

INFORMATION CLEARANCE REVIEW AND RELEASE APPROVAL

Part I: Background Information

Title: Hanford Tank Waste - Near Source Treatment of Low Activity Waste	Information Category: <input checked="" type="checkbox"/> Abstract <input type="checkbox"/> Journal Article <input type="checkbox"/> Summary <input type="checkbox"/> Internet <input type="checkbox"/> Visual Aid <input type="checkbox"/> Software <input type="checkbox"/> Full Paper <input type="checkbox"/> Report <input type="checkbox"/> Other
Publish to OSTI? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Document Number: WRPS-55780-A	Date: 08/12/2013
Author: William Gene Ramsey	
Purpose of Document: Abstract for Waste Management 2014 Conference	

Part II: External/Public Presentation Information

Conference Name: Waste Management '14	
Sponsoring Organization(s): WM Symposia, Inc.	
Date of Conference: March 2-6	Conference Location: Phoenix, AZ
Will Material be Handed Out? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Will Information be Published? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (If Yes, attach copy of Conference format instructions/guidance.)

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If product contains pictures, safety review completed?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

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Subject Matter Expert	WRPS SP&T	8/12/13	<i>William G. Ramsey</i>
Responsible Manager	WRPS SP&T	8/12/13	<i>M. Wheeler</i>
Other:			

Part V: IRM Clearance Services Review

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Document is Subject to Release Restrictions? <i>If the answer is "Yes," please mark category at right and describe limitation or responsible organization below:</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Document contains: <table style="width: 100%; font-size: small;"> <tr> <td><input type="checkbox"/> Applied Technology</td> <td><input type="checkbox"/> Protected CRADA</td> </tr> <tr> <td><input type="checkbox"/> Personal/Private</td> <td><input type="checkbox"/> Export Controlled</td> </tr> <tr> <td><input type="checkbox"/> Proprietary</td> <td><input type="checkbox"/> Procurement - Sensitive</td> </tr> <tr> <td><input type="checkbox"/> Patentable Info.</td> <td><input type="checkbox"/> Business - Sensitive</td> </tr> <tr> <td><input type="checkbox"/> Predecisional Info.</td> <td><input type="checkbox"/> UNCNI</td> </tr> <tr> <td><input type="checkbox"/> Restricted by Operational Security Guidelines</td> <td></td> </tr> <tr> <td><input type="checkbox"/> Other (Specify)</td> <td></td> </tr> </table>	<input type="checkbox"/> Applied Technology	<input type="checkbox"/> Protected CRADA	<input type="checkbox"/> Personal/Private	<input type="checkbox"/> Export Controlled	<input type="checkbox"/> Proprietary	<input type="checkbox"/> Procurement - Sensitive	<input type="checkbox"/> Patentable Info.	<input type="checkbox"/> Business - Sensitive	<input type="checkbox"/> Predecisional Info.	<input type="checkbox"/> UNCNI	<input type="checkbox"/> Restricted by Operational Security Guidelines		<input type="checkbox"/> Other (Specify)	
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Part VI: Final Review and Approvals

8/15

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Hanford Tank Waste - Near Source Treatment of Low Activity Waste

Prepared for the U.S. Department of Energy
Assistant Secretary for Environmental Management

Contractor for the U.S. Department of Energy
Office of River Protection under Contract DE-AC27-08RV14800



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**Approved for Public Release;
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Hanford Tank Waste - Near Source Treatment of Low Activity Waste

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Washington River Protection Solutions

Date Published
August 2013

To be Presented at
WM Symposia 2014

Waste Management Consortium
Phoenix, AZ

03/02/2014

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Printed in the United States of America

WM2014 Conference, March 2 – 6, 2014, Phoenix, AZ

WM 2014 Abstract Submission

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Hanford Tank Waste - Near Source Treatment of Low Activity Waste

Treatment and disposition of Hanford Site waste as currently planned consists of 100+ waste retrievals, waste delivery through up to 8+ miles of dedicated, in-ground piping, centralized mixing and blending operations – all leading to pre-treatment combination and separation processes followed by vitrification at the Hanford Tank Waste Treatment and Immobilization Plant (WTP). The sequential nature of Tank Farm and WTP operations requires nominally 15-20 years of continuous operations before all waste can be retrieved from many Single Shell Tanks (SSTs). Also, the infrastructure necessary to mobilize and deliver the waste requires significant investment beyond that required for the WTP. Treating waste as closely as possible to individual tanks or groups – as allowed by the waste characteristics - is being investigated to determine the potential to 1) defer, reduce, and/or eliminate infrastructure requirements, and 2) significantly mitigate project risk by reducing the potential and impact of single point failures.

The inventory of Hanford waste slated for processing and disposition as LAW is currently managed as high-level waste (HLW), i.e., the separation of fission products and other radionuclides has not commenced. A significant inventory of this waste (over 20M gallons) is in the form of precipitated saltcake maintained in single shell tanks, many of which are identified as potential leaking tanks. Retrieval and transport (as a liquid) must be staged within the waste feed delivery capability established by site infrastructure and WTP. Near Source treatment, if employed, would provide for the separation and stabilization processing necessary for waste located in remote farms (wherein most of the leaking tanks reside) significantly earlier than currently projected.

Near Source treatment is intended to address the currently accepted site risk and also provides means to mitigate future issues likely to be faced over the coming decades. This paper describes the potential near source treatment and waste disposition options as well as the impact these options could have on reducing infrastructure requirements, project cost and mission schedule.

Submitted for: Poster/Oral

Topic: 2.7 Stabilization/Immobilization of HLW, SNF/UNF and Long-lived Alpha/TRU

List up to 3 proposed alternate sessions for your paper:

- 2.12 Expanding WIPP to be a Defense Tank Waste Repository
- X.X Special Session on Hanford Washington