



1 of 1

**RADIOLYTIC GAS GENERATION IN SALT CAKE QUALITY
ASSURANCE PLAN**

by
D. D. Walker

Savannah River Site
Aiken, South Carolina 29808

DOE Contract No. DE-AC09-89SR18035

This paper was prepared in connection with work done under the above contract number with the U. S. Department of Energy. By acceptance of this paper, the publisher and/or recipient acknowledges the U. S. Government's right to retain a nonexclusive, royalty-free license in and to any copyright covering this paper, along with the right to reproduce and to authorize others to reproduce all or part of the copyrighted paper.

MASTER

DISTRIBUTION OF THIS DOCUMENT IS UNLIMITED

DISCLAIMER

This report was prepared as an account of work sponsored by an agency of the United States Government. Neither the United States Government nor any agency thereof, nor any of their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States Government or any agency thereof.

This report has been reproduced directly from the best available copy.

Available to DOE and DOE contractors from the Office of Scientific and Technical Information, P. O. Box 62, Oak Ridge, TN 37831; prices available from (615) 576-8401.

Available to the public from the National Technical Information Service, U. S. Department of Commerce, 5285 Port Royal Rd., Springfield, VA 22161

WESTINGHOUSE SAVANNAH RIVER COMPANY
SAVANNAH RIVER LABORATORY

WSRC-RP-93-1342

Keywords: High activity
liquid waste, saltcakes,
hydrogen

Retention time: Permanent

August 30, 1993

TO: S. D. FINK, 773-A
FROM: *D. D. Walker* *C. L. Crawford*
D. D. WALKER, 773-A, C. L. CRAWFORD, 773-A,
and N. E. BIBLER, 773-A

**RADIOLYTIC GAS GENERATION IN SALT CAKE
QUALITY ASSURANCE PLAN (U)**

INTRODUCTION

High-level radioactive wastes are stored in large, steel tanks in the Savannah River Site's Tank Farms. The liquid levels in these tanks are monitored to detect leakage of waste out of tanks or leakage of liquids into the tanks. Recent unexplained level fluctuations in high-level waste (HLW) tanks have caused High Level Waste Engineering (HLWE) to develop a program to better understand tank level behavior.¹ Interim Waste Technology (IWT) has been requested² by HLWE to obtain data which will lead to a better understanding of the radiolytic generation of gases in salt cake. A task plan has been written in response to this request.³ This document details the controls necessary to ensure the quality of the results of the activities described in the task plan.

TASK QA PLAN CHECKLIST

See Attachment 1.

ADDITIONAL COMMENTS

QA requirements for task activities performed by other organizations are specified in the Critical Measurements section of the Task Technical Plan.³

DOCUMENTS REQUIRING CUSTOMER APPROVAL

The following document requires customer approval:

1. D. D. Walker, C. L. Crawford, and N. E. Bibler, "Radiolytic Gas Generation in Salt Cake, Technical Task Plan (U)," WSRC-RP-93-1341, August 29, 1993.

ATTACHMENT 1. Task QA Plan Checklist

Task Title: Radiolytic Gas Generation in Salt Cake
 Task Technical Plan Document No: WSRC-RP-93-1341

Listed below are the 20 sections of WSRC IQ. Check WSRC IQ Sections applicable to the task. Further indicate, by check marks, DWP&HT procedures used to control the task. This checklist identifies only the procedures used to control task activities performed by DWP&HT.

WSRC IQ Section	Applies to Task	DWP&HT QA Procedures	DWP&HT Procedure Used
Organization	X	DWP&HT 1-1, Organization DWP&HT 1-2, Stop Work	X X
QA Program	X	DWP&HT 2-1, Quality Assurance Program DWP&HT 2-2, Training Program DWP&HT 2-3, Control of R&D Activities	X X X
Design Control		DWP&HT 3-1, Design Control, Category I&II Projects Implementation Statement DWP&HT 3-3, Division Managed Tasks	
Procurement Document Control		DWP&HT 4-1, Procurement	
Instructions, Procedures and Drawings	X	DWP&HT 5-1, Procedures/Instructions	X
Document Control	X	DWP&HT 6-1, Document Control	X
Control of Purchased Items and Services		DWP&HT 4-1, Procurement	
Identification and Control of Items	X	DWP&HT 8-1, ID and Control of Items	X
Control of Processes		DWP&HT 9-1, Control of Processes	
Inspection		DWP&HT 10-1, Inspection	
Test Control		DWP&HT 11-1, Test Control	
Control of Measuring & Test Equipment	X	DWP&HT 12-1, Control of M&TE	
Packaging, Handling, Shipping & Storage		DWP&HT 13-1, Packaging, Handling, Shipping & Storage	
Inspection, Test, and Operating Status		DWP&HT 14-1, Inspection, Test, and Operating Status	
Control of Nonconforming Items & Action	X	DWP&HT 15-1, Control of Nonconforming Items and Activities	X
Corrective Action System	X	DWP&HT 16-1, Corrective Action Implementation Statement	X
Quality Assurance Records	X	DWP&HT 17-1, QA Records	X
Audits	X	DWP&HT 18-1, Audits & Surveillances Implementation Statement	X
Software Quality Assurance		DWP&HT 20-1, Software Control	

RECORDS

The following items shall become records for this technical task:

1. Technical Task Request, HLE-TTR-93-077
2. Task Technical Plan (Ref. 3)
3. Task Quality Assurance Plan (this document)
4. copies of laboratory notebooks or applicable pages
5. reports to customers
6. other supporting documentation deemed appropriate by the task leader.

REFERENCES

1. J. E. Marra, "Tank Level Program Action Plan (U)," HLW-HLE-931291, Rev.0, August 31, 1993.
2. J. E. Marra, Technical Task Request HLE-TTR-93077.
3. D. D. Walker, C. L. Crawford, and N. E. Bibler, "Radiolytic Gas Generation in Salt Cake, Technical Task Plan (U)," WSRC-RP-93-1341, August 29, 1993.

APPROVALS

Samuel D. Fink 10-11-93

 S. D. Fink, Manager, IWTS-LWP Date

Paul E. Lowe 11-8-93

 P. E. Lowe, SRTC Quality Section Date
 (Approval based upon review of
 Task Technical Plan, WSRC-RP-93-1341)

CC: P. E. Lowe, 773-42A
 L. M. Nelson, 773-43A
 IWT-LWP Files, 773-A
 TIM, 773-52A (4)

DATE

FILMED

5/12/94

END

