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**DOCUMENT CHANGE REQUEST (DCR) FOR  
OPERABLE UNIT 1 AND OPERABLE UNIT 4  
TREATABILITY STUDY WORK PLANS FOR  
CEMENTATION**

**10/20/92**

**DOE-0156-93  
DOE-FN/EPA  
6  
LETTER  
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**Department of Energy**  
**Fernald Environmental Management Project**  
P.O. Box 398705  
Cincinnati, Ohio 45239-8705  
(513) 738-6357

OCT 20 1992  
DOE-0156-93

Mr. James A. Saric, Remedial Project Director  
U.S. Environmental Protection Agency  
Region V - 5HR-12  
230 South Dearborn Street  
Chicago, Illinois 60604

Mr. Graham E. Mitchell, Project Manager  
Ohio Environmental Protection Agency  
40 South Main Street  
Dayton, Ohio 45402

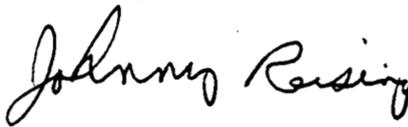
Dear Mr. Saric and Mr. Mitchell:

**DOCUMENT CHANGE REQUEST (DCR) FOR OPERABLE UNIT 1 AND OPERABLE UNIT 4  
TREATABILITY STUDY WORK PLANS FOR CEMENTATION**

Enclosed for your information are the DCRs for Operable Unit 1 and Operable Unit 4 which document the modifications to the data quality objective (DQO) analytical support levels for the toxicity characteristic leaching procedure analyses from a Level IV to Level V. The modifications to the DQO levels will not adversely affect the end use of the data; it merely corrects an inconsistency between the specified tables and the technical approach defined in the work plan text. In addition, radiological analysis per the RI/FS Quality Assurance Project Plan is defined to be a Level V.

If you or your staff have any questions, please contact Randi Allen or Rod Warner at FTS/Commercial 513-738-6158 or FTS/Commercial 513-738-8916, respectively.

Sincerely,

*for*   
Jack R. Craig  
Fernald Remedial Action  
Project Manager

FN:Allen

Enclosures: As Stated

cc w/encs.:

J. J. Fiore, EM-42, TREV  
K. A. Hayes, EM-424, TREV  
L. Jensen, USEPA-V, AT-18J  
B. Barwick, USEPA-V, 5CS-TUB-3  
J. Kwasniewski, OEPA-Columbus  
P. Harris, OEPA-Dayton  
M. Proffitt, OEPA-Dayton  
T. Schneider, OEPA-Dayton  
F. Bell, ASTDR  
T. W. Hahne, PRC  
L. August, GeoTrans  
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N. C. Kaufman, FERMCO/72  
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AR Coordinator, WEMCO

# DOCUMENT CHANGE REQUEST

This form is used to initiate permanent change to controlled distribution project-specific procedures, such as the QAPP, Work Plan, and Sampling Plan.

REQUEST NO. 90

Issue Date: \_\_\_\_\_  
Page \_\_\_ of \_\_\_

Do Not Write In This Block

REQUESTOR Sam Wolinsky PHONE NO. 738-3100 DATE: 7-23-92  
DOCUMENT TITLE Treatability Study Work Plan for Operable Unit 4  
SECTION/PARAGRAPH/PAGE NO.: Section 3, Table 3-6 (continued), Page No. 15 DOCUMENT NUMBER: \_\_\_\_\_  
ISSUE DATE: January 1992 LATEST REVISION DATE: January 1992

### JUSTIFICATION:

The toxicity characteristic leaching procedure (TCLP) extraction data was not reported in a CLP format, therefore, it will not support an analytical level relative to data quality objectives (DQOs) of Level IV. Also, the Full TCLP as defined in this work plan provides for full radiological analyses in addition to normal TCLP analyses. These radiological analyses are to be performed on the TCLP extract, therefore, it is a non-standard method which requires a Level V designation. Finally, spike recovery values used for cement stabilized waste were calculated based on raw waste during the site characterization as indicated in Section 7.2 of the work plan. This is a modification of the standard TCLP method requiring a Level V designation. It is important to note that changing the DQO Level specified in this work plan from Level IV to Level V will not adversely affect the end use of this data; it only corrects an inconsistency between Table 3-6 and the technical approach as defined in this work plan.

### CONTENT OF CHANGE:

This change revises the DQO Level specified for Full TCLP in Table 3-6 (continued) from "Level IV" to "Level V".

### EFFECTIVE DATE OF CHANGE:

- When all approvals have been obtained \_\_\_\_\_ Effective Date
- Other (Specify): April 5, 1992

### REQUIRED APPROVALS:

[Signature] 7/27/92  
Project Director Date

[Signature] 7/30/92  
Project QA Officer Date

[Signature] 7/29/92  
Deputy Director/Technical Date

[Signature] 8/24/92  
WEMCO QA Officer Date

[Signature] 8/10/92  
DOE CORR Date

### TO BE COMPLETED BY DOE

- A. Prior EPA Notification Required?  Yes  No
- B. Prior EPA Approval Required?  Yes  No
- C. Immediate Implementation?  Yes  No

# DOCUMENT CHANGE REQUEST

This form is used to initiate permanent change to controlled distribution project-specific procedures, such as the QAPP, Work Plan, and Sampling Plan.

REQUEST NO. 91  
 Issue Date: \_\_\_\_\_  
 Page \_\_\_ of \_\_\_  
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REQUESTOR Sam Wolinsky PHONE NO. 738-3100 DATE: 7-23-92  
 DOCUMENT TITLE Treatability Study Work Plan for Operable Unit 1  
 SECTION/PARAGRAPH/PAGE NO.: Sec. 3, Table 3-6, Pg. 15 & Sec. 3, Table 3-7, Pg. 16 DOCUMENT NUMBER: W7  
 ISSUE DATE: October 1991 LATEST REVISION DATE: October 1991

**JUSTIFICATION:**

The toxicity characteristic leaching procedure (TCLP) extraction data was not reported in a CLP format, therefore, it will not support an analytical level relative to data quality objectives (DQOs) of Level IV. Also, the Full TCLP as defined in this work plan provides for full radiological analyses in addition to normal TCLP analyses. These radiological analyses are to be performed on the TCLP extract, therefore, it is a non-standard method which requires a Level V designation. Finally, spike recovery values used for cement stabilized waste and vitrified waste were calculated based on raw waste during the site characterization as indicated in Section 7.2 and Section 7.3 of the work plan, respectively. This is a modification of the standard TCLP method requiring a Level V designation. It is important to note that changing the DQO Level specified in this work plan from Level IV to Level V will not adversely affect the end use of this data; it only corrects an inconsistency between Tables 3-6 & 3-7 and the technical approach as defined in this work plan.

**CONTENT OF CHANGE:**

This change revises the DQO Level specified for Full TCLP in Tables 3-6 & 3-7 from "Level IV" to "Level V".

**EFFECTIVE DATE OF CHANGE:**

- When all approvals have been obtained \_\_\_\_\_ Effective Date
- Other (Specify): August 15, 1992

**REQUIRED APPROVALS:**

[Signature] \_\_\_\_\_ 7/29/92  
 Project Director Date

[Signature] \_\_\_\_\_ 7/30/92  
 Project QA Officer Date

[Signature] \_\_\_\_\_ 7/29/92  
 Deputy Director/Technical Date

[Signature] \_\_\_\_\_ 8/24/92  
 WEMCO QA Officer Date

[Signature] \_\_\_\_\_ 8/10/92  
 DOE CONTR Date

**TO BE COMPLETED BY DOE**

- A. Prior EPA Notification Required?  Yes  No
- B. Prior EPA Approval Required?  Yes  No
- C. Immediate Implementation?  Yes  No

**TABLE 3-6**  
**(Continued)**

ADVANCED (REMEDY SELECTION)			
TEST	APPENDIX	DQO/COMMENT	DQO LEVEL
Bulking Factor	B or C	Minimize waste volume increase. To estimate the volume of waste that will be generated.	V
UCS	B	To determine the UCS associated with each of the stabilization reagent formulations.	III
Full TCLP	See QAPP	To determine leachability of each of the stabilization reagent formulations. To provide data for the FS risk assessment calculations.	V
5-Day Static Leach Test	C	To provide data for the FS risk assessment calculations	V
Permeability	C	To provide data for the FS risk assessment calculations	III
Waste Form Temperature Rise	C	To provide preliminary process parameters	I
Shear Strength	C	To provide preliminary process parameters	I
pH, Eh	C	Preliminary process parameter	I

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TABLE 3-6 (Continued)

ADVANCED (REMEDY SELECTION)				DQO LEVEL
TEST	APPENDIX	DQO/COMMENT		
Bulking Factor	B or C	Minimize waste volume increase. To estimate the volume of waste that will be generated.		V
Unconfined Compressive Strength	B	To determine the unconfined compressive strength associated with each of the stabilization reagent formulations.		III
Full TCLP	See QAPP	To determine leachability of each of the stabilization reagent formulations. To provide data for the FS risk assessment calculations.		V
5-Day Static Leach Test	C	To provide data for the FS risk assessment calculations		V
Permeability	C	To provide data for the FS risk assessment calculations		III
Waste Form Temperature Rise	C	To provide preliminary process parameters		I
Shear Strength	C	To provide preliminary process parameters		I
Radon Emanation	C	To determine effect of stabilization on radon emanation		V
pH, Eh	C	Preliminary process parameter		I

TABLE 3-7. VITRIFICATION TEST DQOs

PRELIMINARY (REMEDY SCREENING)			
TEST	APPENDIX	DQO/COMMENT	DQO Level
Bulking Factor	B or C	Minimize waste volume increase. To estimate the volume of water.	V
MTCLP	C	During the screening phases, to determine stabilization reagent formulations so that the final waste form meets the TCLP metal leaching criteria. In addition, the test data will indicate the relative leachability of uranium with the various reagent formulations.	V
PCT	C	To provide data for the FS risk assessment calculations. To provide data on the relative leachability of uranium and glass components with the various reagent formulations.	V
ADVANCED (REMEDY SELECTION)			
Bulking Factor	B or C	Minimize waste volume increase. To estimate the volume of waste that will be generated.	V
Radon emission	C	Estimate effectiveness of treatment in reducing radon emissions	V
Full TCLP	See QAPP	To determine stabilization reagent formulations so that the final waste form meets the TCLP metal leaching criteria. To provide data for the FS risk assessment calculations.	V
PCT	C	To provide data for the FS risk assessment calculations. To	V