Senior Design Project Description for SPRING 2017

Project Title: Conceptual Design of an Escort Railcar using a Buffer Railcar
(AREVA_RAIL)

Supporter: AREVA
Supporter Technical Representative: ASSIGNED
Faculty Mentor: _____ ASSIGNED ____ X ____ TBD (check one)
Single Team __X__ Dual Team ____ (check one)
Personnel (EN/ET): _____ E, _____ Cp, _____ Cv, ____ 5 ____ M, _____ SE
(Complete if the number of students required is known)
Expected person-hours: (250 per student)

Description of Project:

Spent nuclear fuel and other radioactive waste from nuclear facilities must be safely transported to waste disposal and storage facilities. Rail has been determined in several studies to be a good method to transport the radioactive waste. For transport of radioactive waste by rail three types of cars are required: railcar to carry the waste, buffer car, and escort car. This project is to design the escort car using a buffer railcar.

Initial Project Requirements (e.g. weight, size, etc.):

There will be an escort railcar using a buffer railcar with a Sea-Land container-like attachment that:

1. Meets AAR-2043 standards
2. Meets Escort Car requirements
3. Can be loaded and unloaded by a crane
4. Utilizes only the available buffer car attachment points (no modification to buffer car)
5. Establish economics of various attachments

Expected Deliverables/Results:

A complete design with cost estimate for the system is to be provided.

List here any specific skills or knowledge needed or suggested (If none please state none):

None