

TID-04-009  
Rev. 0

**10 CFR 50.75(g) Evaluation of Radiological Soil  
Contamination in Unit 2 Yard 8 Radioactive Materials  
Storage Area**

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## **Objective**

To provide required records, surveys and assessment pursuant to the requirements of 10CFR50.75(g) for minor radiological soil contamination in the Unit 2's outside radioactive material storage area—also known as Yard 8

## **Analysis**

As follow-up to cleanup efforts for Yard 8 (LLW interim storage area) soil samples were obtained beneath the old Unit 2 turbine parts located in Yard 8. Twenty-five samples were obtained IAW MARSSIN sampling techniques to determine if contamination levels exceeded environs limits. The average Cs-137 contamination level is 940 pCi/kg, a value of about five times the environmental release criteria for unrestricted use. Also five samples showed low levels of Co-60 slightly above its environmental release limit. The cause of this low level contamination is very likely from the old unit 2 turbine parts. These values pose no significant environmental hazard and no additional hazards to the workers or work performed in Yard 8. The Yard 8 area is currently posted as a RAM and a RCA, with RWP and dosimeter required for entry. Also, the gate is locked or continuously guarded by a qualified RP individual when worker entrance is required.

## **Corrective Actions**

Additional parameter soil samples were taken outside the fence area to determine extent of condition. These samples showed only trace amounts of Cs-137 and no other byproduct materials. The Cs-137 values were consistent with environmental levels seen in soil around the IPEC over the past ten years and is considered to be weapons fallout concentrations.

## **Conclusions**

No further actions are necessary except for record keeping requirements IAW 10CFR50.75(g). The area is currently utilized as an interim outdoors storage area for low level radioactive materials with no loose activity. Another corrective action is tracking the removal of these old turbine parts and another corrective action is tracking shrink wrapping these parts for better weathering controls. The isotopes identified were cesium and cobalt, both at concentrations, which do not pose an undue hazard to the workers or environment, if left undistributed in the soil. The concentrations found are very low, slightly above environmental LLD values, and are typically very low in soil transport properties. The cobalt-60 contamination found at IPEC is typically insoluble, and the cesium contamination usually very ionic and easily trapped by the soil. This area is classified as an affected area, Level 1 IAW MARRSIN criteria and as such will require further soil sampling in order to be consider releasable IAW IPEC's site

decommissioning plan, when developed. This site will continue to be use thru the life of the operating license of the plant and therefore it would not be cost affective to remediate this area until decommissioning of the site. This is consistent with the regulations in 10CFR50.75g.

### **Recommendations**

- **Maintain this file for future site decommissioning activities-no further actions**