

October 17, 2006 (10:40am)

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

OFFICE OF SECRETARY  
RULEMAKINGS AND  
ADJUDICATIONS STAFF

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

<b>In the Matter of</b> <b>EXELON GENERATION COMPANY, LLC</b> <b>(Early Site Permit for the Clinton ESP Site)</b>	) ) ) ) ) )	<b>Docket No. 52-007</b> <b>ASLBP No. 04-821-01-ESP</b> <b>October 17, 2006</b>
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**PREFILED TESTIMONY OF THOMAS P. MUNDY**  
**ON EXELON GENERATION COMPANY'S ESP APPLICATION**

**I. INTRODUCTION**

Q. Please state your name.

A. My name is Thomas P. Mundy.

Q. Who is your current employer and what is your current position?

A. My current employer is Exelon Generation Company, LLC (EGC or Exelon). My current position is Director, Project Development.

Q. Please describe your professional qualifications.

A. I have been employed by Exelon (and its predecessors) for more than ten years in various technical and management positions of increasing responsibility. I am currently Project Manager for NuStart Energy Development, which is a consortium of nuclear companies (including Exelon) that is developing two applications for combined licenses for nuclear power plants. Prior to my employment with Exelon, I was an attorney for three years and an engineer on various nuclear plants for six years. A copy of my professional qualifications is attached.

Q. On whose behalf are you testifying?

A. I am testifying on behalf of the Applicant, EGC.

Q. Please describe your involvement in the Early Site Permit (ESP) Application.

A. I have been Exelon's project manager for the ESP Application.

Q. Please describe your responsibilities with respect to the ESP Application?

A. As project manager for the ESP Application, the Application was prepared under my supervision and control. This includes revisions to the Application and responses to NRC requests for additional information.

Q. What is the purpose of your testimony?

A. The purpose of my testimony is to provide a brief description of the Applicant (EGC), and the contents of the Application, including the Plant Parameter Envelope (PPE). I will also discuss the preparation of the Application, including a description of the multi-disciplinary team responsible for development of the Application and some of the measures taken by EGC to help make the Application both complete and accurate. Finally, my testimony provides an overview of the proposed site for the EGC ESP facility and provides conclusions regarding the ESP Application.

## **II. BACKGROUND ON THE APPLICANT AND APPLICATION**

### **A. Description of the Applicant**

Q. Please describe the Applicant for the ESP.

A. The Applicant is EGC. EGC is a limited liability company formed to own, operate, and acquire nuclear and other electric generating assets, to engage in the sale of electrical energy, and to perform other business activities. EGC is also one of the nation's largest power producers and wholesale marketers and employs approximately 7,300 individuals.

EGC is a wholly-owned subsidiary of Exelon Ventures Company, LLC which, in turn, is wholly owned by Exelon Corporation. EGC is not a conventional regulated utility, but is a merchant generator. Illinois “deregulated” its retail electricity market with the Illinois Electric Service Customer Choice and Rate Relief Law of 1997, Public Act 90-0561 (1997). As a merchant generator, EGC sells power on the open wholesale market, without traditional considerations such as supplying a service area or satisfying a reserve margin objective. In other words, EGC does not need to supply the energy needs of any particular area.

Q. Do any foreign corporations or foreign governments own or control Exelon?

A. No. Neither EGC nor its parents, Exelon Ventures and Exelon Corporation, is owned, controlled or dominated by an alien, a foreign corporation, or a foreign government. Also, the directors and principal officers of EGC, Exelon Ventures, and Exelon Corporation are U.S. citizens.

Q. Does Exelon own and operate other nuclear generating stations?

A. Yes. Exelon Nuclear, a business unit within EGC, is responsible for the operation of EGC’s ten nuclear stations with 17 nuclear reactors, representing approximately 17 percent of the U.S. nuclear industry’s power capacity.

**B. Description of the Application**

Q. What is the purpose of the ESP Application?

A. The purpose of the Application is to resolve key site-related safety, environmental and emergency preparedness issues before an NRC decision to authorize construction of a nuclear power facility on that site. If granted, the ESP would allow EGC to set aside or “bank” the ESP site for possible future construction of one or more new nuclear power

generation facilities. However, an ESP does not authorize EGC to construct a nuclear plant. Under 10 C.F.R. § 50.10, EGC may not construct a nuclear power plant without a construction permit (CP) or combined operating license (COL). The Application is premised on the assumption that should EGC ultimately decide to exercise the ESP and seek a CP or COL, the actual facility would be constructed and operated as a merchant plant, co-located with the Clinton Power Station (CPS) facility.

Q. What is the duration of the ESP?

A. EGC requests an ESP with a permit duration of 20 years pursuant to 10 C.F.R. Part 52, Subpart A. EGC also requests approval for certain pre-construction activities on the EGC ESP site in accordance with 10 C.F.R. § 50.10(e)(1) and § 52.17(c). EGC has submitted a Site Redress Plan in support of that request.

Q. Did EGC identify any time-dependant site characteristics that would not support a 20-year ESP plus a 40-year operating license or COL?

A. No. EGC did not identify any time-dependant site characteristics that would not fully support a 20-year ESP plus a 40-year operating license or COL. Such site characteristics would normally involve issues such as locations of nearby industrial hazards, meteorology, and demography. None of the data provided in the Application contains conditions or limitations, beyond those normally expected in such an application, which would invalidate a 20-year ESP or a subsequent 40-year operating license or COL.

Q. Briefly describe the contents of the ESP Application.

A. The ESP application is composed of Administrative Information, the Site Safety Analysis Report (SSAR), the Environmental Report (ER), information related to the Emergency Plan (EP), and the Site Redress Plan. 10 C.F.R. Part 52, "Early Site Permits; Standard

Design Certifications; and Combined Licenses for Nuclear Power Plants,” was used as the principal regulatory criteria for developing the ESP. The SSAR includes a description of the site, assessment of site characteristics affecting the plant design in the areas of meteorology, hydrology, geology, and seismology, dose evaluations, natural and man-made hazards on or near the site, and the impact of site characteristics on preparation of adequate security plans and measures. The ER documents the postulated environmental impacts associated with the construction and operation of the EGC ESP facility and considers appropriate mitigation measures, reviews the environmental impacts of design basis and severe accidents, and reviews alternative energy sources and alternative sites. As required by 10 C.F.R. § 52.17(b)(1), the Application evaluates whether there are “significant impediments” to the development of an Emergency Plan. Additionally, as permitted by 10 C.F.R. § 52.17(b)(2)(i), the Application identifies the “major features” of emergency plans. Finally, should EGC decide to implement those site activities authorized under 10 C.F.R. § 50.10(e)(1), the Site Redress Plan addresses 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.

Q. What is the most recent revision of the Application?

A. The most recent revision is Revision 4, which was submitted to the NRC on April 14, 2006. In response to the Licensing Board’s order dated April 17, 2006, EGC provided copies of Revision 4 to the Application to each member of the Board.

Q. Is Revision 4 to the Application complete and accurate to the best of your knowledge, information, and belief?

A. Yes.

**C. Plant Parameter Envelope (PPE)**

Q. Is the Application based on a particular reactor design or designs?

A. No. The regulations in 10 C.F.R. Parts 52 and 100 that apply to an ESP do not require an ESP applicant to provide specific design information. However, sufficient information must be provided to address 10 C.F.R. § 52.17(a)(1), which calls for an analysis and evaluation of the major structures, systems and components (SSCs) of the facility that bear significantly on the acceptability of the site under the radiological consequence evaluation factors identified in 10 C.F.R. § 50.34(a)(1). As permitted by 10 C.F.R. Part 52, EGC has not selected a specific reactor type for the EGC ESP site. To support its application, EGC utilized available information from several reactor plant designs that are either currently commercially available or anticipated to be commercially available within the term of the ESP. Depending on the reactor type selected, the EGC ESP facility could have a total core thermal power rating between approximately 2,400 and 6,800 MWt. The EGC ESP facility may consist of a single reactor or multiple reactors (or modules) of the same or different reactor type. Designs considered include the Advanced Boiling Water Reactor (ABWR), AP1000 Reactor, Pebble Bed Modular Reactor (PBMR), Gas Turbine Modular Helium Reactor (GTMHR), the Advanced CANDU Reactor (ACR), the International Reactor Innovative and Secure (IRIS) reactor, and the Economic Simplified Boiling Water Reactor (ESBWR). These reactor designs formed the basis for the development of the PPE. The PPE identifies a set of design parameters that are expected to bound the design of a reactor or reactors that might be deployed at the site, and serves as a surrogate for actual facility information.

Q. How were the design parameters selected?

A. Appropriate design parameters were identified for inclusion in the PPE through a systematic review of regulatory criteria and guidance, ESP application content requirements, experience with previous site suitability studies, and industry guidance documents. The plant parameter values were developed considering the values provided by various reactor vendors and by applying appropriate conservatism where required to characterize the surrogate facility. As applicable, the most limiting (maximum or minimum) bounding value was selected. The plant parameters were used to characterize (1) the functional or operational needs of the plant from the site's natural or environmental resources, (2) the plant's impact on the site and surrounding environs, and (3) the site-imposed requirements on the plant. The EGC ESP plant parameter values are listed in Table 1.4-1 of the SSAR. This type of facility characterization is considered sufficient to assess the future use of the site from both a nuclear safety and environmental perspective.

Q. How will the PPE values be accounted for in an application for a CP or COL?

A. Under the PPE approach, any future design that is demonstrated to be bounded by the PPE will be suitable for the site, and the ESP will remain valid. Therefore, the EGC ESP facility may consist of one or more of the reactors considered in development of the PPE, or may consist of a different design that falls within the range of parameters included in the PPE. In terms of safety reviews, this means that potential designs will be no more demanding from a site suitability and safety perspective than the bounding design parameters of the PPE. In terms of environmental reviews, this means that environmental impacts of the selected design will not be significantly greater than environmental impacts evaluated in the bounding design parameters of the PPE.

- Q. What happens if the plant design at the COL stage deviates from the PPE?
- A. It is possible that one or more characteristics of the actual EGC ESP facility may not fall within the bounds of the PPE. In such an event, the applicant for the CP or COL may need to request a variance from the ESP in accordance with 10 C.F.R. § 52.39(b).
- Q. Has the NRC reviewed the PPE values?
- A. Yes. The NRC Staff reviewed the PPE values and concluded that the PPE values are generally based on certified design information and the best available information for not yet certified designs. The NRC Staff also found EGC's PPE values to be reasonable and that some of the PPE values have been modified to include margin.

### **III. DESCRIPTION OF THE PROPOSED SITE**

- Q. Briefly describe the site for the proposed EGC ESP facility.
- A. EGC selected a vacant parcel of land on the CPS property, near Clinton, Illinois as the location of the possible future EGC ESP facility. The CPS is a nuclear power plant owned and operated by AmerGen Energy Company, LLC (AmerGen). The ESP site is located approximately 700 feet south of the existing CPS. The EGC ESP site boundary is the same as the CPS property lines. The site and its environs consist primarily of area for the future EGC ESP facility, the existing CPS facilities, Clinton Lake, woodlands, pasture land, cultivated farm land, and recreation areas. The total area encompassed by the site boundary is about 14,180 acres. Except for CPS, the former CPS Energy and Environmental Center, and the site recreational facilities, there are no industrial or commercial structures on the site. Four residential structures on the site property are leased by AmerGen.
- Q. Describe the relationship between EGC and AmerGen.



A. AmerGen was created in 1997 as an equally owned venture of EGC and British Energy. In December 2003, EGC purchased British Energy's fifty percent interest and became the sole owner of AmerGen.

Q. Why did EGC select the CPS location?

A. EGC selected the location in part because the existing nuclear site is already developed and dedicated to nuclear use. Initially, two identical units were planned for the CPS site, but only one was constructed and is operating. Also, considerable site data exist and have been submitted to and reviewed by the NRC for the present CPS facility.

Q. Will the CPS and the proposed EGC ESP facility share any systems?

A. While the EGC ESP facility will be co-located with the CPS, the EGC ESP facility will be essentially independent of the CPS. With the exception of the CPS ultimate heat sink (UHS) (which may be used as an emergency source of makeup water for the EGC ESP facility UHS), no CPS safety-related systems or equipment will be shared or cross-connected. Some structures, such as warehouse and training buildings, and some support facilities, such as domestic water supply and sewage treatment, may be shared. The existing switchyard will be expanded to accommodate the output of the new facility and provide the necessary offsite power. The portion of the existing switchyard intended for the cancelled unit will be used for this purpose. Clinton Lake will be used as the normal source of makeup water for the cooling water system.

#### **IV. PREPARATION OF THE APPLICATION**

Q. Describe the organization responsible for the preparation of the Application.

A. While EGC is the Applicant for the ESP, the Application was prepared by an interdisciplinary team of qualified EGC project personnel and expert contractors with

expertise in all key areas of the application, including the Site Safety Analysis Report and Environmental Report.

Q. What other parties were involved in the development of the Application?

A. CH2M Hill, under contract with EGC, served as the primary contractor for the development of the Application. The principal expert subcontractors who also assisted in the development of the information in the SSAR included: Parsons Power Group, Inc. (now doing business as Worley-Parsons), which provided engineering services in preparing the SSAR, and a number of subcontractors with expertise in geotechnical and seismic analyses. Also, Sargent & Lundy and Idaho National Engineering and Environmental Laboratory independently reviewed draft SSAR sections, and an independent board of review comprised of industry experts in the fields of seismology, probabilistic seismic hazards analysis, soil/structure interaction and soil properties, and structural engineering evaluated the implementation plan for the seismic hazards work, the interim results of the work, and the conclusions reached during the work.

Q. Please describe the qualifications of these contractors to perform these activities.

A. CH2M Hill is a company that provides full-service engineering, construction, and operation services for nuclear facilities, including more than two decades of managing nuclear facilities for the Department of Energy. CH2M Hill also provides a full range of services for new nuclear facility development, including siting, licensing, and design. Sargent & Lundy and Parsons (formerly Gilbert Commonwealth, and now doing business as Worley-Parsons) are large architect-engineers and constructors, that have previously helped to design and construct nuclear power plants in the United States, and who have been extensively involved in providing engineering services for operating nuclear power

plants. In summary, the contractors used to develop the ESP Application were highly experienced with siting and licensing of nuclear power plants and were well qualified to work on this project.

Q. Discuss the site investigation activities conducted by the Application team.

A. The Application team conducted extensive site investigation activities to support the ESP Application. EGC conducted a variety of surveys to support the ESP Application, including collection of extensive and detailed meteorological data from January 2000 to December 2002, geophysical surveys to determine soil and rock dynamic properties, transient population estimates, estimates of the capacity of public water and waste water facilities, and soil borings within the ESP facility site footprint. EGC also installed new test wells to measure current water table conditions, and performed topographical surveys to accurately identify the location of borings and groundwater monitoring wells.

Q. Did EGC also use previously existing data to support the ESP Application?

A. Yes. The ESP Application relied on various existing surveys and data collections. These included: (1) state agency surveys of groundwater quality, hydrologic conditions, water temperatures downstream of Clinton Lake, endangered or threatened species, and seismic conditions; (2) meteorological surveys and data from a variety of third party sources; (3) land use surveys by the U.S. Geological Survey; (4) an archaeological survey conducted in the early 1970s, prior to construction of CPS, and another more recent (2000) archaeological survey conducted prior to construction of a wastewater treatment plant in the vicinity; (5) data from soil borings taken for the original CPS facility; and (6) periodic surveys associated with the operation of CPS.

Q. How are these efforts documented?

A. EGC provided complete lists of references used to support the ESP Application in each chapter of the SSAR, ER, and Site Redress Plan, and in Appendix C of the EP.

Q. Did EGC implement any quality assurance measures during preparation of the Application?

A. Yes. While ESP holders and applicants are not required to implement quality assurance (QA) programs compliant with 10 C.F.R. Part 50 Appendix B, EGC nevertheless employed QA measures for ESP activities. CH2M HILL, the Applicant's primary contractor for developing the ESP application, provided QA for its ESP activities through the development of a project-specific QA program, as well as oversight of subcontractors that worked on various aspects of the application. Exelon implemented project specific procedures addressing the quality expectations and controls that would be applied in the development of the Application and Exelon's review and acceptance of the Application prepared by CH2M Hill. The QA measures used by the Applicant and its contractors helped provide reasonable assurance that any information derived from ESP activities that is used in the design and/or construction of structures, systems, and components important to safety will support satisfactory performance once these are placed in service. The NRC Staff also reviewed these measures and came to the same conclusion.

Q. Did EGC conduct any public outreach activities in support of its application?

A. Yes. Prior to submittal of the Application, EGC contacted members of the public from the surrounding community. Between August 21 and September 1, 2002, EGC representatives gathered input from residents who might be affected by the construction and operation of the proposed ESP facility. Exelon also established a Community Advisory Panel (CAP) in September of 2002. This Panel, comprised of a cross section of

Clinton community stakeholders, convenes about four times per year for the purpose of, among other things, providing a forum to learn about and exchange information regarding Exelon's Application. On May 19, 2003, representatives of the NRC Staff met with the CAP to present information on the NRC's role in the licensing of new reactor plants. Also, on March 20, 2003, the NRC's New Licensing Reactor Project Office (NRLPO) held a public outreach meeting in Clinton to provide information on opportunities for public involvement in the ESP process, and on December 18, 2003, the Staff held a public scoping meeting in Clinton. EGC representatives attended both of those meetings. On April 19, 2005, following the issuance of the draft Environmental Impact Statement (EIS), the NRC held another public meeting near the ESP site to describe the results of the environmental review, answer questions, and provide members of the public with information to assist them in submitting comments on the draft EIS. EGC representatives also attended that meeting.

Q. How did the EGC ESP organization support the NRC Staff's review of the Application?

A. In the course of the Staff's review, the EGC ESP organization responded to twelve separate safety and emergency planning-related requests for additional information (RAIs) that included approximately 110 subparts. EGC also responded to four RAIs with approximately fifty subparts related to environmental issues.

Q. Are there any remaining open items on the application?

A. No. There are no remaining open items or outstanding requests for information for any portion of the Application. However, there are 32 safety COL Action Items, six safety Permit Conditions, and one environmental Permit Condition. The Staff's environmental review was also predicated on certain assumptions that will need to be verified at the CP

or COL stage. Required future actions are documented in Appendix K to the final EIS (“Key Statements Made in the Environmental Report Considered in the NRC Staff’s Final Review”) and in Appendix A to the final Safety Evaluation Report (SER) (“Permit Conditions, COL Action Items, Site Characteristics, and Bounding Parameters”).

Q. Please summarize the subjects addressed by the RAIs.

A. The topics addressed by the safety and emergency planning RAIs included quality assurance, meteorological data, emergency plan major features, meteorology, hydrology, security, seismology, geology, accidents, hazards, and evacuation time. Environmental RAIs addressed topics in the areas of ecology, cooling system and water-related impacts, radwaste management, transmission system, transportation of radioactive materials, ecological impacts, socioeconomic impacts, radiation exposure to construction workers, radiological impacts of normal operation, design basis accidents, severe accidents, alternative sites, and alternative energy sources.

Q. What other interactions did EGC have with the NRC Staff on the Application?

A. As I previously mentioned, in December of 2003, the Staff held a public scoping meeting in Clinton. This meeting was intended to provide members of the public with an opportunity to provide their comments on what environmental issues the NRC should consider during its review of the Application for the Clinton ESP site. In April of 2005, following the issuance of the draft EIS, the NRC held another public meeting near the ESP site to describe the results of the environmental review, answer questions, and provide members of the public with information to assist them in submitting comments on the draft EIS. Regarding specific interactions between Exelon and the Staff, Exelon announced its intentions to pursue an ESP on April 30, 2002, and subsequently met with

the NRC Staff at its headquarters on May 28, 2002. This meeting generally introduced Exelon's ESP project plan and timeline for the completion and submission of the Application. Subsequently, Exelon met with the NRC Staff at the ESP site on March 2, 2004 for the purpose of familiarizing the NRC's environmental staff and its contractors with the ESP property and the surrounding area. A similar visit was held on July 15, 2004 for the NRC nuclear safety staff in connection with their review of site hazards. During subsurface exploration fieldwork, EGC met with technical experts of the NRC Staff interested in witnessing the fieldwork and understanding the testing methodology being employed by EGC. On May 18 and 19, 2004, EGC met with NRC Staff geotechnical and seismic experts for the purpose of explaining EGC's approach to addressing the ground motion analysis pursuant to 10 C.F.R. Part 100. During these meetings, the NRC staff asked numerous questions regarding the ASCE 43-05 methodology basis, how this method was applied to the ESP site, how the performance-based methodology complies with 10 C.F.R. §100.23, and the specific data related to the application of the ASCE method to the ESP site. During the period in which the NRC was issuing RAIs pertaining to the Application, Exelon held several teleconferences with the NRC staff to discuss and understand the intent of the RAIs. Exelon also met with the NRC Staff on September 16, 2005 to discuss Exelon's performance-based seismic methodology; on September 17, 2005 to discuss major feature aspects of emergency planning information; and on September 27, 2005 to discuss Exelon's intended responses to open items contained in the draft SER. These meetings served to ensure that the information EGC provided to the NRC Staff was responsive to the issues addressed in the RAIs.

Q. What is your opinion regarding the review performed by the NRC Staff of the Application?

A. In my opinion, the reviews performed by the NRC Staff were probing and thorough. The NRC Staff systematically reviewed the Application using its review guidance. In many cases, the Staff issued RAIs to elicit additional information beyond that required by its review guidance, and it critically challenged EGC in the RAIs, in meetings, and during inspections to provide the basis for EGC's analyses and conclusions. Furthermore, in my opinion, the NRC Staff's Safety Evaluation Report and Environmental Impact Statement provide a comprehensive evaluation of the information provided in the Application, and provide more than sufficient information to support the findings needed for issuance of the ESP.

V. **CONCLUSION**

Q. What are your conclusions regarding the EGC ESP Application

A. The Application contains sufficient information to support the Board's required safety and environmental findings and issuance of the ESP. The safety and environmental review conducted by the NRC Staff has been adequate. The Clinton ESP site is a suitable location for a nuclear station of the general size and type bounded by the PPE. Therefore, the ESP should be issued subject to the terms and conditions specified in the SER and EIS.

Q. Does this complete your testimony?

A. Yes.



**STATEMENT OF PROFESSIONAL QUALIFICATIONS OF  
THOMAS P. MUNDY**

**PROFESSIONAL EXPERIENCE**

EXELON GENERATION COMPANY, LLC, Kennett Square, PA

1997-Present

**Director, Project Development – Exelon Generation**

Direct and manage various activities associated with Exelon’s advanced nuclear reactor related projects. Areas of responsibility include: Exelon’s participation in *NuStart Energy Development, LLC* activities, Exelon’s Early Site Permit (“ESP”) project, preparing, negotiating, and administering advanced plant funding agreements with the U.S. Department of Energy (“DOE”) and EPRI, and representing Exelon on several advanced plant-related industry forums.

**Director, Technical Support, Nuclear Acquisitions – Exelon Nuclear**

Direct the due diligence and transition activities associated with the acquisition of nuclear generating assets including potential project identification, contribute to project viability analysis, manage due diligence, liaison between line organization and financial analysis group to ensure thorough financial analysis, present findings/recommendations to senior nuclear management. Assist in negotiation and preparation of asset purchase, interconnection, and other agreements, manage due diligence and transition budgets, manage closing/transition activities.

**Merger Lead, UNICOM/PECO Energy Company Merger**

Selected as 1 of 5 leads representing PECO in connection with the merger of its nuclear organization with that of Commonwealth Edison. Developed the overall integration methodology and accompanying tools, and managed the transition of several functional areas. Recipient of special corporate recognition for outstanding contribution to merger.

**Director, Generation Support Group – Power Generation**

With six direct reports and approximately 40 indirect reports, managed the delivery of central services for 4,500 MW<sub>e</sub> fossil generation organization including business/finance, engineering, environmental, information technology, supply/procurement, and industrial safety.

**Manager, Central Engineering and Projects – Power Generation**

With 20 direct reports, managed the delivery of: strategic project management, engineering designer services, Energy Delivery interface, EPRI participation, retired fossil station asbestos remediation, chemistry and industrial safety consulting, centralized training; and all non-nuclear joint-owner activities.

**Support Manager – Eddystone Generating Station, Power Generation**

Supervised three direct reports and approximately 25 indirect reports in the functional areas of fuel handling, financial, technical services, and facilities.

**Technical Services Supervisor – Eddystone Generating Station, Power Generation**

Managed the station chemistry, industrial safety, environmental compliance, fire protection, and chemical control programs, and the system manager function associated with the wastewater treatment and demineralization plants. Contract administrator for the settling basin, specialty and bulk chemicals.

**Senior Engineer – Engineering Services, Energy Delivery**

Coordinated and administered the regional Event Investigation Program within the Distribution Company. Authored the Energy Delivery Event Investigation handbook and delivered associated training.

ENVIRONMENTAL CLAIMS ADMINISTRATORS INC., Exton, PA 1995-1997

**Supervising Claims Counsel**

Supervised Counsels' handling of engineer, architect and contractor professional and environmental liability insurance claims including coverage analysis; coordinating remediation strategies, retaining and coordinating counsel in litigation, client correspondence, and negotiating claim settlement.

PALMER BIEZUP & HENDERSON, Philadelphia, PA 1994-1995

**Attorney**

Associated with 20-attorney law firm with practice concentrating in admiralty and insurance defense litigation.

**OTHER POSITIONS**

**Supervising Engineer – PECO ENERGY COMPANY**  
Limerick Generating Station, Limerick, PA 1988-1994

**Engineer, Plant Analysis – GPU NUCLEAR CORPORATION**  
Oyster Creek Nuclear Generating Station, Forked River, NJ 1986-1988

**Mechanical Test Engineer – NEWPORT NEWS SHIPBUILDING**  
Aircraft Carrier (Nuclear) Engineering, Newport News, VA 1982-1986

**E-Plan Corporate Spokesperson, EXELON NUCLEAR** 2000-Pres.

**EDUCATION**

**Juris Doctor** (cum laude), Temple University School of Law, Philadelphia, PA

**Master of Engineering Administration**, George Washington University, Washington, DC

**B.S., Marine Engineering**, U.S. Merchant Marine Academy, Kings Point, NY

**PROFESSIONAL AFFILIATIONS**

Licensed to practice law in Pennsylvania and New Jersey

Registered Patent Attorney; U.S. Patent and Trademark Office

**UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION**

**BEFORE THE ATOMIC SAFETY AND LICENSING BOARD**

**In the Matter of**

**EXELON GENERATION COMPANY, LLC**

**(Early Site Permit for the Clinton ESP Site)**

**Docket No. 52-007**

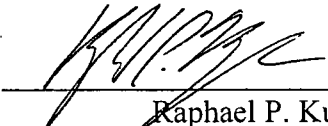
**ASLBP No. 04-821-01-ESP**

**October 17, 2006**

**CERTIFICATE OF SERVICE**

I hereby certify that copies of the attached letter dated October 17, 2006, from Steven P. Frantz to the Licensing Board Members and Exelon Generation Company, LLC's (1) "Prefiled Testimony of Thomas P. Mundy on Exelon Generation Company's ESP Application," (2) "Prefiled Testimony of Eddie R. Grant on Required Safety Findings," and (3) "Prefiled Testimony of Tamar Jergensen Cerafici on Required Environmental Findings" in the above captioned proceeding have been served as shown below by deposit in the United States mail, first class, this 17th day of October, 2006. Additional service has also been made this same day by electronic mail as shown below.

Office of the Secretary* U.S. Nuclear Regulatory Commission Attn: Rulemakings and Adjudication Staff Washington, DC 20555-0001 email: hearingdocket@nrc.gov	Office of Commission Appellate Adjudication U.S. Nuclear Regulatory Commission Washington, DC 20555-0001
Dr. Paul B. Abramson Atomic Safety and Licensing Board Panel U.S. Nuclear Regulatory Commission Washington, DC 20555-0001 email: pba@nrc.gov	Dr. Anthony J. Baratta Atomic Safety and Licensing Board Panel U.S. Nuclear Regulatory Commission Washington, DC 20555-0001 email: ajb5@nrc.gov
Dr. David L. Hetrick 8740 E. Dexter Drive Tucson, AZ 85715 email: dlmwh@dakotacom.net	Ann P. Hodgdon Robert M. Weisman Office of the General Counsel U.S. Nuclear Regulatory Commission Washington, DC 20555-0001 email: aph@nrc.gov, rmw@nrc.gov

  
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Raphael P. Kuyler

\* Original and two copies

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202.739.5460  
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October 17, 2006

Dr. Paul B. Abramson, Chairman  
Dr. Anthony J. Baratta  
Dr. David L. Hetrick  
Atomic Safety and Licensing Board Panel  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555-0001

Re: **Exelon Generation Company, LLC (Early Site Permit for Clinton ESP Site), Docket No. 52-007-ESP: Submittal of Prefiled Direct Testimony**

Dear Licensing Board Members:

In accordance with the Atomic Safety and Licensing Board's ("Board's") August 2, 2006 Order in the above proceeding, Exelon hereby provides the enclosed prefiled direct testimony. It consists of three separate documents: (1) "Prefiled Testimony of Thomas P. Mundy on Exelon Generation Company's ESP Application," (2) "Prefiled Testimony of Eddie R. Grant on Required Safety Findings," and (3) "Prefiled Testimony of Tamar Jergensen Cerafici on Required Environmental Findings."

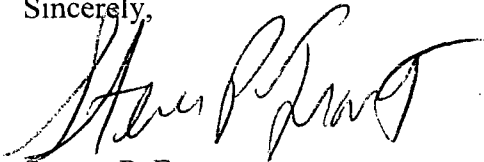
Also in accordance with the Board's request during the October 3, 2006 prehearing teleconference, Exelon hereby provides the following list of exhibits that it intends to introduce as evidence at the November 7-9, 2006 mandatory hearing in Decatur, Illinois:

1. Exelon Generation Company, LLC, Early Site Permit Application, Revision 4, April 14, 2006;
2. The following slide presentations to be given by Exelon's witnesses at the hearing:
  - Overview of Clinton Early Site Permit Application (Thomas P. Mundy)
  - Safety Assessment of Clinton Early Site Permit (Eddie R. Grant)

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- Environmental Analyses for Clinton Early Site Permit (Tamar J. Cerafici)

Sincerely,



Steven P. Frantz  
Counsel for Exelon Generation Company, LLC

Enclosures

cc: Service List