



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION II**

245 PEACHTREE CENTER AVENUE NE, SUITE 1200  
ATLANTA, GEORGIA 30303-1257

June 21, 2016

The Honorable William G. Thiess  
Mayor of Town of St. Lucie Village  
P. O. Box 3878  
Fort Pierce, FL 34948

Dear Mayor Thiess,

I am responding to your letter dated April 18, 2016, expressing concerns regarding the proposed All Aboard Florida (AAF) passenger rail expansion project and its potential impacts to the safe operation of the St. Lucie Nuclear Power Plant and current evacuation plans. The NRC's Region II office has NRC oversight responsibilities for the St. Lucie Nuclear Power Plant. Region II, in collaboration with other NRC offices, developed this response.

Since you addressed your letter to multiple federal and state agencies that have regulatory authority over different aspects of your concerns, it is our understanding that those agencies who received the correspondence have responded or will respond to you directly to address the aspects of your concerns that fall under their regulatory authority.

Regarding your concerns about the potential of a chemical release or explosion due to a freight rail accident that could affect the plant, nuclear power plants are required by NRC regulations to maintain a final safety analysis report (FSAR). The FSAR describes the facility, presents the design bases, and explains the safety analysis of the facility as a whole. This report also describes the evaluation of regional rail traffic and Florida Power & Light's (FPL) analysis of potential hazards to the plant posed by the railroad. The report considers the distance of the track, the frequency of trains, and the types of materials carried. This analysis includes postulated toxic chemical releases and explosives carried by rail. In reference to your 500kV line concern, the FSAR also addresses plant events associated with the loss of both onsite and offsite power, irrespective of cause. During required periodic requalification training, NRC licensed operators frequently perform scenarios where loss of power events are addressed. NRC regulations require that nuclear power plants periodically update the FSAR and the updates shall contain all the changes necessary to reflect information and analyses submitted to the NRC, as appropriate.

More specifically, St. Lucie FSAR Section 2.2.3.2.2 (last updated in 2011) accounts for the amounts of toxic chemicals transported by the Florida East Coast Railway (FECR) and notes that those amounts are greater than those specified in NRC Regulatory Guide 1.78 "Evaluating the Habitability of a Nuclear Power Plant Control Room during a Postulated Hazardous Chemical Release." Therefore releases of toxic chemicals due to railroad accidents are considered in their design basis analysis. FPL has administrative procedures governing their control room envelope habitability program. This program recognizes that hazardous chemical types or quantities on the plant site or in the vicinity of the plant may change with time and therefore, requires that FPL perform periodic evaluations for hazardous chemicals and take

appropriate actions, as warranted. References within this procedure require a periodic survey at least once every three years for stationary and mobile sources of hazardous chemicals in the vicinity of the plant, in accordance with NRC Regulatory Guide 1.78. Transportation accident rates have remained relatively constant for many years, so it has not been necessary to revise these frequencies.

We have contacted FPL and notified them of your concerns and others expressed directly to us and the other agencies. They are aware of the proposed railroad expansion and have recently considered the types of accidents described in your letter. They plan to continue to do so periodically as required by their control room envelope habitability program and plan to assess new rail traffic, as warranted. Additionally, we confirmed that FPL has provisions in their emergency plans and procedures for activation of their Emergency Response Organization in the event of chemical spills such as those postulated in your letter.

Regarding your emergency evacuation concerns, FPL assessed the ability for people to safely evacuate from the areas around the plant under various conditions, in accordance with NUREG/CR-7002, "Criteria for Development of Evacuation Time Estimate Studies." NUREG/CR-7002 provides a description of the emergency planning zone (EPZ) and the general approach used to meet the requirements for developing or updating an evacuation time estimate (ETE) study. The ETE is used to inform the protective action decision-making process and to assist in the development of traffic management plans to support an evacuation. The NRC reviewed your concerns and determined that there is no regulatory requirement to update the ETE based on the expansion of the existing rail line.

Part 50 of the Code of Federal Regulations, Section IV, Appendix E requires that nuclear power plants update the ETE when the permanent resident population within the EPZ increases, such that the increase causes ETE values to change by 25 percent or 30 minutes, whichever is less, from the plant's currently NRC approved or updated ETE. The updated ETE analysis would reflect the impact of the population increase.

NUREG/CR-7002 states that in the unlikely event that the conditions of an EPZ are changed significantly, such as a bridge collapse on a primary roadway, an update to the ETE analysis is recommended if these conditions are expected to persist for at least a few months. Planned activities, such as construction or infrastructure projects, are expected to have compensatory measures in place such that the activities do not affect the ETE.

In addition, ETE studies include an analysis of many different scenarios to provide ETEs under varying conditions to support emergency planning. These scenarios include season, day of the week, time of day, weather conditions, special events, and roadway impact.

The Roadway Impact scenario is intended to bound a variety of conditions that may impact a roadway segment such as construction, flooding, vehicle accidents, etc. This scenario should assume one segment of one of the highest volume roadways will be out of service and unavailable to evacuees. This analysis is conducted to understand the potential impact of such events and to support the development of traffic control plans. However, the ETE for this scenario is not typically used in protective action recommendations or decisions.

In summary, the NRC has reviewed the information provided in your correspondence and concluded that neither the rail expansion project nor the impact of potential rail accidents would require updates to the ETE. Additionally, the accidental releases of chemicals transported in the vicinity of the plant do not currently present undue risk to control room operators. However,

FPL is required to assess the impacts of increased rail traffic and does have administrative procedures in place to do so.

We do understand your concerns and will continue to look at any potential impacts rail traffic may have on either the operation of the plant or potential evacuations. If there is information that changes our current regulatory status, we will take the steps necessary to ensure that your residents and others near the plant are adequately protected.

Should you have any questions or need additional information, please contact the NRC's Region II Public Affairs Office at 404-997-4417 or via e-mail at [opa2.resource@nrc.gov](mailto:opa2.resource@nrc.gov).

Sincerely,

**/RA/**

Catherine Haney  
Regional Administrator

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Sincerely,

**/RA/**

Catherine Haney  
Regional Administrator

PUBLICLY AVAILABLE     
  NON-PUBLICLY AVAILABLE     
  SENSITIVE     
  NON-SENSITIVE  
 ADAMS:  Yes   
 ACCESSION NUMBER: ML16173A433     
  SUNSI REVIEW COMPLETE   
  FORM 665 ATTACHED

OFFICE	RII:OPA	RII:ORA	RII:ORA				
SIGNATURE	RH	LW	CH				
NAME	R Hannah	L. Wert	C. Haney				
DATE	6/21/16	6/21/16	6/21/16	6/ /2016	6/ /2016	6/ /2016	6/ /2016
E-MAIL COPY?	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO

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