

# START

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Meeting Minutes Transmittal and Approval  
RCRA Groundwater Monitoring Program  
450 Hill St., Room 60  
November 14, 1991

Approval: M. J. Furman Date: 12/16/91  
M. J. Furman, U.S. Department of Energy Field Office, Richland

Approval: K. Kowalik Date: 12/16/91  
K. Kowalik, State of Washington Department of Ecology

Attendees

Distribution

U. S. Department of Energy-Field Office, Richland  
M. J. Furman A5-21

State of Washington Department of Ecology  
K. Kowalik

Westinghouse Hanford Company  
K. R. Fecht H4-56  
R. R. Thompson L4-88  
R. L. Jackson H4-56

Attendees  
L. C. Brown H4-51  
D. G. Horton H5-56  
M. Marratt H4-56  
L. L. Powers B2-35  
S. M. Price H4-57  
W. H. Price N3-05  
D. S. Takasumi R3-27  
EDMC H4-22

SUMMARY

Highlights of this meeting are summarized below:

- o Ms. Kowalik verbally approved TPA change control form M-24-91-4, which specifies TSD units for 21 wells to be drilled in Calendar Year (CY) 1992. This change control allows DOE to commence CY 1992 drilling in a timely manner. Ecology will formally transmit their approval to DOE upon clarification of public review involvement. Ms. Kowalik indicated that CY 1992 wells that may be drilled prior to formal approval will be credited as part of TPA milestone for CY 1992. These wells have been specifically identified in the aforementioned change control form submitted to Ecology on October 3, 1991.

Ms. Kowalik and Mr. Furman agreed that the total number of wells to be drilled in CY 1992 will include 27 (change request form M-24-91-5) specifically identified wells with three additional wells identified as To Be Determined (TBD) (change request form



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M-24-91-6). The TBD wells will be identified by end of March to allow for sufficient time to plan and drill wells. The DOE has action to obtain Ecology's approval of change control forms M-24-91-5 and M-24-91-6.

The above changes reduce the well installation requirement from 50 to 30 in CY 1992. The reduced rate of installation of wells will allow time for technical interpretation of additional analytical data from wells already installed and establish a sound basis for the location of any additional wells that are determined to be necessary and appropriate.

- o Ecology agreed in principle with DOE's proposed criteria to close out M-24-00 (see Attachment). Ecology does not envision at this time a total phase out of M-24-00, because of other undetermined needs that may arise in the future. Reducing the number of wells per year will be negotiated on an annual basis.
- o Ecology suggests that other mechanisms may be needed to complement the close out of M-24-00. For example, additional monitoring and characterization could be specified by Ecology in NODs associated with permitting documents.

DOE-RL: MA 12/16/91

Ecology: K. G. 12/16/91

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# PRESENTATION FORMAT

Attachment 1

<b>Requirement/Criterion</b>	<b>Compliance Action</b>	<b>Documented Evidence</b>
<b>WAC Key words</b> <b>WAC reference</b> <b>Criterion</b>	<b>Action needed</b>	<ul style="list-style-type: none"><li>- <b>Measure</b></li><li>- <b>Where documented</b></li><li>- <b>Method of depiction</b></li></ul> <ul style="list-style-type: none"><li>* <b>Tracked with 2 forms</b></li><li><b>(1) Status</b></li><li><b>(2) Document reference/with page number</b></li></ul>

# PROPOSED CRITERIA FOR CLOSE OUT OF TPA MILESTONE M-24-00

Requirement/Criterion	Compliance Action	Documented Evidence
<p><b>Appropriate locations WAC-173-303-645(8)(a).</b></p> <p><b>The groundwater wells must be located to immediately detect a release of dangerous waste from the facility</b></p>	<p><b>Shallow detection monitoring system is adequate with ~90% monitoring efficiency using MEMO and professional judgement</b></p>	<ul style="list-style-type: none"><li><b>o ~90% monitoring efficiency</b></li><li><b>o Permitting document and/or groundwater monitoring plan</b></li><li><b>o Map with accompanying text</b></li></ul>

## PROPOSED CRITERIA FOR CLOSE OUT OF TPA MILESTONE M-24-00 (Cont.)

Requirement/Criterion	Compliance Action	Documented Evidence
<p><b>Depths WAC-173-303-645(8)(a)</b></p> <p><b>The monitoring interval must be placed at appropriate depths(s) to immediately detect a release of dangerous waste from the facility</b></p>	<p><b>Shallow monitoring system is adequate for initial groundwater detection system</b></p>	<ul style="list-style-type: none"> <li><b>o Contaminant characteristics</b></li> <li><b>o Permitting document and/or groundwater monitoring plan</b></li> <li><b>o Text</b></li>   <li><b>o Geologic cross sections</b></li> <li><b>o Permitting document and/or groundwater monitoring plan</b></li> <li><b>o Figures with accompanying text</b></li>   <li><b>o Monitoring/screen intervals</b></li> <li><b>o Borehole completion data package</b></li> <li><b>o Well as-built drawings</b></li> </ul>

# PROPOSED CRITERIA FOR CLOSE OUT OF TPA MILESTONE M-24-00 (Cont.)

Requirement/Criterion	Compliance Action	Documented Evidence
<p><b>Quality of Background Water WAC-173-303-645(8)(a)(i)</b></p> <p><b>Upgradient groundwater wells must yield groundwater samples that are representative of the upgradient groundwater quality</b></p>	<p><b>RCRA facility or waste management area must have at least one "immediately" upgradient well</b></p>	<ul style="list-style-type: none"><li><b>o Borehole locations relative to facility</b></li><li><b>o Permitting document and/or groundwater monitoring plan</b></li><li><b>o Map</b></li> <li><b>o Geologic cross-sections</b></li><li><b>o Permitting document and/or groundwater monitoring plan</b></li><li><b>o Figure with accompanying text</b></li> <li><b>o Flow direction</b></li><li><b>o Permitting document and/or groundwater monitoring plan</b></li><li><b>o Water table map</b></li></ul>

## PROPOSED CRITERIA FOR CLOSE OUT OF TPA MILESTONE M-24-00 (Cont.)

Requirement/Criterion	Compliance Action	Documented Evident
<b>Quality of Background Water (Cont.)</b>		<ul style="list-style-type: none"> <li>o Borehole construction</li> <li>o Borehole completion data package</li> <li>o Variety of information</li>   <li>o Background water quality</li> <li>o Quarterly groundwater reports</li> <li>o Text</li>   <li>o Well development to &lt;5 NTU</li> <li>o Borehole completion data package (Well summary report since ~1989)</li> <li>o Laboratory turbidity (prior to 1989, only as indicator)</li> <li>o Table</li> </ul>

## PROPOSED CRITERIA FOR CLOSEOUT OF TPA MILESTONE M-24-00 (Cont.)

Requirement/Criterion	Compliance Action	Documented Evidence
<p><b>Quality of Groundwater Passing Point of Compliance WAC-173-303-645(8)(a)(ii)</b></p> <p><b>Groundwater must yield groundwater samples that are representative of groundwater quality immediately downgradient of the facility</b></p>	<p><b>Location of downgradient detection wells are installed at point of compliance</b></p>	<ul style="list-style-type: none"> <li><b>o Borehole locations relative to facility</b></li> <li><b>o Permitting document and/or groundwater monitoring plan</b></li> <li><b>o Map</b></li>   <li><b>o Geologic cross sections</b></li> <li><b>o Permitting document and/or groundwater monitoring plan</b></li> <li><b>o Figure with accompanying text</b></li>   <li><b>o Flow direction</b></li> <li><b>o Permitting document and/or groundwater monitoring plan</b></li> <li><b>o Water table map</b></li> </ul>

## PROPOSED CRITERIA FOR CLOSE OUT OF TPA MILESTONE M-24-00 (Cont.)

Requirement/Criterion	Compliance Action	Documented Evidence
<b>Quality of Groundwater Passing Point of Compliance (Cont.)</b>		<ul style="list-style-type: none"> <li>o Borehole construction</li> <li>o Borehole completion data package</li> <li>o Variety of information</li>   <li>o Background water quality</li> <li>o Quarterly groundwater reports</li> <li>o Text</li>   <li>o Well development to &lt;5 NTU</li> <li>o Borehole completion data package (Well summary report since ~1989)</li> <li>o Laboratory Turbidity (prior to 1989, only as indicator)</li> <li>o Table</li> </ul>

# PROPOSED CRITERIA FOR CLOSEOUT OF TPA MILESTONE M-24-00

<b>Requirement/Criterion</b>	<b>Compliance Action</b>	<b>Documented Evidence</b>
<p><b>Monitoring Well Construction WAC-173-303-645(8)(c)</b></p> <p><b>Groundwater monitoring wells must be constructed to yield representative groundwater samples and to prevent groundwater contamination</b></p>	<p><b>Wells constructed to WAC 173-160 requirements are adequate</b></p>	<ul style="list-style-type: none"><li><b>o Well Construction Information</b><ul style="list-style-type: none"><li>- geologic logs with description</li><li>- geophysical logs</li><li>- well development data</li><li>- analytical sample results</li><li>- decontamination information</li><li>- variance information</li><li>- survey data</li></ul></li> <li><b>o Borehole completion data package</b></li><li><b>o Forms, drawings, tables and text</b></li></ul>