From: <eddie.grant@exeloncorp.com>
To: <nvg@nrc.gov>
Date: 10/11/04 11:22AM
Subject: Response to RAI Letter No. 10

Nannette Gilles

Attached is your copy of the response to RAI letter No. 10 that was mailed Friday.

Thanks,

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

Mail Envelope Properties (416AA538.94E : 5 : 10574)

Subject: Response to RAI Letter No. 10
Creation Date: 10/11/04 11:21AM
From: <eddie.grant@exeloncorp.com>

Created By: eddie.grant@exeloncorp.com

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

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MESSAGE	1128	10/11/04 11:21AM
TEXT.htm	3565	
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Ltr - 2004-10-08 Kray RAI No 10 Response.pdf	371686	

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Security:	Standard

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52.17

October 8, 2004

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

Subject: Response to Request for Additional Information (RAI) Letter No. 10 – 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 Letter No. 10 – Exelon Early Site Permit Application for the Clinton ESP Site (TAC No. MC1122)

Enclosed, as requested in the referenced letter, are responses to the requests for additional information (RAIs) associated with the site hazards portion of the Exelon Generation Company, LLC (EGC) ESP application.

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)

Enclosure: Response to RAI 2.2.2-1 through 2.2.2-4
Response to RAI 2.2.3-1

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 8th day of October, 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. 2.2.2-1

In reference to Section 2.2.2.5.3, describe the types of aircraft and provide estimates of the annual number of operations for the three private airstrips within 6 miles of the proposed ESP site.

EGC RAI ID: R13-1

EGC RESPONSE:

Information on the private airfields (types of aircraft and number of operations) within 6 miles of the ESP site has been added from the CPS USAR and FAA database. Private field owner C. L. Baker was contacted to determine the number of flights from his field. Mr. Baker advised that the field is maintained, but he no longer flies for medical reasons. An occasional light plane lands there. A bounding estimate of one flight per week was proposed and was considered extremely conservative by Mr. Baker. Thus, conservative bounding estimates of annual operations would be:

- Bakers 50 operations annually
- Martin RLA 250 operations annually
- Thorp Airport 500 operations annually

Section 2.2.2.5.1 of the SSAR will be revised with the additional information on flight operations.

ASSOCIATED EGC ESP APPLICATION REVISIONS:

Revise SSAR, Chapter 2, Section 2.2.2.5.1, from:

DeWitt County has no passenger air service or public airports. There are seven private airstrips scattered throughout the county. Three of these strips are within 6 mi of the EGC ESP Facility as shown in Figure 2.2-1. The Martin RLA Airport, located approximately 4 mi south of the site, has one runway 2,000 ft long. Thorp Airport located approximately 5 mi northwest has two 1,500 ft runways; one oriented east-west and the other north-south. The Bakers Strip, located approximately 5.5 mi southeast of the site has a 2,000 ft runway running north south (Bureau of Transportation Statistics, 2000). There is also a non-operational (Spencer) airport owned by AmerGen, located approximately 2 mi west-southwest. These facilities are private strips that can only accommodate small, light single or twin-engine propeller aircraft. They are available for public use only in emergencies.

To read:

DeWitt County has no passenger air service or public airports. There are seven private airstrips scattered throughout the county. Three of these strips are within 6 mi of the EGC ESP Facility as shown in Figure 2.2-1. The Martin RLA Airport, located approximately 4 mi south of the site, has one turf runway 2,000 ft long oriented north-south. Martin RLA averages 4 to 5 operations per week or about 250 operations annually (CPS, 2002). Thorp Airport located approximately 5 mi northwest has two turf

runways; one oriented east-west 2400 ft long and the other north-south 1500 ft long. Each runway averages 4 to 5 operations per week each or about 500 operations annually for both runways combined (CPS 2002). Bakers Strip, located approximately 5.5 mi southeast of the site has a 2,000 ft turf runway running north-south (Bureau of Transportation Statistics, 2000). Bakers Strip conservatively averages one operation per week based on discussion with the owner, or about 50 operations annually. There is also a non-operational (Spencer) airport owned by AmerGen, located approximately 2 mi west-southwest. These facilities are private strips that can only accommodate small, light single or twin-engine propeller aircraft. They are available for public use only in emergencies.

FAA statistics shows there are no air carrier, air taxi, general aviation, military or ultra-light operations at these airfields (GCR, 2004).

Revise SSAR, Chapter 2, Section 2.2 References, to include the following new reference:

G. C. R. & Associates (GCR). Facilities Directory from National Flight Data Center. Database available at: http://www.gcr1.com/5010web/. 2004.

ATTACHMENTS:

None

NRC Letter Dated: 07/27/2004

NRC RAI No. 2.2.2-2

In reference to Section 2.2.2.5.3, clarify the statement "... ESP safety related facilities would have to be sighted within a footprint of 386,000 ft^2 in order to meet the 1.0E-07 impact probability criterion. This area is less than the effective impact area computed for Clinton, which ranges from 235,000 ft^2 to 192,000 ft^2." The use of the word "less" appears to be incorrect.

EGC RAI ID: R13-2

EGC RESPONSE:

The use of the word less is incorrect. However, for clarification we have revised the description provided in this section to present a conservative estimate of the probability per year of an aircraft crash on the site based upon site data and the guidance provided in RS-002 Section 3.5.1.6.

Aircraft impact probability for EGC ESP Site is estimated using the following relationship as specified in RS-002 Section 3.5.1.6 (USNRC, 2002):

$$P_{FA} = C \times N \times A/w$$

Where:

C = inflight crash rate per mile for aircraft using the airway = 4×10^{-10} (USNRC, 2002)

w = width of airway (plus twice the distance from the airway edge to the site when the site is outside the airway, (CPS USAR Table 3.5-7).

N = number of flights per year along the airway projected for the life of the facility (40 years) plus the term of the ESP (20 years).

A = projected site area in square miles; (estimated at approximately 7.17E-02 mi^2 which will envelop all of the major proposed facility structures)

Probability of Aircraft Impact From Federal Airways				
Airway	**Airway Width[(1)]**	**Present Traffic[(1)] $\underline{n_p}$**	**Projected Traffic[(1)] $N = n_p(1.21)^{60/12}$**	**Probability of Impact per Year**
V313	9.2	7,300	18,934	5.90E-08
V233	9.2	7,300	18,934	5.90E-08
V434	12	5,475	14,201	3.39E-08
V72	9.5	3,650	9,467	2.86E-08
Total				1.81E-07

1. CPS USAR Table 3.5-7 (CPS, 2002).

This estimate reflects a conservative upper bound for the aircraft impact probability at the Exelon ESP Site. The calculated values are consistent with the recommended probability of occurrence guideline of about 10^{-7} per year.

ASSOCIATED EGC ESP APPLICATION REVISIONS:

Revise SSAR, Chapter 2, Section 2.2.2.5.3, Aircraft Hazards, beginning at the 9th paragraph from:

The low altitude federal airways described above are identical to those in existence at the time of the CPS USAR. The probability of incidence of an aircraft crash from these airways was determined in the CPS USAR to be within guidelines in the NUREG-0800, Section 3.5.1.6 (USNRC, 1981) and did not constitute a design consideration (CPS, 2002). This conclusion is substantiated in Table 3.5-7 of the CPS USAR where it is demonstrated that impact probability is within the nominal acceptance criteria from the SRP (USNRC, 1981) of <1.0E-7 per yr.

Aircraft impact probability for EGC ESP Site-located facilities would be a function of the magnitude of the footprint of those facilities. An extrapolation to determine the maximum footprint allowable for ESP safety related facilities was made based upon the probability criteria in the draft SRP Section 3.5.1.6 (USNRC, 2002) used in conjunction with the data in the CPS USAR Table 3.5-7. This extrapolation indicates that ESP safety related facilities would have to be sighted within a footprint of 386,000 ft^2 in order to meet the 1.0E-7 impact probability criterion. This area is less than the effective impact area computed for Clinton, which range from 235,000 ft^2 to 192,000 ft^2.

Locating ESP safety related facilities within the extrapolated area of 386,000 ft^2 is reasonable for the reactor designs under consideration. In addition, several conditions exist that strongly indicate that this criterion is substantially conservative.

- The effective areas as found in CPS USAR Table 3.5-7 includes shadow and skid areas identified in the earlier USNRC criteria (USNRC, 1981) but not required by the proposed, draft criteria (USNRC, 2002). The actual siting areas are smaller than these tabulated values and the impact probabilities also correspondingly smaller.
- The tabulated probabilities in CPS USAR Table 3.5-7 do not fully credit the separation distance of 4 of the 5 runways resulting in the tabulated probabilities being conservative.
- The determination of probabilities in CPS USAR Table 3.5-7 are derived using a commercial aircraft crash probability of 3.0E-9 per mi per yr, whereas the current and proposed SRP rate is 4.0E-10 per mi per yr (USNRC, 1981 and USNRC, 2002), further decreasing crash probability from that determined in the CPS USAR.

Based upon these conditions, aircraft impact is not considered to be a design concern for the EGC ESP Site.

To read:

The low altitude federal airways described above are identical to those in existence at the time of the CPS USAR. The probability of incidence of an aircraft crash from these airways was determined in the CPS USAR to satisfy the criteria given in the NUREG-0800, Section 3.5.1.6 (USNRC, 1981) and did not constitute a design consideration (CPS, 2002). This conclusion is substantiated in Table 3.5-7 of the CPS USAR where it is demonstrated that the impact probability from federal airways is about 10E-7 per year.

Aircraft impact probability for EGC ESP Site is estimated using the following relationship as specified in RS-002 Section 3.5.1.6 (USNRC, 2004):

PFA = C x N x A/w

Where:

C = inflight crash rate per mile for aircraft using the airway = 4 x 10E-10 (USNRC, 2004)

w = width of airway (plus twice the distance from the airway edge to the site when the site is outside the airway, (CPS USAR Table 3.5-7).

N = number of flights per year along the airway projected for the life of the facility (40 years) plus the term of the ESP (20 years).

A = projected site area in square miles; (estimated at approximately 7.17E-02 mi^2 which will envelop the major proposed facility structures)

The results of the probability of aircraft impact from federal airways are provided in Table 2.2-4A. The estimated value reflects a conservative upper bound for the aircraft impact probability at the Exelon ESP Site. The calculated values are consistent with the recommended probability of occurrence guideline criteria of about 10E-7 per year.

Revise SSAR, Chapter 2, to include new Table 2.2-4A:

TABLE 2.2-4A

Probability of Aircraft Impact From Federal Airways

Airway	Airway Width	Present Traffic np	Projected Traffic $N = np(1.21)^{60/12}$	Probability of Impact per Year
V313	9.2	7,300	18,934	5.90E-08
V233	9.2	7,300	18,934	5.90E-08
V434	12	5,475	14,201	3.39E-08
V72	9.5	3,650	9,467	2.86E-08
Total				1.81E-07

Source: CPS USAR Table 3.5-7 (CPS, 2002)

Revise SSAR, Chapter 2, Section 2.2 References, to include the following new reference:

U.S. Nuclear Regulatory Commission (USNRC). Regulatory Issue Summary 2004-07. Release of Final Review Standard (RS)-002, "Processing Applications for Early Site Permits." Office of Nuclear Reactor Regulation. Washington DC. May 19, 2004.

ATTACHMENTS:

None

NRC Letter Dated: 07/27/2004

NRC RAI No. 2.2.2-3

In reference to Section 2.2.2.5.3, clarify what is meant by “separation distance” in the phrase “... do not fully credit the separation distance of 4 of the 5 runways resulting in the tabulated probabilities being conservative.” Also, describe how this separation distance relates to the probabilities provided in Clinton Power Station (CPS) updated safety analysis report (USAR) Table 3.5-7.

EGC RAI ID: R13-3

EGC RESPONSE:

The "separation distance" is the distance between the nearest edge of the airway and the station when the station is outside the airway. The distance is used in computing the effective width of the airway as shown in CPS USAR Table 3.5-7. The same distance is used for the ESP site.

Section 2.2.2.5.3 of the SSAR will be revised to provide clarification.

ASSOCIATED EGC ESP APPLICATION REVISIONS:

Revise SSAR, Chapter 2, Section 2.2.2.5.3, from:

The tabulated probabilities in CPS USAR Table 3.5-7 do not fully credit the separation distance of 4 of the 5 runways resulting in the tabulated probabilities being conservative.

To read:

The tabulated probabilities in CPS USAR Table 3.5-7 do not fully credit the separation distance between the site and the four airways resulting in the tabulated probabilities being conservative.

ATTACHMENTS:

None

NRC Letter Dated: 07/27/2004

NRC RAI No. 2.2.2-4

In reference to Section 2.2.2.6, clarify the apparent inconsistency in the statement "While DeWitt County's Comprehensive Plan identifies industrial growth, including a public airport, as intermediate term objectives, there are no pending new industries or expansion of existing industries in the vicinity of the [Exelon Generation Company] EGC ESP Site." Also, clarify what is considered the 'vicinity' of the EGC ESP Site.

EGC RAI ID: R13-4

EGC RESPONSE:

DeWitt County has industrial growth as an objective; however, there is no anticipated expansion near the ESP Site.

The term "vicinity" refers to a six-mile radius around the site as shown on SSAR Figure 2.2-1.

Section 2.2.2.6 of the SSAR will be revised to provide additional information.

ASSOCIATED EGC ESP APPLICATION REVISIONS:

Revise SSAR, Chapter 2, Section 2.2.2.6, from:

Current industries in the vicinity of the station are listed in Table 2.2-2. While DeWitt County's Comprehensive Plan identifies industrial growth, including a public airport, as intermediate term objectives, there are no pending new industries or expansion of existing industries in the vicinity of the EGC ESP Site.

To read:

Current industries in the vicinity of the station are listed in Table 2.2-2. The DeWitt County's Comprehensive Plan identifies industrial growth, including a public airport, as intermediate term objectives. However, there are no pending new industries or anticipated expansion of existing industries within six mile vicinity of the EGC ESP Site. The current lack of expansion is consistent with the observed decrease in regional employment in DeWitt County from 1990 and 2000 (USDOL, 2002).

Revise SSAR, Chapter 2, Section 2.2 References, to include the following new reference:

U.S. Department of Labor (USDOL). Bureau of Labor Statistics Available at: http://www.bls.gov/data/home.htm. August 8, 2002.

ATTACHMENTS:

None

NRC Letter Dated: 07/27/2004

NRC RAI No. 2.2.3-1

In reference to Sections 2.2.3 and 2.2.3.1.1, transportation accidents on State Route 54 passing about 1 mile from the EGC ESP facility are described as not needing to be considered as design basis events for the CPS. This conclusion is described as also being valid for the EGC ESP facility on the basis of similar proximity and traffic volumes. It is not clear as to how each of these hazard attributes is being used in the EGC ESP site hazard evaluation. Provide clarification with respect to these hazard attributes.

If transportation accidents are dismissed from consideration in the ESP application on the basis of proximity, then overpressure and toxic gas hazards need to be addressed in terms of facility design (or applicable plant parameter envelope [PPE] values). If, however, dismissal is based on traffic volume, this needs to be indicated explicitly.

For example, in Section 2.2.3.1.1, overpressure is judged to not require specific design considerations on the basis of the separation distance being similar or greater than that for the CPS. Separation distance provides a basis for estimating the overpressure, but does not address the capacity of a facility to withstand its effects. Hence, consideration of structural design capacity for withstanding a given overpressure is needed to support the conclusion that an overpressure accident need not be considered as a design basis event.

Similarly, in Section 2.2.3.1.3, conclusions of "no adverse effects" regarding postulated toxic gas hazards for the CPS are judged to apply to the EGC ESP facility, primarily on the basis of similar separation distances. Describe the extent to which plant features (e.g., control room habitability system design) may be required in order to support the "no adverse effect" conclusion for the EGC ESP facility.

EGC RAI ID: R13-5

EGC RESPONSE:

SSAR, Chapter 2, Sections 2.2.3, 2.2.3.1, 2.2.3.1.1, 2.2.3.1.3 and 2.2.3.2 will be revised to reflect the following clarifications of the hazards attributes: 1) the overpressure is limited to 1 psi, 2) the local releases at CPS and near site from farmers/tankers must be evaluated when the control habitability system design is established. Revisions to these sections will also a) remove conflicts with toxic chemical evaluations, and b) clearly state what needs to be done at COL for toxic chemical hazards.

With respect to Section 2.2.2.3.1, the identified and evaluated explosion overpressures are no greater than 1 psi. Below this level no significant damage would be expected to safety related SSCs per Regulatory Guide 1.91 guidance.

An explosion of 90 tons of propane carried by a tank truck will give a 1-psi overpressure at about 0.65 mile (based on Regulatory Guide 1.91, Figure 1). The closest approach to the site is about 1 mile. Therefore, the site overpressure is less than 1 psi.

An explosion of the 1,000,000 lb propane inventory for Cornbelt FS will result in a blast overpressure much less than 1 psi. The CPS USAR analyzed a hypothetical maximum quantity of 13,240,000 lbs of propane at the Cornbelt FS facility. The DeWitt facility is 2.5 miles from CPS (and approximately 2.6 miles from the ESP site). The USAR states that this quantity (i.e., 13,240,000 lbs) of propane might be a basis for design-related concern. A propane explosion with an assumed efficiency of 0.2 gives a 1-psi standoff

distance of 2.4 miles for 13,240,000 lbs of propane. Therefore, the actual overpressure from the 1,000,000 lb stored quantity is less than 1 psi.

With respect to Section 2.2.3.1.3, the impact of toxic chemical releases at CPS and from anhydrous tanks used by farmers and suppliers need to be evaluated at the COL stage when the control room ventilation system design is established. In addition, previous evaluations for CPS will need to be re-examined for impact due to chemical and material inventories used/stored at the ESP Facility.

With respect to Section 2.2.3.2, the revision identifies the need for analysis of specific chemical toxic hazards at the COL stage.

ASSOCIATED EGC ESP APPLICATION REVISIONS:

Revise SSAR, Chapter 2, Section 2.2.3 from:

The nearest highway is State Route 54 passing approximately 1 mi from the EGC ESP Facility. U.S. Highway 51 is approximately 6 mi from the site. Effects of accidents on these transportation routes were evaluated in the CPS USAR and concluded that they need not be considered as design basis events for the CPS. Given that the EGC ESP Facility is no closer to these routes and that there has been no distinguishable increase in traffic volumes on these routes since the CPS analysis, this conclusion is valid for the EGC ESP Facility as well (SIDOT, 2002).

To read:

The nearest highway is State Route 54 passing approximately 1 mi from the EGC ESP Facility. U.S. Highway 51 is approximately 6 mi from the site. Effects of accidents on these transportation routes were evaluated in the CPS USAR and concluded that they need not be considered as design basis events for the CPS. There has been no distinguishable increase in traffic volumes on these routes since the CPS analysis (SIDOT, 2002).

Revise SSAR, Chapter 2, Section 2.2.3.1 from:

The accident categories given below have been evaluated.

Hazards associated with flammable, explosive, chemical and toxic material storage at CPS were not considered in the CPS USAR to constitute a design concern (CPS, 2002). The presence and operation of CPS and these materials is therefore not considered to constitute the need for further analysis for determining EGC ESP Site acceptability.

To read:

Hazards associated with flammable, explosive, chemical and toxic material storage at CPS were not considered in the CPS USAR to constitute a design concern (CPS, 2002). Similar conclusions have been made for flammable and explosion accidents for the ESP Facility. Certain toxic chemical hazards will need to be evaluated at the COL stage with consideration of design features such as the ESP Facility control room habitability systems.

External fires, collisions with the intake structure, and liquid spills were determined to not be hazards in the CPS USAR. Similar conclusions are made for the ESP Facility.

Revise SSAR, Chapter 2, Section 2.2.3.1.1 from:

Cornbelt FS maintains a large propane tank at their facility in DeWitt, located approximately 2.6 mi from the Exelon ESP Site. The transport of propane to this location and the storage of a large quantity of propane constitute a potential explosion concern. The propane stored and used by Cornbelt FS is transported to the location in DeWitt by truck on Highway 54 and Illinois State Route 48. At the closest approach (approximately 0.75 mi) of the closest highway to CPS, Highway 54, the risk of an explosion involving approximately 90 tons of hydrocarbon fuel (standard tank trucks are limited to a gross weight of 40 tons) was reviewed in the CPS USAR, and the safety-related structures at the station demonstrated being capable of withstanding well in excess of the overpressure associated with detonation of this (90 tons) quantity of fuel (CPS, 2002). Structures to be located at the EGC ESP Site, by virtue of having a similar or greater separation (closest approach of Highway 54 is approximately 1 mi from the ESP Site) from such an event, will not be subjected to overpressures requiring specific design considerations.

CPS evaluated, the amount of propane stored at DeWitt (1,000,000 lbs) (at the distance from the DeWitt facility to the CPS) and it was determined to be more than an order of magnitude below the level (13,240,000 lbs) that would constitute a design concern for CPS. This conclusion is valid for the EGC ESP Facility as well due to a similar or greater separation from a potential event (Illinois Power, 1998).

To read:

Cornbelt FS maintains a large propane tank at their facility in DeWitt, located approximately 2.6 mi from the Exelon ESP Site. The transport of propane to this location and the storage of a large quantity of propane constitute a potential explosion concern.

The propane is trucked to the Cornbelt FS location in DeWitt on Highway 54 and Illinois State Route 48. At the closest approach to CPS (approximately 0.75 mi on Highway 54), the risk of an explosion involving approximately 90 tons of hydrocarbon fuel (standard tank trucks are limited to a gross weight of 40 tons) was reviewed in the CPS USAR, and the safety-related structures at the station were demonstrated to be capable of withstanding well in excess of the overpressure. The corresponding peak positive incident overpressure is less than 1 psi based on Regulatory Guide 1.91, Figure 1 (USNRC, 1978b).

CPS also evaluated, the amount of propane (1,000,000 lbs) stored at the Cornbelt FS facility in DeWitt. At a distance of 2.5 miles between the DeWitt facility and CPS, the overpressure was determined to be more than an order of magnitude below the amount (13,240,000 lbs) that would constitute a design concern for CPS (Illinois Power, 1998).

Structures to be located at the EGC ESP Site, by having similar or greater separation (closest approach of Highway 54 is approximately 1 mi) than CPS, will also not be subjected to overpressures greater than 1 psi. This same conclusion is valid for propane storage explosions originating at the Cornbelt FS facility. In both cases the peak

incident pressure is less is less 1 psi, a level at which no significant damage would be expected to occur to safety related SSCs.

Revise SSAR, Chapter 2, Section 2.2.3.1.3 from:

The chemicals and other materials maintained in inventory at CPS were evaluated in the CPS USAR for potential impact on design and operation of the facility. It was concluded that these materials did not constitute a design concern at CPS, and would therefore not pose such a concern for the ESP Facility.

Van Horn-DeWitt is the only facility within 5 mi of the EGC ESP Site that manufactures, uses, or stores toxic chemicals. Van Horn-DeWitt is a distributor of agricultural products and chemicals (such as pesticides, herbicides, and fertilizers) and their facility in DeWitt is located approximately 2.6 mi from the EGC ESP Site. A list of chemicals distributed by Van Horn-DeWitt was reviewed in the preparation of the CPS USAR. This review was updated as part of the EGC ESP application development, and it was determined that with the exception of anhydrous ammonia, none of the chemicals in Van Horn-DeWitt's inventory require evaluation for their potential effect on control room habitability (due to an accidental spill or release) in accordance with Regulatory Guide 1.78 (USNRC, 2001).

CPS demonstrated that the postulated accidents of anhydrous ammonia nurse tanks and tanker trucks used by farmers and suppliers do not adversely affect the site (CPS, 2002). This conclusion applies to the EGC ESP Facility by virtue of the EGC ESP Facility having a similar or greater separation from such an event.

To read:

The chemicals and other materials maintained in inventory at CPS were evaluated in the CPS USAR for potential impact on design and operation of the facility. It was concluded that these materials did not constitute a design concern at CPS. This conclusion is expected to be valid for the ESP facility; however, the chemicals and materials used at CPS and ESP facility will need to be analyzed at the COL stage taking into account the control room ventilation design.

Van Horn-DeWitt is the only facility within 5 mi of the EGC ESP Site that manufactures, uses, or stores toxic chemicals. Van Horn-DeWitt is a distributor of agricultural products and chemicals (such as pesticides, herbicides, and fertilizers) and their facility in DeWitt is located approximately 2.6 mi from the EGC ESP Site. A list of chemicals distributed by Van Horn-DeWitt was reviewed in the preparation of the CPS USAR. This review was updated as part of the EGC ESP application development, and it was determined that with the exception of anhydrous ammonia, none of the chemicals in Van Horn-DeWitt's inventory require evaluation for their potential effect on control room habitability (due to an accidental spill or release) in accordance with Regulatory Guide 1.78 (USNRC, 2001).

CPS demonstrated that the postulated accidents of anhydrous ammonia nurse tanks and tanker trucks used by farmers and suppliers do not adversely affect the site (CPS, 2002). The postulated accidents will need to be evaluated at the COL stage with consideration of design features such as the ESP Facility control room habitability systems.

Revise SSAR, Chapter 2, Section 2.2.3.2 from:

The only design basis accidents identified in Section 2.2.3.1, relate to material releases at Van Horn-DeWitt and from the Gilman Rail Line resulting in toxic vapor concentrations as discussed in Section 2.2.3.1.3. Analyses will be required at the COL stage to evaluate the potential for material releases at Van Horn-DeWitt and from the Gilman Rail Line resulting in toxic vapor concentrations in a control room located at the ESP Site. These analyses will be dependent on the specific control room location and control room ventilation system design.

All other potential accidents involving explosions, flammable vapor clouds, fires, collisions with intake structures, and liquid spills do not pose a threat to the EGC ESP Facility.

To read:

Evaluations were performed of potential hazards near the ESP Facility site. These evaluations concluded that potential accidents involving explosions, flammable vapor clouds, fires, collisions with intake structures, and liquid spills do not pose a threat to the EGC ESP Facility.

The effects of toxic chemical releases near the facility will require evaluation at the COL stage since plant features such as the control room habitability system design must be considered to determine there is no adverse effect from these hazards. Analyses will be required for releases of: (1) chemical materials used at CPS and the EGC ESP Facility; (2) anhydrous ammonia nurse tanks used by farmers and tanker trucks used by suppliers; (3) anhydrous ammonia tank failure at the Van Horn - DeWitt facility; and (4) chemical hazards shipped by railway on the Gilman Line of the Canadian National Railroad.

ATTACHMENTS:

None