



Approved By <b>J. B. Sills</b>	<b>Vogtle Electric Generating Plant</b> 	Procedure Number <b>36025-C</b>	Rev <b>6.2</b>
Date Approved <b>02/25/2000</b>	<b>RADIOACTIVE EFFLUENT RELEASE REPORT PREPARATION</b>	Page Number <b>1 of 7</b>	

## RADIOACTIVE EFFLUENT RELEASE REPORT PREPARATION

<b>PROCEDURE USAGE REQUIREMENTS-</b>	<b>SECTIONS</b>
<b>Continuous Use:</b> Procedure must be open and readily available at the work location. Follow procedure step by step unless otherwise directed.	
<b>Reference Use:</b> Procedure or applicable section(s) available at the work location for ready reference by person performing steps.	
<b>Information Use:</b> Available on plant site for reference as needed.	<b>ALL</b>

Approved By <b>J. B. Sills</b>	<b>Vogtle Electric Generating Plant</b> 	Procedure Number <b>36025-C</b>	Rev <b>6.2</b>
Date Approved <b>02/25/2000</b>	<b>RADIOACTIVE EFFLUENT RELEASE REPORT PREPARATION</b>	Page Number <b>2 of 7</b>	

## **INFORMATION USE**

### **1.0 PURPOSE**

This procedure provides the reporting requirements, format and methodology for the preparation of the Radioactive Effluent Release Report.

### **2.0 DEFINITIONS**

#### **2.1 OFF-SITE DOSE CALCULATION MANUAL (ODCM)**

Contains the methodology and parameters used in the calculation of off-site doses due to radioactive gaseous and liquid effluents, in the calculation of gaseous and liquid effluent monitoring Alarm/Trip setpoints, and in the conduct of the Environmental Radiological Monitoring Program.

#### **2.2 PROCESS CONTROL PROGRAM (PCP)**

Contains the current formulas, sampling, analyses, tests, and determinations to be made to ensure that processing and packaging of solid radioactive wastes based on demonstrated processing of actual or simulated wet solid wastes will be accomplished in such a way as to assure compliance with 10 CFR Parts 20, 61, and 71 and Federal and State regulations, burial ground requirements, and other requirements governing the disposal of radioactive waste.

### **3.0 PRECAUTIONS**

**3.1** Ensure any changes to the ODCM Specifications, (that regulate the effluent program), the PCP, ODCM or major changes to the liquid, gaseous, and solid radwaste treatment systems are included in this report.


**3.2** The report shall be submitted by 1 May of each year.

**3.3** Each report will be reviewed by a radiochemist for errors/omissions.

**3.4** Numerical values should be managed as described in Procedure 36010-C, "Off-Site Dose Calculation Manual (ODCM) Implementation And Control".

**3.5** Any abnormal release should be treated as a batch release. If an abnormal gaseous release is made, the meteorological data obtained during the release should be reported. The number of such releases, total number of Curies, and a description of each event are to be included in the Radioactive Effluent Release Report.

**3.6** The report cannot be completed until all results of radiochemical analyses required for this report that are performed by outside laboratories have been received. It is imperative that all such samples be shipped as soon as possible.

Approved By <b>J. B. Sills</b>	<b>Vogle Electric Generating Plant</b> 	Procedure Number <b>36025-C</b>	Rev <b>6.2</b>
Date Approved <b>02/25/2000</b>	<b>RADIOACTIVE EFFLUENT RELEASE REPORT PREPARATION</b>	Page Number <b>3 of 7</b>	

**3.7** The report should be checked for "reasonableness". The quantities and identities of nuclides released should be compared to those expected to be released as defined in the FSAR.

**3.8** The previous Radioactive Effluent Report may be used as a "Typical" report for the preparation of the current Annual Radioactive Effluent Report.

**4.0** **RESPONSIBILITIES**

**4.1** **CHEMISTRY DEPARTMENT**

The Chemistry Department will assemble and submit the Radioactive Effluent Release Report to the VEGP Licensing Group in its entirety. It will be responsible for reviewing all data before submittal. The Chemistry Department will prepare all Sections of the report.

**4.2** **HEALTH PHYSICS DEPARTMENT**

The Health Physics Department will be responsible for supplying the solid waste data. This data will be submitted in accordance with Section 7.2.2.4 of ODCM.

The Health Physics Department will supply the Chemistry Department with any changes to the PCP during the report period.

**4.3** **ENVIRONMENTAL AFFAIRS - CORPORATE**


Environmental Affairs - Corporate Group will be responsible for supplying the meteorological data as described in Section 7.2.2.2 of the ODCM and land use survey as described in ODCM Section 4.1.2.

**4.4** **NUCLEAR SAFETY AND COMPLIANCE**

The report will be transmitted from the Chemistry Manager to Nuclear Safety and Compliance as described in Procedure 00152-C, "Federal And State Reporting Requirements".

**4.5** **OPERATIONS DEPARTMENT**

The Operations Department will supply the Chemistry Department with any major changes to the liquid, gaseous or solid Radwaste Treatment System pursuant to ODCM 7.2.2.7.

Approved By <b>J. B. Sills</b>	<b>Vogtle Electric Generating Plant</b> 	Procedure Number <b>36025-C</b>	Rev <b>6.2</b>
Date Approved <b>02/25/2000</b>	<b>RADIOACTIVE EFFLUENT RELEASE REPORT PREPARATION</b>	Page Number <b>4 of 7</b>	

5.0

PROCEDURE

5.1

REQUIREMENT CONTENTS

The materials specified in the following sub-sections shall be included in each Radioactive Effluent Release Report.

5.1.1

Quantities of Radioactive Materials Released

The report shall include a summary of the quantities of radioactive liquid and gaseous effluents and solid waste released from the units as outlined in NRC Regulatory Guide 1.21, "Measuring, Evaluating, and reporting Radioactivity in Solid Wastes and Releases of Radioactive Materials in Liquid and Gaseous Effluents from Light-Water-Cooled Nuclear Power Plants," Revision 1, June 1974, with liquid and gaseous effluent data summarized on a quarterly basis and solid radioactive waste data summarized on a semiannual basis following the format of Appendix B thereof. Unplanned releases of radioactive materials in gaseous and liquid effluents from the site to UNRESTRICTED AREAS shall be included in the report, tabulated either by quarter or by event. For gamma emitters released in liquid and gaseous effluents, in addition to the principal gamma emitters for which MDC'S are specifically established in Table 2-3 and Table 3-3, other peaks which are measurable and identifiable also shall be identified.

5.1.2


Meteorological Data

The report shall include an annual summary of hourly meteorological data collected over the previous year. This annual summary may be either in the form of a hour-by-hour listing of the wind speed, wind direction, and atmospheric stability, and precipitation (if measured) on magnetic tape; or in the form of joint frequency distributions of wind speed, wind direction, and atmospheric stability. In lieu of submission with the Radioactive Effluent Release Report, the licensee has the option of retaining this summary of required meteorological data on site in a file that shall be provided to the NRC upon request.

5.1.3

Dose Assessments

The report shall include an assessment of the radiation doses due to the radioactive liquid and gaseous effluents released from each unit during the previous calendar year. Historical annual average meteorology or the meteorological conditions concurrent with the time of release of radioactive materials in gaseous effluents (as determined by sampling frequency and measurement) shall be used for determining the gaseous pathway doses. This assessment of radiation doses shall be performed in accordance with ODCM Sections 2.1.3, 2.4, 3.1.3, 3.1.4, 3.4.2, 3.4.3, 5.1, and 5.2.

Approved By <b>J. B. Sills</b>	<b>Vogtle Electric Generating Plant</b> 	Procedure Number <b>36025-C</b>	Rev <b>6.2</b>
Date Approved <b>02/25/2000</b>	<b>RADIOACTIVE EFFLUENT RELEASE REPORT PREPARATION</b>	Page Number <b>5 of 7</b>	

If a determination is required by Section 5.1.2, the report shall also include an assessment of radiation doses to the likely most exposed MEMBER OF THE PUBLIC from reactor releases and other nearby uranium fuel cycle sources (including does from primary effluent pathways and direct radiation) for the previous year to show conformance with 40 CFR 190, Environmental Radiation Protection Standards for Nuclear Power Operation; this dose assessment must be performed in accordance with Chapter 5. The report shall also include as assessment of the radiation doses from radioactive liquid and gaseous effluents to MEMBERS OF THE PUBLIC due to their activities inside the SITE BOUNDARY during the report period; this assessment must be performed in accordance with ODCM Chapter 6. All assumptions used in making these assessments (i.e., specific activity, exposure time, and location) shall be included in the report.

#### 5.1.4 Solid Radwaste Data


For each type of solid waste shipped offsite during the report period, the following information shall be included:

- a. Waste volume
- b. Total curie quantity (specify whether determined by measurement or estimate)
- c. Principal radionuclides (specify whether determined by measurement or estimate)
- d. Type of waste (e.g., spent resin, compacted dry waste, evaporator bottoms)
- e. Type of container (e.g., LSA, Type A, Type B, Large Quantity)
- f. Solidification agent (e.g., cement, urea formaldehyde)
- g. Class of solid wastes (as defined by 10 CFR Part 61)

#### 5.1.5 Licensee Initiated Document Changes

Licensee initiated changes shall be submitted to the Nuclear Regulatory Commission as a part of or concurrent with the Radioactive Effluent Release Report for the period in which any changes were made. Such changes to the ODCM shall be submitted pursuant to Technical Specification 5.5.1. This requirement includes:

- 5.1.5.1 Any changes to the sampling locations in the radiological environmental monitoring program, including any changes made pursuant to ODCM Section 4.1.1.2.3. Documentation of changes made pursuant to Section ODCM 4.1.1.2.3 shall include supporting information identifying the cause of the unavailability of samples.

Approved By <b>J. B. Sills</b>	<b>Vogtle Electric Generating Plant</b> 	Procedure Number <b>36025-C</b>	Rev <b>6.2</b>
Date Approved <b>02/25/2000</b>	<b>RADIOACTIVE EFFLUENT RELEASE REPORT PREPARATION</b>	Page Number <b>6 of 7</b>	

5.1.5.2 Any changes to dose calculation locations or pathways, including any changes made pursuant to ODCM Section 4.1.2.2.2.

5.1.6 Descriptions of Program Deviations

Discussions of deviations from the established program shall be included in each report, as follow:


5.1.6.1 The report shall include deviations from the liquid and gaseous effluent monitoring instrumentation operability requirements included in ODCM Sections 2.1.1 and 3.1.1, respectively. The report shall include an explanation as to why the inoperability of the liquid or gaseous effluent monitoring instrumentation was not corrected within the specified time requirement.

5.1.6.2 The report shall include a description of the events leading to liquid holdup tanks or gas storage tanks exceeding the limits of Technical Specification 5.5.12.

5.1.7 Major changes to Radioactive Waste Treatment Systems

As required by ODCM Sections 2.1.5 and 3.1.6, licensee initiated MAJOR CHANGES TO RADIOACTIVE WASTE TREATMENT SYSTEMS (liquid and gaseous) shall be reported to the Nuclear Regulatory Commission in the Radioactive Effluent Release Report covering the period in which the change was reviewed and accepted for implementation. The discussion of each change shall contain:

- A summary of the evaluation that led to the determination that the change could be made in accordance with 10 CFR 50.59;
- Sufficient detailed information to totally support the reason for the change without benefit of additional supplemental information;
- A detailed description of the equipment, components, and processes involved and the interfaces with other plant systems;
- An evaluation of the change which shows the predicted releases of radioactive materials in liquid and gaseous effluents that differ from those previously predicted in the license applications and amendments thereto;
- An evaluation of the change which shows the expected maximum exposures to individuals in the UNRESTRICTED AREA and to the general population that differ from those previously estimated in the license applications and amendments thereto;
- A comparison of the predicted releases of radioactive materials, in liquid and gaseous effluents, to the actual releases for the period prior to when the changes are to be made;

Approved By <b>J. B. Sills</b>	<b>Vogtle Electric Generating Plant</b> 	Procedure Number <b>36025-C</b>	Rev <b>6.2</b>
Date Approved <b>02/25/2000</b>	<b>RADIOACTIVE EFFLUENT RELEASE REPORT PREPARATION</b>	Page Number <b>7 of 7</b>	

- g. An estimate of the exposure to plant operating personnel as a result of the change; and
- h. Documentation of the fact that the change was reviewed and found acceptable by the PRB.

## 6.0 REFERENCES

- 6.1 VEGP Technical Specifications.
- 6.2 Regulatory Guide 1.21, June 1974.
- 6.3 10CFR50.36(a)

**END OF PROCEDURE TEXT**