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Final

**Meeting Minutes Transmittal/Approval**  
**Unit Manager's Meeting: 200 Aggregate Area/200 Area Operable Units**  
**740 Stevens Center, Room 1200, Richland, Washington**  
**February 24, 1993**

FROM/APPROVAL: *Paul M. Pak* Date 3/25/93  
Paul M. Pak, 200 Aggregate Area Unit Manager, RL (A5-19)

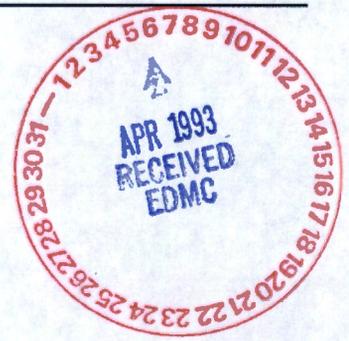
APPROVAL: *Douglas R. Sherwood* Date 3/25/93  
Douglas R. Sherwood, 200 Aggregate Area Unit Manager, EPA (B5-01)

APPROVAL: *Dib Goswami* Date 3/25/93  
Dib Goswami, 200 Aggregate Area Unit Manager, WA Dept of Ecology

Meeting Minutes are attached. Minutes are comprised of the following:

- Attachment #1 - Meeting Summary
- Attachment #2 - Attendance Sheet
- Attachment #3 - Agenda
- Attachment #4 - Action Item Status List
- Attachment #5 - 200 Area Program
- Attachment #6 - 200 West Area Groundwater and Contaminant Transport Model Development
- Attachment #7 - 200 Area Ecological Characterization Plan

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Prepared by: *Suzanne Clarke* Date: March 25, 1993  
Suzanne Clarke, Kay Kimmel, GSSC (A4-35)

Concurrence by: *Curt Wittreich* Date: 3/25/93  
Curt Wittreich, WHC Coordinator (H6-03)

**Attachment #1  
Unit Manager's Meeting: 200 Aggregate Area/200 Area Operable Units  
February 24, 1993**

**Meeting and Summary of Commitments and Agreements**

**1. SIGNING OF THE JANUARY 200 AREA UNIT MANAGER'S MEETING MINUTES:**

Meeting minutes were reviewed and approved with no changes.

**2. ACTION ITEM UPDATE. See Attachment 4 for status (before January meeting):**

All Action Items are closed.

**3. NEW ACTION ITEMS (INITIATED February 24, 1993):**

No new action items were initiated.

**4. STATUS 200 AGGREGATE AREA MANAGEMENT STUDY PROGRAM**

- 200 AAMS Reports Status - Curt Wittreich provided the status of the 200 Area work (see attachment #5).

**5. INFORMATION ITEM:**

- The status of the modeling effort for the 200-West unconfined aquifer was presented by Mike Connelly (see attachment #6).
- An overview of the 200 Area Ecological Characterization Plan was presented by Curt Wittreich (see attachment #7). This work does not directly support a work plan or Milestone. The information collected, however, will be used to support IRM decisions.

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**Attachment #3**  
**Unit Manager's Meeting: 200 Aggregate Area/200 Area Operable Units**  
**February 24, 1993**

**Agenda**

200 Aggregate Area Management Study Program:

- 200 AAMS Reports Status - Curt Wittreich
- Groundwater Model Development
- Ecological Characterization

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**Attachment #4**

**Action Item Status List**  
**Unit Manager's Meeting: 200 Aggregate Area/200 Area Operable Units**  
**February 24, 1993**

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Item No.	Action/Source of Action	Status
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No Action Items.

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9 3 1 2 8 9 8 1 3 3 0

ATT #5

**200 AREA PROGRAM**

**Curtis D. Wittreich**

February 24, 1993

## STATUS

- 200 AGGREGATE AREA MANAGEMENT STUDY REPORTS
- 200-UP-1 GROUNDWATER OPERABLE UNIT WORK PLAN
- 200-ZP-1 GROUNDWATER OPERABLE UNIT WORK PLAN

## 200 AREA ACTIVITIES

- GROUNDWATER MODEL DEVELOPMENT
- ECOLOGICAL CHARACTERIZATION

## 200 WEST AREA GROUNDWATER AND CONTAMINANT TRANSPORT MODEL DEVELOPMENT

### PURPOSE

- Develop capabilities to simulate/predict the physical and chemical response of the unconfined aquifer to stresses created by remedial actions
- Provide a screening/design tool for groundwater remedial actions

### SPECIFIC OBJECTIVES

- Predict flow paths and travel times for contaminants of concern
- Provide a design tool for extraction and injection, and barrier configurations
- Assess impact of remedial actions on local hydraulic regime and contaminant plumes
- Focus future field investigations

## 200 WEST AREA GROUNDWATER AND CONTAMINANT TRANSPORT MODEL DEVELOPMENT (continued)

### SCOPE

- Assemble appropriate available information on the hydrogeologic system to refine conceptual model (based on the 200 AAMSRs and new data)
- Use conceptual model to define input parameters (physical properties, boundary and initial conditions) for VAM3DCG computer code
- Calibrate model to existing conditions
- Model initial scenario
- Refine model by incorporating results of the field program (aquifer testing and vertical profiling of contaminants)
- Define and model additional remedial action scenarios
- Issue final report

The VAM3DCG code requires the following data to simulate groundwater flow and contaminant transport:

(1) System Geometry

- Horizontal and/or vertical dimension including layering and other heterogeneities. (conceptual model)

(2) Porous Media Flow Properties

- Horizontal, longitudinal, and transverse components of saturated hydraulic conductivity ( $K_x$  and  $K_y$ , laboratory and field measurements)
- Vertical component of saturated hydraulic conductivity ( $K_z$ , laboratory and field measurements)
- Specific storage ( $S_s$ , field measurement)

(3) Porous Media Transport Properties

- Longitudinal dispersivity ( $\alpha_L$ , literature)
- Transverse dispersivity ( $\alpha_T$ , literature)
- Free-water molecular diffusion coefficient ( $D_o$ , literature)
- Effective Porosity ( $\phi$ , literature and/or laboratory measurement)
- Bulk Density ( $\rho_b$ , laboratory measurement)

(4) Properties of Solute Species

- Decay coefficient ( $\lambda$ , literature)
- Distribution coefficient ( $K_d$ , literature)

(5) Initial and Boundary Conditions

- Initial distribution of pressure head ( $\phi_o$ , conceptual model)
- Initial distribution of concentration ( $C_o$ , conceptual model)
- Prescribed head values and/or water fluxes at boundaries (conceptual model)
- Prescribed concentration values and/or fluxes at boundaries (conceptual model)

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## 200 AREA ECOLOGICAL CHARACTERIZATION PLAN

### SCOPE AND OBJECTIVE

- Limited field investigation to support interim actions in the 200 Areas



## 200 AREA ECOLOGICAL CHARACTERIZATION PLAN (continued)

### PROPOSED TASKS

- Summarize Current Hanford-Specific Information
- Summarize Historical Biota Contamination and Trends
- Field Sampling:
  - Vegetation
  - Insects
  - Small Mammals

Distribution

Unit Manager's Meeting: 200 Aggregate Area/200 Area Operable Units  
February 24, 1993

Roger D. Freeberg /Julie K. Erickson /Paul Pak . . . . . DOE-RL, ERD (A5-19)  
Mike Thompson . . . . . DOE-RL, EAP/RPB (A5-15)  
Diane Clark . . . . . DOE-RL, TSD/SSB (A5-55)  
Mary Harmon . . . . . DOE-HQ (EM-442)

Doug Sherwood . . . . . 200 Aggregate Area Manager, EPA (B5-01)  
Ward Staubitz . . . . . USGS, Support to EPA  
Audree DeAngeles . . . . . PRC, Support to EPA

Dib Goswami . . . . . WDOE (Kennewick)  
Darci Teel . . . . . WDOE (Kennewick)  
Larry Goldstein . . . . . WDOE (Lacey)

Lynn Albin . . . . . Washington Dept. of Health

Curt Wittreich . . . . . WHC (H6-03)  
Tom Wintczak . . . . . Program Manager, WHC (H6-27)  
Mel Adams (Please route to:) . . . . . WHC (H6-01)  
    Rich Carlson . . . . . WHC (H6-03)  
    M.J. Galgoul . . . . . WHC (H6-03)  
L.D. Arnold . . . . . WHC (B2-35)  
Diana Sickle . . . . . WHC (H6-27)  
Chris Widrig (Please route to:) . . . . . PNL (K1-21)  
    Wayne Martin . . . . . PNL (K1-19)  
    Mark Hanson . . . . . PNL (K1-51)  
    Roy Gephart . . . . . PNL (K1-22)  
    Steve Slate . . . . . PNL (K1-19)  
    Joan Keller . . . . . PNL (K1-21)  
    Ben Johnson . . . . . PNL (K1-78)

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Original Sent To: ADMINISTRATIVE RECORD: 200 AAMS; Care of EDMC, WHC (H6-08)

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Please inform Suzanne Clarke (376-8189) or Kay Kimmel (376-1985) of Mactec/Dames & Moore (A4-35) of deletions or additions to the distribution list.

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