SUPPLEMENTARY INFORMATION

Report No.: 50-302/79-112/04X-0

Facility: Crystal River Unit #3

Report Date: 10 January 1980

Occurrence Date: First and Second Halves 1979
(discovered 10 December 1979)
(confirmed 7 January 1980)
(determined at plant 9 January 1980)

Identification of Occurrence: Environmental samples were not analyzed using procedures which provided LLDs equal to, or less than, those required by the Environmental Technical Specification 3.2.2.

Conditions Prior to Occurrence: NA

Description of Occurrence: The following sample had an LLD greater than that required to the date indicated below:

| | | |
|---|---|---|
| MARINE PLANT (2 stations) ( # > ETS) | FIRST HALF | 1 |
| VEGETATION (3 stations) ( # > ETS) | SECOND HALF | 1 |

Description of Apparent Cause: Inadequate sample time was the apparent cause of the greater than required LLD. A contributing factor may also have been the use of analyzing equipment other than that normally used because of equipment failures.

Analysis of Occurrence: The activity associated with Sr-89 at Station C29 (Control) for Marine Plants in the First Half was 28 pCi/kg and for the Second Half, it was nondetectable. For Station C30 (Control), the activity was nondetectable for the first half and 9 pCi/kg for the second half. The activity is considered erroneous because of the different equipment being employed for analyzing these samples.

The activity associated with Zn-65 at Station C05 for vegetation in second half was nondetectable as was the activity for Zn-65 for all three stations in both the first and second halves.

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Corrective Action:

The LLD for Sr-89 from Sample Station C29 (Control) for Marine Plants in the first half was 11 pCi/kg and it was 3 pCi/kg in the second half. The average annual LLD is 5 pCi/kg compared to the Technical Specification requirements of 10 pCi/kg.

The LLD for Zn-65 from Sample Station C05 (Control) for vegetation in the second half of 1979 was 15 pCi/kg. The required LLD is 20 pCi/kg and the average annual LLD was 15 pCi/kg.

Analyses are performed in such a manner that the required LLDs will be achieved under routine conditions. Occasionally, background fluctuations, unavoidable small samples sizes, the presence of interfering nuclides, or other uncontrollable circumstances may render these LLDs unachievable. For example, the energy of the Zn-65 gamma is about the same as the average gamma from the Compton Effect of K-40. When there is unexpected K-40 activity in a sample, it will influence the Zn-65 LLD even though there may be no Zn-65 activity. Therefore, no corrective action is proposed.

Failure Data:

This is the thirteenth (13th) report for this type occurrence.

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