

APM Project Management Awards



WINNER'S

CASE STUDY



Category **Shell HSSE (health, safety, security and environment) Award 2013**

Winner **Pile Fuel Cladding Silo (PFCS), Sellafield Ltd**

Sponsor



Overview

Sellafield Ltd prides itself on having a continuously improving HSSE culture. Its vision, mission, communications, design and construction are all driven by the overriding philosophy of 'safety first'.

The Pile Fuel Cladding Silo (PFCS) is a legacy storage facility for intermediate-level nuclear waste, and its mere existence has presented significant nuclear and conventional safety challenges.

It's a uniquely demanding and time-sensitive project, meaning the teams must innovate and challenge established

norms to overcome significant safety, security, environmental and organisational challenges.

The programme inspires an environment of nuclear safety and overall safe working, with aspirations of maintaining its world-class achievements such as the global URS Safe Facility of the Year Award 2012.

The overriding programme vision of 'keep it safe; get the waste out; resolve the legacy' places HSSE consciousness at the heart of all workforce contribution.

Objectives

The programme is aligned with the missions of The World Association of Nuclear Operators and the Institute of Nuclear Power Operations – to achieve the highest standards of nuclear safety, while promoting the benefit of excellence in an HSSE culture within the nuclear decommissioning sector.

On the back of recent high-profile awards, the PFCS addressed its weaknesses and built upon its strengths in order to avoid complacency.

The PFCS team aimed to accelerate work to permanently mitigate the nuclear hazard posed by the facility's continuing existence.

Resources

The programme has been given huge recognition and priority with more than 400 project staff and a £570m budget.

As a result of PFCS achieving 75 per cent of all Silver Awards granted at Sellafield, including for Environmental Management and Documentation, the team subsequently formed an Improvement Plan in order to address Areas for Improvement recognised by the Performance Evaluation Board.

Each department also adopted individual annual improvement action plans to sustain the organisation's reputation for perpetual enhancement.

Co-ordination

The PFCS programme is open, receptive and always willing to learn. Communication has been key.

The programme hosts a number of safety committees, which feed into the Management Safety Committee (MSC), which advises on technical matters. The MSC consists of members with expertise and knowledge of the project and facility.

In addition, a 'manager in the field' process promotes the review of safety arrangements and engagement with the workforce.

Other key methods include Sellafield's Human Performance Tools, which includes a Stop, Think, Act, Review (STAR) and peer-to-peer observation sessions, which has a minimum standard of one session per month.

Challenges

The PFCS is a significant nuclear hazard reduction programme and the tasks required to retrieve the Intermediate Level Waste are world-firsts, deemed by the Office for Nuclear Regulation as some of the most significant nuclear challenges in Europe.

The first challenge to overcome was the age of the nuclear building. It's a 60-year-old concrete structure, which was not built for long-lasting storage.

It's been exposed to the elements of coastal Cumbria and maintaining the integrity and containment of the Silo, which is at the end of its lifecycle, was the main concern for all project stages.

Furthermore, in order to retrieve the waste as effectively and safely as possible, a concrete superstructure and control rooms were built, as well as the installation of a semi-goliath crane.

Meanwhile, the threat of argon gas has never been higher, with five workers in a Hyundai Steel plant in South Korea being killed in May 2013 by exposure to the gas during a simple manufacturing process.

The gas is pumped into the silo to ensure the mitigation of fire risk, preventing physical human access during the retrieval process, as well as presenting a challenge for design, safety and works testing. To overcome this, an Oxytech system was required to monitor worker respiration conditions.

Successes

There was a series of major mitigation achievements during the PFCS programme.

It received certification and recognition for being the first nuclear programme in the UK to have introduced Safety Trained Supervisor certification provision and support for its workforce.

Also, high background radiation required probes to be shielded, and the team designed its own wheel-mounted solution, reducing manual handling risks.

The Environmental Health, Safety and Quality (EHS&Q) team was challenged to rollback the radiological and contamination footprint categorisation from the active area.

Subsequently the anticipated project savings were more than £1m.





The APM Project Management Awards have been celebrating project management excellence since 1993 and the broad range of categories is designed to make entry possible for projects and companies of all sizes and complexity.

The awards reflect the invaluable contribution project managers make in all sectors of society and the event provides an opportunity for industry professionals to meet with colleagues and entertain guests as well as celebrate at one of the year's most exciting events.

Highly regarded in the project management industry, the awards reflect the dedication and talent that helps to shape the project management community and the world around us. The finalists, winners and sponsors of the awards attract national publicity for their achievement and involvement. Winning an award provides invaluable recognition and kudos to the careers of winners.

For more details on the awards and how to enter or attend, visit apm.org.uk/awards or email awards@apm.org.uk

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