

Containment Purge Accountability (or The Anatomy of a Containment Purge)

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21-May-03**

This document analyzes the processes used at Calvert Cliffs to calculate and report activity discharged in containment purge. The use of grab samples and radiation monitors provides assurance that accountability is accurate, complete, and well understood. This practice, and practices like this, help ensure an effective radioactive effluent control program at CCNPP. A case study is presented involving the containment purge accountability for the 2003 Unit #2 refueling outage (RFO).

Accountability of the activity discharged during containment purge is relatively simple. There are, however, many different assumptions that—if they are not true—tend to complicate the method of accountability. Some of the assumptions may include:

1. Do grab samples accurately represent containment atmosphere activity at peak concentration?
2. Is the default purge fan flow rate accurate?
3. Are the RMSs responses checked to ensure the default efficiencies are correct?
4. When primary systems are opened in containment, how is accountability performed?
5. Do effluent calculations adequately account for the activity discharged?

By using a number of the techniques described in this paper:

1. accountability for containment purge will be accurate and complete,
2. the accuracy of RMS responses may be verified, and
3. the RETS-REMP Program Manager can have confidence in the effluent control program.