From: <eddie.grant@exeloncorp.com>
To: <nvg@nrc.gov>
Date: 9/28/04 2:33PM
Subject: Response to RAI Letter No. 5

Nannette Gilles

Attached is a copy of the response to RAI letter No. 5 that is being mailed today.

Thanks,

Exelon
Early Site Permit Project
Eddie R. Grant
610.765.5001 voice
610.765.5755 fax
850.598.9801 cell

Mail Envelope Properties (4159AE55.A58 : 4 : 23128)

Subject: Response to RAI Letter No. 5
Creation Date: 9/28/04 2:28PM
From: <eddie.grant@exeloncorp.com>

Created By: eddie.grant@exeloncorp.com

Recipients
nrc.gov
owf4_po.OWFN_DO
NVG (Nanette Gilles)

exeloncorp.com
thomas.mundy CC

Post Office	**Route**
owf4_po.OWFN_DO	nrc.gov
	exeloncorp.com

Files	**Size**	**Date & Time**
MESSAGE	1128	09/28/04 02:28PM
TEXT.htm	3262	
Blank Bkgrd.gif	145	
Ltr - 2004-09-28 Kray RAI No 5 Response.pdf	6999486	
Mime.822	9585597	

Options
Expiration Date: None
Priority: Standard

Reply Requested:	No
Return Notification:	None
Concealed Subject:	No
Security:	Standard

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****

CC: thomas.mundy@exeloncorp.com

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www.exeloncorp.com

52.17

September 28, 2004

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555

Subject: Response to Request for Additional Information (RAI) Letter No. 5 – Exelon Early Site Permit (ESP) Application for the Clinton ESP Site (TAC No. MC1122)

Re: Letter, U.S. Nuclear Regulatory Commission (N. V. Gilles) to Exelon Generation Company, LLC, (M. Kray), dated July 27, 2004, Request for Additional Information (RAI) Letter No. 5 – Exelon Early Site Permit (ESP) Application for the Clinton ESP Site (TAC No. MC1122)

Enclosed, as requested in the referenced letter, are responses to the RAIs associated with the topics of site security and general information portions of the Exelon Generation Company, LLC (EGC) ESP.

Please contact Eddie Grant of my staff at 610-765-5001 if you have any questions regarding this submittal.

Sincerely yours,

Marilyn C. Kray
Vice President, Project Development

TPM/ERG

cc: U.S. NRC Regional Office (w/ enclosures)
Ms. Nanette V. Gilles (w/ enclosures)

Enclosures: Response to RAIs 1.5-1 and 3.4.1.6-1 (and associated attachments)

AFFIDAVIT OF MARILYN C. KRAY

State of Pennsylvania

County of Chester

The foregoing document was acknowledged before me, in and for the County and State aforesaid, by Marilyn C. Kray, who is Vice President, Project Development, of Exelon Generation Company, LLC. She has affirmed before me that she is duly authorized to execute and file the foregoing document on behalf of Exelon Generation Company, LLC, and that the statements in the document are true to the best of her knowledge and belief.

Acknowledged and affirmed before me this 28th day of September, 2004.

My commission expires 10-6-07.

Vivia V. Gallimore
Notary Public

COMMONWEALTH OF PENNSYLVANIA
Notarial Seal
Vivia V. Gallimore, Notary Public
Kennett Square Boro, Chester County
My Commission Expires Oct. 6, 2007
Member, Pennsylvania Association Of Notaries

NRC Letter Dated: 07/27/2004

NRC RAI No. RAI 1.5-1

Please provide a comprehensive listing of NRC regulations applicable to the Exelon early site permit (ESP) SSAR and the affected SSAR sections, similar to that provided in Table 1.5-1 for NRC RGs. Also, please update Table 1.5-1 to include all applicable RGs or confirm that it is complete as is. For example, please state whether 10 CFR 100.21(f) and RG 4.7 apply to SSAR Section 3.4.1.6, "Site Characteristics - Security Plans."

EGC RAI ID: R10-1

EGC RESPONSE:
The NRC Review Standard (RS)002, "Processing Applications for Early Site Permits," identifies the NRC regulations applicable to the EGC ESP SSAR. This NRC document also identifies the affected SSAR sections. EGC deviations from the RS002 identifications are provided as follows.

- RS002, § 3.5.1.6 - This topic is addressed in EGC ESP SSAR § 2.2.
- RS002, § 13.3 - This topic is addressed in EGC ESP "major features" Emergency Plan.
- RS002, § 15.0 - This topic is addressed in EGC ESP SSAR § 3.3.
- RS002, § 17.1.1 - This topic is not addressed in the EGC ESP SSAR since 10 CFR 52.17 does not require quality assurance information to be included in the application.
- SSAR, § 3.1 - This section addresses Radiological Effluent per 10 CFR 52.17(a)(1)(iv). This topic is also addressed in the Environmental Report.
- SSAR, § 3.2 - This section addresses Thermal Discharges per 10 CFR 52.17(a)(1)(iv). This topic is also addressed in the Environmental Report.
- SSAR, § 3.3 - This section addresses RS002 § 15.0 topics.
- SSAR, § 3.4 - This section addresses conformance with 10 CFR 100 - Reactor Site Criteria.

As indicated in the SSAR, Chapter 1, Section 1.5, Table 1.5-1 lists the applicable Division 1 NRC Regulatory Guides. EGC considers Table 1.5-1 to be complete for Division 1. The only other ESP applicable Regulatory Guide is from Division 4. The EGC SSAR considered Regulatory Guide 4.7, Revision 2 (April 1998), "General Site Suitability Criteria for Nuclear Power Stations," Regulatory Positions C.1 though C.8. Regulatory Positions C.9 through C.12 are not addressed in the SSAR since these sections provide guidance applicable only to the content of the environmental report. The affected SSAR Sections for this regulatory guide are 2.1.2, 2.1.3, 2.2, 2.3, 2.4, 2.5, 3.4.1.6, and 3.4.1.7. Regulatory Guide 4.7 was not listed because it generally provided no additional specific criteria for consideration. One exception was the specific example.

Regulatory Guide 4.7 was used as a reference for the distance criterion as identified in SSAR section 3.4.1.6. Further, SSAR sections 3.4.1 and 3.4.2 were intended to address 10 CFR 100.21 and 100.23, respectively, including 10 CFR 100.21(f) in SSAR Section 3.4.1.6, "Site Characteristics - Security Plans."

Additionally, during review of this information, an additional exception has been identified for RG 1.165. Regulatory Position C.3, near the end of item 2, implies that significant revisions to the LLNL and EPRI data base would impact the PSHA. A new exception is identified to clarify that any impacts to the site specific PSHA would only be within the provisions and limitations of 10 CFR 50.109 and 52.39.

ASSOCIATED EGC ESP APPLICATION REVISIONS:
Revise SSAR, Chapter 1, Section 1.5, from:

Table 1.5-1 lists the applicable Division 1 USNRC Regulatory Guides considered in the development of the EGC ESP SSAR. Relevant portions of these guides were applied, as appropriate, as discussed in the conformance/comment column of the Table.

To read:

Table 1.5-1 lists the applicable Division 1 USNRC Regulatory Guides considered in the development of the EGC ESP SSAR. Relevant portions of these guides were applied, as appropriate, as discussed in the conformance/comment column of the Table.

The only other ESP applicable Regulatory Guide is from Division 4. The EGC SSAR considered Regulatory Guide 4.7, Revision 2 (April 1998), "General Site Suitability Criteria for Nuclear Power Stations," Regulatory Positions C.1 though C.8. Regulatory Positions C.9 through C.12 are not addressed in the SSAR. The affected SSAR Sections for this regulatory guide are 2.1.2, 2.1.3, 2.2, 2.3, 2.4, 2.5, 3.4.1.6, and 3.4.1.7. Regulatory Guide 4.7 provides no additional specific criteria for consideration with the one exception that Regulatory Guide 4.7 was used as a reference for the distance criterion as identified in SSAR section 3.4.1.6.

In addition NRC Review Standard (RS)-002, "Processing Applications for Early Site Permits," identifies the NRC regulations applicable to the EGC ESP SSAR. This NRC document also identifies the affected SSAR sections. EGC deviations from the RS002 identifications are as follows.

- RS002, § 3.5.1.6 - This topic is addressed in EGC ESP SSAR § 2.2.

- RS002, § 13.3 - This topic is addressed in EGC ESP "major features" Emergency Plan.

- RS002, § 15.0 - This topic is addressed in EGC ESP SSAR § 3.3.

- RS002, § 17.1.1 - This topic is not addressed in the EGC ESP SSAR.

- SSAR, § 3.1 - This section addresses Radiological Effluent per 10 CFR 52.17(a)(1)(iv). This topic is also addressed in the Environmental Report.

- SSAR, § 3.2 - This section addresses Thermal Discharges per 10 CFR 52.17(a)(1)(iv). This topic is also addressed in the Environmental Report.

- SSAR, § 3.3 - This section addresses RS002 § 15.0 topics.

- SSAR, § 3.4 - This section addresses conformance with 10 CFR 100 - Reactor Site Criteria.

Further, SSAR sections 3.4.1 and 3.4.2 address 10 CFR 100.21 and 100.23, respectively, including 10 CFR 100.21(f) in SSAR Section 3.4.1.6, "Site Characteristics - Security Plans."

Revise SSAR, Chapter 1, Section 1.5, Table 1.5-1, RG 1.165 Applicability/Conformance column, from:

C.1: Conforms.
C.2: Conforms.
C.3: <u>Alternate method used to conduct probabilistic seismic hazard analysis.</u>
C.4: Conforms.

To read:

C.1: Conforms.
C.2: Conforms.
C.3: Conforms, except 1) alternate method used to conduct probabilistic seismic hazard analysis (PSHA), and 2) revisions of the industry seismic databases and/or reexamination of the acceptability of the reference probability, and associated updating of the site specific PSHA, are subject to the provisions and limitations of 10 CFR 50.109 and 52.39.
C.4: Conforms.

ATTACHMENTS:
None U.S. Nuclear Regulatory Commission September 28, 2004, Enclosure Page 4 of 5

NRC Letter Dated: 07/27/2004

NRC RAI No. RAI 3.4.1.6-1

Please provide scale drawings that depict:

. • The existing protected area (PA) boundary
. • The existing vehicle checkpoint
. • Proposed PA boundary for the power block structures and safety related cooling towers

. • The outer boundary of the owner controlled area (OCA)
. • The shoreline of the lake within the OCA
. • All roads and railroads that penetrate the OCA
. • The proposed location of the intake structure
. • Existing culverts (greater than 254 square inches in cross-section area) that extend from outside to inside the existing PA
. • Existing or planned culverts (greater than 254 square inches in cross-section area) that extend from outside to inside either the area for power block structures and/or the area for safety related cooling towers, and
. • Route 54 in relation to the OCA

EGC RAI ID: R10-2

EGC RESPONSE:
SSAR, Chapter 3, Figure 3.4-1 has been prepared to supply the requested details with the exceptions of the existing vehicle checkpoint and the culverts.

The existing vehicle checkpoints were not provided on the drawing because they are not permanent site fixtures (i.e., they have been in several locations since 2001 and can be moved as desired) and, as such, the existing CPS vehicle checkpoints do not impact the capability to develop adequate security plans and measures for the EGC ESP site.

While there is one existing culvert in the area of expected ESP facility construction, it is expected to be removed for the EGC ESP facility construction. Thus, it will not impact the ability to develop adequate security plans and measures for the EGC ESP site. Possible future culvert locations have not been determined at this time. However, since the proposed protected area is relatively flat terrain, culvert(s) that might be needed for the ESP facility are not expected to be special in any way, nor present any significant challenges with regard to developing adequate protected area barriers.

ASSOCIATED EGC ESP APPLICATION REVISIONS:
Revise SSAR, Chapter 3, Section 3.4.1.6, from:

The EGC ESP Facility is located approximately 700 ft south of the existing CPS Facility. The site plot plan is provided in Figure 1.2-3. The detailed security plans developed for U.S. Nuclear Regulatory Commission September 28, 2004, Enclosure Page 5 of 5

the EGC ESP Facility will be established at the COL stage once a reactor design is selected and detailed plant layout information is available.

To read:

The EGC ESP Facility is located approximately 700 ft south of the existing CPS Facility. Figure 3.4-1 shows:
-existing protected area boundary

.- proposed boundary for the power block structures and safety related cooling towers - outer boundary of the owner controlled area (OCA) that is fenced
.- shoreline of the lake within the OCA
.- roads and railroads that penetrate the OCA
.- proposed location of the intake structure.

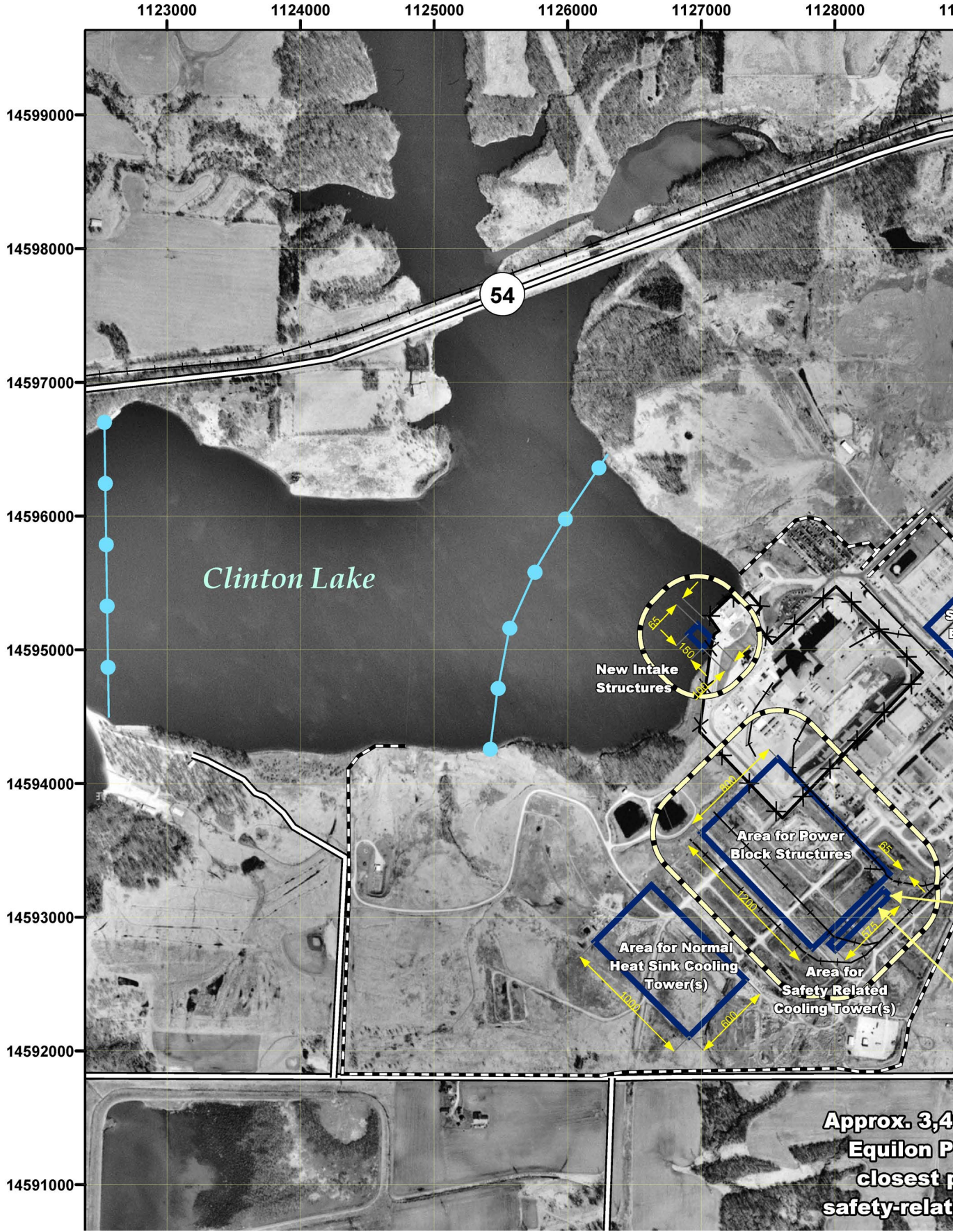
The detailed security plans developed for the EGC ESP Facility will be established at the COL stage once a reactor design is selected and detailed plant layout information is available.

Revise SSAR, Section 3.4, to add new Figure 3.4-1 as provided in the attached file, RAI 3.4.1.6-1 SSAR Figure 3.4-1.pdf.

ATTACHMENTS:
RAI 3.4.1.6-1 SSAR Figure 3.4-1.pdf

RAI ATTACHMENTS

1. RAI 3.4.1.6-1 SSAR Figure 3.4-1.pdf (1 page)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Clinton Lake
New Intake Structures
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Area for Power Block Structures
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1200
65
Area for Normal Heat Sink Cooling Tower(s)
1000
600
Area for Safety Related Cooling Tower(s)
Approx. 3,4
Equilon P
closest
safety-relat