

1206790060



**PUBLIC  
SERVICE  
INDIANA**

S. W. Shields  
Vice President - Electric System

November 30, 1979

Mr. Harold R. Denton  
Director  
Office of Nuclear Reactor Regulation  
US Nuclear Regulatory Commission  
Washington, DC 20555

Docket Nos.:  
STN 50-546  
STN 50-547

Dear Mr. Denton:

This letter provides for your review the planned Marble Hill Units 1 & 2 Preoperational Radiological Environmental Monitoring Program.

PSI is preparing to issue specifications to vendors for the performance of this pre-operational monitoring program. NRC guidance on the scope of this program has been provided in the Marble Hill FES (NUREG-0097, September 1976). However, differing programs are also outlined in more recent documents such as "Radiological Effluent Technical Specifications for PWR's", (NUREG-0472, Rev. 2, July 1979) and the revised Radiological Assessment Branch Technical Position, November 1979.

In designing this Marble Hill program, PSI has considered the general programs outlined in the above documents along with site specific requirements unique to Marble Hill. We have met with representatives of the Louisville Water Company and State of Indiana to obtain their comments concerning this program. Also, several aspects of this program evolved from a meeting with the NRC (Messrs. Kirsliis, Congel and Britz) on August 28, 1979. At that meeting, the NRC agreed to review this final version of the program to insure that it was satisfactory.

The attached tables outline our proposed program. Your statement of concurrence is requested.

Sincerely,

S. W. Shields  
Vice President-Electric Systems

ADP:baq

Attachments

1535 227

7912120

317 .. 839 . 9611

COOL  
ES

398

A

SCHEDULE FOR  
PROPOSED MARBLE HILL PREOPERATIONAL  
ENVIRONMENTAL RADIOLOGICAL MONITORING PROGRAM

- A. Two years prior to commercial operation -
  - 1. Thermoluminescent dosimeters at air particulate locations
  - 2. Fish and invertebrates
  - 3. Peaches, tobacco and cabbage
  - 4. Downstream Ohio River drinking water (Louisville Water Company)
  
- B. One year prior to commercial operation -
  - 1. Airborne particulates
  - 2. Milk (gamma scan)
  - 3. Ohio River surface water
  - 4. Groundwater (well drinking water supplies)
  
- C. Six months prior to commercial operation -
  - 1. Airborne iodine
  - 2. Milk (I-131)
  - 3. Soil

# AIRBORNE MONITORING PROGRAM

<u>Exposure Pathway</u>	<u>Number of Samples</u>	<u>Collection Frequency</u>	<u>Type/Frequency of Analysis</u>
Airborne Particulates	8 Stations (4 on or near site boundary, 4 at 5-20 miles from site)	Continuous Sampler Operation With Sample Collection Weekly or as required by dust loading - whichever is more frequent	Gross Beta - Weekly Gamma Scan - Quarterly on composites
Airborne Iodine	8 Stations (same locations as air particulate stations)	Continuous Sampler Operation with Canister Collection Weekly	I-131
Thermoluminescent Dosimeters <sup>1</sup>	8 Stations (same locations as air particulate stations)	Quarterly Collection	Integrated Gamma Dose Quarterly
	32 Additional Stations plus additional TLD packets at each of of the 8 air particulate stations.	Annual Collection	Annual integrated gamma dose or analysis as needed to evaluate abnormal release.

## Footnote:

1. There will be a total of 40 TLD locations. Each 22½° sector will contain 2 TLD stations - one at or near the site boundary and one at 3-5 miles distance. Eight of the TLD locations will coincide with the air particulate stations and will have 2 TLD packets, one for quarterly evaluation and one for "as needed" or annual evaluation.

# TERRESTRIAL MONITORING PROGRAM

<u>Exposure Pathway</u>	<u>Number of Samples</u>	<u>Collection Frequency</u>	<u>Type/Frequency of Analysis</u>
Fruits and Vegetable <sup>1</sup>			
A. Peaches	1 Control, 1 Indicator	Annually at Harvest	Gamma Scan of Edible Portions
B. Tobacco	1 Control, 1 Indicator	Annually at Harvest	Gamma Scan, I-131
C. Cabbage	1 Control, 1 Indicator	Annually at Harvest	Gamma Scan
Milk	1 Control, 3 Indicators	Monthly <sup>2</sup>	Gamma Scan, I-131
Soil	8 Samples (same locations as air particulate stations)	Once Per 3 Years	Gamma Scan

## Footnote:

1. Peaches, tobacco and cabbage are predominant crops grown near the site. Tobacco and cabbage were selected as representative of broadleaf vegetables.
2. Sample from highest X/Q area split for analysis by State of Indiana.

1535  
230

# AQUATIC MONITORING PROGRAM

<u>Exposure Pathway</u>	<u>Number of Samples</u>	<u>Collection Frequency</u>	<u>Type/Frequency of Analysis</u>
Surface Water	1 Ohio River, Upstream of Site	Monthly grab sample; composite of the 3 monthly samples <sup>1, 2</sup>	Gross Beta and Gamma Scan - Monthly Quarterly Composite for H-3 For Drinking Water, also include I-131 Analysis on each composite when the dose calculated for the consumption of the water is greater than 1mRem per year
	1 Ohio River, approxi- mately one mile down- stream of site	"	"
	1 Ohio River, in dis- charge plume	"	"
	1 Little Saluda Creek Bridge	Monthly grab sample; composite of the 3 monthly samples	"
	1 Louisville Water Company Raw Water Intake	Continuous composite for monthly analysis <sup>3</sup>	"

## Footnote:

1. Continuous composite sampling not possible due to high flows and debris in Ohio River.
2. Samples split for analysis by State of Indiana.
3. Samples split for analysis by State of Indiana and Louisville Water Company.

AQUATIC MONITORING PROGRAM (Continued)

<u>Exposure Pathway</u>	<u>Number of Samples</u>	<u>Collection Frequency</u>	<u>Type/Frequency of Analysis</u>
Ground Water	1 Drinking Water Sample from nearest on-site or offsite well with potential for contamination due to radioactive spill	Monthly grab sample; composite of the 3 monthly samples	Same as Surface Water
Fish	1 Sample of a commercially or recreationally important species in the vicinity of the discharge point	Semi-Annually	Gamma Scan on Edible Portion
	1 Sample of same species as above collected upstream of site (not influenced by discharge)	"	"
Invertebrates	1 Sample, if available, in the vicinity of the discharge point	Semi-Annually	Gamma Scan
	1 Sample of same species as above, if available, upstream of site (not influenced by discharge)	"	"