

## RMIS View/Print Document Cover Sheet

This document was retrieved from the Documentation and Records Management (DRM) ISEARCH System. It is intended for Information only and may not be the most recent or updated version. Contact a Document Service Center (see Hanford Info for locations) if you need additional retrieval information.

Accession #: D195064273

Document #: SD-WM-ETP-175

Title/Desc:

ENGINEERING TASK PLAN FOR SIMULATED RISER  
INSTALLATION BY USE OF ROTARY DRILLING

Pages: 10

DEC 01 1995  
*Sta. 21*

**21 ENGINEERING DATA TRANSMITTAL**

Page 1 of 1  
1. EDT 140832

2. To: (Receiving Organization) Distribution	3. From: (Originating Organization) Characterization Equipment Development/75250	4. Related EDT No.: NA
5. Proj./Prog./Dept./Div.: Characterization	6. Cog. Engr.: GA Barnes	7. Purchase Order No.: NA
8. Originator Remarks: Approve/Release (ETN-96-0008)		9. Equip./Component No.: NA
		10. System/Bldg./Facility: NA
11. Receiver Remarks:		12. Major Assm. Dwg. No.: NA
		13. Permit/Permit Application No.: NA
		14. Required Response Date: NA

15. DATA TRANSMITTED					(F)	(G)	(H)	(I)
(A) Item No.	(B) Document/Drawing No.	(C) Sheet No.	(D) Rev. No.	(E) Title or Description of Data Transmitted	Approval Designator	Reason for Transmittal	Originator Disposition	Receiver Disposition
1	WHC-SD-WM-ETP-175	A11	0	Engineering Task Plan for Simulated Riser Installation by Use of Rotary Drilling	Q	1	1	

16. KEY					
Approval Designator (F)		Reason for Transmittal (G)		Disposition (H) & (I)	
E, S, Q, D or N/A (see WHC-CM-3-5, Sec. 12.7)		1. Approval	4. Review	1. Approved	4. Reviewed no/comment
		2. Release	5. Post-Review	2. Approved w/comment	5. Reviewed w/comment
		3. Information	6. Dist. (Receipt Acknow. Required)	3. Disapproved w/comment	6. Receipt acknowledged

17. SIGNATURE/DISTRIBUTION (See Approval Designator for required signatures)											
(G)	(H)	(J) Name	(K) Signature	(L) Date	(M) MSIN	(J) Name	(K) Signature	(L) Date	(M) MSIN	Reason	Disp.
1	1	Cog. Eng. GA Barnes	<i>[Signature]</i>	11-29-95	S5-09						
1	1	Cog. Mgr. CE Hanson	<i>[Signature]</i>	11/30/95	H5-09						
1	1	QA ML McElroy	<i>[Signature]</i>	11-29-95	S7-07						
		Safety									
		Env.									
1	1	CH Brevick	<i>[Signature]</i>	11/30/95	S3-10						

18. GA Barnes <i>[Signature]</i> Signature of EDT Originator 11/29/95 Date	19. CH Brevick <i>[Signature]</i> Authorized Representative for Receiving Organization 11/30/95 Date	20. CE Hanson <i>[Signature]</i> Cognizant Manager 11/30/95 Date	21. DOE APPROVAL (if required) Ctrl. No. <input type="checkbox"/> Approved <input type="checkbox"/> Approved w/comments <input type="checkbox"/> Disapproved w/comments
--	--	--	---

# Engineering Task Plan for Simulated Riser Installation by use of Rotary Drilling

G. A. Barnes  
WHC, Richland, WA 99352  
U.S. Department of Energy Contract DE-AC06-87RL10930

EDT/ECN: 140832 UC: 802  
Org Code: 75250 Charge Code: ~~N444A~~ N444D  
B&R Code: EW312.0074 Total Pages: 8

Key Words: Characterization, riser installation, waste, rotary drilling

Abstract: This task is being performed to demonstrate the feasibility of the best riser installation alternative identified in the Engineering Study. This Engineering Task Plan (ETP) will be the WHC project management plan for the riser installation demonstration activities.

TRADEMARK DISCLAIMER. 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 or its contractors or subcontractors.

Printed in the United States of America. To obtain copies of this document, contact: WHC/BCS Document Control Services, P.O. Box 1970, Mailstop H6-08, Richland WA 99352, Phone (509) 372-2420; Fax (509) 376-4989.

OFFICIAL RELEASE **(21)**  
BY WHC  
DATE DEC 01 1995  
*Sta. 21*

*Kevin A. Tolank* 12/1/95  
Release Approval Date

Release Stamp

Approved for Public Release

WHC-SD-WM-ETP-175  
REV 0

**ENGINEERING TASK PLAN**  
**FOR**  
**SIMULATED RISER INSTALLATION**  
**BY**  
**USE OF ROTARY DRILLING**

Rev. 0

Engineering Task Plan No: WHC-SD-WM-ETP-175  
Engineering Task Number: ETN-96-0008

November 21, 1995

TABLE OF CONTENTS

1.0	INTRODUCTION . . . . .	2
2.0	SCOPE . . . . .	2
2.1	OBJECTIVES . . . . .	2
2.2	DELIVERABLES . . . . .	2
3.0	DESCRIPTION . . . . .	3
3.1	PHYSICAL DESCRIPTION . . . . .	3
3.2	ENGINEERING TASKS . . . . .	3
3.3	FOLLOW-ON WORK . . . . .	3
4.0	ORGANIZATION . . . . .	4
5.0	SCHEDULE . . . . .	5
6.0	COST ESTIMATE . . . . .	6
7.0	SAFETY, ENVIRONMENTAL, AND QUALITY ASSURANCE . . . . .	6
8.0	REFERENCES . . . . .	6

ENGINEERING TASK PLAN  
FOR SIMULATED RISER INSTALLATION  
BY USE OF ROTARY DRILLING

1.0 INTRODUCTION

Currently, the Westinghouse Hanford Company (WHC) is conducting a waste characterization program to characterize the waste contained in the underground Single Shell waste Tanks (SST) on the Hanford site. Waste characterization requires access to the interior of the SSTs through risers that extend above ground level. A limited number of useable risers are available on the SSTs and future characterization activities may require installation of additional risers. Due to the limited risers, an Engineering Study (Reference 1) was performed to determine the best alternative for installing new risers in the SSTs. This task is being performed to demonstrate the feasibility of the best riser installation alternative identified in the Engineering Study. This Engineering Task Plan (ETP) will be the WHC project management plan for the riser installation demonstration activities.

2.0 SCOPE

2.1 OBJECTIVES

The objective of the riser installation simulation is to show, through testing, that a 12" riser can be installed in a mocked up SST dome, using proven mechanized technology. This testing will be performed as development testing and will be controlled using the Activity Plan (Reference 2). The test plan for the simulated riser installation testing can be found in Appendix F of the Activity Plan (Reference 2).

2.2 DELIVERABLES

A final report of the riser installation simulation activities shall be prepared by ICF KH and submitted to WHC for final approval. The outline for the final report is detailed in Reference 2. Along with the final report, all procured and fabricated equipment, drawings and video recordings of the testing shall be given to WHC at the completion this activity.

### 3.0 DESCRIPTION

#### 3.1 PHYSICAL DESCRIPTION

See the Activity Plan (Reference 2) for a physical description of the simulated riser installation activities. The Activity Plan also contains acceptance criteria for the simulated riser installing activities.

#### 3.2 ENGINEERING TASKS

The Activity Plan (Reference 2) shall be the controlling field document for the simulated riser installation activities. Any changes to the scope of this activity shall be documented with ECNs to the Activity Plan.

At the end of testing activities, a test report shall be written documenting the results of the testing. The test report shall follow the outline in Appendix B of the Activity Plan.

All equipment and tools specially fabricated for this activity shall be documented by sketches. The Activity Plan (Reference 2) contains most of the sketches that will be used for fabrication of hardware, tools and equipment. If any additional tools are required for testing activities, a fabrication sketch shall be prepared to support fabrication. After testing is completed, all sketches shall be updated to show as-built configuration and shall be incorporated into the final test report. All fabricated equipment shall be permanently labeled "NOT FOR FACILITY USE" and appropriately disposed of after testing is completed, unless it is decided that the fabricated equipment will be qualified for field use.

#### 3.3 FOLLOW-ON WORK

The simulated riser installation activities only test the feasibility of physically installing risers in mocked up SSTs (reinforced concrete pad beneath a column of compacted soil). The list below identifies a few of the tasks that must be completed before risers are installed in actual SSTs. A thorough list of follow-on activities will be detailed in the final test report (see Appendix B of Reference 2) along with a schedule for their completion:

- Containment equipment. The riser installation simulation activities do not test containment methods. Containment methods (tents, glove bags, shielding, temporary exhausters, etc.) to be used for actual riser installations will need to be identified and may need to be designed, built and/or procured.
- Dome loading and structural analysis. A structural analysis of the

dome must be performed to determine if the rotary coring activities will adversely effect the structural integrity of the tank domes. Also, a dome loading analysis must be performed to determine if installation equipment will effect dome loading limits.

- Safety documentation. A safety analysis will need to be prepared for riser installation activities in SSTs.
- Regulatory permitting. Components of the riser installation system will need to be permitted.

#### 4.0 ORGANIZATION

##### WHC-Characterization Equipment Development (CED):

Cognizant/Project Manager: C. E. Hanson  
Cognizant/Project Engineer: G. A. Barnes

CED is the responsible organization for this activity and has Cognizant signature authority for all associated project documentation. These activities are non-plant (TWRS) associated, therefore, no special cognizant engineering training is required. CED will provide project direction and funding for the Riser installation simulation activities.

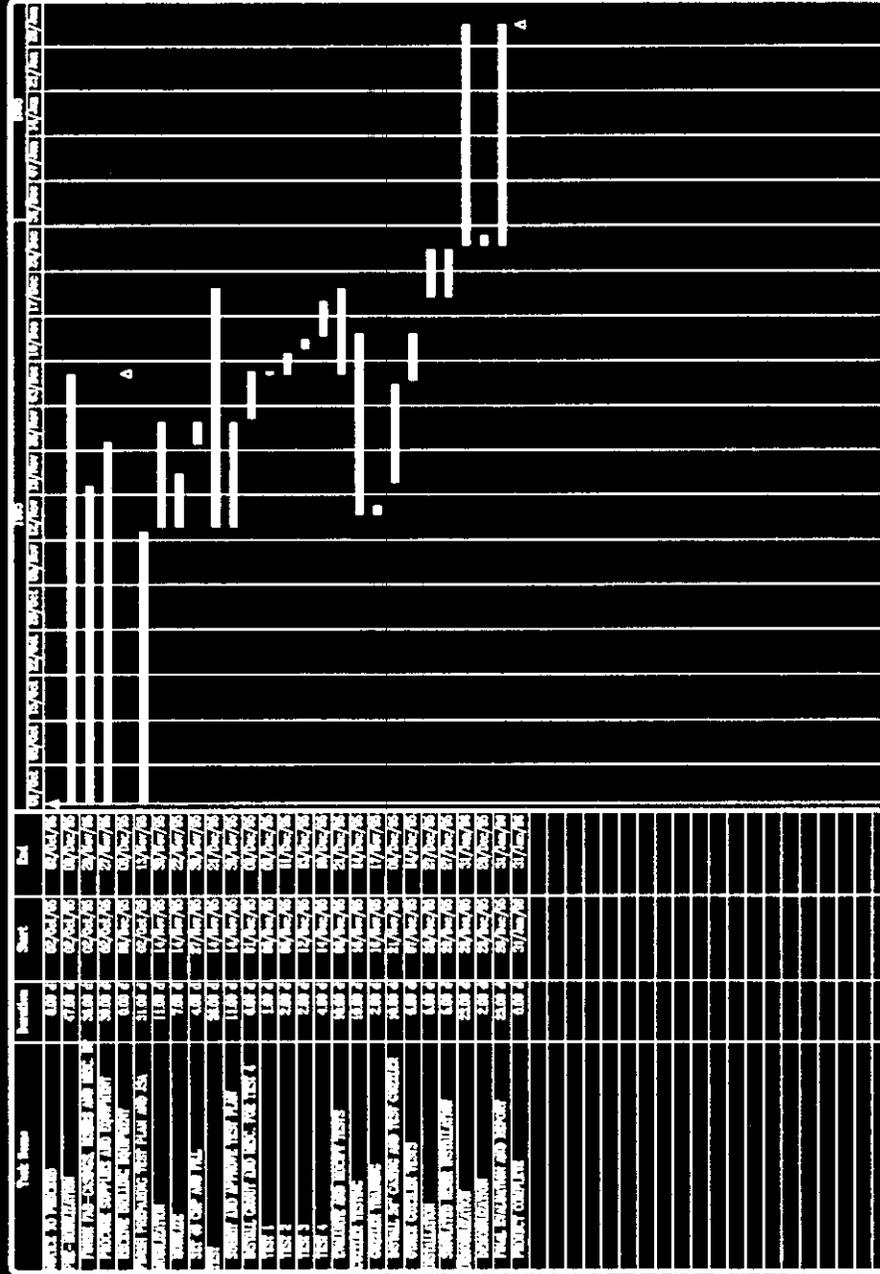
##### ICF KH:

Project Manager: C. H. Brevick

ICF KH will be responsible for the following:

- Status project cost and schedule as required by the WHC Cognizant/Project Engineer.
- Coordinate testing/field activities as detailed in Reference 2.
- Change Reference 2 (per ECN) as needed to reflect scope changes.
- Provide appropriate safety controls during field activities.
- Maintain project files.
- Prepare and submit the final report as detailed in Reference 2.

5.0 SCHEDULE  
KISEK INSTALLATION SIMULATION



6.0 COST ESTIMATE

WHC Project Management	\$26,480
ICF KH	\$175,220 (see Reference 2 for detailed cost estimate)
<hr/>	
Total	\$201,700

7.0 SAFETY, ENVIRONMENTAL, AND QUALITY ASSURANCE

All equipment for the riser installation simulation is designated non-safety class per WHC-CM-4-46, Section 9.0. All documentation will have an approval designator of N/A, per WHC-CM-3-5, Section 12.7, unless otherwise specified by the WHC Cognizant/Project Engineer.

8.0 REFERENCES

1. WHC-SD-WM-ES-299, Rev 0, "Installation of New Risers in Single-Shell Tanks".
2. WHC-SD-WM-AP-034, Rev 0, "Activity Plan Simulated Riser Installation By Use of Rotary Drilling".