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REDEPLOYMENT OF DUAL ENERGY RFQ ACCELERATOR SYSTEMS: LESSONS LEARNT.

In 2007 Necsa was given the opportunity to take over two separate RFQ accelerator systems designed to generate intense pulses of pseudo monoenergetic neutrons. Both systems, though similar, were unique in their design and established mode of operation. Each accelerator system consisted of two RFQ linear accelerators connected in tandem and linked to a windowless high pressure gas cell target. As such it was important to maintain a reliable high vacuum system for the accelerators and also ensure that the target gas retained its purity so as to minimize unwanted radiation. The shielding requirements for such a facility was an important feature of the overall installation. Aspects of the operation of the accelerator under these conditions will be presented.

One of the systems had to be dismantled and rebuilt at a new location. The experience and lessons learnt in undertaking this task will also be presented.

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