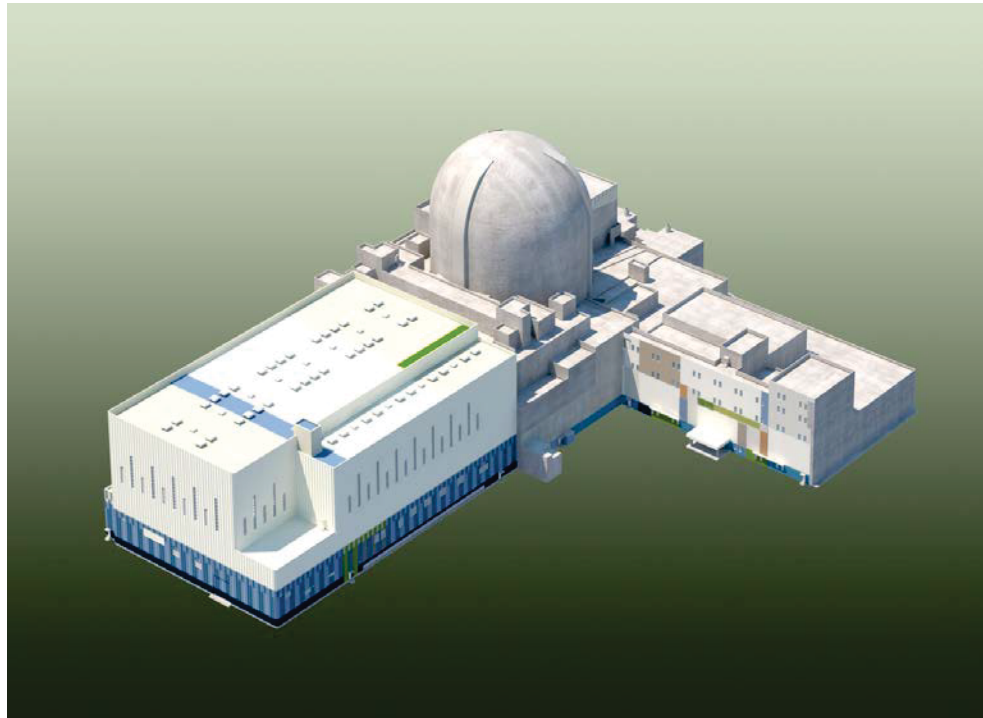


# APR1400 Plant Security Design (Aircraft Impact Analysis)



**KEPCO/KHNP**  
**Apr. 20~21. 2016**

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# Overview

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- Perform design-specific assessment for the effects of the impact of a large commercial aircraft on the NPP facility based on 10CFR50.150
- US NRC Regulatory Guide 1.217 allows guidance provided in NEI 07-13(Rev. 8) as acceptable methodology for assessments
- Use NEI 07-13 Methodology to Show that
  - Core remains cooled, and
  - Spent fuel pool integrity is maintained

# Overview

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- **Sufficiency criteria needed**

- **Containment integrity**

- No perforation - protects internal SSC's from damage and fire
- Polar crane does not fall inside containment

- **Spent fuel pool integrity**

- Pool structure, supports, and liner remain intact
- Consider debris and wreckage falling into pool

- **Protect critical penetrations into containment**

- **Protect sufficient equipment for all possible strike locations**

- Control fire spread with 3-hour & 5-psid doors and dampers
- Prevent shock damage

# Part I: Structural Assessment

# Structural Response Assessments

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# Integrity of Containment

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# Integrity of Spent Fuel Pool

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Exterior Walls Removed of Interior View

Spent Fuel Pool

# SFP Integrity Due to Strike Above SFP

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# Summary

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## Part II: Heat Removal Assessment

# Heat Removal Assessment

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# Heat Removal Assessment

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# Heat Removal Assessment

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# Summary

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