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January 3, 2011

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Ms. Tomeka Terry
Chief, Rules, Announcements, and Directives Branch
Division of Administrative Services
Mail Stop TWB-05-B01M
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001

RE: Proposed Early Site Permit Application for Exelon Nuclear Holdings Texas, LLC for the Victoria County Station, Victoria County.

Dear Ms. Terry:

Texas Parks and Wildlife Department (TPWD) received the November 8, 2010 notification for the issuance of and request for comment on the above referenced Early Site Permit Application. The notification was submitted in accordance with the National Environmental Policy Act of 1969, as amended (NEPA), and the Fish and Wildlife Coordination Act of 1934, as amended. Exelon Nuclear Holdings Texas, LLC (Exelon) has prepared an Environmental Report (ER) that has been submitted to the Nuclear Regulatory Commission (NRC) in preparation of the Draft Environmental Impact Statement (DEIS) for the Early Site Permit (ESP) for the proposed Victoria County Station. The U.S. Army Corps of Engineers Galveston District (USACE) is a cooperating agency in the preparation of the DEIS so that the Final EIS can be used to decide on issuance of permits pursuant to Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act.

At this time Exelon is applying for an ESP in which the NRC will prepare a DEIS to determine if the Victoria County Station (VCS) is a suitable site for the construction and operation of a new nuclear power generating facility. The application for an ESP does not include any decision or approval to build the facility, which would be considered at the time of filing of an application for a combined license (COL). No specific plant designs have been chosen at this time for the VCS site. Instead, a set of plant design and habitat impact parameters have been developed and presented in the ER. When Exelon files an application for the COL, the environmental impacts will be reevaluated in an EIS process.

Based on TPWD staff review of the information provided, TPWD offers specific recommendations regarding the preparation of the DEIS and concerns regarding the project that can be found in Attachment A to this letter. Listed below are TPWD's principal concerns, which are more fully addressed in Attachment A:

- Proposed new location 345-kV transmission line routes have not been fully assessed through a routing and alternatives evaluation, thus impacts associated with the proposed new lines are not fully articulated. Without an assessment of

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Ms. Tomeka Terry
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routes and their alternatives for inclusion in the DEIS, the NRC may be segmenting project impacts under Section 1508.27 (7) of NEPA. This section states, "Significance [of impacts] cannot be avoided by terming an action temporary or by breaking it down into small component parts."

- The proposed impacts to aquatic resources including: the Guadalupe River, the San Antonio Bay System, the Victoria Barge Canal, Kuy Creek and Dry Kuy Creek, and their associated onsite tributaries, Linn Lake, and associated wetlands.
- Hydrological changes to the Guadalupe River ecosystem that will result from increased withdrawals and consumptive water losses and impacts to this system from blowdown discharge.
- From 2007-2009 Texas experienced one of the severest droughts in Central Texas since the 1950's. Victoria County specifically had the 5th driest year on record since 1900. The one year sampling performed for the ER is not adequate nor representative of normal conditions at this site.
- TPWD staff was not able to locate a specific compensatory mitigation plan for the project's proposed wetland plan or any other habitats proposed to be impacted in the ER. TPWD's review of Section 4.6 of the ER, Measures and Controls to Limit Adverse Impacts During Construction Activities, provides some very generalized measures and controls that the review team considered in its evaluation of impacts of building the VCS.

TPWD appreciates the opportunity to provide comments on this important project and participate in the NEPA process. If you have any questions regarding our comments, please contact Amy Turner at (361) 576-0022. Thank you.

Sincerely,



Ross Melinchuk
Deputy Executive Director, Natural Resources

RM:AJT:gg

Attachment A

This attachment contains Texas Parks and Wildlife Department (TPWD) specific recommendations regarding the Environmental Report (ER) and the proposed Draft Environmental Statement (DEIS) and concerns regarding Exelon Nuclear Holdings Texas, LLC (Exelon) Early Site Permit (ESP) application for the Victoria County Station (VCS), Texas. This attachment has been affixed to TPWD's January 3, 2011 cover letter to the Nuclear Regulatory Commission (NRC). These recommendations are organized to parallel the ER format. TPWD provided scoping comments for the project, as follows:

July 8, 2008, Letter to Mr. Kenneth Ainger with Exelon Generating for the proposed combined license for the proposed Victoria County Nuclear Facility from Carter Smith. (Attached)

Project Description

The proposed action is the issuance of an ESP approving the VCS site as suitable for the future construction and operation of a new nuclear generating facility. This proposed action does not include any decision or approval to build the facility, which would be considered at the time of filing of an application for a combined license (COL). No specific plant design has been chosen for the VCS site.

VCS is located on approximately 11,500 acres in a rural area of Victoria County, approximately 13.3 miles south of the city of Victoria, Texas. The power block area of the site is approximately 4.1 miles west of the Guadalupe River. The site property boundary runs through Linn Lake on the east and runs adjacent to U.S. Highway 77 on the west and the Union Pacific Railway on the southeast.

Chapter 2 Environmental Description

2.2 Land Use and Transmission

2.2.2.1 Proposed Transmission Corridors

Exelon estimated that 8 transmission corridors would be required for the proposed project:

- VCS to Hillje (two lines on double-circuit towers) (approximately 60 miles long)
- VCS to Coletto Creek (two lines on double-circuit towers) (approximately 20 Miles long)
- VCS to Blessing (approximately 60 miles long)
- VCS to Whitepoint (approximately 6-20 miles long)
- VCS to South Texas Project (approximately 6-20 miles long)

- VCS to Cholla (approximately 46 miles long)

Table 2.2-2 Summary of the habitat impacts for the proposed transmission corridors to connect the VCS site to the power grid.

Land-Use Category	Acreage
Open Water	13
Urban	70
Barren Land	1
Forest	341
Shrub/Scrub	361
Herbaceous	65
Hay/Pasture	1,056
Cultivated Crops	747
Wooded Wetlands	124
Emergent herbaceous wetlands	31
Total Disturbed Area	2,809

2.2.2.2 Cooling Basin Blowdown Line and VCND Transportation Corridor

A heavy haul road would be built onsite to access the Victoria County Navigation District (VCND) transportation corridor. Transportation of heavy components from a barge facility at the Port of Victoria Turning Basin to the VCS construction site would be accomplished using a heavy haul road and transportation corridor. A 48-inch discharge blowdown line would be installed (buried) within the right-of-way of the heavy haul road and transportation corridor. The corridor would cross Black Bayou, Sand Bayou, and unnamed water course and gullies, and the Guadalupe River. The construction right-of-way for the combined transportation corridor and blowdown line would be approximately 270 feet wide between the VCS and the Guadalupe River, and approximately 300-310 feet wide from the Guadalupe River to the barge facility. The ER states, the blowdown line would be used to blow down water in the cooling basin to control the accumulation of salts and solids within the cooling reservoir. Blowdown water would be discharged to the Guadalupe River.

2.2.2.3 Rail Spur Connection

A connection from the Union Pacific rail line to a new proposed rail spur would be constructed near the southern corner of the site.

2.2.2.4 Raw Water Makeup System and Intake Structure

Makeup water to the cooling basin would be drawn from the Guadalupe River at a RWMU system intake structure and pumping station. Three proposed routes for the makeup water pipeline have been proposed.

Route A extends southwest from the pumping station for approximately 1.4 miles before turning northwest for 8.7 miles. This route would cross the San Antonio River, Elm Bayou, Cushman Bayou, Kuy Creek, and a tributary of Dry Kuy Creek.

Route B follows Route A from the pumping station for 1.4 miles then extends another 1.2 miles to the southwest. It then extends to the northwest for 3.5 miles and converges with Route A for the remaining 5.2 miles. This route would cross the San Antonio River and one of its tributaries, Cross Bayou, Cushman Bayou, and a tributary of Dry Kuy Creek.

Route C extends northwest from the pumping station for 8.5 miles to the VCS. It crosses the San Antonio River, Elm Bayou, Kuy Creek, a tributary of Kuy Creek, and Dry Kuy Creek. This route also crosses a Natural Resource Conservation Service Wetlands Reserve Program area between Elm Bayou and Kuy Creek.

2.4.1.2 General Site Description

The VCS construction landscape consists of a proposed cooling basin (5,785 acres disturbed) and approximately 1350 additional acres for the power block, ancillary facilities, parking, and laydown areas. Associated offsite areas include a cooling basin blowdown line to the Guadalupe River parallel to the transportation corridor, a rail spur, and an approximately 8.5 to 11-mile long raw water makeup (RWMU) system pipeline between the RWMU pumphouse in Refugio County and VCS. New transmission corridors would be established to connect VCS with the existing power grid, but the exact route of these corridors has yet to be determined.

2.4.1.5 Threatened and Endangered Species

The ER states that the applicant surveyed for threatened and endangered species and species of concern in 2008. In addition, Exelon has initiated consultation with TPWD regarding endangered and threatened resources.

Recommendation: The ER does not address all rare resources outlined by TPWD in the 2008 correspondence (attached). TPWD recommends that the NRC address all rare resource concerns for the VCS site and all proposed off-site infrastructure.

Determining the actual presence of a species in a given area depends on many variables including daily and seasonal activity cycles, environmental activity cues, preferred habitat, transiency and population density (both wildlife and human). The absence of a species can be demonstrated only with great difficulty and then only with repeated negative observations, taking into account all the variable factors contributing to the lack of detectable presence.

Recommendation: According to the ER, survey efforts were conducted for rare resources in 2008. TPWD recommends that Exelon conduct multiple year surveys that span varying weather patterns to adequately assess presence or absence of rare resources.

On November 5, 2009, the Texas Parks and Wildlife Commission placed 15 native freshwater mussel species on the state threatened species list; therefore, previous

TPWD correspondence regarding the proposed project did not fully address the newly-listed species.

Recommendation: TPWD recommends the DEIS include a description of the mussel sampling methodology and its appropriateness for obtaining baseline data. The DEIS should include a summary of existing TPWD survey data for mussels from VCS to downstream. Because the data may be outdated, TPWD recommends Exelon conduct additional pre-operation mussel sampling from VCS to downstream reaches below the VCS site. Using survey methodology appropriate for mussels, sampling should assess the habitats that have suitable conditions to support mussels. For additional data regarding mussel survey records for the Guadalupe River in the project vicinity, please coordinate with Michael Warriner, TPWD Invertebrate Biologist, at (512) 389-8759.

Chapter 3 Plant Description

3.3 Plant Water Use

3.3.1 Water Consumption

Plant water would come from two water sources, the Guadalupe River and local wells, depending on the quality of water required and the intended use.

3.5 Radioactive Waste Management System

According to the ER, because a reactor design has not been chosen for the VCS site, bounding values have been developed for the quantities of radioactive waste that are projected to be generated and processed and then stored or released as liquid or gaseous effluent or as solid waste. During the COL and design phase of VCS, sources of radioactive waste will be identified and collection and processing systems will be evaluated and designed.

Recommendation: TPWD recommends the DEIS identify potential discharge locations of liquid radioactive waste and options for disposal of solid radioactive waste. Impacts associated with both types of radioactive waste should be assessed in the DEIS.

3.7 Power Transmission

The ER indications that the proposed interconnection components to complete the interface between the VCS American Electric Power (AEP) WHY Substation and the interconnections to the regional power grid include:

- A new on-site AEP 345-kV WHY Substation for VCS.
- Onsite 345-kV tie-lines from VCS unit switchyards to the new AEP 345-kV WHY Substation.

- Six new or rerouted 345-kV transmission lines (eight total circuits) that interconnect VCS with various existing 345-kV substations and a new Cholla substation of the regional AEP transmission system.

The following transmission lines beyond the VCS-direct interconnections are proposed for construction to deliver VCS- generated power to the regional transmission grid:

- Cholla Substation to Zorn Substation (approximately 75 miles long)
- Cholla Substation to Coletto Creek Substation (approximately 40 miles long)
- Hillje Substation to O'Brien Substation (approximately 70 miles long)
- Marion Substation to Elm Creek Substation (approximately 14 miles long)
- East Bernard Substation to Flewellen Substation (approximately 29 miles long)
- Cholla Substation to Elm Creek Substation to STP Substation

The existing Elm Creek to STP 345-kV circuit would be "looped in" to the Cholla Substation to facilitate these new line terminations. Therefore, no new transmission line construction is necessary for this segment.

3.9 Construction Activities

3.9.1.3 Road, Rail, and Barge Facility Construction

A construction access road will be constructed from U.S. Highway 77 onto the site property. A new rail spur will connect the site to the Union Pacific railway line, which passes southeast of the VCS property. The Victoria Barge Canal connects the Gulf Intracoastal Waterway (GIWW) to the Port of Victoria, and will be used for large module delivery. Upon exiting the Port of Victoria barge facility and crossing the Victoria Barge Canal levee, the transportation corridor would traverse the Guadalupe River floodplain in a southwesterly direction toward the VCS site. The transportation corridor would run adjacent to the VCS site and shortly thereafter become a divided highway to its connections point with U.S. Highway 77. A separate heavy haul road would be constructed entirely on the VCS site to link the power block and fabrication areas with the transportation corridor.

3.9.1.3 Temporary Construction Facilities Construction

The temporary construction parking lot and construction laydown and fabrication areas will be cleared, grubbed, graded, and graveled with a road system to accommodate the site construction traffic. Temporary construction facilities including offices, warehouses, temporary workshops, sanitary facilities, locker rooms, training facilities, and access facilities will be constructed.

3.9.1.8 Cooling Basin Construction

The cooling basin will have a footprint of approximately 5,785 acres and a water surface area, depending upon the level, of approximately 4,900 acres.

Chapter 4.1 Land-Use Impacts

4.1.1.1 The Site

The proposed units and their supporting facilities would be located on the 11,532-acre VCS site. Table 4.1-1 summarizes the acreage impacts of each onsite component of proposed VCS facility.

Table 4.1-1. Proposed permanent and temporary impacts for the VCS project.

Disturbed Area	Acreage	Temporary/Permanent
Powerblock Area	330	Permanent
Switchyard Substation Area	90	Permanent
Heavy Haul Road and Cooling Basin		
Blowdown Line	22	Permanent
Construction Roads and Laydown Area	433	Temporary
VCND Transportation Corridor	34	Permanent
Pipeline and Railroad	93	Permanent
Spoils Area	342	Temporary
Cooling Basin Area	5,785	Permanent
Total Disturbed Area	7,129	

An additional 775 acres, not accounted for in Table 4.1-1, would be disturbed for temporary construction facilities, laydown areas, construction parking areas, and borrow/spoils storage.

Recommendation: TPWD does not concur with Exelon's conclusion that the land use impacts to the proposed 11,532 acres of the VCR site are SMALL and would not require mitigation.

TPWD recommends that the NRC reevaluate the conclusions made by Exelon and that Exelon mitigate for the loss of available habitat.

4.1.2 Transmission Corridors and Offsite Areas

4.1.2.1 Proposed Transmission Corridors

According to the ER, the proposed transmission corridors would require approximately 2,809 acres. The land use is comprised of agricultural, forests, wetlands, scrub/shrub/herbaceous vegetation, and urban areas. Exelon states that AEP would be responsible for the routing and application process through the Public Utilities Commission.

Recommendation: This project is a federal action, and would therefore be subject to NEPA requirements. Although the CCN process is not always subject to NEPA, the transmission lines associated with the VCS would be associated with a federally regulated project and would therefore have a federal nexus.

TPWD recommends that the NRC fully address the direct impacts of the proposed transmission line corridors in the DEIS; by not doing so it could appear to be “segmenting” by attempting to address the impacts of these transmission corridors under the CCN process. An analysis of alternative routes and a preferred route for each new transmission line should be identified for the DEIS.

In addition, TPWD does not concur that the approximately 2,809 acre impact from the construction of the proposed transmission lines could be considered SMALL and asks that the NRC address this assessment in the DEIS.

The Avian Power Line Interaction Committee (APLIC) has developed the following guidelines for minimizing adverse encounters with wildlife.

APLIC. 1994. Mitigating Bird Collisions with Power Lines: The State of the Art in 1994. Edison Electric Institute, Washington, D.C., 78 pp.

APLIC. 2006. Suggested Practices for Avian Protection on Power Lines: The State of the Art in 2006. Edison Electric Institute, APLIC, and the California Energy Commission, Washington, D.C. and Sacramento, CA, 140 pp.

Recommendation: TPWD recommends Exelon and AEP incorporate these guidelines into the project to limit adverse impacts to wildlife, including migratory birds. These resources are available online at: www.aplic.org, www.eei.org, www.energy.ca.gov or at 1-800-334-5453.

4.1.2.2 Blowdown Piping

According to the DEIS the onsite disturbance associated with the blowdown piping is included with the VCS heavy haul road disturbance of 22 acres (Table 4.1-1). The proposed disturbed areas for the blowdown pipeline corridor would be 80-foot wide and would parallel the transportation corridor for approximately 3 miles, resulting in an offsite disturbed area of approximately 28 acres. The offsite portion of the blowdown line would traverse Black Bayou and its tributaries, a small unnamed stream east of San Bayou, mapped wetlands, and the Guadalupe River floodplain prior to turning south and terminating at the Guadalupe River. According to the ER, these impacts are addressed in Section 4.7 Cumulative Impacts.

Recommendation: As previously stated, this project is a federal action, and would therefore be subject to NEPA requirements. Although transportation processes are not always subject to NEPA, the infrastructure associated with the VCS would be associated with a federally regulated project and would therefore have a federal nexus.

TPWD recommends that the NRC fully address all direct impacts of the proposed infrastructure onsite and offsite in the DEIS; by not doing so it could appear to be “segmenting” by attempting to address these impacts through other review processes. An analysis of proposed routes, alternatives, and proposed mitigation should be identified for the DEIS.

Comment: The proposed heavy haul road will likely block and/or change normal water flow within the floodplain. This will not only impact the duration of floods but it will most likely impact the plant communities and the wildlife dependent on them, not to mention the upstream flooding possibilities. This floodplain is almost 3.5 miles across and floods the entire basin for months at a time during some events. Any infrastructure, including a haul road, built over this floodplain must have a minimal impact during these (mostly annual) events. Upstream flooding could occur if the hydrology is altered.

4.1.2.4 Raw Water Makeup System and Intake Structure

Makeup water to the cooling basin would be drawn from the Guadalupe River at a new RWMU system intake structure, canal, and pumping station and impacts would range from 119 acres to 159 acres for the three possible routes.

4.2 Water Related Impacts

According to the ER water bodies that could be affected include the Guadalupe River, the San Antonio Bay System, the Victoria Barge Canal, Kuy Creek and Dry Kuy Creek, and their associated onsite tributaries, Linn Lake, more than one dozen small, isolated stock ponds, and 30 isolated wetlands on the site (including six large isolated wetlands ranging in size from approximately 10.6 acres to 38.5 acres).

Overhanging vegetation in riparian and wetland areas, undercut banks, logs and other streamside features provide cover for aquatic species. These types of cover and instream habitats could be disturbed by clearing and trenching during construction resulting in decreased shading, increased water temperature, bank erosion, altered hydrology, and displacement for wildlife from disturbed area.

Recommendation: Green and Mission Lakes, and Hynes and Guadalupe Bays are important aquatic resource sites. During construction, sediment-laden stormwater should not be allowed to flow into these lakes and bays. High turbidity and suspended solids can have deleterious effects on oysters and seagrass beds. TPWD recommends turbidity curtains should be used to avoid these impacts. Measures must be in place to assure that necessary flows are maintained and that stormwater from the site is retained and treated before release.

During operation, contaminants released into the Guadalupe River would very quickly spread throughout the coastal lakes and bay system potentially having a

significant impact upon many commercially and recreationally important species including threatened and endangered species such as whooping cranes and sea turtles.

4.3 Ecological Impacts

4.3.1.1 The Site and Vicinity

According to the ER, approximately 7,129 acres on site would be disturbed by the construction of the VCS. Acreage impacts consist of approximately 6,354 acres of uplands habitat and 585 acres of wetland habitat. At the end of construction approximately 775 acres of temporary impacts would be restored and revegetated.

Recommendation: TPWD recommends that disturbed areas be restored to pre-construction contours and planted with a mixture of native herbaceous species, especially when the adjacent property of the proposed project contains native species of vegetation. Introduction of non-native species into native landscapes should be prevented. Native perennial grass species preferred by TPWD for permanent cover include Switchgrass (*Panicum virgatum*), Eastern Gamagrass (*Tripsacum dactyloides*), Virginia Wildrye (*Elymus virginicus*), Canada Wildrye (*E. canadensis*), Yellow Indiangrass (*Sorghastrum nutans*) and Little Bluestem (*Schizachyrium scoparium*). Other species appropriate for the area can be found by accessing the TPWD Texas Plant Information Database at <http://tpid.tpwd.state.tx.us/overview.asp> or by accessing the TPWD Wildscapes website at <http://www.tpwd.state.tx.us/huntwild/wild/wildscapes/>.

4.3.1.1 Wetlands

The ER indicates that approximately 1,843 acres of wetlands were located on the VCS site but stated that the site was experiencing unusually dry conditions, thus soil indicators for wetland delineation were used. Due to the drought conditions in Victoria County during the assessment, wetland identification may have been underestimated both in the acreage and in the usage by avifauna.

TPWD is of the opinion that the sampling plan for aquatic resources in the ER is inadequate. Texas is subject to extreme interannual variation in rainfall and hence in stream flows. From 2007-2009 Texas experienced one of the severest droughts in Central Texas since the 1950's. Victoria County specifically had the fifth driest year on record since 1900. The one year sampling performed is not adequate or representative of normal conditions at this site, therefore the TCEQ sampling protocol should be utilized.

Recommendation: TPWD recommends that the NRC and Exelon conduct multiple years of surveying to evaluate the available habitat types and wildlife and avian species use of these habitats for the proposed VCS and offsite infrastructure. The ER was compiled during 2008, a year of extreme drought for the Victoria area, and this could have resulted in a lower wetland classification as well as a decrease of overall utilization of the proposed site by wildlife and avian species due to a lack of water availability.

Isolated wetlands, as well as jurisdictional wetlands, provide valuable habitat for aquatic and terrestrial wildlife. Isolated wetlands within the project area would produce and support plant and invertebrate populations that provide food for a wide variety of waterfowl, wading, and other birds. In addition, these wetlands protect water quality by filtering and retaining freshwater runoff and associated pollutants from adjacent roads and developed properties.

Recommendation: TPWD recommends identifying all wetland areas; ephemeral, isolated and jurisdictional within the project area and minimize any adverse impacts. These wetlands should be verified by the USACE and EPA. Coordination of all impacts to the aquatic resources should be coordinated with Paul Silva with the Coastal Fisheries Division; he can be reached at 361-825-3204. Mitigation for impacts to wetlands has a potential to be addressed in creating wetlands within the cooling reservoir.

For those impacts that cannot be avoided, a comprehensive mitigation plan needs to be developed in consultation with TPWD.

Comment: At this time, it is unclear whether this project will impact a State-owned streambed. Disturbance of the State-owned streambed and removal of streambed materials would require a permit from this Department under Chapter 86, Parks and Wildlife Code. Application forms and additional information can be obtained from Tom Heger at (512) 389-4583.

4.3.1.1.2 Terrestrial Wildlife

Approximately 7,129 acres would be disturbed on site for this project. Construction would result in displacement of large and/or mobile terrestrial wildlife and mortality of some local individuals of smaller, less mobile species.

Recommendation: TPWD recommends that Exelon develop a mitigation plan for all terrestrial resources that become unavailable for wildlife use. TPWD also recommends that Exelon develop a revegetation plan for all areas that are temporarily disturbed and that pre-construction contours are reestablished and that the area is reseeded with native vegetation.

Recommendation: TPWD recommends the identification of both terrestrial and aquatic invasive species present on or near the VCS site and develop plans for eradication or preventing introduction from the site. After construction, the disturbed areas should be managed to return to the natural coastal prairie ecosystem environment.

4.3.1.1.3 Other Construction Impacts

The ER states that avian collisions with equipment (cranes), structures (buildings, fences, etc.), and new transmission lines during the construction phase could possible result in mortalities.

Recommendation: TPWD recommends that Exelon survey for avian related mortalities during construction and post-construction. In addition, measures can be taken to minimize the impact of the proposed facility upon avian communities such as:

- Unless otherwise required by the FAA, only white (preferable) or red strobe lights, or red flashing incandescent lights should be used at night, and these should be the minimum number, minimum intensity, and minimum number of flashes per minute (longest duration between flashes) allowable by the FAA. The use of solid (non-flashing) warning lights at night should be avoided. Current research indicates that solid or pulsating (beacon) red lights attract night-migrating birds at a much higher rate than white strobe lights.
- Recent research indicates that use of only white strobe, red strobe, or red flashing lights provide significant reductions in bird fatalities on towers less than 482 feet (147 meters) AGL (Gehring 2009).
- Security lighting for on-ground facilities and equipment should be down-shielded to keep light within the boundaries of the site.

4.3.1.2 RWMU System Pipeline

According to the ER, the RWMU pipeline would be installed by conventional direct-bury/lay construction techniques for most of the pipeline. Horizontal direct drilling (HDD) would be utilized to minimize impacts for the larger water crossings, such as the San Antonio River, and down the steep bluff near the edge of the San Antonio River. Smaller water crossings would be traversed by conventional above ground methods.

Recommendation: TPWD supports the plan to HDD pipelines under major stream crossings and their associated riparian corridors. TPWD recommends placing the bore entry/exit locations and equipment staging areas outside riparian habitat, in previously disturbed sites.

Pipeline projects usually do not result in a net loss of wetlands, though there are reductions in overall functional value when forested wetlands are permanently and temporarily converted to emergent or scrub-shrub. Typically, an area 10-feet wide centered over the pipeline is permanently maintained in an herbaceous state. Often trees beyond the 10-foot wide area are selectively removed or prevented trimmed; therefore, forested wetlands beyond the 10-foot wide area would not be given the chance to become a mature forested wetland.

TPWD makes the following recommendations:

Recommendation: The permanent impacts to forested wetlands should be calculated to include the total width of area where trees would be removed during long-term maintenance including any removal areas beyond the 10-

feet wide area. All forested wetland clearing is considered a permanent impact that would require compensatory mitigation.

Recommendation: The wetland mitigation plan should take into consideration the temporary and permanent impacts associated with conversion from forested to herbaceous or scrub/shrub wetlands.

Recommendation: The DEIS should address wetland, riparian, and bottomland hardwood impacts at the proposed river and stream crossings to determine that the location chosen is most suitable and provides the least amount of unavoidable impacts compared to other possible crossing locations nearby. Mitigation for impacts to all wetlands, bottomland forests, and riparian areas should be provided.

Recommendation: In these areas, only vegetation impeding construction should be removed, equipment should not be driven over vegetation when it is extremely wet, and heavy machinery should not be stored on vegetative cover for long periods of time. Protective mats should be placed within streambeds during construction to reduce the amount of soil and root disturbance and aid in the recovery of plants.

Recommendation: High quality wetland, riparian, and bottomland hardwood communities should be crossed using directional drilling techniques when avoidance is not feasible. Staging areas for the drilling equipment should be located in previously disturbed areas or areas of low value habitat.

Recommendation: Vehicles not needed specifically at creek crossings should utilize nearby roadways and bridges when crossing wetlands and streams to avoid soil disturbances.

Recommendation: The applicant should minimize disturbance to inert microhabitats, i.e., snags, brush piles, fallen logs, creek banks, and pools as these provide habitat for a variety of wildlife species and their food sources.

In addition, the RWMU system pump station and intake canal would require dredging of the Guadalupe River and the creation of a canal approximately 350 feet wide. Approximately 171,300 cubic yards of spoil would be removed from the Guadalupe River and its banks.

Recommendation: TPWD does not support Exelon's conclusion that the level of impact from construction of the RWMU system and associated infrastructure is SMALL. TPWD recommends that the NRC reevaluate this conclusion. If the NRC reaches the same conclusion as Exelon, TPWD requests a detailed explanation for this conclusion. TPWD recommends that Exelon mitigate for all impacts associated with aquatic resources.

4.7 Cumulative Impacts

This section of the ER evaluates the cumulative impacts of the proposed project combined with the impacts of projects such as: the addition of two new nuclear reactors at the South Texas Project, I-69 Trans-Texas Corridor, White Stallion Energy Center, an additional coal-fired generating unit at the Coletto Creek Power Station, and other projects located within the region.

Recommendation: The ER concludes that the cumulative impacts of the proposed project on Land Use would be SMALL to MODERATE. TPWD does not concur with the assessment that the cumulative impacts on Land Use would be SMALL. At a minimum, TPWD believes that the impacts would MODERATE.

Recommendation: In addition, the ER states that cumulative impacts of aquatic resources are SMALL. TPWD does not concur with this assessment and recommends that the NRC reevaluate this assessment and address this in the DEIS.

Chapter 5 Environmental Impacts of Station Operations

Chapter 5 describes the environmental impacts of operation of the proposed VCS.

5.2 Water-related Impacts

5.2.1.1 Surface Water

The VCS system would require makeup water supplied to the cooling basin from the Guadalupe River to replace water lost as evaporation, drift, seepage, and blowdown. The consumptive use of surface water by VCS would range from approximately 46,000 gallons per minute (gpm) under normal use conditions to approximately 68,300 gpm for maximum use conditions. (Blowdown that would be returned to the Guadalupe River is not considered consumptive loss by Exelon). According to the ER, Exelon considers the hydrologic impacts of the cooling basin to surface water bodies during the operating life of the plant to be SMALL.

5.2.1.3 Summary of Hydrological Alterations

The ER states that the capture of precipitation within the cooling basin footprint could result in the loss of approximately 4,277 acre-feet per year of inflow, mainly to Kuy Creek and Dry Kuy Creek. Seepage from the VCS cooling basin is estimated to contribute approximately 335 acre-feet per year to Kuy Creek and approximately 742 acre-feet per year to Dry Kuy Creek. Both creek are intermittent/ephemeral and currently receive flows only as a result of rain events.

5.2.3 Water Quality Impacts

5.2.3.1 Surface Water

According to the ER, it will be necessary to blow down the cooling basin to control the accumulation of salts and solids within the cooling reservoir. The cooling basin

blowdown will be pumped to the Guadalupe River via a discharge pipeline. The blowdown flows are expected to range between 0 and 6,500 (normal) or 40,000 (maximum) gpm.

Blowdown water could also contain concentrations of some chemical and/or biocides. The ER states that volume and concentration of each constituent discharged to the Guadalupe River as part of the blowdown would meet requirements established in the TPDES permit issued by TCEQ.

Recommendation: Discharges related to plant operation and any hydrostatic testing may alter flow regimes within the lower Guadalupe River and its nearby estuary, San Antonio Bay. San Antonio Bay supports diverse and healthy aquatic habitats including unvegetated estuarine benthic bottoms, estuarine emergent wetlands, oyster reefs and seagrass beds that are designated as essential fish habitat for crabs, oysters, shrimp and fish species. These species provide an important recreational and commercial fishery in the San Antonio Bay system and should be considered in the water resource impact assessments.

TPWD recommends the assessment address effects on estuarine organisms and habitat that result from potential changes in water quality and hydrologic regime. The quantity and timing of discharges should be managed to consider the life cycles of these recreational and commercially important species. In addition, contingency plans should be made to address excessively wet or drought conditions.

Blowdown discharges may contribute to changes to existing water quality parameters (temperature, dissolved oxygen, turbidity, chemical constituents) in the receiving water, especially during low flow and drought conditions when there is less water in the receiving stream for dilution. Estuarine organisms and their habitats may be affected through acute or chronic toxicity and high turbidity; and may affect their survival, reproduction, growth, and recruitment. Filter feeding species such as mussels, clams, and oysters would be particularly vulnerable to the introduction of pollutants or disturbance of sediments affecting water quality, instream and estuarine habitat.

Recommendation: TPWD recommends operational monitoring of aquatic resources (biota and habitat) of VCS, Guadalupe and San Antonio Rivers from VCS downstream to, and including upper San Antonio Bay. Operation procedures should be developed to detect levels of aquatic biota and habitat impact and to implement mitigation strategies as impacts above negligible levels are detected. TPWD recommends the NRC review team require the development and support of a cooperative monitoring program that includes fixed monitoring stations designed to monitor turbidity and specific contaminants that may flow into Guadalupe and Hynes Bays as a result of the project. TPWD, among other agencies, has expertise and interest in participating in the design and operation of a monitoring program. An adaptive management strategy should be incorporated to mitigate the impacts

revealed through monitoring. Additional pressures on biota and habitat as a result of the project should be reduced through mitigation to restore, enhance or create habitat to help offset anticipated impacts. As an aid in mitigating impacts, TPWD recommends the NRC review team incorporate operational strategies to ensure base flows and episodic releases entering the Guadalupe River maintain the existing characteristics of the hydrologic flow regime, and is consistent with applicable environmental flow standards for the river and bay system.

5.11 Cumulative Impacts

5.11.2 Hydrology and Water Use

The proposed project would require an annual maximum withdrawal of 75,000 acre feet of water from the Guadalupe River for makeup water to the cooling basin, and the consumptive use of surface water by VCS would range from approximately 46,000 gpm under normal use conditions to approximately 68,300 gpm for maximum use conditions. The water required for the proposed project is in addition to water requirements by other projects and the proposed Guadalupe Blanco River Authority's (GBRA) permit application to seek new water rights for withdrawal of up to 189,484 acre-feet per year from the Guadalupe River.

Recommendation: TPWD does not concur that the cumulative impacts related to the proposed withdrawals for the VCS cooling basin and the execution of the proposed GBRA water right of up to 189,484 acre-feet per year from the Guadalupe River, are expected to be SMALL.

TPWD recommends that this assessment be reevaluated and that the NRC clearly define the assessment protocol and conclusions in the DEIS.

6.5 Ecological Monitoring

The ER states that ecological monitoring occurred from October 2007 to October 2008.

Recommendation: TPWD is of the opinion that this abbreviated sampling plan in the ER is inadequate. Texas is subject to extreme interannual variation in rainfall. From 2007-2009 Texas experienced one of the severest droughts in Central Texas since the 1950's. Victoria County specifically had the 5th driest year on record since 1900. The one year sampling performed is not adequate or representative of normal conditions at this site, therefore TPWD recommends a multiple year sampling protocol should be utilized to fully evaluate the proposed location and the flora and fauna that inhabit the site.

9.0 Alternatives to the Proposed Action

The proposed action is the NRC issuance of an early site permit to Exelon for approval of the VCS site for one or more nuclear power facilities, separate from the filing of an application for a combined license for such a facility.

9.1 No-Action Alternative

The no-action alternative for a proposed ESP is non-issuance of that permit (i.e., NRC denies the application for an ESP for the proposed site). Not issuing the ESP would avoid significant environmental impacts, because no impacts are caused by a site suitability determination. With respect to a future proposal to construct and operate new nuclear units, the no-action alternative at that point would constitute denial of the construction permit and operating license.

9.3.3 Alternative Site Review

The intention of alternative site analysis is to determine if any obviously superior alternative exists to the site proposed. Within Exelon's region of interest for creating power, screening criteria were applied to evaluate sites, and after following different evaluation and selection refinement processes, lead to the selection of the preferred and alternative sites. Eventually, five candidate sites were chosen, the proposed VCS Site, Buckeye Site, Green Site, Alpha Site, and Bravo Site, and further evaluation determined the preferred site is the Victoria County Station. According to the ER, the decision to locate the nuclear power units at the VCS site was based upon the implementation of a site selection process that evaluated all 22 potential sites. The ER states that there is no significant difference in environmental impact among the five candidate sites.

9.4.1.1 Screening of Alternative Heat Dissipation Systems

This section of the ER evaluated six heat dissipation systems to determine which system would be preferred for the VCS site. The systems were: cooling ponds, spray ponds, dry cooling towers, mechanical draft wet cooling towers, natural draft wet cooling towers, and wet-dry cooling towers. The ER identifies the cooling basin as the preferred cooling system for the proposed VCS site.

General Comments

State Listed Species

Under Chapter 68, Texas Parks and Wildlife (TPW) Code, state-listed species are prohibited from take. TPW Code does not establish an incidental take permit analogous to the U.S. Fish and Wildlife Service (USFWS) Section 10 permit established under the Endangered Species Act. TPWD cannot provide an incidental take permit in preparation of the DEIS.

Recommendation: Although TPWD does not provide incidental take permits, only personnel with a TPWD scientific collection permit are allowed to handle and move state-listed species. Should the applicant require moving state-listed species out of harms way for construction activities, the person

handling the species must possess a scientific collection permit, which can be obtained from TPWD Permitting Specialist, Chris Maldonado, at (512) 389-4647 or at chris.maldonado@tpwd.state.tx.us.

Compensatory Mitigation

TPWD staff was not able to locate a specific compensatory mitigation plan for the project's proposed wetland plan or any other habitats proposed to be impacted in the ER. TPWD's review of Section 4.6 of the ER, Measures and Controls to Limit Adverse Impacts During Construction Activities, provides some very generalized measures and controls that the review team considered in its evaluation of impacts of building the VCS. Table 4-6 also provides the team's list of measures and controls proposed by Exelon to limit adverse impacts during building the VCS. Table 4-6-2 provide a summary of the impact levels determined by the review team which categorizes the impacts as small, moderate, or large.

Recommendation: TPWD recommends that the NRC and Exelon formulate a compensatory mitigation plan for all impacts to fish and wildlife habitat, including wetlands and shallow water habitat for the proposed project. This would include impacts to species and habitats covered under federal law and state resource habitat types not covered by state or federal law. At a minimum, TPWD recommends a replacement ratio of 1:1 for state resource habitat types. TPWD requests the opportunity to review and comment on the compensation plan.



Life's better outside.™

July 8, 2008

Mr. Kenneth Ainger
Exelon Generation
200 Exelon Way
Kennett Square, PA 19348

RE: Proposed application for combined licenses for the proposed Victoria County Nuclear Facility, Victoria County.

Dear Mr. Ainger:

The Texas Parks and Wildlife Department (TPWD) has received your request for information regarding potential impacts to threatened and endangered species and for information on other issues of concern relating to the project referenced above. Under §12.0011 of the Texas Parks and Wildlife Code, TPWD is charged with "providing recommendations that will protect fish and wildlife resources to local, state, and federal agencies that approve, permit, license, or construct developmental projects" and "providing information on fish and wildlife resources to any local, state, and federal agencies or private organizations that make decisions affecting those resources."

Exelon proposes to build and operate two nuclear generating units, each rated at approximately 1,600 megawatts-electrical (gross). Much of the infrastructure, including the generating units and supporting facilities, would be concentrated in an approximately 300-acre area in the northwest part of the approximately 11,000-acre site located in Victoria County. The proposed project also includes offsite infrastructure to facilitate construction and operation.

Offsite infrastructure would be constructed in support of the proposed nuclear generating units, including a heavy-haul road that would be constructed from the plant to a barge slip constructed on the Victoria Barge Canal. The barge slip would accommodate delivery of large components for the construction of the proposed nuclear units. The road would traverse undeveloped land, Black Bayou, and will include a new bridge across the Guadalupe River. A pipeline for discharging plant effluent to the Guadalupe River would parallel the heavy-haul road for most of its route, and then turn south along the river.

Current plans call for the construction of a 4,800-acre cooling reservoir on the site to serve as the source for condenser cooling water. Makeup water for the cooling reservoir would be purchased from the Guadalupe-Blanco River Authority (GBRA). The GBRA operates a system of canals that supply water to industrial, agricultural, and municipal users. The Exelon Victoria County site would obtain

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its water from the Calhoun Canal, southeast of Green Lake, via a newly constructed pipeline. The ultimate source of the water would be the Guadalupe River, just downstream of its confluence with the San Antonio River. Preliminary plans include the construction of an approximately 1,300-acre water storage basin east of and adjacent to the proposed 4,800-acre cooling reservoir. The storage basin and associated pipeline would be operated by the GBRA.

Plans for improvement of transmission system infrastructure are less well defined than facility development plans. Based on preliminary analysis, it appears that it may be necessary to build at least two new transmission lines, including a west-running line that would extend to the Coletto Creek Reservoir area of Goliad County and a northeast-running line that would pass through Calhoun, Jackson, Wharton, and Matagorda counties.

Project Information

Detailed information regarding impacts of the proposed project on fish and wildlife resources were not provided. Therefore, it is not possible to adequately assess the potential impacts of this project upon fish and wildlife resources. TPWD requests that Exelon provide detailed information regarding the proposed project impacts on fish and wildlife resources and address the following concerns and questions.

Water Resources

- *Regional water availability.* Demonstrate sufficient surface/groundwater supplies are available for the proposed project and documented in regional and state water plans.
- *Quantity, timing, and location of water discharges.* Address the discharges related to plant operation and any hydrostatic testing; these discharges may alter flow regimes within the lower Guadalupe River and its nearby estuary, San Antonio Bay. San Antonio Bay supports a diverse and healthy community including oysters, crabs, shrimp, and fish for recreation and commercial harvesting, which should be considered in water resource impact assessments.
- *Quantity, timing and location of water diversions and intakes.* Address the impacts related to the supply and diversion of makeup water on

ecosystem health of affected rivers and bays, including long-term impacts to eggs, larvae, and nekton.

- *Water quality.* Address the changes in existing water quality parameters (temperature, dissolved oxygen, turbidity, chemical constituents) in the receiving water, especially during low flow and drought conditions when there is less water in the receiving stream for dilution, which may be caused by discharges. Discharges of hydrostatic testing waters (if necessary for this project) may contain toxic water additives that would affect fish through acute or chronic toxicity; and may affect reproduction, growth, and recruitment. Address the potential impacts to filter feeding species such as mussels, clams, and oysters, which are particularly vulnerable to the introduction of pollutants or disturbance of sediments affecting water quality, instream and estuarine habitat.
- *Aquatic riparian terrestrial habitat; particularly rare, threatened, and endangered species habitats.* Address the impacts from removal of riparian vegetation and compensation plans for revegetation or compensation. Overhanging vegetation in riparian and wetland areas, undercut banks, logs and other streamside features provide cover for aquatic species. These types of cover and instream habitats could be disturbed by clearing and trenching during construction resulting in decreased shading, increased water temperature, and displacement of wildlife from disturbed areas.
- *Efficient use of surface/groundwater.* It is unclear if there is still the option for the design to change to use cooling towers versus a cooling reservoir. TPWD would have increased concerns should the proposed project include cooling towers, due to the increased amount of water loss from cooling towers.
- *The proposed sampling plan for aquatic resources.* The proposed sampling plan is inadequate. Texas is subject to extreme inter-annual variation in rainfall and hence in stream flows; therefore the Texas Commission on Environmental Quality (TCEQ) has established sampling protocols that require, at a minimum, two years of sampling to characterize a waterbody. Sampling includes fish, benthics, habitat, flow, 24-hour diel parameters and water chemistry characterization. The fact sheets are on the TCEQ Web site for Use Attainability Analyses or Aquatic Life

Assessment at http://www.tceq.state.tx.us/assets/public/compliance/monops/water/wqm/biofact_sheets_may06.pdf. These should be used in any proposed sampling plan for Texas.

- *Implementation of the Cooling Water Intake Structure.* As the agency with the responsibility and authority to manage fish populations in the state, TPWD should be included in any discussion regarding implementation of the Cooling Water Intake Structure rules. The cooling impoundment will have a substantial fish population; it should not be assumed that construction and use of a cooling impoundment will qualify as closed cycle cooling by the TCEQ. Most power plants in Texas that use cooling impoundments are subject to Phase II requirements.
- *Discharge permit.* Since the cooling impoundment will have a substantial fish population, the discharge permit should have effluent limitations for temperature.
- *Water Needs Plan.* TPWD requests that a Water Needs Plan be developed, detailing the expected amount of water needed to be withdrawn from the Calhoun Canal in order to supply the Main Cooling Reservoir (MCR) with the required makeup water and potential impacts and cumulative impacts to San Antonio Bay from reduced freshwater inflows into the bay.

Riparian Impacts

According to the environmental document, the Guadalupe River floodplain, Black Bayou and tributaries, Dry Kuy Creek and tributaries, Kuy Creek and tributaries would be impacted by the proposed project.

The area between the proposed site and the Victoria Barge Canal floods frequently and stays flooded for long periods of time. When these flood events occur, wildlife disperses out of the floodplain and utilizes the adjacent upland as refuge during these events. The proposed site occupies a very important dispersal area for wildlife during these flood events, and the facility design does not appear to allow for any utilization during these periods. Highway mortalities are higher during these flood events in the area surrounding the floodplain and will surely increase when this immediate adjacent habitat is removed.

The haul road will likely create blocks and/or change normal water flow within the floodplain. This will not only impact the duration of floods but it will most

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likely adversely impact the plant communities and the wildlife dependent on them, including the upstream flooding possibilities. This floodplain is approximately 3.5 miles across and floods the entire basin for months at a time during some events, and log jams occur, which prolong flood events. Any infrastructure, including a haul road, built over this floodplain must be constructed so as to have a minimal impact during these (mostly annual) events. Upstream flooding could occur if the hydrology is altered.

Recommendations: If the haul road is temporary, it should be built at grade, to avoid altering the current hydrology as little as possible, and not present an impoundment that will increase the number of log jams during flood events. The road should be graded and restored to native vegetation after construction is complete.

If the haul road is permanent, it should be constructed with as much free span as is possible, to avoid permanently altering the normal river and flood flows.

Woody riparian vegetation usually reflects high value wildlife habitat by providing sources of food, cover, nesting and roosting. Ecologically, it stabilizes stream banks, provides shaded microenvironments, and improves water quality by slowing flood waters, filtering pollutants and retaining sediment. The degree of adverse impacts to wildlife habitat resulting from direct loss of riparian vegetation relates directly to the quantity of vegetation lost, the quality of the vegetation assemblage in fulfilling the life requisites of the organisms using it, and the proposed mitigative measures to compensate for those impacts.

Riparian corridors improve water quality and quantity and provide important nutrients to the streams and rivers. Riparian vegetation also holds water by slowing the rate at which water moves from the land into streams, and shaded waterways lose much less water to evaporation. These areas also intercept surface runoff, wastewater, subsurface flow and deeper groundwater flows from upland sources and remove or buffer the effects of associated nutrients, sediment, organic matter, pesticides or other pollutants prior to entry into surface waters and groundwater recharge areas. Riparian areas are extremely complex ecosystems that help provide optimum food and habitat for stream communities as well as being useful in mitigating or controlling nonpoint source pollution and can offer recreational opportunities.

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Recommendation: Because the root systems of riparian vegetation help stabilize soils and minimize erosion, TPWD recommends that if riparian vegetation, including mature trees and shrubs, must be removed, the root systems should be left to stabilize the sediment thus reducing erosion potential. TPWD strongly recommends that all impacts to forested/riparian areas be mitigated.

Recommendation: TPWD requests that Exelon evaluate the potential impacts and cumulative impacts to resident wildlife given their reduced ability to move to other habitat due to the current management practices, such as the presence of a perimeter fence at the site and evaluate the potential impacts and secondary impacts to all habitats as a result of the proposed project and potential future expansion.

Wetland Impacts

According to the environmental document, the proposed project will impact ephemeral depressional wetlands, wetlands associated with the Guadalupe River, Black Bayou and tributaries, Linn Lake, Dry Kuy Creek and tributaries, Kuy Creek and tributaries.

The Clean Water Act (CWA) sets the basic regulatory framework for regulating discharges of pollutants to U.S. waters. Section 404 of the CWA establishes a federal program to regulate the discharge of dredged and fill material into waters of the U.S., including wetlands. The U.S. Army Corps of Engineers (USACE) and the Environmental Protection Agency (EPA) are responsible for making jurisdictional determinations and regulating wetlands under Section 404 of the CWA. The USACE also makes jurisdictional determinations under Section 10 of the Rivers and Harbors Act of 1899.

Recommendation: Green and Mission lakes, and Hynes and Guadalupe bays are important aquatic resource sites. During construction, sediment-laden stormwater should not be allowed to flow into these lakes and bays. Measures must be in place to assure that necessary flows are maintained and that stormwater from the site is retained and treated before release. During operation, contaminants released into the Guadalupe River would very quickly spread throughout the coastal lakes and bay system, potentially having a significant impact upon many commercially and recreationally important species, including threatened and endangered species such as whooping cranes and sea turtles.

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Isolated wetlands, as well as jurisdictional wetlands, provide valuable habitat for aquatic and terrestrial wildlife. Isolated wetlands within the project area produce and support plant and invertebrate populations that provide food for a wide variety of waterfowl, wading, and other birds. In addition, these wetlands protect water quality by filtering and retaining freshwater runoff and associated pollutants from adjacent roads and developed properties.

Recommendation: TPWD recommends identifying all wetland areas within the project area and minimizing any adverse impacts to isolated wetlands to the same extent as jurisdictional wetlands. Coordination of all impacts to the aquatic resources should be coordinated with Kendal Keyes with the Coastal Fisheries Division; she can be reached at 361-825-3243.

Recommendation: It is unclear whether this project will impact a state-owned streambed. Chapter 86 of the Texas Parks and Wildlife Code places the management, control, and protection of stream bed materials under the authority of the Texas Parks and Wildlife Commission in order to ensure that disturbance of those habitats does not pose a significant threat to aquatic life. Disturbing or taking of materials from a state-owned stream bed without a permit is prohibited, and any material removed incurs a charge per cubic yard payable to TPWD. Dredging for the intake may require a Sand, Shell, Gravel and Marl Permit from TPWD; please contact Rollin MacRae at (512) 389-4639 for additional information.

Terrestrial Resources

There was limited information on the amount and types of vegetation located at the site. The site is mostly upland, with some ephemeral depressional wetlands and stock ponds, augmented by windmill driven wells. The information provided indicates there is significant vegetation, particularly around the wet areas. The upland portion is divided into grazing units, which are burned regularly to encourage native grassland and discourage thickets of shrubs and low-growing trees. Any environmental documentation prepared should include a quantification of types of vegetation present at the site, and the acres of each vegetation type that will be impacted by the project.

From the information provided, it appears the project as proposed will impact 4,800-acres for the cooling reservoir, 1,300-acres for the water storage basin, and 300-acres for the plant site, a total of approximately 6,400-acres. This is a considerable impact on terrestrial and aquatic resources, and without a proposed

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mitigation plan for replacement of those acres, TPWD could not support a Finding of No Significant Impact for this project.

Transmission Line Corridor

According to the environmental documentation the proposed project may require at least two new transmission lines, including a west-running line that would extend to the Coleta Creek Reservoir area of Goliad County and a northeast-running line that would pass through Calhoun, Jackson, Wharton, and Matagorda counties.

Recommendations: TPWD recommends use of existing right-of-way (ROW), such as highway ROWs or transmission or pipeline corridors to reduce the impacts on fish and wildlife resources. Use of existing ROWs should be included in the selection of alternatives for this project.

In addition, TPWD recommends that Exelon evaluate the potential for bird strikes into the proposed aerial electrical lines and units, and the short and long term impacts to wildlife species due to the construction of the two transmission lines (i.e., removal or conversion of habitat). Attached are the TPWD *Recommendations for Electrical Transmission/Distribution Line Design and Construction*.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) provides for a year-round closed season for nongame birds and prohibits the taking of migratory bird nests and eggs, except as permitted by the U.S. Fish and Wildlife Service (USFWS).

Recommendations: Construction activities such as, but not limited to, tree felling as well as vegetation clearing, trampling, or maintenance should occur outside the April 1–July 15 migratory bird nesting season of each year the project is authorized and last for the life of the project. To comply with the MTBA, the proposed site should be surveyed for migratory bird nest sites prior to construction or future maintenance activities. Since raptors nest in late winter and early spring, all construction activities as identified above should be excluded from a minimum zone of 100 meters around any raptor nest during the period of February 1–July 15.

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Please contact the USFWS Southwest Regional Office (Region 2) at (505) 248-6879 for further information.

Rare and Protected Resources

The primary threats this project poses to rare, threatened, and endangered species would be from:

- direct impacts to individuals and to populations;
- indirect impacts through removal and disruption of habitats and travel corridors;
- indirect impacts from disruption of the ecosystem.

The environmental documentation should include a discussion of the anticipated impacts, and "may effect but unlikely to effect" type impacts, and a discussion of mitigation measures (avoidance, minimization, and compensation).

Texas' ecosystems have evolved numerous flora and fauna that are endemic to the state. Endemic species frequently occur in small numbers, so loss of the immediate and surrounding flora and fauna could result in extirpation from the state and possible extinctions for species or subspecies with small range distributions.

Recommendations: Those species already under the protection of either the federal or state endangered species laws for their imperiled status and that reside or travel through the area would likely be significantly affected by any major facility failure. *Consequently, TPWD recommends an environmental impact statement (EIS) be prepared for this facility. Mitigation measures to counter the increased stresses from the facility upon the species should be included in the EIS.*

TPWD reviewed the table provided with the request. Based on records and expected distributions for rare resources that may occur in the area, TPWD recommends the following species be included in the EIS.

Federal and State Listed Endangered

Attwater's Prairie-Chicken (*Tympanuchus cupido attwateri*)

Brown Pelican (*Pelecanus occidentalis*) (Federally Proposed for Delisting)

Interior Least Tern (*Sterna antillarum athalassos*)

Whooping Crane (*Grus americana*)
West Indian Manatee (*Trichechus manatus*)
Atlantic hawksbill sea turtle (*Eretmochelys imbricata*)
Kemp's Ridley sea turtle (*Lepidochelys kempi*)
Leatherback sea turtle (*Dermochelys coriacea*)

Federal and State Listed Threatened

Piping Plover (*Charadrius melodus*)
Green sea turtle (*Chelonia mydas*)
Loggerhead sea turtle (*Carretta caretta*)

State Listed Endangered

American Peregrine Falcon (*Falco peregrinus anatum*)

State Listed Threatened

Black spotted newt (*Notophthalmus meridionalis*)
Bald Eagle (*Haliaeetus leucocephalus*)
Arctic Peregrine Falcon (*Falco peregrinus tundrius*)
Reddish Egret (*Egretta rufescens*)
White-faced Ibis (*Plegadis chihi*)
White-tailed Hawk (*Buteo alicaudatus*)
Wood Stork (*Mycteria americana*)
Texas scarlet snake (*Cemophora coccinea lineri*)
Timber/Canebrake rattlesnake (*Crotalus horridus*)
Indigo snake (*Drymarchon corais*)
Texas tortoise (*Gopherus berlandieri*)

Species of Concern

American eel (*Anguilla rostrata*)
Texas diamondback terrapin (*Malaclemys terrapin littoralis*)
Welder machaeranthera (*Psilactis heterocarpa*)

Special Features

Colonial Waterbird Rookeries
Migratory Songbird Stopover and Fallout Sites
Guadalupe River Ecologically Significant Stream Segment

Sensitive Managed Areas

Aransas National Wildlife Refuge
Designated Critical Habitat for the Whooping Crane

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Designated Critical Habitat for the Piping Plover
Guadalupe Delta Wildlife Management Area

The areas of concern and the species not included in the table are discussed in Attachment 1.

Texas Natural Diversity Database (TXNDD) printouts for recorded locations of rare species within 1.5 miles of the facility location are attached for your planning reference. These include one rookery and one eagle nesting territory that are crossed by the facility; and one additional eagle nesting territory and one location for the Welder machaeranthera that fall within 1.5 miles. Additional recorded locations would likely be crossed by the pipelines, transmission lines, roads, and dredging. When these proposed infrastructure locations become available, additional TXNDD information should be requested. A map showing the relative locations for the printouts and additional rare species, special features, and managed natural areas is attached for your planning reference.

Although it is based on the best data available to TPWD regarding rare species, the TXNDD does not provide a definitive statement as to the presence, absence or condition of special species, natural communities, or other significant features within your project area. The TXNDD is intended to assist users in avoiding harm to rare species or significant ecological features. Given the small proportion of public versus private land in Texas, the TXNDD does not include a representative inventory of rare resources in the state. Absence of information in an area, or for any given species, does not imply that rare species are absent from that area. These data are not inclusive and cannot be used as presence/absence data. They represent species that could potentially be in your project area. This information cannot be substituted for on-the-ground surveys by your qualified biologists.

Determining the actual presence of a species in a given area depends on many variables including daily and seasonal activity cycles, environmental activity cues, preferred habitat, transiency and population density (both wildlife and human). The absence of a species can be demonstrated only with great difficulty and then only with repeated negative observations, taking into account all the variable factors contributing to the lack of detectable presence.

The USFWS should always be contacted for additional species occurrence data for federally listed species. For USFWS county lists of rare species, access <http://www.fws.gov/southwest/es/EndangeredSpecies/lists/ListSpecies.cfm>. Also,

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TPWD county level lists of rare species are available online at http://www.tpwd.state.tx.us/landwater/land/maps/gis/ris/endangered_species.phtm. Lastly, the TXNDD site-specific data are updated continuously, based on new, updated, and previously non-digitized information. For site-specific information on future projects, please e-mail txnodd@tpwd.state.tx.us or contact Dorinda Scott at (512) 389-8723 for the most current TXNDD information. TPWD recommends that rare resources data from the TXNDD and the online county lists be checked for updated information at least every three years for a long-term project such as this one.

The comments and recommendations reflected in this letter are for existing conditions; considering the build-out time of this project, it is likely the resource issues will become more controversial due to changes in natural resources within the project site and surrounding areas. As well, local land use conditions may change during that time frame and additional concerns may arise. The NRC should ensure the EIS is updated within appropriate time frames.

The EIS should incorporate a plan for compensation for those resource impacts that cannot be avoided or minimized. With the project potentially impacting 11,000 acres, TPWD would strongly recommend an integrated compensation plan for the footprint of the project, incorporating all mitigated functions at a single site, including those terrestrial and aquatic habitats not regulated by state or federal law. To mitigate at a larger scale will provide contiguous tracts to assist in compensating for the impacts of the project at an ecosystem level. TPWD also notes that the aggregation of impacts to justify larger, more meaningful compensatory mitigation projects, mitigation for significant fish and wildlife resources not otherwise regulated by federal law, and the use of mitigation banks, including "multi-function" banks, is advocated by the direction provided by the latest EPA/USACE guidance for mitigation banking (2008).

Please provide a copy of the EIS or other documentation prepared for this project to TPWD for review and comment.

TPWD appreciates the opportunity to coordinate with the Nuclear Regulatory Commission to ensure these projects are developed with the least amount of

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impact to the natural resources of the state. If you have any questions regarding our comments, contact Amy Hanna of my staff at (361) 576-0022. Thank you.

Sincerely,



Carter Smith
Executive Director

CS:KB:AH:gg

Attachments:

cc: Ms. Harriett Nash, Nuclear Regulatory Commission