emergency plan that includes processes and agreements with local and regional entities that were utilized.
- The existing CPS exclusion area previously underwent a screening and evaluation process establishing its suitability, including a National Environmental Policy Act (NEPA) evaluation of alternatives. The proposed EGC ESP Site is located within the CPS exclusion area.

This Application for the EGC ESP does not consider the need for power, as "need for power" is not required pursuant to 10 CFR 52.17.

In furtherance of the submittal of this Application for the EGC ESP, the Applicant seeks the following from the USNRC:

- An ESP issued for a duration of 20 years;
- USNRC environmental impact statement (EIS) finding of no significant impact on setting aside the EGC ESP Site;
- USNRC EIS finding of no significant impact from the construction and operation of the EGS ESP Facility;
- USNRC safety evaluation report (SER) finding of no significant impact on (limited work) authorization for the EGC ESP Site;
- USNRC finding that there is reasonable assurance that the redress carried out under the plan will achieve an environmentally stable and aesthetically acceptable site suitable for whatever non-nuclear use may conform to local zoning laws;
- USNRC SER finding that the site characteristics have been appropriately identified;
- USNRC finding that there are no significant impediments to implementing an emergency plan and that the major features provide reasonable assurance that adequate protective measures can and will be taken, in the event of a radiological emergency at the proposed site; and
- USNRC finding that the site characteristics are such that adequate security plans and measures can be developed.

1.2 Generic Industry Activities

The EGC has been participating in an industry task force (led by the Nuclear Energy Institute [NEI]) with the purpose of developing resolution to several generic items of interest to those currently anticipating applying for an ESP under 10 CFR 52 Subpart A. The NEI and the ESP Task Force have been meeting regularly for over a year with the USNRC Office of New Reactor Licensing to resolve issues that might impede the timely review and disposition of an ESP application. The approaches identified by the ESP Task Force and the comments provided by the USNRC staff on these issues are generally reflected in this application. However, there are some issues still under discussion for which the resolution will continue to be advanced through these generic efforts during the USNRC review of the specific applications, particularly in areas where guidance has only recently been issued by the USNRC, such as in the areas of quality assurance and accident analysis.

CHAPTER 2

Application Format and Content

The Application for the EGC ESP is composed of several documents: the Site Safety Analysis Report (SSAR), the ER, the Emergency Plan, and the Site Redress Plan. The information for this chapter is presented in the following sections:

- Site Safety Analysis Report (Section 2.1)
- Environmental Report (Section 2.2)
- Emergency Plan (Section 2.3)
- Site Redress Plan (Section 2.4).

This administrative information also includes a description of the reports, general corporate information, and Appendix A. Appendix A contains the list of acronyms and abbreviations used for the Application for the EGC ESP reports and plans.

Multiple sources were consulted in the writing of this Application, and these references are presented in separate reference lists contained in the Application documents. However, the inclusion of references in these lists does not imply adherence to all criteria or guidance stated in each individual reference. The multiple reports and plans required for the EGC ESP, discussed in the sections below, were developed in accordance with the applicable regulatory requirements and with consideration to available USNRC guidance documents. The Application includes the following documents:

- A SSAR that focuses on the site-related safety features and includes:
  - Site description and general location of the EGC ESP Facility;
  - Design parameters postulated for the EGC ESP Facility and the EGC ESP Site characteristics;
  - Population profiles of the area surrounding the site; and
  - An assessment of site features affecting the plant design (e.g., major structures, systems, and components that bear significantly on site acceptability).
- An ER focusing on the environmental impacts to the site from construction and operation of one or more reactors that have characteristics that fall within the site parameters;
- A "major features" Emergency Plan: The "major features" addressed in the Emergency Plan include the exact sizes of the emergency planning zones (EPZs) and other features as described in Section V of NUREG-0654 Supplement 2.
- A Site Redress Plan that addresses anticipated site preconstruction activities.

For a site to be granted an ESP, the USNRC must conclude that the reactor design established by the PPE can be constructed and operated on the site without undue risk to public health and safety. For this reason, 10 CFR 52, "Early Site Permits; Standard Design Certifications; and Combined Licenses for Nuclear Power Plants," was used as the regulatory criteria for developing this ESP. Additionally, the recommendations for the ESP format identified by the NEI were followed.

PPE information was prepared based upon the results of previous preliminary ESP Demonstration Program work performed in the early 1990s by EPRI. This information was updated to reflect current data needs in performing safety and environmental impact assessments. During the compilation of PPE data, efforts were coordinated with and input obtained from alternative nuclear reactor manufacturers, EPRI, NEI, and the pilot ESP applicants. Bounding PPE and site characteristic values were developed, taking into consideration EGC's unique siting and business objectives. Discussions of the reactor technologies considered can be found in the SSAR.

The Applicant also prepared extensive site characterization studies and analyses to document the site's suitability for a range of nuclear plant designs. These studies involved data collection and analysis in a number of technical disciplines. Input from these disciplines was used to complete the SSAR and the ER portions of the Application for the EGC ESP.

The SSAR and ER demonstrate that the site is suitable for construction and operation of a plant with design features as specified for major structures, systems, and components within the bounds of the PPE.

2.1 Site Safety Analysis Report

The SSAR complies with the applicable portions of 10 CFR 52.17(a)(1) and consists of a description of the site and proposed facilities, an assessment of the site features affecting the facility design(s); and meteorological, hydrologic, geologic, and seismic characteristics of the site. In addition, the SSAR discusses the capability of the facilities to withstand the natural and man-made environmental hazards of the site.

The regulatory bases for the SSAR include consideration of the following:

- USNRC Regulations - 10 CFR 50, 10 CFR 52, and 10 CFR 100;
- USNRC Regulatory Guide 1.70, "Standard Format and Content of Safety Analysis Reports for Nuclear Power Plants;" and
- NUREG-0800, "Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants."

The following briefly describes the sections of the SSAR:

Chapter 1, Introduction and Description of Proposed Facility, includes an overview of the site and possible reactor types, along with a PPE listing.

Chapter 2, Site Characteristics, addresses geography and demography; nearby industrial, transportation, and military facilities; meteorology; hydrologic engineering; and geologic and seismic engineering.

Chapter 3, Site Safety Assessment, addresses effluents; thermal discharges; radiological consequences of accidents; and conformance with 10 CFR 100, "Reactor Site Criteria." This section provides the anticipated maximum levels of radiological and thermal effluents the facility will produce. These data are used to verify that plant effluents will meet applicable regulatory standards and serve as input for the development of the environmental impacts analyses presented in the ER.

Appendix A, Geotechnical Report for the EGC Early Site Permit, addresses the details of the geotechnical evaluations conducted in support of the Application.

Appendix B, Seismic Hazards Report for the EGC Early Site Permit, addresses the details of the seismic hazards analysis conducted in support of the Application.

2.2 Environmental Report

The ER provides information required by 10 CFR 52.17(a)(2), using guidance provided by NUREG-1555. This ER document addresses the environmental impacts associated with the construction and operation of the EGC ESP Facility.

This Application for the EGC ESP is premised on the assumption that, should the Applicant ultimately decide to exercise the permit and seek a construction permit or COL, the actual facility would be constructed and operated as a merchant power plant, co-located with the CPS Facility. The ER discusses the existing environment surrounding the site and vicinity; postulates environmental impacts of construction and operation and considers appropriate mitigation measures; reviews the impacts of design basis severe accidents; and reviews similar alternative sites. This ER does not assess impacts based on a specific facility design, nor does it postulate costs and benefits associated with construction or operation of any one design option; rather, the ER considers the most bounding conditions using the PPE.

For evaluation purposes, the following categories of information regarding interfaces of the proposed site and facilities are reviewed:

- Comparison of the functional and operational needs of the facility as they relate to the site's natural and environmental resources; and
- Direct impact of the facilities on the site's natural and environmental resources.

The regulatory bases for the ER include:

- NEPA;
- USNRC Regulations - 10 CFR 51 and 10 CFR 52;
- USNRC Regulatory Guide 4.2*, Preparation of Environmental Reports for Nuclear Power Stations*;

- NUREG-1555, *Standard Review Plans for Environmental Reviews of Nuclear Power Plants*; and
- State Environmental Statutes, as applicable.

The following briefly describes sections of the ER:

Chapter 1, Introduction to the Environmental Report, includes a discussion of the Applicant's purpose for the permit.

Chapter 2, Environmental Description, examines the existing use of the site for operating the CPS Facility and describes the current (2003) surrounding physical environment along with the existing socioeconomic, demographic, historic, and community characteristics.

Chapter 3, Plant Description, describes reactor technologies considered for this site. A design has not yet been selected from a number of potential new nuclear generating technologies. As a result, the description is based on a number of bounding plant parameters that assist in the assessment of the potential environmental impacts of construction and operation of a nuclear power plant at the EGC ESP Site. The EGC ESP Facility is based on bounding plant parameters and site characteristics described in the SSAR.

Chapter 4, Environmental Impacts of Construction, describes the potential impacts on the surrounding environment of constructing the EGC ESP Facility.

Chapter 5, Environmental Impacts of Station Operation, describes the potential impacts of operating the EGC ESP Facility at this site.

Chapter 6, Environmental Measurements and Monitoring Programs, describes the programs that will be utilized to monitor the environmental impacts of the construction and operation of the EGC ESP Facility.

Chapter 7, Environmental Impacts of Postulated Accidents Involving Radioactive Materials, describes the potential radiological consequences associated with operating a nuclear power facility at the EGC ESP Site due to postulated accidents.

Chapter 8, Need for Power, notes that an assessment of the power needs has been omitted from the Application pursuant to 10 CFR 52.17(a)(2) and 10 CFR 52.18.

Chapter 9, Alternatives to the Proposed Action, reviews the alternatives and supports the reasons for co-locating a merchant power plant at the EGC ESP Site.

Chapter 10, Environmental Consequences of the Proposed Action, analyzes unavoidable adverse environmental impacts, commitments of resources, and relevant costs and benefits, as they support the suitability of the proposed site.

Appendix A, Wells Within 15 Mi of the Site.

Appendix B, Schools Within the Region.

2.3 Emergency Plan

The emergency planning information consists of a "major features" Emergency Plan developed to comply with 10 CFR 52.17(b), using guidance provided in NUREG-0654/FEMA–REP-1, Revision 1, Supplement 3, *Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants*, and in NUREG–0654/FEMA–REP-1, Revision 1, Supplement 2, *Criteria for Emergency Planning in an Early Site Permit Application*.

This Emergency Plan is also aligned with the *Exelon Nuclear Standardized Radiological Emergency Plan* so that the emergency response organization (ERO) operations will parallel the other EGC nuclear power stations and corporate response operations. The material contained in the emergency planning information is not intended to be updated until such time as it is necessary to utilize the plan, such as at the COL stage. During this interim period, the *Exelon Nuclear Standardized Radiological Emergency Plan* will likely be modified and updated. When and if this ESP Emergency Plan is used in the future, it will be reviewed and updated to the extent needed to bring it into conformity with those aspects of the *Exelon Nuclear Standardized Radiological Emergency Plan* that have formed the basis for this ESP Emergency Plan.

The Emergency Plan for the EGC ESP, in conjunction with future implementing and administrative procedures, documents the methods by which the EGC Emergency Preparedness Program meets the ESP-applicable planning standards set forth in 10 CFR 50.47(b) and requirements of 10 CFR 50, Appendix E.

The Emergency Plan for the EGC ESP recognizes the State of Illinois, in cooperation with the local emergency planning zone (EPZ) communities, as the overall authority responsible for protective action directives in order to protect the health and safety of the general public. The plan was developed in coordination with Illinois' emergency response plans in support of the EGC nuclear power stations within that state. The Emergency Plan further incorporates by reference *The Illinois Plan for Radiological Accidents* (IPRA).

The regulatory bases for the emergency planning information include:

- USNRC Regulations - 10 CFR 50 and 10 CFR 52;
- Federal Emergency Management Agency (FEMA) Regulations - 44 CFR 350;
- USNRC/FEMA Memorandum of Understanding (MOU), 58 Federal Register 47996;
- U.S. Environmental Protection Agency (USEPA) 400-R-92-001, *Manual of Protective Action Guides and Protective Actions for Nuclear Incidents*;
- NUREG-0396, *Planning Basis for the Development of State and Local Government Radiological Emergency Response Plans in Support of Light Water Nuclear Power Plants*;
- NUREG-0654, *Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants*;
- NUREG-0696, *Functional Criteria for Emergency Response Facilities*; and

- USNRC Regulatory Guide 1.101, *Emergency Planning and Preparedness for Nuclear Power Reactors.*

The following briefly describes sections of the Emergency Plan:

Chapter 1, Introduction, contains an overview discussing the approach to the development of the plan along with a description of the standards and criteria that were utilized.

Chapter 2, Identification of Physical Characteristics, includes figures that illustrate the EGC ESP Site's plume exposure EPZ, evacuation routes, relocation centers, and registration centers. This chapter supports the conclusion that there are no major impediments to the development of an emergency plan for the EGC ESP Site.

Chapter 3, Assignment of Responsibility (Organizational Control), describes the primary responsibilities and organizational control of Exelon Corporation, federal, state, county, and other ERO within the EGC ESP Site plume exposure pathway.

Chapter 4, Emergency Classification System, describes in general terms the classification and emergency action level (EAL) scheme that will be used to determine the minimum response to an abnormal event at the EGC ESP Facility.

Chapter 5, Notification Methods and Procedures, describes the notification methods for state and county response personnel and the general public.

Chapter 6, Emergency Communications, describes the provisions utilized for prompt communications among principal ERO, communications with the ERO, and communications with the general public.

Chapter 7, Public Education and Information, describes the Exelon Nuclear Public Education and Information Program, outlines the methods for distributing public information materials on an annual basis, and describes how the public is informed in the event of an emergency.

Chapter 8, Emergency Facilities and Equipment, describes the emergency facilities and equipment used by the ERO, and outlines the methods that aid in timely and accurate response actions.

Chapter 9, Accident Assessment, describes methods to discover and assess actual or potential off-site consequences of a radiological emergency condition, and is required to effectively coordinate and direct the response to an emergency situation.

Chapter 10, Protective Response, describes the range of emergency actions to be taken during or after an emergency situation that are intended to minimize or eliminate hazards to the health and safety of the public and/or facility personnel.

Chapter 11, Radiological Exposure Control, describes the means for controlling emergency worker radiological exposures during an emergency, as well as the measures that are used by Exelon Corporation to provide necessary assistance to persons injured or exposed to radiation and/or radioactive materials.

Chapter 12, Medical and Public Health Support, describes the arrangement for medical services for contaminated or injured individuals sent from the EGC ESP Facility.

Chapter 13, Recovery and Re-Entry, describes in general terms the measures to be taken to re-enter areas of a nuclear facility that has been evacuated as the result of an accident.

Chapter 14, Drills and Exercises, is not required at the ESP stage as part of NUREG-0654, Supplement 2, Section V, and will be developed at a later time.

Chapter 15, Radiological Emergency Response Training, describes the emergency response training that is provided by Exelon Corporation to both its employees and off-site support personnel requiring site access.

Chapter 16, Responsibility for the Planning Effort, describes the responsibilities for development, review, and distribution of the Emergency Plan. In addition, it describes actions that must be performed to maintain the Emergency Preparedness Program.

Appendix A, Contacts and Arrangements, provides a list of non-EGC private companies and government entity contacts and arrangements.

Appendix B, Requirements Matrix, provides a requirements matrix linking regulations through guidance documents to appropriate sections of the Emergency Plan and the state and local plans.

Appendix C, Sources and References.

2.4 Site Redress Plan

The Site Redress Plan and specific authorization are required by 10 CFR 52.17(c) if the Applicant intends to perform any of the activities allowed by 10 CFR 50.10(e)(1). Specifically, the Applicant must determine the scope and extent of any preconstruction site investigation or preparation activities that will be conducted prior to approval of a construction permit or COL. In addition, the Applicant must address such measures that may be necessary to restore the site to the condition suitable for other appropriate use in the event that the project does not proceed to construction.

The need for redress information is dependent on the Applicant's plans for the site. Specifically, the Applicant must determine the scope and extent of any preconstruction site preparation activity (e.g., grading, establishment of construction support facilities, dredging for intake and discharge structures) that will be conducted prior to the approval of a construction permit or COL. Site redress activities described in the Application for the EGC ESP are appropriate to the level of ecological and land use damage associated with the planned activities. For example, redress for continued maintenance of a meteorological monitoring program will be much smaller in scope than activities required to remediate large-scale clearing, grading, or dredging activities.

While this portion of an Application for an ESP is unique to a given site and an individual Applicant’s planned preconstruction permit activities, the following issues provide examples of considerations taken into account in formulating the Site Redress Plan:

- Future site ownership and use (e.g., recreation, residential or industrial development, wildlife preserve);

- Use of Applicant-constructed facilities (e.g., roads, structures) for future use;
- Habitat replacement (e.g., wetlands, threatened and endangered species);
- Restoration of sensitive water resource features (e.g., river banks) where disturbed for intake or discharge structures;
- Recontouring, revegetating, and replanting cleared areas;
- Potential liabilities associated with any facilities or structures that are left following redress; and
- Potential contamination, which may include radiological or hazardous waste, left on the site, either pre-dating, or as a result of, the Applicant's actions.

The overall objective of this plan is to efficiently and as effectively as possible, reconfigure and redress the site to provide an environmentally stable, self-draining, self-maintaining and aesthetically acceptable site that can be left unattended post-redress. This does not preclude the property owner from using the site as permitted pursuant to the USNRC license granted for the CPS, should the property not be used for new nuclear construction pursuant to the ESP granted through the approval of this application, and the ESP holder has provided the appropriate notice to the USNRC pursuant to 10 CFR 52.35, "Use of site for other purposes."

The regulatory bases for the Site Redress Plan include USNRC Regulations, 10 CFR 50 and 10 CFR 52.

The Site Redress Plan is outlined as follows:

Chapter 1, Description of Site Preparation Activities, describes the EGC ESP Site including the present (2003) site condition, site ownership, and planned physical activities.

Chapter 2, Site Redress Plan, provides general information, cites the regulatory requirement criteria for a site redress plan, provides a description of the redress plan, discusses impacts to existing redress and decommissioning plans, and discusses the financial responsibility of the Applicant to perform redress activities, if required.

CHAPTER 3

General Corporate Information

3.1 Name of Applicant

The Applicant for this ESP is Exelon Generation Company (EGC), LLC.

3.2 Address of Applicant

200 Exelon Way, KSA3-E
Kennett Square, PA 19348

3.3 Description of Applicant's Business

The EGC is a limited liability company formed to own, operate, and acquire nuclear and other electric generating stations; to engage in the sale of electrical energy; and to perform other business activities. EGC, one of this nation's largest power producers and wholesale marketers, has access to more than 48,000 megawatts (MW) of electricity and employs approximately 7,300 individuals. Exelon Nuclear, a business unit within the EGC is responsible for the operation of EGC's fleet of nuclear power stations. The EGC is a wholly-owned subsidiary of Exelon Ventures Company (Exelon Ventures), LLC. Non-regulated activities, such as power generation and marketing, are conducted through entities owned by Exelon Ventures. Exelon Ventures is wholly owned by Exelon Corporation, a corporation formed under the laws of the Commonwealth of Pennsylvania. The Exelon Corporation is a public utility holding company created in 2000 through the merger of PECO, and Unicom Corporation. The Exelon Corporation, including its subsidiaries, employs approximately 25,600 people. Through its Exelon Energy Delivery Company (EED), LLC subsidiary, the Exelon Corporation conducts utility operations in northern Illinois and southeastern Pennsylvania. The EED serves 5.1 million electric customers, and 450,000 natural gas customers.

The site that is the subject of this application is the Clinton Power Station (CPS) property, near the central Illinois town of Clinton. CPS is a single-unit nuclear generating facility capable of producing approximately 950 net MWe. The CPS reactor is a BWR design by GE and has been producing electricity for customers since 1987. The CPS is owned and operated by AmerGen Energy Company (AmerGen), LLC, a limited liability company organized under the laws of the State of Delaware with its principal place of business in Pennsylvania. AmerGen was created in 1997 as an equally owned venture of EGC (as assignee of PECO) and British Energy, of Edinburgh, Scotland. In December 2003, EGC purchased British Energy's fifty percent interest and became the sole owner of AmerGen.

3.4 Organization and Management

3.4.1 U.S. State of Incorporation

The EGC is organized under the laws of the Commonwealth of Pennsylvania, with its principal place of business in Pennsylvania.

3.4.2 Descriptions of Organization and Management of Applicant

Exelon Ventures is a limited liability company with its principal place of business in the State of Delaware. The Exelon Corporation is a Pennsylvania corporation with its principal place of business in Chicago, Illinois. The Exelon Corporation is a publicly-traded corporation whose shares are traded on the New York Stock Exchange. Exelon Ventures is a wholly-owned subsidiary of the Exelon Corporation. The directors and principal officers of the EGC, Exelon Ventures, and the Exelon Corporation are U.S. citizens. Neither the EGC nor its parent, Exelon Ventures, are owned, controlled, or dominated by an alien, a foreign corporation, or a foreign government. The principal officers of the EGC and their addresses are presented in Table 3-1.

There is a pending (2005) merger of Exelon Corporation (the ultimate parent company of both AmerGen and EGC) and Public Service Enterprise Group (PSEG) and the subsequent restructuring of the merged companies. Under the merger agreement, the two companies will combine to create Exelon Electric & Gas Corporation (EEG). As a result of the merger, AmerGen will remain a wholly-owned subsidiary of EGC; EGC will remain a wholly-owned subsidiary of Exelon Ventures; and Exelon Ventures will become a wholly-owned subsidiary of EEG. AmerGen will continue to be the owner of the Clinton Power Station and the associated property. The relationship of AmerGen and EGC will not be affected by the merger, and the authorization of the AmerGen officers to support the EGC ESP application will also not be affected.

3.4.3 Period of Time for Which the License Is Sought

The EGC requests an ESP with a permit duration of 20 years pursuant to 10 CFR 52, Subpart A. Once issued, the permit may be renewed for up to 20 additional years. During the ESP Application review, the EGC did not identify any site data or methodologies used to make future predictions (e.g., time-dependent site characteristics) that would not fully support a 20-yr ESP. Such data would normally involve population growth predictions, geology, meteorology, etc. None of the data provided contains conditions or limitations, beyond those normally expected in such an Application, which would invalidate a 20-yr ESP.

3.4.4 Local News Publications

News publications in circulation near the EGC ESP Site that are considered appropriate to give reasonable notice of the application are as follows:

The Clinton Herald
221 6th Avenue
Clinton, Iowa 52732
Tel. (800) 729-7101
Fax. (563) 242-7147

The Pantagraph
301 W. Washington St
P. O. Box 2907
Bloomington, IL 61702-2907
Tel. (309) 829-9411
Fax. (309) 829-8497

Herald & Review
601 East William Street
Decatur, IL 62525
Tel. (217) 429-5151

3.4.5 Contact Information

Any notices, questions, or correspondence in connection with this application are to be directed to the following individual:

Ms. Marilyn C. Kray
Vice President, Project Development
Exelon Nuclear
200 Exelon Way, KSA3-E
Kennett Square, PA 19348

with copies to:

Mr. Thomas P. Mundy
Director, Project Development
Exelon Nuclear
200 Exelon Way, KSA3-E
Kennett Square, PA 19348

Stephen Frantz, Esquire
Morgan, Lewis & Bockius LLP
1111 Pennsylvania Avenue, NW
Washington, DC 20004

3.4.6 Rights and Control over the Property that is the Subject of this Application

AmerGen owns the real estate on which the EGC ESP Facility will sit, including the exclusion area, with the exception of a right-of-way for the township road, which traverses the exclusion area. The EGC entered an Access and Indemnity Agreement with AmerGen, which provides the EGC rights to conduct preliminary studies and perform other activities necessary to support the EGC ESP Application process. The EGC anticipates entering a similar agreement with AmerGen to cover EGC's required pre-construction activities and EGC's right to the land required by the EGC ESP Facility. The agreement will grant the EGC an exclusive and irrevocable option, exercisable prior to the start of construction, to purchase, enter a long-term lease for, and/or procure other legal right in the land required by the EGC ESP Facility.

In addition to the title EGC acquires in the land required by the EGC ESP Facility, the EGC will enter an Exclusion Area Agreement with AmerGen. For land the EGC acquires, the

Exclusion Area Agreement will provide EGC with authority, within those parts of the exclusion area for the EGC ESP Facility owned and controlled by EGC, to determine the activities in the exclusion area, including the exclusion of personnel and property, to the extent necessary to comply with applicable USNRC guidance. For land the EGC leases or otherwise acquires right, the Exclusion Area Agreement will provide the EGC with authority, for the entire exclusion area, to determine the activities in the exclusion area, including the exclusion of personnel and property, to the extent necessary to comply with applicable USNRC guidance. The aggregate result will provide EGC with full control of the exclusion area for the EGC ESP Facility, to the extent necessary to comply with applicable USNRC guidance.

The AmerGen Management Committee, which has the authority to manage AmerGen, authorized AmerGen's officers to negotiate all necessary agreements to support EGC with its ESP application, which may include, without limitation, a long-term interest in the real estate that is the subject of the ESP application and an exclusion area agreement.

Finally, the EGC will acquire whatever other rights, control and access necessary to effectuate the objectives of this ESP application, including access to riparian, transmission, and other rights as deemed necessary pursuant to an ESP granted in furtherance of this application.

CHAPTER 3

Table

TABLE 3-1
Officers of Exelon Generation Company, LLC (as of April 30, 2003)

Name	Title	Address
Oliver D. Kingsley Jr.	Chief Executive Officer and President Exelon Generation	4300 Winfield Road Warrenville, IL 60555
Michael Bemis	President, Exelon Power	200 Exelon Way Kennett Square, PA 19348
Ian P. McLean	President, Exelon Power Team	300 Exelon Way Kennett Square, PA 19348
John L. Skolds	President and Chief Nuclear Officer, Exelon Nuclear	4300 Winfield Road Warrenville, IL 60555
John Young	Chief Operating Officer, Exelon Power	200 Exelon Way Kennett Square, PA 19348
William Arndt	Senior Vice President, Business Operations, Exelon Generation	4300 Winfield Road Warrenville, IL 60555
William H. Bohlke	Senior Vice President, Nuclear Services, Exelon Nuclear	4300 Winfield Road Warrenville, IL 60555
Kenneth W. Cornew	Senior Vice President, Power Transactions & Wholesale Delivery, Exelon Power Team	300 Exelon Way Kennett Square, PA 19348
Christopher M. Crane	Senior Vice President, MidWest Regional Operating Group, Exelon Nuclear	4300 Winfield Road Warrenville, IL 60555
Richard J. Landy	Senior Vice President, Human Resources & Administration, Exelon Generation	4300 Winfield Road Warrenville, IL 60555
Charles G. Pardee	Senior Vice President, MidAtlantic Regional Operating Group, Exelon Nuclear	200 Exelon Way Kennett Square, PA 19348

TABLE 3-1
Officers of Exelon Generation Company, LLC (as of April 30, 2003)

Name	Title	Address
David W. Woods	Senior Vice President, Communications, Governmental & Public Affairs	300 Exelon Way Kennett Square, PA 19348
Carol Anderson	Vice President, Information Technology, Exelon Nuclear	300 Exelon Way Kennett Square, PA 19348
Robert S Bement	Vice President, MidWest Regional Operating Group Support, Exelon Nuclear	4300 Winfield Road Warrenville, IL 60555
Jeffrey A. Benjamin	Vice President, Licensing and Regulatory, Exelon Nuclear	4300 Winfield Road Warrenville, IL 60555
Kevin Cellars	Vice President, Business Operations, Exelon Power	200 Exelon Way Kennett Square, PA 19348
Martin Coveney	Vice President, Finance, Exelon Nuclear	4300 Winfield Road Warrenville, IL 60555
Edward J. Cullen Jr.	Vice President, Legal and Secretary	300 Exelon Way Kennett Square, PA 19348
Ronald J. DeGregorio	Vice President, MidAtlantic Regional Operating Group Support, Exelon Nuclear	200 Exelon Way Kennett Square, PA 19348
Joel P. Dimmette	Vice President, Nuclear Oversight, Exelon Nuclear	4300 Winfield Road Warrenville, IL 60555
Meg Evangelist	Vice President, Human Resources, Exelon Power	200 Exelon Way Kennett Square, PA 19348
Edward Fedorchak	Vice President, Fuel Management & Proprietary Trading, Exelon Power Team	300 Exelon Way Kennett Square, PA 19348
Robert J Fisher	Vice President, MidWest Regional Operating Group Support, Exelon Nuclear	4300 Winfield Road Warrenville, IL 60555
Jan H. Freeman	Vice President, Public Affairs, Exelon Generation	300 Exelon Way Kennett Square, PA 19348

TABLE 3-1
Officers of Exelon Generation Company, LLC (as of April 30, 2003)

Name	Title	Address
Dorothy M Hawkins	Vice President, Business Operations, Exelon Nuclear	4300 Winfield Road Warrenville, IL 60555
J. Michael Heffley	Vice President, Exelon Nuclear	4300 Winfield Road Warrenville, IL 60555
James S. Jablonski	Vice President, Portfolio Management, Exelon Power Team	300 Exelon Way Kennett Square, PA 19348
Theodore E. Jennings	Vice President, Engineering & Operation Support	200 Exelon Way Kennett Square, PA 19348
Marilyn C. Kray	Vice President, Special Projects, Exelon Nuclear	200 Exelon Way Kennett Square, PA 19348
Rod Krich	Vice President, Licensing Projects, Exelon Nuclear	4300 Winfield Road Warrenville, IL 60555
Charles P. Lewis	Vice President, Strategy and Development, Exelon Generation	300 Exelon Way Kennett Square, PA 19348
James P. Malone	Vice President, Fuels Management, Exelon Nuclear	4300 Winfield Road Warrenville, IL 60555
Robert K. McDonald	Vice President, Generation	Bank One Building 10 South Dearborn Street Chicago, IL 60603
Michael McMahan	Vice President, Outage Planning & Services, Exelon Nuclear	4300 Winfield Road Warrenville, IL 60555
James R. Meister	Vice President, Nuclear Engineering, Exelon Nuclear	4300 Winfield Road Warrenville, IL 60555
Michael Metzner	Vice President, Marketing & Origination, Exelon Power Team	300 Exelon Way Kennett Square, PA 19348

TABLE 3-1
Officers of Exelon Generation Company, LLC (as of April 30, 2003)

Name	Title	Address
J. Barry Mitchell	Vice President and Treasurer	Bank One Building 10 South Dearborn Street Chicago, IL 60603
J. Donald Myhan	Vice President, Human Resources and Administration, Exelon Nuclear	4300 Winfield Road Warrenville, IL 60555
Mark A. Schiavoni	Vice President, Sithe New England	Schrafft Center 529 Main Street Charlestown, MA 02129
John L. Settelen	Vice President, Exelon Generation	300 Exelon Way Kennett Square, PA 19348
Preston D. Swafford	Vice President, Exelon Power	200 Exelon Way Kennett Square, PA 19348
Thomas D. Terry Jr.	Vice President, Taxes	Bank One Building 10 South Dearborn Street Chicago, IL 60603I
Sue E. Wallace	Vice President, Management Projects, Exelon Generation	4300 Winfield Road Warrenville, IL 60555
Thomas H. Weir	Vice President, Exelon Generation	300 Exelon Way Kennett Square, PA 19348
David B. Wozniak	Vice President, MidWest Regional Operating Group Support, Exelon Nuclear	4300 Winfield Road Warrenville, IL 60555
Kevin Yessian	Vice President Supply, Exelon Nuclear	4300 Winfield Road Warrenville, IL 60555
George P. Barnes Jr.	Site Vice President - LaSalle County Station	2601 North 21st Road Marseilles, IL 61341
Ernest J. Harkness	Site Vice President - Oyster Creek	Route 9 South, P.O. Box 388, Forked River, NJ 08731

TABLE 3-1
Officers of Exelon Generation Company, LLC (as of April 30, 2003)

Name	Title	Address
Robert J. Hovey	Site Vice President - Dresden Nuclear Power Station	6500 North Dresden Road, Morris, IL 60450
William Levis	Site Vice President - Limerick Generating Station	Evergreen & Sanatoga Roads Pottstown, PA 19464
Richard Lopriore	Site Vice President - Byron Station	4450 North German Church Road, Byron, IL 61010
Michael Pacilio	Site Vice President - Clinton Nuclear Power Station	P.O. Box 678 Clinton, IL 61726
Timothy Tulon	Site Vice President - Quad Cities Nuclear Power Station	22710 206th Avenue North, Cordova, IL 61242
James D. von Suskil	Site Vice President - Braidwood Station	Rural Route 1, Box 84, Braceville, IL 60407
Russell G. West	Site Vice President - Peach Bottom Atomic Power Station	1848 Lay Road, Delta, PA 17314
Bruce C. Williams	Site Vice President - TMI	Route 441 South P.O. Box 480 Middletown, PA 17057
Thomas R. Miller	Assistant Treasurer	Bank One Building 10 South Dearborn Street Chicago, IL 60603
George R. Shicora	Assistant Treasurer	Main Office Building 2301 Market Street Philadelphia, PA 19101
Charles S. Walls	Assistant Treasurer	Bank One Building 10 South Dearborn Street Chicago, IL 60603

TABLE 3-1
Officers of Exelon Generation Company, LLC (as of April 30, 2003)

Name	Title	Address
Todd D. Cutler	Assistant Secretary	Main Office Building 2301 Market Street Philadelphia, PA 19101
Scott N. Peters	Assistant Secretary	Bank One Building 10 South Dearborn Street Chicago, IL 60603
Thomas H. Weir	Controller	300 Exelon Way Kennett Square, PA 19348

CHAPTER 4

Application Summary

The selection of the site adjacent to the existing CPS provides many advantages for the Applicant and supports this ESP process. The EGC ESP Site is located adjacent to the CPS, an existing licensed nuclear power station, and is therefore likely to have greater support from the local population and governmental entities in the event that a construction permit or COL is pursued. The resources needed to prepare this EGC ESP application have been significantly lessened through the application of existing CPS documents in the development of the SSAR, the ER, the Emergency Plan, and the Site Redress Plan. Actual resources needed to ultimately develop the site as contemplated by the ESP application will be reduced through utilization and sharing of existing infrastructure and site services, if and when the EGC ESP Facility is operational.

APPENDIX A

Acronyms and Abbreviations

ABWR	advanced boiling-water reactor
ACR-700	Advanced Canada Deuterium Uranium (CANDU) Reactor
ACSR	aluminum-conductor steel-reinforced
A-E	architect-engineer
AEA	Atomic Energy Act of 1954
AECL	Atomic Energy of Canada, Ltd.
ALARA	as low as reasonably achievable
ALS	advanced life support
AmerGen	AmerGen Energy Company, LLC
AMS	American Meteorological Society
ANI	American Nuclear Insurers
ANS	alert and notification system
ANSI	American National Standards Institute
AP600	advanced pressurized-water reactor (smaller version of AP1000)
AP1000	advanced pressurized-water reactor
AQCR	air quality control regions
AQI	air quality index
ARM	area radiation monitor
ASLB	Atomic Safety and Licensing Board (NRC)
AST	alternate source term
ASTM	American Society for Testing and Materials (now ASTM International)
BOD	biological oxygen demand
BP	before present
Btu	British thermal unit
BWR	boiling water reactor
^{o}C	degrees Celsius

CANDU	Canada Deuterium Uranium
CB	citizen band
CCC	Clinton Chamber of Commerce
CCSW	component cooling service water
CDAM	Core Damage Assessment Methodology
CDE	committed dose equivalent
CEDE	committed effective dose equivalent
CFC	chlorinated fluorocarbons
CFR	Code of Federal Regulations
cfm	cubic feet per minute
cfs	cubic feet per second
CHRMS	containment high range monitoring system
Ci/yr	curies per year
CN	Canadian National (Railroad)
COD	chemical oxygen demand
COL	combined operating license
ComEd	Commonwealth Edison
CPS	Clinton Power Station
CPS ER	Clinton Power Station Environmental Report
CPS USAR	Clinton Power Station Updated Safety Analysis Report
CPT	cone penetrometer testing
CR	control room
CRT	cathode-ray tube
CSDO	communication services duty officer
CWA	Clean Water Act
D_2O	deuterium oxide
D&D	decontamination and decommissioning
dB	decibel
DB	dry bulb

dBa	decibel adjusted
DBA	design-basis accident
DDE	deep dose equivalent
DEQ	Department of Environmental Quality
DF	decontamination factor
DHFS	Department of Health and Family Services
DPH	Department of Public Health
dpm	disintegrations per minute
DOT	Department of Transportation
DSM	demand-side management
EAB	exclusion area boundary
EAL	emergency action level
EAS	emergency alert system
ECC	emergency core cooling
ECL	effluent concentration limit
EDTA	Ethylenediamine Tetraacetic acid
EED	Exelon Energy Delivery
EEI	Edison Electric Institute
EGC	Exelon Generation Company, LLC
EHV	extra high voltage
EIS	environmental impact statement
EMF	electromagnetic fields
EMP	environmental monitoring program
ENC	emergency news center
ENS	emergency notification system (USNRC)
EOC	emergency operations center
EOF	emergency operations facility
EOP	emergency operating procedure
EPIO	Emergency Public Information Organization

EPRI	Electric Power Research Institute
EPZ	emergency planning zone
ER	environmental report
ERA	Environmental Resource Associates
ERDS	emergency response data system (USNRC)
ERF	emergency response facility
ERO	emergency response organization
ESBWR	Economic Simplified Boiling Water Reactor
ESF	engineered safety feature
ESP	early site permit
ESRP	environmental standard review plan
ESW	essential service water
ETE	evacuation time estimate
EWG	exempt wholesale generator
Exelon Ventures	Exelon Ventures Company, LLC
ºF	degrees Fahrenheit
FAA	Federal Aviation Administration
FBI	Federal Bureau of Investigation
FEMA	Federal Emergency Management Agency
FEMA-REP	Federal Emergency Management Agency – Radiological Emergency Preparedness
FERA	Federal Emergency Response Agency
FERC	Federal Energy Regulatory Commission
FFCA	Federal Facilities Compliance Act
FHA	fuel handling accident
fps	feet per second
FRERP	Federal Radiological Emergency Response Plan
FRMAP	Federal Radiological Monitoring and Assessment Plan
FRPCC	Federal Radiological Preparedness Coordinating Committee
FSAR	final safety analysis report

FY	fiscal year
G	gauss
GA	General Atomics
g/d	grams per day
Ge	germanium
GE	General Electric Company
GEIS	generic environmental impact statement
GIS	geographic information system
gpd	gallons per day
gpm	gallons per minute
GT-MHR	gas turbine-modular helium reactor
GWH	giga-watt hours
HEPA	high-efficiency particulate adsorber
HHV	high heating value
HPN	health physics network (USNRC)
HSWA	Hazardous and Solid Waste Amendments
HVAC	heating, ventilation, and air conditioning
I&C	instrumentation and control
IAC	Illinois Administrative Code
IAEA	International Atomic Energy Agency
IASS	Illinois Agricultural Statistics Service
ICG	Illinois Central Gulf
ICRP	International Commission on Radiological Protection
IDNR	Illinois Department of Natural Resources
IDNS	Illinois Department of Nuclear Safety
IDOA	Illinois Department of Agriculture
IDOT	Illinois Department of Transportation
IDPH	Illinois Department of Public Health
IEEE	Institute of Electrical and Electronic Engineers

IEMA	Illinois Emergency Management Agency
IEPA	Illinois Environmental Protection Agency
IGPA	Institute of Government and Public Affairs
IL	Illinois
INEEL	Idaho National Engineering and Environmental Laboratory
INHS	Illinois Natural Heritage Survey
INPO	Institute of Nuclear Power Operations
IPCB	Illinois Pollution Control Board
IPNSED	Illinois Power Nuclear Station Energy Department
IPRA	Illinois Plan for Radiological Accidents
IRIS	International Reactor Innovative and Secure
ISGS	Illinois State Geological Society
ISU	Illinois State University
ISWS	Illinois State Water Survey
JPIC	Joint Public Information Center
kcmil	kilo circular mils
KI	potassium iodide
LADTAP	computer code
LED	light emitting diodes
LHV	low heating value
LLC	Limited Liability Company
LLRWPAA	Low-Level Radioactive Waste Policy Amendments Act of 1985
LLW	low-level waste
LOCA	loss-of-coolant accident
LOOP	loss of off-site power
LPZ	low-population zone
LTD	Limited
LWA	limited work authorization
LWR	light-water reactor

mA	milliamperes
MAELU	Mutual Atomic Energy Liability Underwriters
MCL	maximum contaminant level
MCLG	maximum contaminant level goal
MDL	method detection limit
mgd	million gallons per day
mg/L	milligram(s) per liter
MMBtu	one million British Thermal Unit(s)
MOU	memorandum of understanding
mph	mile(s) per hour
mps	meter(s) per second
MRCC	Midwest Regional Climate Control
MRI	Meteorology Research, Inc.
MSDS	material safety data sheet(s)
msl	mean sea level
MSLB	main steamline break
MSW	municipal solid wastes
MUX	multiplexer
MWROG	Mid-West Regional Operating Group
MW	megawatt
MWe	megawatt electric
MWt	megawatt thermal
NA	not available
NAAQS	National Ambient Air Quality Standards
NARS	nuclear accident reporting system
NCES	National Center for Education Statistics
NDO	nuclear duty officer
NEI	Nuclear Energy Institute
NEPA	National Environmental Policy Act of 1969

NESC	National Electric Safety Code
NETVAC	computer code
NFPA	National Fire Protection Association
NGET	nuclear general employee training
NHS	normal heat sink
NIST	National Institute of Standards and Technology
NOAA	National Oceanic and Atmospheric Administration
NOI	notice of intent
NOT	notice of termination
NOx	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NRC	Nuclear Regulatory Commission
NRLPO	New Licensing Reactor Project Office
NSSFC	National Severe Storms Forecast Center
NSSS	nuclear steam supply system
NUMARC	Nuclear Utility Management and Resources Council (now NEI)
NWI	National Wetlands Inventory
NWS	National Weather Service
ODCM	offsite dose calculation manual
OLS	operating license stage
OSC	operations support center
OSHA	Occupational Safety and Health Administration
OTA	Office of Technology Assessment
OW	observation well
P&IDs	piping and instrumentation drawings
PA	public address
PAG	protective action guide
PAR	protective action recommendation
PASS	post accident sampling system

PBMR	pebble bed modular reactor
PBX	private branch exchange
PCB	polychlorinated biphenyls
PCCS	passive containment cooling system
PECO	PECO Energy Company
PM	particulate matter
PMF	probable maximum flood
PMP	probable maximum precipitation
PPDS	plant parameter display system
PPE	plant parameters envelope
ppm	parts(s) per million
ppmvd	part(s) per million, volumetric dry
PPWMAP	Pollution Prevention and Waste Minimization Awareness Program
PPWMP	Pollution Prevention and Waste Minimization Program
PSAR	preliminary safety analysis report
PSD	prevention of significant deterioration
psf	pound(s) per square foot
PSHA	probabilistic seismic hazard analysis
psi	pound(s) per square inch
psig	pound(s) per square inch gauge
PURPA	Public Utilities Regulatory Policy Act of 1978
PV	photovoltaic
PWR	pressurized water reactor
QA	quality assurance
RAC	Regional Assistance Center (FEMA)
rad	Roentgen absorbed dose (100 ergs/gm)
RAFT	Radiological Assistance Field Team (IL)
RAI	request for additional information
RAP	Radiological Assistance Plan

RCC	radiation controls coordinator
RCE	radiation controls engineer
RCRA	Resource Conservation and Recovery Act
REAC	Radiological Emergency Assistance Center
REAC/TS	Radiation Emergency Assistance Center/Training Site (USDOE)
rem	roentgen equivalent man
REMP	radiological environmental monitoring program
REP	radiological emergency plan
RG	regulatory guide
RI	radio interference
RP	radiation protection
RPM	radiation protection manager
RR	railroad
RTO	regional transmission operator
SAM	severe accident management
SAMA	severe accident mitigation alternatives
SAMDA	severe accident mitigation design alternative
SAMG	severe accident management guidelines
SBWR	Simplified Boiling Water Reactor
SD	sample data
SEC	State Environs Communicator
sec/m^3	second(s) per meter cubed
SEOC	State Emergency Operations Center
SER	safety evaluation report
SGTR	steam generator tube rupture
SGTS	standby gas treatment system
SHPO	State Historic Preservation Office
SNYPSC	State of New York Public Service Commission
SO_x	sulfur oxides

SPDS	safety parameter display system
SPF	standard project flood
SPRAT	Spillway Routing and Flood Routing (computer program)
SPS	standard project storm
SRC	state radiological coordinator
SRP	Standard Review Plan
SREP	Standardized Radiological Emergency Plan
SSAR	site safety analysis report
SSE	safe shutdown earthquake
STA	shift technical advisor
STORET	STOrage and RETrieval System for Water and Biological Data (computer code)
SWDA	Solid Waste Disposal Act
SWPPP	Stormwater Pollution Prevention Plan
TDS	total dissolved solids
TEDE	total effective dose equivalent
TID	Technical Information Document
TLD	thermoluminescent dosimeter
TMDL	total maximum daily load
TOC	total organic carbon
TRC	The Research Corporation
TSC	technical support center
TSM	technical support manager
TSS	total suspended solids
TVI	television interference
UHC	unburned hydrocarbons
UHS	ultimate heat sink
UO_2	Uranium Dioxide
USACOE	United States Army Corps of Engineers
USAEC	United States Atomic Energy Commission

USAR	updated safety analysis report
USDOC	United States Department of Commerce
USDOE	United States Department of Energy
USDOL	United States Department of Labor
USDOT	United States Department of Transportation
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
USNRC	United States Nuclear Regulatory Commission
USNWS	United States National Weather Service
UTM	universal transverse mercator
VOC	volatile organic compounds
WASP	water surface profiles
wb	whole body
WWTP	wastewater treatment plant