



START

Department of Energy

Richland Operations Office
P.O. Box 550
Richland, Washington 99352

0028163

MAY 05 1993

93-ERB-145

Mr. Roger F. Stanley, Director
Tri-Party Agreement Implementation
State of Washington
Department of Ecology
Mail Stop 7600
Olympia, Washington 98504-7600

Dear Mr. Stanley:

VARIANCE FOR VADOSE MONITORING INSTALLATIONS USING CONE PENETROMETER

The U.S. Department of Energy, Richland Field Office (RL) requests a variance from Washington Administrative Code (WAC) 173-160 for approximately 80 or more cone penetrometer (CPT) holes scheduled for fiscal years 1993 and 1994. These CPT holes are to be pushed within the boundaries of the 200 West Area in support of the carbon tetrachloride (CCl₄) Expedited Response Action (ERA) and the 200-UP-2 Operable Unit Project. CPT rods (one meter each) will be left in the ground to act as extraction and/or monitoring points in the vadose section. The 200-UP-2 Operable Unit Project CPT holes will be used for future radiological characterization of the soils.

All CPT pushes will be placed using a 35-40 ton CPT truck to depths up to 150 feet. The variance request form is enclosed. The water table is at a depth of approximately 210 feet. The geology of the area is shown on the variance request Exhibit 3.

In the event that a hole can not be completed to its intended depth, additional attempts to re-push the hole may be required. The following variances from WAC 173-160 are requested:

- WAC 173-160-325, "Special Standards for Driven or Jetted Wells." Annular seals required by this standard will interfere with the in-situ monitoring of volatile organic compounds and planned radiological monitoring as the cone is advanced into the subsurface. It is proposed that, once the injection/extraction wells are excavated around the rod, the excavated hole be filled with a two percent bentonite slurry in order to safeguard the groundwater and remove the threat of cross contamination.
- WAC 173-160-055, "Well Construction Notification (Start Card)." CPT holes are not drilled, but pushed. It is requested that the requirement for a licensed driller and registration number be waived. Holes pushed by the CPT will be identified on the Start Card as a CPT generated hole. CPT holes can not be constructed in a manner to provide an annular space for a seal.

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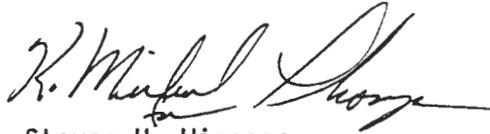
Mr. Roger D. Stanley
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This proposed method of probe installation will minimize the potential for generating waste, reduce the risk of exposure to site workers, and protect the groundwater from any pathway emanating from the surface and flowing along the CPT rod.

Please review the enclosed variance request and provide concurrence as applicable. It is anticipated work will begin in May of 1993. If you have any further questions, please contact Mr. Paul M. Pak at (509) 376-4798.

Sincerely,



Steven H. Wisness
Hanford Project Manager

ERD:PMP

Enclosure

cc w/encl:
C. S. Cline, Ecology Lacey Office
P. T. Day, EPA
G. C. Hofer, EPA
D. J. Moak, WHC
W. H. Price, WHC
D. R. Sherwood, EPA
D. D. Teel, Ecology Kennewick Office
D. M. Trader, TDD
R. D. Wojtasek, WHC

9313723003

STATE OF WASHINGTON DEPARTMENT OF ECOLOGY
VARIANCE REQUEST INFORMATION

1. Date: March 11, 1993
2. Cognizant Engineer: M. J. Galgoul, WHC
Phone: (509) 376-2038
Organization: Environmental Division

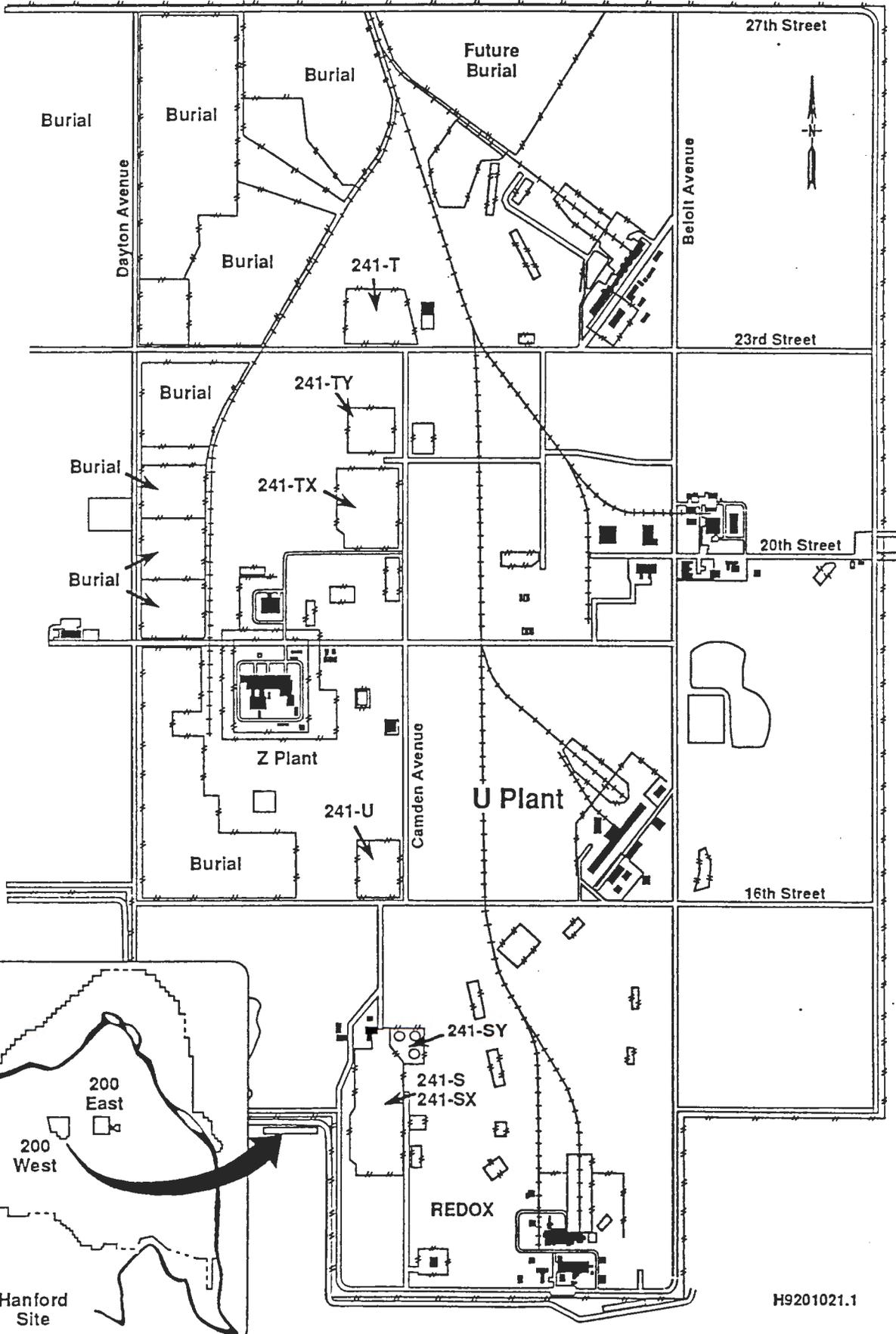
Cognizant Engineer: M. C. Hagood, WHC
Phone: (509) 376-9664
Organization: Environmental Division
3. RL Contact: P. M. Pak
Address: MSIN A5-19
Phone: (509) 376-4798
4. Operators Name: TBD by contractor
Address: Applied Research Associates, Inc.
4300 San Mateo Blvd., NE, Suite A-220
Albuquerque, New Mexico 87110
Phone: (505) 883-3636
5. Project Name: 200 West Carbon Tetrachloride, 200-UP-2
Location: 200 West Area
Purpose: Site Characterization
6. Reason for Variance: See Attached Letter
7. Regulatory Oversight: State of Washington Department of Ecology
Contact: C. S. Cline
Phone: (206) 438-7756
8. Number of Wells: Approximately 80
9. Estimated Well Life: Four years
10. Site Map: See Exhibit 1
11. Ground Water Data: NA (Vadose Zone)
12. Ground Water Depth: 210 Feet
13. Proposed Well Const.: See Exhibit 2
14. Placement of Materials: Bentonite crumbles will be poured in from the surface after probe placement.
15. Soil, Geologic Logs: See Exhibit 3

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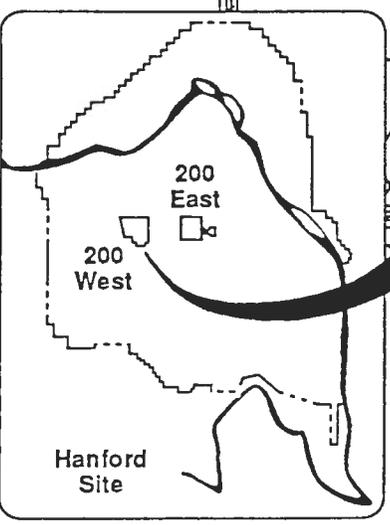
16. Proposed Abandonment Procedure: Abandonment will be completed per WAC 173-160 requirements.
17. Additional Information: Exhibit 1; Site Map
Exhibit 2; Proposed Construction
Exhibit 3; Geologic Logs

9 8 1 7 7 2 3 0 0 5

Exhibit 1



9 3 1 3 0 2 3 1 0 0 6

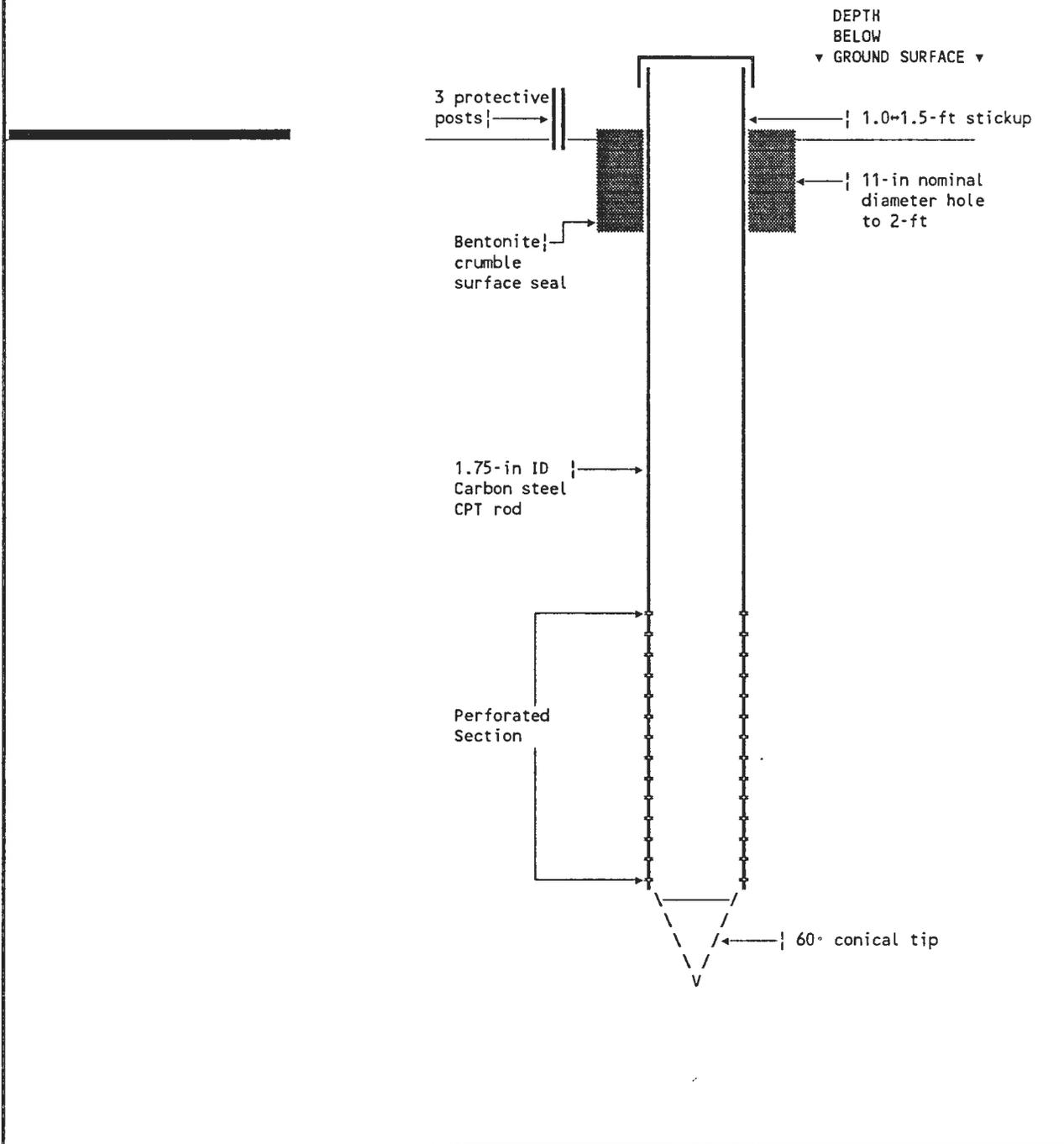


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Exhibit 2

PROPOSED CPT EXTRACTION/INJECTION WELL DESIGN

Proposed Drilling Method: <u>CPT System</u>	Sample Method: <u>Vapor extraction</u>	WELL NUMBER: <u>TBD</u>	TEMPORARY WELL NO: <u>TBD</u>
Drilling Fluid To Be Used: <u>None</u>	Allowable Additives: <u>NA</u>	Hanford	Hanford Site
Driller's Name: <u>TBD</u>	WA State Lic Nr: <u>NA</u>	Coordinates: N/S: <u>200W Area</u>	E/W: <u>200W Area</u>
Drilling Company: <u>TBD</u>	Company Location: <u>TBD</u>	Coordinates: N: <u>TBD</u>	E: <u>TBD</u>
Proposed Start Date: <u>TBD</u>	Proposed Date Complete: <u>TBD</u>	Start Card #: <u>TBD</u>	T <u> </u> R <u> </u> S <u> </u>
		Elevation	
		Ground surface: <u>TBD</u>	



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CORRESPONDENCE DISTRIBUTION COVERSHEET

Author: S. H. Wisness, RL
D. J. Moak, WHC

Addressee: R. F. Stanely, Ecology

Correspondence No.: Incoming 9302919
Xref 9352018

Subject: VARIANCE FOR VADOSE MONITORING INSTALLATIONS USING CONE PENETROMETER

INTERNAL DISTRIBUTION

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		D. J. Moak	N3-05	
		W. H. Price	N3-05	
		R. D. Wojtasek, Assignee	H6-27	
		EDMC	H6-08	

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