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NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555  
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TO ALL PWR LICENSEES

SUBJECT: NUREG-1301 - "OFFSITE DOSE CALCULATION MANUAL GUIDANCE:  
STANDARD RADIOLOGICAL EFFLUENT CONTROLS FOR PRESSURIZED  
WATER REACTORS" (GENERIC LETTER 89-01, SUPPLEMENT NO. 1)

Enclosed, for your information, is a copy of the subject NUREG report. This NUREG report does not impose any new requirements or staff positions; its use is therefore totally voluntary.

The subject NUREG supersedes prior draft guidance for RETS (NUREG-0472) for those licensees who elect to implement Generic Letter 89-01. Licensees not electing to implement this Generic Letter should continue to follow the prior draft RETS guidance.

  
James G. Partlow  
Associate Director for Projects  
Office of Nuclear Reactor Regulation

Enclosure: As stated

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W. Wayne Meinke and Thomas H. Essig

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This report contains guidance which may be voluntarily used by licensees who choose to implement the provision of Generic Letter 89-01, which allows Radiological Effluent Technical Specifications (RETS) to be removed from the main body of the Technical Specifications and placed in the Offsite Dose Calculation Manual (ODCM). Guidance is provided for Standard Effluent Controls definitions, Controls for effluent monitoring instrumentation, Controls for effluent releases, Controls for radiological environmental monitoring, and the basis for Controls.

Guidance on the formulation of RETS has been available in draft form (NUREG-0472 and -0473) for a number of years; the current effort simply recasts those RETS into Standard Radiological Effluent Controls for application to the ODCM. Also included for completeness are: (1) radiological environmental monitoring program guidance previously which had been available as a Branch Technical Position (Rev. 1, November 1979); (2) existing ODCM guidance; and (3) a reproduction of Generic Letter 89-01.

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# Offsite Dose Calculation Manual Guidance: Standard Radiological Effluent Controls for Pressurized Water Reactors

Generic Letter 89-01, Supplement No. 1

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**U.S. Nuclear Regulatory Commission**

**Office of Nuclear Reactor Regulation**

W. W. Meinke, T. H. Essig



## ABSTRACT

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## PREFACE

This compilation of Standard Radiological Effluent Controls (SREC) contains all of the controls addressed in Generic Letter 89-01, to be incorporated into a licensee's Offsite Dose Calculation Manual (ODCM) at the time the procedural details of the current Radiological Effluent Technical Specifications (RETS) are transferred out of the licensee's Technical Specifications (TS). It has been developed by recasting the RETS of the most current Westinghouse Standard Technical Specifications (W STS) from the "LCO" format into the "Controls" format of an ODCM entry. Since the RETS guidance for Babcock and Wilcox and Combustion Engineering plants are identical to that for Westinghouse plants, the W SREC are applicable to all Pressurized Water Reactors.

The following W SREC provide the latest version of staff guidance, and document current practice in the operating procedures required by 10 CFR 20.106, 40 CFR Part 190, 10 CFR 50.36(a), and Appendix I to 10 CFR Part 50. This document contains no new requirements and its use is completely voluntary.

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## FOREWORD

### RADIOLOGICAL EFFLUENT TECHNICAL SPECIFICATIONS

Licensee Technical Specification (TS) amendment requests for incorporation of Radiological Effluent Technical Specifications (RETS) pursuant to 10 CFR 50.36a and Appendix I to 10 CFR Part 50 were approved in the mid-1980s for most operating reactors licensed before 1979 (ORs). Plants licensed after 1979 (NTOLs), included the RETS as part of their initial Technical Specifications. By November 1987, the RETS were implemented by all licensees of operating power reactors. Detailed Safety Evaluation Reports (SERs) documented the acceptability of the plant-specific RETS of the ORs, while the acceptance of the RETS for the NTOLs followed the regular pattern of the Standard Technical Specifications (STS). Thus, for all operating plants, the compliance of the licensee with 10 CFR 50.36a and Appendix I to 10 CFR Part 50 is a matter of record.

Early draft revisions of model RETS, distributed to licensees in mid-1978, contained equations for dose calculations, setpoint determinations and meteorological dispersion factors, as well as the procedural details for complying with Appendix I to 10 CFR Part 50. In later revisions, including Revision 2 used as the bench mark for the NRC staff's acceptance of OR RETS, the equations were removed and incorporated into an Offsite Dose Calculation Manual (ODCM) prepared by the licensee and provided to NRC for review along with the proposed RETS.

Early guidance for preparation of the Radiological Effluent Technical Specifications (RETS) and Offsite Dose Calculation Manual (ODCM) was published in NUREG-0133, "Preparation of Radiological Effluent Technical Specifications for Nuclear Power Plants," October 1978. Copies of model RETS, however, have been available only in draft form as NUREG-0472, Revision 2, "Radiological Effluent Technical Specifications for PWRs," February 1, 1980; NUREG-0473, Revision 2, "Radiological Effluent Technical Specifications for BWRs," February 1, 1980; and succeeding draft revisions. Staff guidance for the Radiological Environmental Monitoring Program is contained in the Radiological Assessment Branch Technical Position (RAB-BTP), originally issued in March 1978 and upgraded by Revision 1 in November 1979 as a result of the accident at Three Mile Island. This Revision 1 to the RAB-BTP was forwarded to all operating reactor licensees in November 1979 and remains in effect at the present time. Since this BTP was never incorporated into the Regulatory Guide System, a copy is reproduced in this document as Appendix A. Even though it has been used extensively in reviewing ODCMs, guidance for the contents of the ODCM is found only in an appendix to a paper presented at an Atomic Industrial Forum conference in 1981, and has had only informal distribution since that time.

### OFFSITE DOSE CALCULATION MANUAL

The potential for augmentation of a licensee's ODCM through transfer of the procedural details of the RETS following the guidance of Generic Letter 89-01, provides an opportunity to assemble in one set of documents the staff guidance for the ODCM.

The current overview guidance for development of the ODCM was prepared originally in July 1978 and revised in February 1979 after discussions with committees of the Atomic Industrial Forum. This guidance was made generally available as "Appendix B - General Contents of the Offsite Dose Calculation Manual (ODCM) (Revision 1, February 1979)" to the paper authored by C. A. Willis and F. J. Congel, "Status of NRC Radiological Effluent Technical Specification Activities" presented at the Atomic Industrial Forum Conference on NEPA and Nuclear Regulation, October 4-7, 1981, Washington, D.C. A copy of this guidance that continues in effect to date, is reproduced in this document as Appendix B.

During the discussions leading up to the implementation of the RETS by the ORs, it became important to record in a "living" document certain interpretations and understandings reached in these discussions. The ODCM thus became a repository for such interpretations, as well as for other information requested by the staff in connection with its evaluation of licensee's commitments and performance under 10 CFR 50.36a and Appendix I to 10 CFR Part 50.

#### TECHNICAL SPECIFICATION IMPROVEMENT PROGRAM

Recently, the NRC staff has examined the contents of the RETS in relation to the Commission's Interim Policy Statement on Technical Specification Improvements. The staff has determined that programmatic controls can be implemented in the Administrative Controls section of the Technical Specifications (TS) to satisfy existing regulatory requirements for RETS. At the same time, the procedural details of the current TS on radioactive effluents and radiological environmental monitoring can be relocated to the Offsite Dose Calculation Manual (ODCM).

To initiate the change, new programmatic controls for radioactive effluents and radiological environmental monitoring are incorporated in the TS to conform to the regulatory requirements of 10 CFR 20.106, 40 CFR Part 190, 10 CFR 50.36a, and Appendix I to 10 CFR Part 50. The procedural details included in licensees' present TS on radioactive effluents, environmental monitoring, and associated reporting requirements will be relocated to the ODCM. Licensees will handle future changes to these procedural details in the ODCM under the administrative controls for changes to the ODCM. Detailed guidance to effect the transfer of the RETS to the ODCM is given in Generic Letter 89-01, reproduced in its entirety as Appendix C.

#### GUIDANCE FOR THE TRANSFER OF RETS TO ODCM

Enclosure 1 of Generic Letter (GL) 89-01 of Appendix B provides detailed guidance for the preparation of a license amendment request to implement the transfer of RETS to ODCM. Page 1 of the enclosure states:

"The NRC staff's intent in recommending --- the relocation of procedural details of the current RETS to the ODCM is to fulfill the goal of the Commission Policy Statement for Technical Specification Improvements. It is not the staff's intent to reduce the level of radiological effluent control. Rather, this amendment will provide programmatic controls for RETS consistent with regulatory requirements and allow relocation of the procedural details of current RETS to the ODCM."

Page 2 of Enclosure 1 states:

"...the procedural details covered in the licensee's current RETS, consisting of the limiting conditions for operation, their applicability, remedial actions, surveillance requirements, and the Bases section of the TS for these requirements, are to be relocated to the ODCM --- in a manner that ensures that these details are incorporated in plant operating procedures. The NRC staff does not intend to repeat technical reviews of the relocated procedural details because their consistency with the applicable regulatory requirements is a matter of record from past NRC reviews of RETS."

### DISCUSSION

For the purpose of the transfer described in GL 89-01 of Appendix B, the RETS will consist of the specifications from the STS listed in Enclosure 2 of Appendix B of GL 89-01. Licensees with nonstandard TS should consider the analogous TS in their format.

It is suggested that the most straightforward method of transferring a licensee's commitments in the RETS to the ODCM in accordance with GL 98-01 is to recast the RETS in the licensee's present TS from the "Limiting Condition for Operation (LCO)" format of the TS into the "Controls" format of the ODCM entry. The accompanying package provides an example of this recasting into Standard Radiological Effluent Controls (SREC) from the model RETS for Pressurized Water Reactors (PWRs). This recasting is in format only. The TS pages have been transferred to the ODCM without change except for the substitution of "Controls" for "LCO." Plants that have RETS that closely follow the STS format will be able to use the accompanying examples directly as guidance. For plants with nonstandard RETS, the transfer of TS commitments to the ODCM should be made similarly page by page, again with the substitution of "Controls" for "LCO."

This NUREG report contains no new requirements; licensee implementation of this guidance is completely voluntary.

### SUMMARY

As part of the license amendment request for TS improvement relative to the RETS, a licensee confirms that the guidance of Generic Letter 89-01 has been followed. This guidance includes the following:

"The procedural details covered in the licensee's current RETS, consisting of the limiting conditions for operation, their applicability, remedial actions, surveillance requirements, and the Bases section of the TS for these requirements, are to be relocated to the ODCM --- in a manner that ensures that these details are incorporated in plant operating procedures."

The Standard Radiological Effluent Controls (SREC) compiled in this report document current staff practice in the operating procedures required by 10 CFR 20.106, 40 CFR Part 190, 10 CFR 50.36(a), and Appendix I to 10 CFR Part 50. Thus they contain all of the controls required by Generic Letter 89-01, to be incorporated into a licensee's ODCM at the time the procedural details of the current RETS are transferred out of the licensee's TS.