

## **Carbon-14 Sampling During Diablo Canyon Unit 1 Refueling Outage 17**

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### **ABSTRACT**

Beginning with their 2010 annual radioactive effluent release reports, a majority of commercial U.S. nuclear power plants started including the quantity of carbon-14 released, and resulting dose to receptors. Sampling gaseous waste throughout a fuel cycle can be difficult and expensive. Many plants calculate the production and release of carbon-14 using references such as EPRI Technical Report 1021106, "Estimation of Carbon-14 in Nuclear Power Plant Gaseous Effluents." Diablo Canyon performed limited sampling and analysis for carbon-14 during power operation in 2010. Sampling has now been performed during Unit 1 refueling outage 17 in an attempt to characterize the quantity and form of carbon-14 released in gaseous effluents. This paper presents the information collected.

Paper presented at the 22<sup>th</sup> Annual RETS/REMP Workshop, June 25-27, 2006, Orlando, FL.