

## Vitalant's Irradiator Project Plan to Transition from Gamma to X-ray

### Content:

Abstract title: Vitalant's Irradiator Project Plan to Transition from Gamma to X-ray

Vitalant is a non-profit blood provider, which consists of 7 divisions with 127 donation centers and 18 manufacturing sites, and distributes blood and blood products to over 1,000 hospitals and health care partners across the United States. The Vitalant enterprise utilizes 24 Gamma irradiators to reduce or inactivate white blood cells, which are associated with the transmission of Transfusion-Associated Graft-Versus-Host-Disease, TA-GVHD. As a large number of the Vitalant's Gamma irradiators were posed for resourcing and there is a potential threat of malicious use of Gamma radioactive sources, a cross-functional Irradiator Work Group was established to develop a recommendation in regards to the replacement of Gamma irradiators with x-ray irradiators. X-ray blood irradiators are considered a practical alternative to Gamma irradiators in providing an equivalent reduction/inactivation of white blood cells in blood and blood products. X-ray blood irradiators are approved by the Food and Drug Administration (FDA) and have been available for many years with numerous countries across the globe already completing this transition. The Irradiator Work Group was responsible for identifying any upcoming changes in the Federal Regulations as they applied to Gamma source blood irradiators, completion of a cost-benefit analysis of Gamma vs. x-ray, equipment selection, installation requirements, and an equipment replacement plan in which the current equipment was ranked based upon six critical factors. Per the group's recommendation, Vitalant Executive Leadership approved the transition from Gamma blood irradiator to x-ray blood irradiators.

A contract between Vitalant and the Department of Energy/National Nuclear Security Administration's Office of Radiological Security (ORS) was established for the removal of the Gamma irradiators and to cover the expenses incurred as a result of the source removal. ORS also provided an incentive which covers a portion of the costs of the new x-ray blood irradiators. The support from ORS was critical in ensuring that Vitalant as a non-profit blood provider would be able to decrease potential security threats while continuing to provide cost-effective blood and blood products to our patients.

The Vitalant Irradiator Work Group's project development process, the enterprise's progress to date on this three-year plan, and the lessons learned will be shared in this poster.

### State

United States

### Gender

Female

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