

Hot Cell Waste Posting Chute

Client: Nuclear Medicines

Aims and objectives

Aquila, was asked to undertake a concept design which would allow for the remote posting of active material into a horizontal chute, within a shielded cell, and then empty the waste directly into a 200 litre drum, outside the cell.



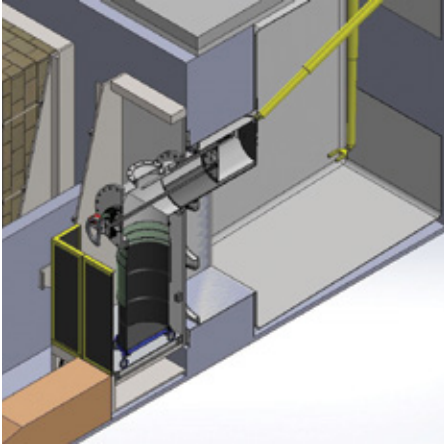
Shielded Facilities

Cyclife EDF Group - Subsidiaries



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Project overview



A suite of legacy hot cells are being decommissioned by a Nuclear Medicines organisation.

The three cells historically, included Zinc Bromide windows with manipulators on the front face with

removable sliding doors filled to the back of the cells. The objective over the years has been to empty the activity within the shield cells and decommission the complete facility.

Scope and Project Solution

As an integral part of the concept, we worked with our client to develop a decommissioning methodology which included the challenge of how to retract each rear shield door while maintaining shielding integrity and containment. The solution was based on an ice cream scoop principal whereby, the scoop was filled with waste then withdrawn through the shielded

penetration. Once the scoop had been withdrawn to the defined position over the lined waste drum, the whole scoop assembly could be rotated 180°, allowing the waste to drop into the drum. Once the drum had been filled, the drum liner could be double heat sealed and cut to maintain containment. Once validated, the concept was designed, developed and manufactured at Aquila with subsequent handling trials to prove the operation.

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Summary

Once again, the Aquila team was engaged right at the start of the project to work with the client's engineers to develop a simple, commercial solution. We believe this solution could be adapted for other decommission applications.

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