

Optioneering Studies for the Sellafield Evaporator D Project Lifting

Project Overview

The construction of Evaporator D posed a risk to the existing inventory, especially associated with the use of cranes: the potential threat of crane collapse and dropped loads from height. As a result, options to safely construct the facility were developed and assessed at various stages as the build progressed and construction sequences and techniques were refined.

The drivers for speedy construction and reduction in construction hazards resulted in Sellafield Limited (SL) and the main contractor Costain Oil, Gas and Process (COGAP) agreeing to independent studies to assess construction options for timely and safe delivery of Evaporator D, including establishing the most suitable craneage for general construction lifts.

In addition to these prime drivers, other factors (e.g. implementation timescales) influenced the choice of option for a safe, early build and hence a variety of optioneering studies were utilised ranging from a full Multi-Attribute Decision Analysis (MADA) exercise to tailor made, fit-for-purpose option selection workshops, both of which were formally recorded and the final decision documented.

Scope of Work

To undertake a variety of optioneering studies throughout the construction phase of a major nuclear build, looking at construction and lifting techniques including craneage options.

DBD Deliverables

- ✎ To develop, facilitate and document fit-for-purpose optioneering studies as required throughout the construction phase of Evaporator D, including tailoring the appropriate filtering and scoring processes
- ✎ To guide the client through implementation of the selected option, including progress monitoring and reporting as well as producing the required implementation and compliance documentation

The Results

DBD tailored optioneering studies at each stage of the project to be fit-for-purpose and support timescales to aid decision-making. This included assessments of the impact of each option and change management/managing the implementation following option selection.

Client Benefits

A successful solution that aided the selection of construction and lifting techniques:

- ✎ A fit-for-purpose optioneering process at each stage of the construction
- ✎ A robust and audible documented decision making process
- ✎ A report recording a documented decision to support key decisions making stages in the project
- ✎ The client was able to reference documented decisions to support legal requirements (e.g. nuclear safety, conventional safety and regulatory)

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