

10 CFR 50.90

RS-10-205
December 2, 2010

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555-0001

LaSalle County Station, Units 1 and 2
Facility Operating License Nos. NPF-11 and NPF-18
NRC Docket Nos. 50-373 and 50-374

Subject: Clarification of Supplemental Information - License Amendment to Allow Receipt and Storage of Low-Level Radioactive Waste at LaSalle County Station, Units 1 and 2

- References:**
- 1) Letter from D. M. Benyak (Exelon Generation Company, LLC) to U. S. NRC, "Request for License Amendment to Allow Receipt and Storage of Low-Level Radioactive Waste at LaSalle County Station, Units 1 and 2," dated January 6, 2010
 - 2) Letter from C. Norton (U. S. NRC) to M. J. Pacilio (Exelon Generation Company, LLC), "LaSalle County Station, Units 1 and 2 - Request for Additional Information Related to Request for License Amendment to Allow Receipt and Storage of Low-Level Radioactive (TAC Nos. ME3054 thru ME3055)," dated September 20, 2010
 - 3) Letter from D. M. Benyak (Exelon Generation Company, LLC) to U. S. NRC, " Supplemental Information Concerning License Amendment to Allow Receipt and Storage of Low-Level Radioactive Waste at LaSalle County Station, Units 1 and 2," dated October 14, 2010

In Reference 1, Exelon Generation Company, LLC (EGC) submitted a request to amend Facility Operating License (FOL) Nos. NPF-11 and NPF-18 for LaSalle County Station (LSCS), Units 1 and 2, respectively. The proposed change will enable LSCS to store Class B and Class C low-level radioactive waste (LLRW) from Braidwood Station, Units 1 and 2 (Braidwood), Byron Station, Units 1 and 2 (Byron), and Clinton Power Station, Unit 1 (CPS) in the LSCS Interim Radwaste Storage Facility (IRSF).

In Reference 2, the NRC forwarded requests for additional information (RAIs) concerning the Reference 1 license amendment request. EGC provided a response to these RAIs in Reference 3. The attachment to this letter provides clarifying information for two of the Reference 3 RAI responses.

EGC has reviewed the information supporting a finding of no significant hazards consideration, and the environmental consideration that were previously provided to the NRC in Reference 1. The additional information provided in this submittal does not affect the bases for concluding that the proposed license amendment does not involve a significant hazards consideration. In addition, the additional information provided in this submittal does not affect the bases for concluding that neither an environmental impact statement nor an environmental assessment is required for the proposed amendment. There are no regulatory commitments in this letter or the attachment.

Should you have any questions or require additional information, please contact Mr. John L. Schrage at (630) 657-2821.

I declare under penalty of perjury that the foregoing is true and correct. Executed on the 2nd day of December 2010.

Respectfully,



Darin M. Benyak
Director - Licensing
Exelon Generation Company, LLC

Attachment: Clarification of Responses to Two Requests for Additional Information Concerning License Amendment to Allow Receipt and Storage of Low-Level Radioactive Waste at LaSalle County Station, Units 1 and 2, Facility Operating Licenses NPF-11 and NPF-18

cc: Administrator – NRC Region III
NRC Senior Resident Inspector – LaSalle County Station
NRC Project Manager, NRR – LaSalle County Station
Illinois Emergency Management Agency – Division of Nuclear Safety Resources

Attachment

Clarification of Responses to Two Requests for Additional Information Concerning License Amendment to Allow Receipt and Storage of Low-Level Radioactive Waste at LaSalle County Station, Units 1 and 2 Facility Operating Licenses NPF-11 and NPF-18

By letter to the Nuclear Regulatory Commission (NRC) dated January 6, 2010 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML100070297), as supplemented by letters dated August 20, 2010 (ADAMS Accession No. ML102320599) and October 14, 2010 (ADAMS Accession No. ML102320599), Exelon Generation Company, LLC (EGC) submitted a request to revise license paragraph 2.B(5) of LaSalle County Station (LSCS) Units 1 and 2. The proposed change would enable LSCS to possess byproduct material from Braidwood Station Units 1 and 2, Byron Station Units 1 and 2, and Clinton Power Station Unit 1.

The information below provides clarification for EGC's October 14, 2010 response to two NRC requests for additional information (RAIs).

NRC RAI-07

"For onsite radiation protection purposes, describe the boundaries of the Title 10 of the Code of Federal Regulations Part 20 (10 CFR 20) controlled area (e.g., provide map and distances to the LLRW Storage Facility); describe whether members of the public are allowed in the controlled area, and describe how the dose limits of 10 CFR 20.1301(a) and (b) will be met."

EGC Clarification

The LSCS Interim Radwaste Storage Facility (IRSF) is located within the station protected area (PA), as well as within the site boundary (i.e., the Controlled area, as defined in 10 CFR Part 20.1003, "Definitions"). EGC limits unescorted access to the LSCS PA in accordance with the LSCS Security Plan as well as for the purpose of protecting individuals against undue risks from exposure to radiation and radioactive materials. Therefore, the LSCS PA also serves as the "Restricted area," as defined in 10 CFR Part 20.1003. Unescorted access to the Restricted area by members of the public is prohibited.

Figure 1, "LSCS Site Map," and Figure 2, "LSCS Controlled Area and Restricted Area" provides overhead depictions of the LSCS site. These figures identify the location of the IRSF relative to the Restricted area boundary, the Controlled area boundary, and an employee parking lot. As noted on Figures 1 and 2, the nearest Restricted area boundary is approximately 20 meters from the exterior surface of the IRSF. The nearest point in the employee parking lot is approximately 108 meters from the exterior surface of the IRSF.

The LSCS Controlled area is totally owned and controlled by EGC. As such, EGC controls access in accordance with the EGC Security Plan. While individual members of the public have the ability to access the employee parking lot (i.e., an unrestricted area within the Controlled area) from the plant access road, extended presence of these individuals within the employee parking lot will be identified by LSCS Security personnel within a short period of time and those individuals will be removed, in accordance with the requirements of the LSCS Security Plan. Similarly, the movement of an unauthorized individual by foot from the employee parking lot to the southern Restricted area boundary will be identified within a short period of time by Security personnel, and that individual will be removed, in accordance with the requirements of the LSCS Security Plan. Individual members of the public do not have the capability to access any other unrestricted area within the Controlled area.

The transfer, placement, and storage of low level radioactive waste (LLRW) liners within the IRSF is controlled by real-time dose rate limitations (i.e., dose rates within the IRSF, on the exterior surface of the IRSF, and in the vicinity of the IRSF, including the nearest Restricted area boundary). Compliance with these limitations is established and verified by direct radiation surveys and physical access controls.

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Radiation surveys in and around the IRSF are conducted after each transfer and placement of LLRW liners to ensure that all dose rates are within expected operation and design limits during storage-only conditions, as well as on a quarterly basis at the nearest Restricted area boundary (i.e., the west side of the Restricted area, opposite the IRSF). These surveys verify compliance with the 10 CFR Part 20.1301(a)(2) requirement that the dose in any unrestricted area from external sources does not exceed 0.002 rem in any one hour during storage-only conditions.

During liner transfer and placement operations (i.e., the transfer of a LLRW liner from a shielded transportation cask within the truck bay to a storage location within the IRSF), EGC establishes positive access control outside of the IRSF using radiation protection personnel (i.e., trained technicians equipped with radiation survey monitors) such that the dose rate beyond the positive access controls is less than 2 mrem/hour. These access controls ensure compliance, during loading operation, with the 10 CFR Part 20.1301(a)(2) Restricted area dose requirement.

As stated above, access by individual members of the public to unrestricted areas within the LSCS Controlled area is physically limited to the employee parking lot and the area between the parking lot and the south boundary of the Restricted area. In addition, the provisions and requirements of the LSCS Security Plan provide reasonable assurance that the length of time that any individual member of the public will occupy these two areas, either on an extended basis or on a periodic basis, is minimized.

EGC has determined that the combination of 1) access control to unrestricted areas for members of the public; and 2) the anticipated dose rate at the nearest Restricted area boundary and the employee parking lot, due to the licensed operation of the station, including a fully loaded IRSF, provides reasonable assurance that the total effective dose equivalent to individual members of the public, will not exceed 0.1 rem in one year, exclusive of the dose contributions from background radiation. This combination, therefore, establishes compliance with 10 CFR Part 20.1301(a)(1) and 10 CFR Part 20.1301(b).

NRC RAI-08

"For offsite radiation protection considerations under 10 CFR 20.1301(e), explain the methods used in the Offsite Dose Calculation Manual methods to measure and/or calculate the net dose at the nearest residence attributable to the LLW Storage Facility and those doses attributable to the nuclear site from other sources of the direct radiation. For the environmental monitoring dosimeters, describe how the background (baseline) radiation dose will be (or has been) determined, how the standard deviation at each environmental dosimeter location has been determined, and the estimated Lower Limit of Detection for dosimeters that can be achieved at the 95% confidence level."

EGC Clarification

As depicted in Figure 2, the nearest resident is 880 meters from the center of the LLRW liners stored in the IRSF. The calculated dose contribution at that location, from a filled IRSF (i.e., with Class B/C LLRW liners), and assuming 100% occupancy in the residence, is 0.3 mrem/year.

The nearest site boundary is 395 meters from the center of the waste stored in the IRSF. The adjacent land is used for agriculture. The calculated dose contribution at that location, from a filled IRSF (i.e., with Class B/C LLRW liners), and assuming an occupancy of 20 hours per year is 0.08 mrem/year.

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Based on these calculated dose rates, EGC has determined that the additional dose to a member of the public from a filled IRSF will not result in exceeding the annual 40 CFR Part 190.10 dose equivalent limit of 25 mrem, and thus ensure compliance with 10 CFR Part 20.1301(e).

The total dose from all contained sources, at the nearest residence, is verified on a quarterly basis by the LSCS Radiological Environmental Monitoring Program (REMP) as described below.

The LSCS REMP complies with the requirements of Regulatory Guide (RG) 4.13, "Performance, Testing, and Procedural Specifications for Thermoluminescence Dosimetry: Environmental Applications" and RG 4.15, "Quality Assurance for Radiological Monitoring Programs (Normal Operations) – Effluent Streams and the Environment."

By letter dated May 12, 2010 (ADAMS Accession No. ML101320380), EGC transmitted the 2009 LSCS Annual Radiological Environmental Operating Report (AREOR). AREOR Section IV, "Results and Discussion," subsection C, "Ambient Gamma Radiation" stated that most TLD measurements were below 30 mrem/standard quarter, with a range of 19 to 35 mrem/quarter.

A comparison of the quarterly environmental TLD measurements to the control location measurements indicates that the ambient gamma radiation levels in 2009 were comparable to the control location measurements. In addition, the AREOR stated that the 2009 ambient gamma radiation levels were consistent with those observed in previous years.

This statement is supported by EGC's quarterly trending of LSCS environmental TLD measurements, as described below. Upon receipt of quarterly environmental TLD results, the results for each TLD location are reviewed, recorded, and graphed as a time series. Anomalous data points are identified and evaluated with the environmental TLD vendor for resolution.

EGC has used this analytical trending process for the evaluation of environmental TLD results since January 2004. In addition, EGC has recently reviewed the 2009 LSCS environmental TLD data with the environmental TLD vendor. This review resulted in the conclusion that the lower limit of detection (LLD) for the LSCS environmental TLDs, at the 95% confidence level, is approximately 5 mrem/quarter. This means that a change in a quarterly environmental TLD reading of greater than 5 mrem from an individual TLD station's long term average could be detected by the LSCS quarterly data trending program, investigated in accordance with the LSCS corrective action program, and resolved.

Figure 1
LSCS Site Map

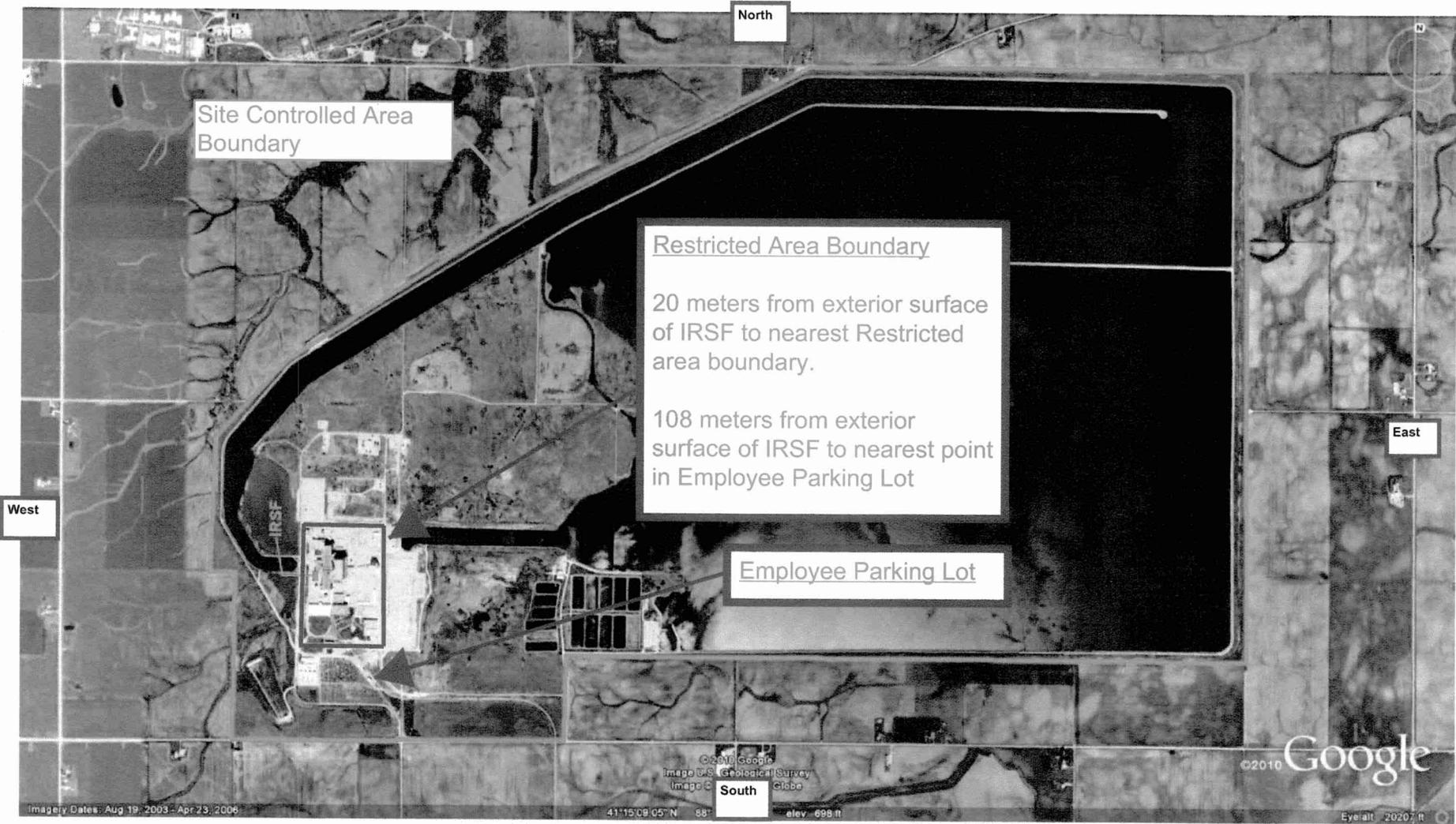


Figure 2
LSCS Controlled area and Restricted area

