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Final

Meeting Minutes Transmittal/Approval
Unit Manager's Meeting: 300-FF-5 Operable Unit
450 Hills, Richland, Washington
August 27, 1992

FROM/APPROVAL: Robert D. McLeod Date 9-24-92
Bob McLeod, 300-FF-5 Unit Manager, RL (A5-19)

APPROVAL: David R. Einan Date 24 Sept 92
Dave Einan, 300-FF-5 Unit Manager, EPA (B5-01)

APPROVAL: D. Goswami Date 9/24/92
Dib Goswami, 300-FF-5 Unit Manager, WA Department of Ecology

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

Attachment #1	-	Meeting Summary/Summary of Commitments and Agreements
Attachment #2	-	Attendance List for 300-FF-5
Attachment #3	-	Agenda For 300-FF-5 Meeting
Attachment #4	-	Action Items Status List
Attachment #5	-	300-FF-5 Work Progress
Attachment #6	-	Remedial Investigation Summary Schedule
Attachment #7	-	Hydraulic Conditions at Well 399-1-16C
Attachment #8	-	River Stage in the 300 Area
Attachment #9	-	Hourly Flows for 8/12/92
Attachment #10	-	Average Daily Flow (August)
Attachment #11	-	300-FF-5 Operable Unit
Attachment #12	-	Ferris Method for Inferring Aquifer Hydraulic Parameters
Attachment #13	-	Project L-045H 300 Area Effluent Treatment Facility Overview
Attachment #14	-	Site Development and Infrastructure Planning Overview

OCT 1992 RECEIVED EDMC

PREPARED BY: Kay Kimmel Date 9/24/92
Suzanne Clarke, Kay Kimmel, GSSC (A4-35)

CONCURRENCE BY: L.C. Hulstrom Date 9/24/92
L. Hulstrom, WHC FF-5 RI Coordinator (H4-55)

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Attachment #1

Meeting Summary

Unit Manager's Meeting: 300-FF-5 Operable Unit
August 27, 1992

1. SIGNING OF THE JULY 300-FF-5 MEETING MINUTES:

Minutes were reviewed and approved with one minor change.

2. ACTION ITEM UPDATE (See Attachment #4):

All previous action items have been closed.

3. NEW ACTION ITEMS (INITIATED August 27, 1992):

No new Action Items were added at this meeting.

4. STATUS AND SCHEDULE OF TASKS:

- Larry Hulstrom (WHC) presented the monthly update on task status for the 300-FF-5 Operable Unit (for details see attachments #5, #6, #7, #8, #9, #10).

5. INFORMATION ITEMS:

- D.S. Takasumi presented a construction update on the status of the Treated Effluent Disposal Facility (TEDF) (see attachment #13).

- Boyd Hathaway (WHC) presented Land Use Planning for the 300 Area (see attachment #14).

- Doug Morell (GAI) presented the baseline risk assessment (see attachment #11).

- Bill McMahon presented a utilization of the Ferris method to infer hydraulic parameters for the 300 Area unconfined aquifer (see attachment #12). A general discussion ensued on how to make the Ferris method more useable since there has been no successful application of this method to unconfined aquifers.

- Brian Innis provided Change Form 300-FF-5-18 for consideration. This change form deals with proposed modifications to Table 1 of the QAPP that are required as a result of a DOE/RL audit finding.

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Attachment # 2

300-FF-5 Operable Unit Manager's Meeting
Official Attendance Record
August 27, 1992

Please print clearly and use black ink

PRINTED NAME	SIGNATURE	ORGANIZATION	O.U. ROLE	TELEPHONE
Kay Kimmel	Kay Kimmel	SWEC	GSSC	509-372-0610
Hal Dawney	H.D. Dawney	WHC	ER-Program offic	509-376-5539
Larry Hulstrom	LC Hulstrom	WHC	FF5 OU Coordin.	509 376 4034
RON BELDEN	Ron Belden	WHC	Asst Coord	509-372-1226
Dave Einan		EPA	Unit Mgr	509.376.3883
Dib Goswami	[illegible]	Ecology	Unit Mgr	509-546-4301
Brian E. Innis	Brian E. Innis	WHC	Asst. Coord. 300FF5	509-372-5670
Suzanne Clarke	Suzanne Clarke	SWEC	GSSC to RL	509-372-0630
RG McLeod	[illegible]	DOE-RL	UM	509-372-0092
CC Henckel III	[illegible]	WHC	OU Technical Coordinator	509-376-[illegible]
Andree DeAngeles	Andree DeAngeles	PRC	EPA Support	206-624-2692
Ward Staubitz	[illegible]	USGS	EPA Support	206-553-6510
Jack Donnelly	[illegible]	WDOE	Assist O.U.M.	546-2968
Michael Frank	M A Frank	WHC	Asst Coord. 300-FF-5	509-376-2731
Douglas Morell	[illegible]	Golder Assoc	WHC Support	(206)883-0777
H Boyd Hathaway	H. Boyd Hathaway	WHC/Site Planning	Land use Planning ~~WHC Support~~	509 376-7340
William J. McMahon	William J. McMahon	WHC	Geoscience Support	(509) 376-9744
CHUCK CLINE	[illegible]	Ecology	Hydrogeo. Support	(206) 438-7556
Larry Gadbois	LE Gadbois	EPA	Unit Manager	509 376-9884
Brian Drost	Brian Drost	USGS	EPA Support	206-593-6510
DENNIS S TAKASUMI	Dennis S Takasumi	WHC-PROJECTS	LOAS-H	509-372-0249
Stephen Friant	Steph Friant	PNL	Field	509 376 9789
RP Henckel	RP Henckel	WHC	100 Area RL	509 376-2091
RL Jackson	RL Jackson	WHC	RCRA Geohydr	(509) 376-9780
RE PETERSON	RE Peterson	WHC-GEOSCIENCES	100 Areas Groundwater	(509) 376-5888
Jon Sprecher	[illegible]	Brown & Caldwell	Ecology Support	(503) 244-7005

Attachment #3

UNIT MANAGER'S MEETING AGENDA
300-FF-5 OU
August 27, 1992
2:15 - 3:45 pm
450 Hills St., Room 47

Introduction:

Status:

Action Items

Remedial Investigation

Schedule

Issues:

Other Topics:

Treated Effluent Disposal Facility (TEDF) Construction Update - (D.S. Takasumi)

Land Use Planning for the 300 Area - (H.B. Hathaway)

Baseline Risk Assessment Scenarios - (GAI)

Status of Well 399-1-16C - (L.C. Hulstrom, R.L. Jackson, J.V. Borghese)

Evaluation of the Ferris model for the 100 Area using 300 Area data - (R.E. Peterson, W.J. McMahon)

Change Form 300-FF-5-18 for modifications of QAPP Table 1 - (B.E. Innis)

Agreements and Commitments

Presenter - Larry Hulstrom

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Attachment #4

Commitments/Agreements Status List

300-FF-5 Operable Unit

August 27, 1992

Item No.	Action	Status

NO OPEN ITEMS AT THIS TIME

9 2 1 2 7 5 5 0 8 8 2

Attachment #5

August 27, 1992

0 Remedial Investigation Activities

Well Drilling

Geologic Characterization Borehole - Deferred to Phase 2 RI via Change Form 300-FF-5-07.

Pumping Wells

A report summarizing the results of testing is undergoing WHC internal review at this time.

Existing Well Maintenance

Remediation work has been completed on 19 wells (1-1, 1-2, 1-6, 2-1, 2-2, 3-9, 3-11, 3-12, 4-1, 4-7, 4-9, 4-10, 5-1, 6-1, 8-1, 8-2, 8-3, 8-4, and 699-S30-E15A). Work on additional wells will begin in FY93 as soon as preparatory work has been completed.

Task 1--Source Investigation (Conducted in Source Operable Units)

Task 2--Geologic Investigation

Task 2a - Geophysical Surveys

A draft summary report was received for WHC review on August 5.

Task 2b - 300-FF-5 Wide Geological Characterization

A draft report summarizing this information is being developed by WHC Geosciences.

Task 3--Soil Investigation

Surface Radiation Survey - Task completed.

Soil Sampling and Analysis

Data validation of the remaining soils data is presently near completion. A draft summary report is scheduled for delivery to WHC for review by August 31, 1992. The clearance process for this report will be initiated upon receipt, as will the process of transferring validation information updates to HEIS.

Change Form 300-FF-5-19 was provided for review at the July UMM to propose deferral of leach and sorption tests on contaminated soil samples until the 300-FF-1 treatability test has been completed.

9 2 1 2 7 5 5 0 8 8 3

0 Remedial Investigation Activities (continued)

Task 4--Groundwater Investigation

Task 4a - Hydrostratigraphy
Task 4b - Contaminant Distribution in Soil and Groundwater

EDMC has received 99% of the chemical analysis data packages from the first round of groundwater sampling. About 70% of the rad. data has been received. Validation of selected data packages is underway. A draft summary report is scheduled for delivery to WHC for review by September 7, 1992.

Data from the second round of groundwater sampling is now beginning to arrive at OSM and EDMC. Validation of this data will begin as it becomes available. The third round of sampling, as discussed last month, has been initiated as of this week.

Plans for FY93 include completion of a fourth round of sampling, followed by a change to semi-annual sampling to be performed in conjunction with the RCRA program sampling of the 300 Area.

Task 4c - Hydraulic Properties

The last two transducers (for wells 2-2 and 5-1) were installed, completing the 34 well network of transducers. Data presented last month relative to wave propagation and the use of the Ferris model has been analyzed. This was performed relative to a 100 Area interim milestone on this subject. Results of this analysis will be discussed at this meeting.

Tracer tests have been deferred to Phase 2 RI per Change Form 300-FF-5-15.

Task 4d - Aquifer Intercommunication - Well 399-1-16D

Consideration of abandonment of well 16D has been postponed until the Phase 2 RI (per Change Form 300-FF-5-14) with the stipulation that investigation of well 16C be continued. An overview of information obtained to date on well 16C is attached for discussion.

Task 4e - Groundwater Modeling

Modeling efforts continue on schedule.

Task 5--Surface-Water and Sediment Investigation

Task 5a - Relative Data Compilation - Task completed.

9 2 1 2 7 3 5 0 8 8 4

August 27, 1992

0 Remedial Investigation Activities (continued)

Task 5--Surface-Water and Sediment Investigation - continued

Task 5b - Riverbank Springs

An update on the river stage level is attached. A meeting was held on August 17 to discuss regulatory comments. The field sampling plan has been revised and is in the clearance process. Due to the shutdown of WPPSS#2 it was not possible to initiate sampling the weekend of August 23 as planned. The next sampling attempt is scheduled for the weekend of September 12. Change forms 300-FF-5-9 and 300-FF-5-20 were presented at the July UMM to address proposed modifications to the work scope associated with this task.

Task 5c - Near Shore River Water and Sediment

Performed in conjunction with Task 5b.

Task 5d - Transect River Water

This "phase 3" task has been proposed for deferral via Change Form 300-FF-5-20.

Task 5e - River Stage

One of the two river stage measurement stations (SWS-1) has been active since November 7, 1991. Change Form 300-FF-5-17 was approved June 25 to eliminate the need for a second river monitoring station.

Task 5f - Boundary Conditions Along the Columbia River

Available data is being reviewed.

Task 5g - Numerical Algorithms for Groundwater to Surface Water Dispersion

Available data is being reviewed.

Task 6--Air Investigation

(Conducted in Source Operable Units and in coordination with well drilling activities.)

9 2 1 2 7 5 5 0 8 8 5

0 Remedial Investigation Activities (continued)

Task 7--Biota Investigations

Riparian Plants and Mammals

The first draft summary report of validation results for metals and tritium analyses was received for WHC review on August 25, 1992. The clearance process for this report will be initiated, as will the process of transferring validation information updates to HEIS. Validation of rad. data (uranium, etc.) has not yet been initiated since not all data has been received from the laboratories.

Collection and shipment of small mammals is presently scheduled to be completed by early September. Collection began on August 16, 1992 and should be completed by the end of the month. House mice (not voles) have been the primary species caught.

Aquatic Biota

Samples from the third round of periphyton collection were shipped to the laboratory on July 16. As yet no analytical results have yet been received.

Task 8--Data Evaluation

Performed with data available from the RI when gathered, and supplemented as new information becomes available.

Task 9--Baseline Risk Assessment

Efforts have been initiated to begin this task with available data. The site wide methodology (DOE/RL 91-45) is being utilized. A kickoff meeting with SAIC/Golder Associates Inc. was held on July 31. Two subsequent meetings have taken place. Once land use scenarios have been finalized the assessment can continue.

Task 10--Preliminary Site Characterization Summary Report

Task 10a - Draft Report
Task 10b - Final Report

A statement of work has been submitted for subcontractor support to write the Phase I RI report. It is planned to begin this effort on October 1, 1992.

Phase 1 Feasibility Study - Remedial Alternatives Development

A statement of work has been submitted for subcontractor support to write the FS I and II report. This effort will begin as soon as possible. The same contractor for the Phase I RI report is being utilized.

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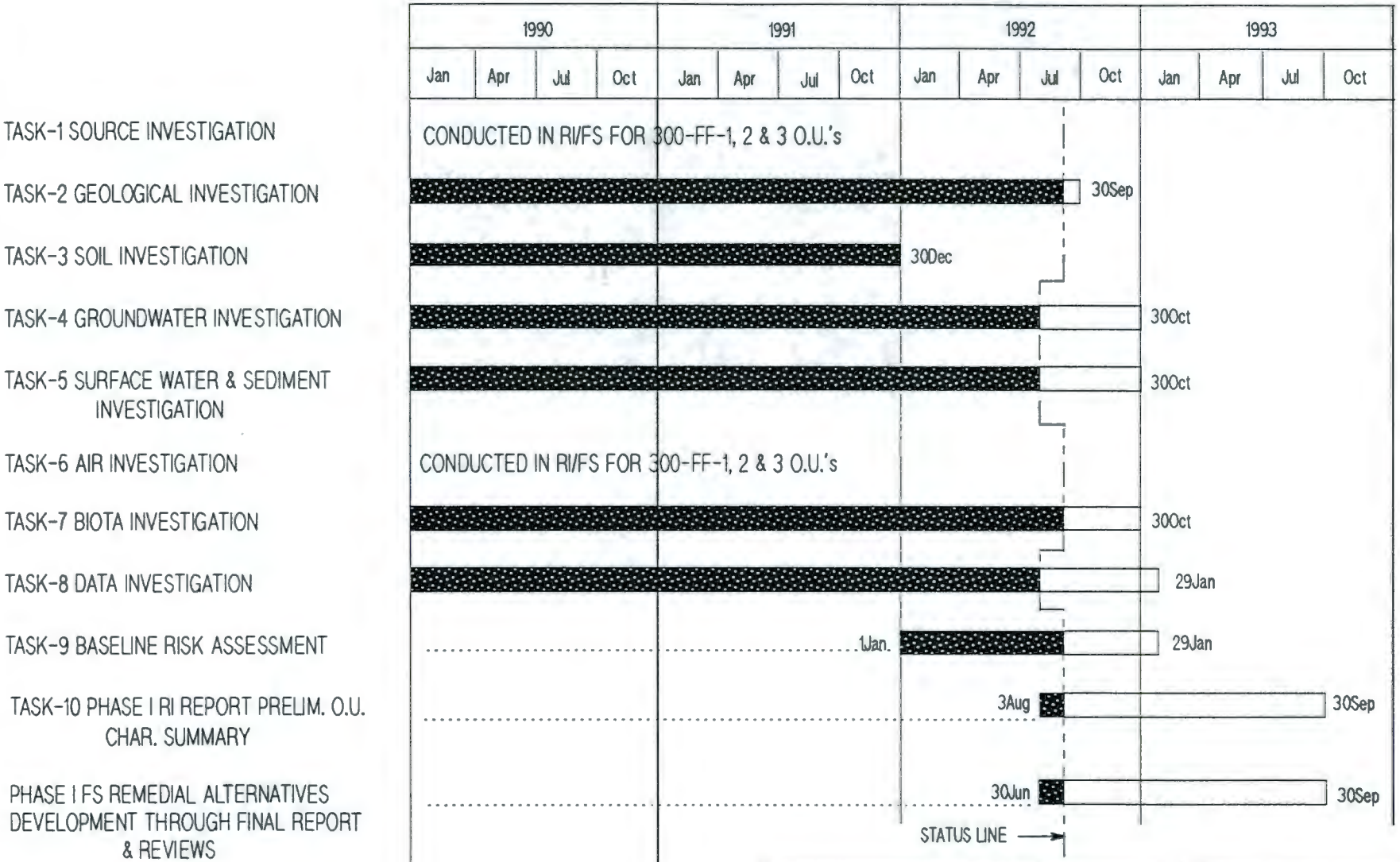
300-FF-5 OPERABLE UNIT
REMEDIAL INVESTIGATION SUMMARY SCHEDULE



Project:	LH300RIS	Date: 26 Aug 92 13:10
300-FF-5 OPERABLE UNIT		
Page: 1 of 1	Drawn by: Steve J. Sakey 6-3092	

Attachment #6

HYDRAULIC CONDITIONS AT WELL 399-1-16C

- completed in confined aquifer
- initial water level, 370 ft
- stabilized water level, 335-340 ft (unconfined head)
- head changed 35 - 40 ft

Head Change indicates: flow from the confined aquifer to the unconfined aquifer

CONDITIONS CONTRIBUTING TO HEAD CHANGE

- casing joint leaks
- leakage along annular seals
- combination of above or some other factor

- **CASING JOINT LEAKS**

  - casing integrity test performed in July

  - total leak 410 ml/min (0.1 gpm)

Simple analytical model results show that this leakage rate does not account for total head change.

- **ANNULAR SEAL LEAKS**

  - pressure exerted by the seal must be greater than formation pressures

  - formation pressure, 71 psi

  - seal pressure, 64 psi

Formation pressure > seal pressure. Therefore it is likely that annular seal leaks.

RECOMMENDED ACTIONS

- consider remediation of well 399-1-16C

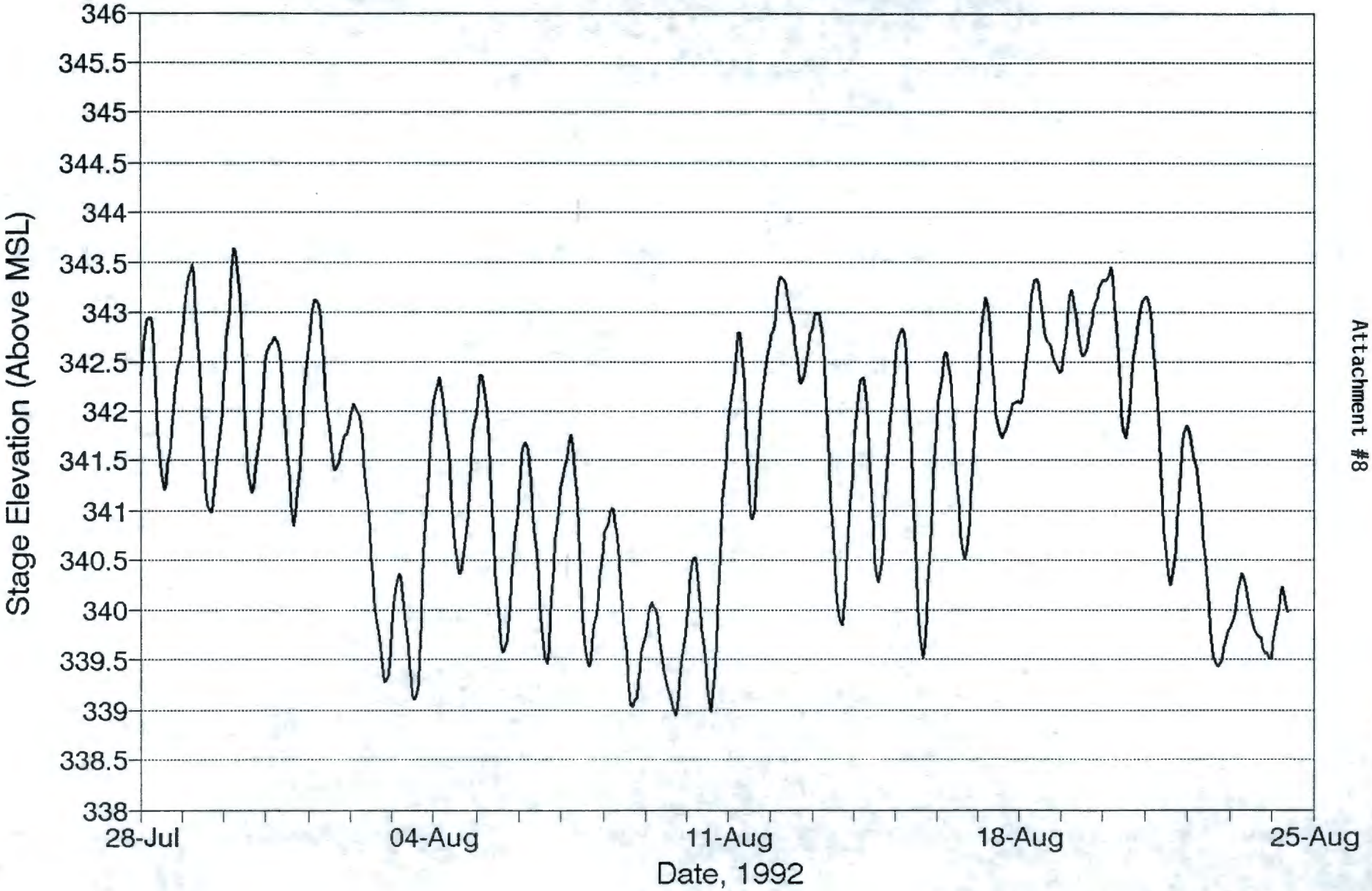
OR

- construct replacement well and then abandon 16C

- survey similarly constructed wells in the 300 Area (399-1-9, 399-1-17C, 399-1-18C)

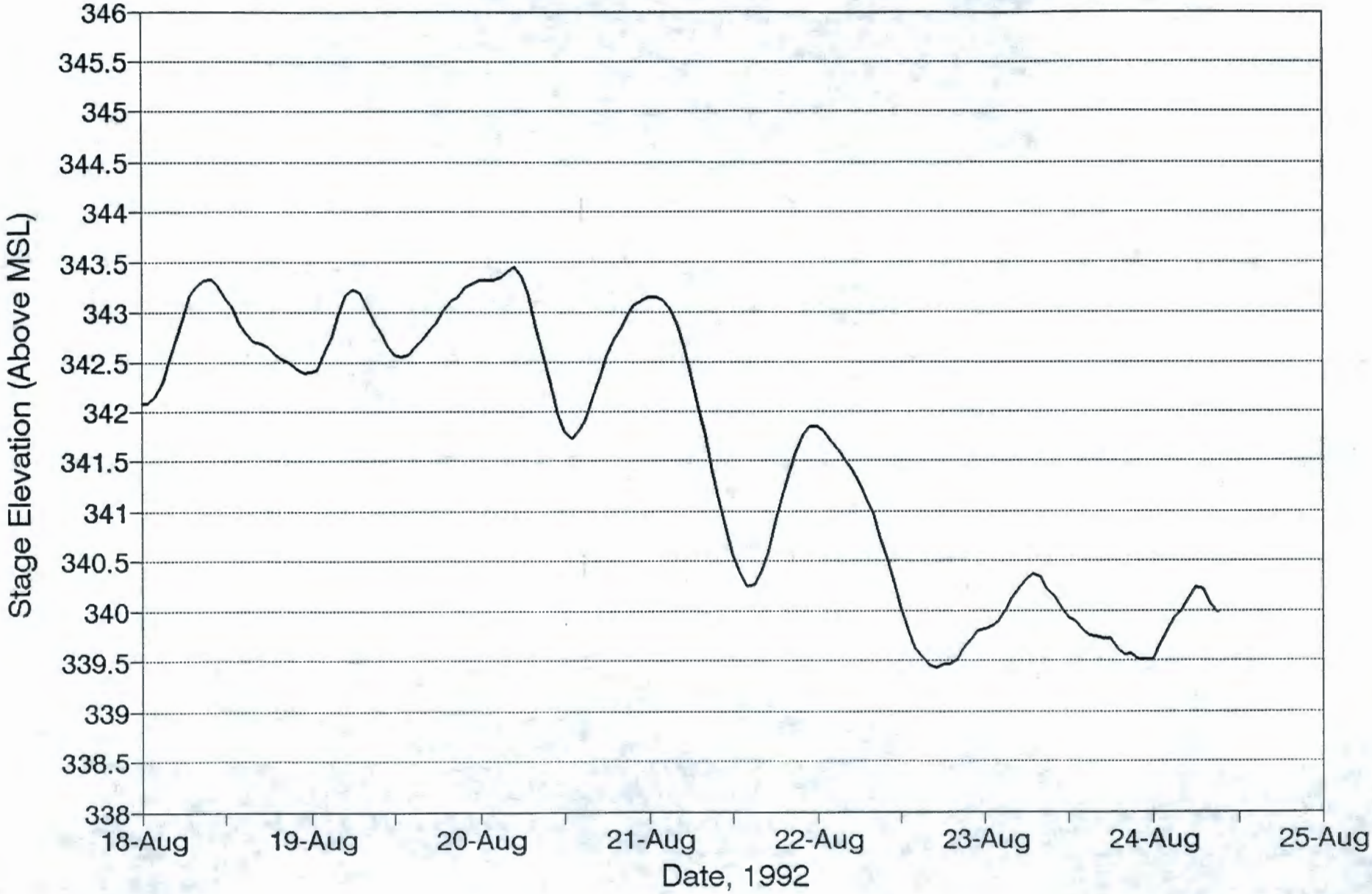
River Stage in the 300 Area

SWS - 1

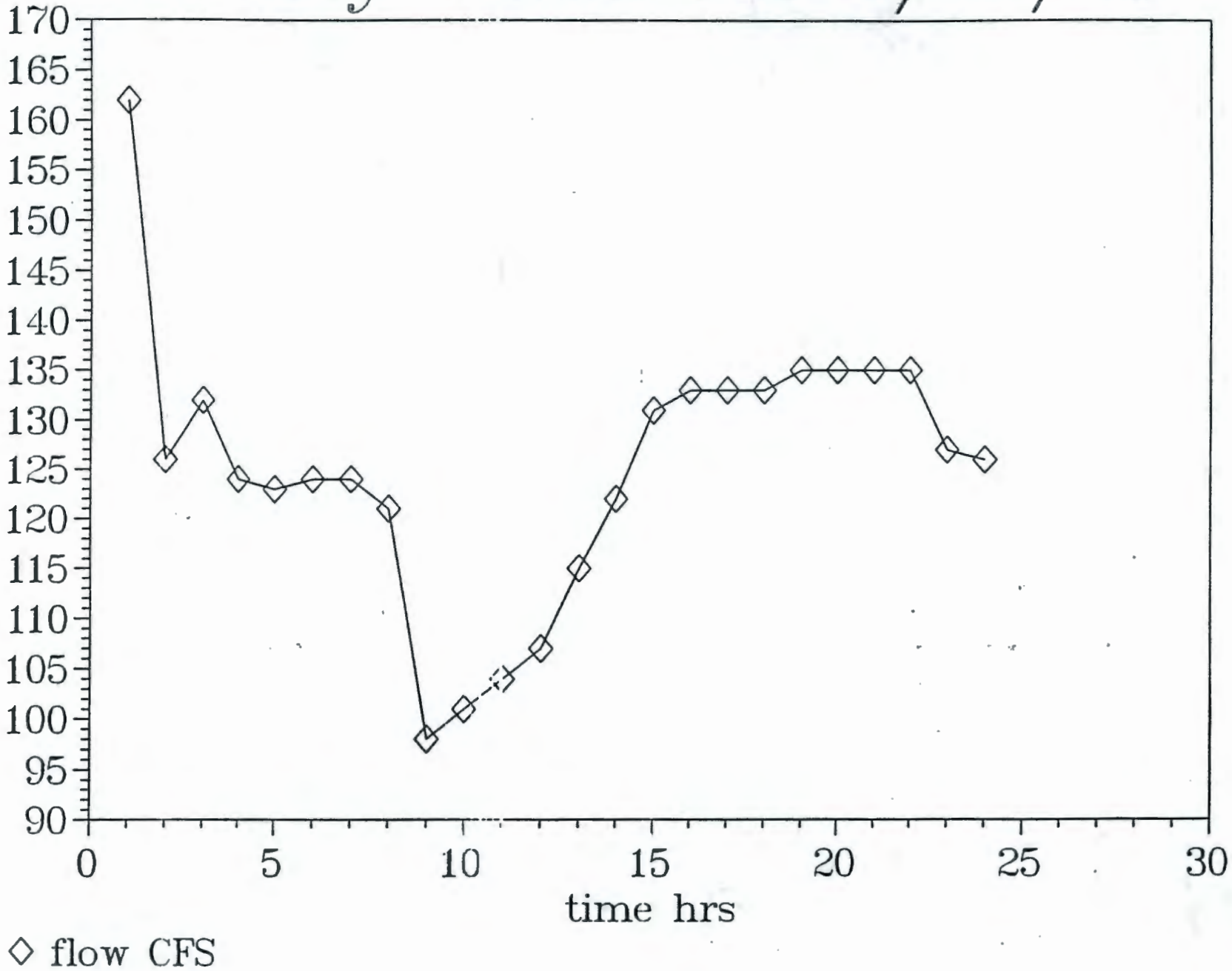


River Stage in the 300 Area

SWS - 1

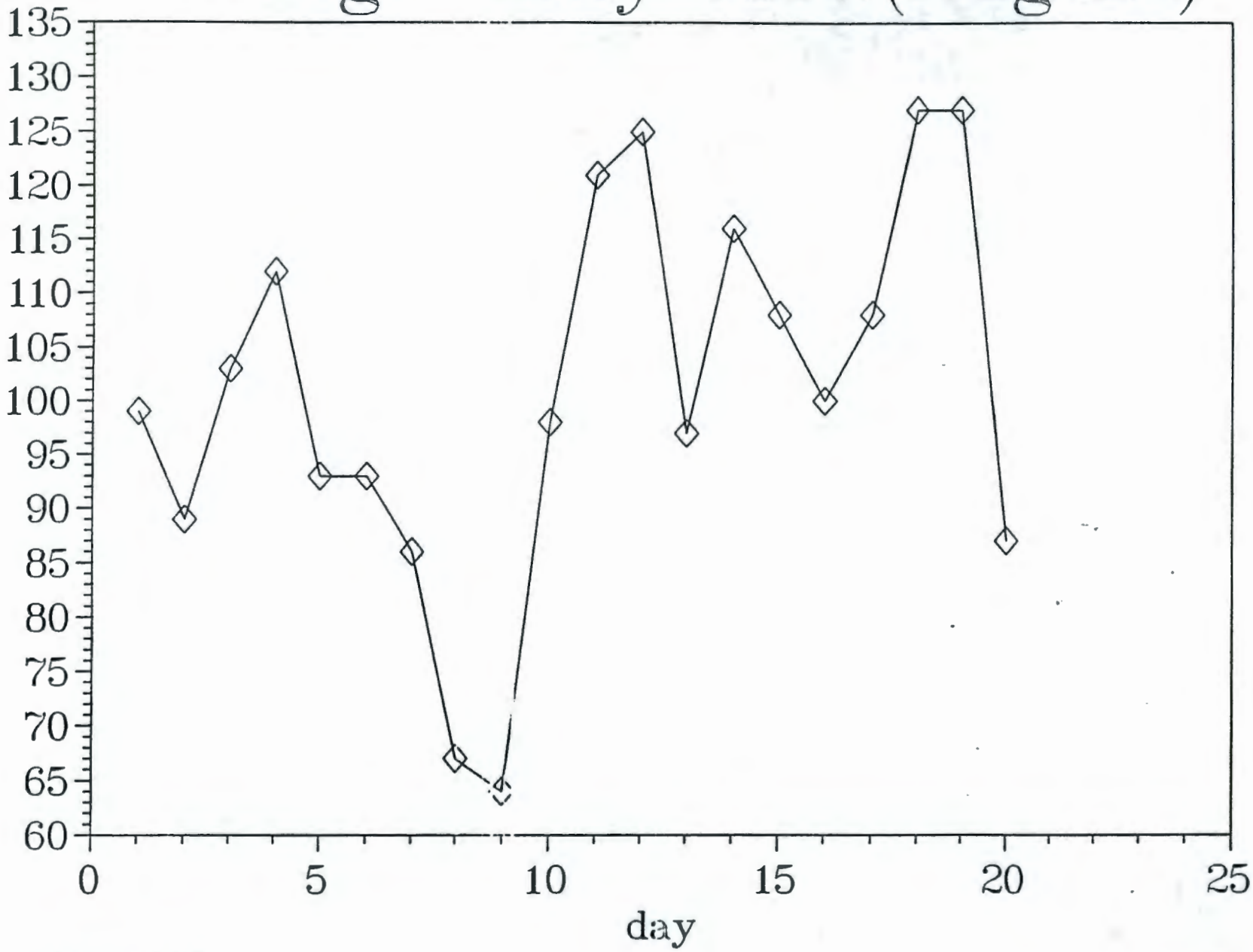


Hourly Flows For 8/12/92



Attachment #9

Average Daily Flow(August)



◇ flow CFS

Attachment #10

300-FF-5 OPERABLE UNIT

SCENARIO	ON-OU			ON-HANFORD SITE			OFF-HANFORD SITE			RATIONALE FOR EVALUATION
	Current	2018	2118	Current	2018	2118	Current	2018	2118	
Industrial	Yes	Yes	Yes	No	Yes	Yes	No	No	No	The OU vicinity is an active industrial area; therefore, evaluation of an industrial scenario on the OU under both current and future conditions is appropriate if the groundwater is used directly or if groundwater contamination could impact river water that may be used in the 300 Area. Evaluation of off-Site industrial exposure to potential contaminants would not be necessary unless some industrial facility used river water downgradient from the OU and accessed that water upgradient from the City of Richland water intake.
Residential	No	No	No	No	No	Yes	Yes	Yes	Yes	Given that the OU vicinity is an active industrial area, it is not appropriate to evaluate residential water use and exposures on the OU. Off-Hanford Site residential exposures should be evaluated for contaminants that could be transported from the groundwater to the river and the City of Richland water intake. On-Hanford Site residential exposures to groundwater would be evaluated under a future scenario for areas such as the 600 Areas.
Recreational	No	No	No	No	No	Yes	Yes	Yes	Yes	It is not appropriate to evaluate recreational water use immediately overlying 300-FF-5 unless there are probable exposures such as accessible springs etc. The recreational scenario should be evaluated for off-Site recreational receptors potentially impacted by groundwater to river related pathways (e.g. fish consumption, swimming, etc.).
Agricultural	No	No	No	No	No	Yes	Yes	Yes	Yes	As with the residential scenario, there is no real likelihood of on-OU agriculutral use. The agricultural scenario is basically a residential scenario with a garden and livestock. Evaluation of this scenario would only be necessary if there is significant contamination in the groundwater that could bioconcentrate in a food chain receptor. If off-Site residential receptors are evaluated for contaminants transported through the groundwater, sufficient information should be available to qualitatively discuss questions on exposures to potential "agricultural scenario" receptors, by analogy. If off-Site residential receptors are not evaluated, any such discussion would be very limited.

Attachment #11

Attachment #12

FERRIS METHOD FOR INFERRING AQUIFER HYDRAULIC PARAMETERS (Ferris 1963)

- An analysis of correlations between river stage fluctuations and subsequent water level changes in nearby groundwater wells.

- Aquifer property estimated is diffusivity. Diffusivity results from the combined effects of transmissivity and storage capability.

- Diffusivity is inferred in two ways: By analyzing (1) the ratio of stage changes in the river and water level changes in wells, and (2) the time lag between a river pulse and its appearance in a well.

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FERRIS METHOD continued . . .

Assumptions

- A confined aquifer fully penetrated by the river
- The aquifer is isotropic and uniform in thickness
- River stage changes in a sinusoidal manner
- Change in storage occurs instantaneously and proportionally, to the change in pressure

If unconfined or not fully penetrated:

- No vertical component of flow
- Fluctuation is a small fraction of saturated thickness

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9 2 1 2 7 5 5 0 9 0 0

Water Level Elevation in the 300 Area

May, 1992

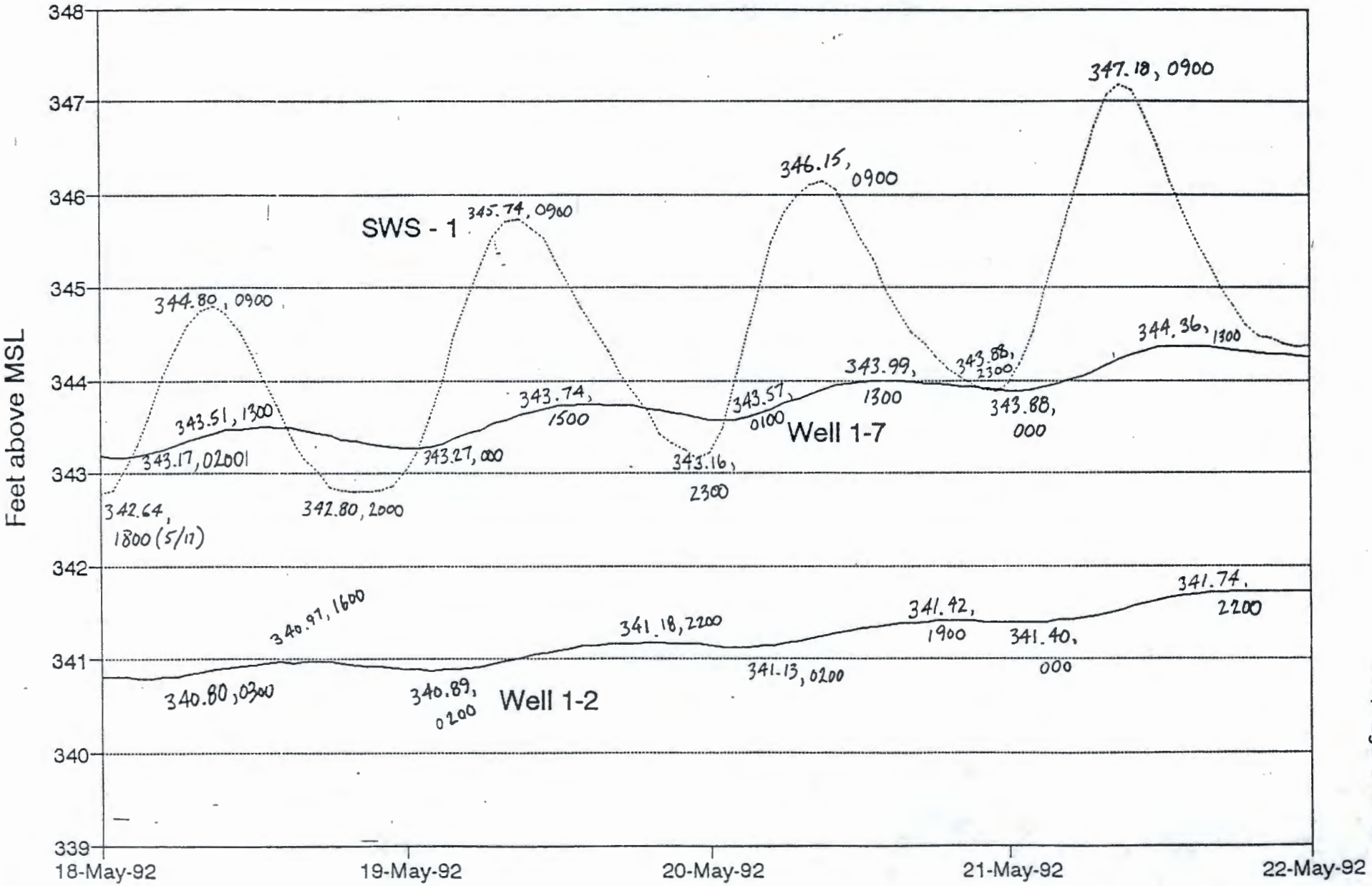

Table 1. Water-level and lag time data for the 399-1-7 and 399-1-2 well line for the period between May 17 through May 21.

May 17-21

	SWS - 1 Elevation (feet)	Change (feet)	Well 399-1-7 Elevation (feet)	Change (feet)	Change Ratio	Well 399-1-2 Elevation (feet)	Change (feet)	Change Ratio (feet)
Minimum	342.64		343.17			340.8		
Maximum	344.8	2.16	343.51	0.34	0.1574074	340.97	0.17	0.0787037
Minimum	342.8	-2	343.27	-0.24	0.12	340.89	-0.08	0.04
Maximum	345.74	2.94	343.74	0.47	0.1598639	341.18	0.29	0.0986395
Minimum	343.16	-2.58	343.57	-0.17	0.0658915	341.13	-0.05	0.0193798
Maximum	346.15	2.99	343.99	0.42	0.1404682	341.42	0.29	0.09699
Minimum	343.88	-2.27	343.88	-0.11	0.0484581	341.4	-0.02	0.0088106
Maximum	347.18	3.3	344.36	0.48	0.1454545	341.74	0.34	0.1030303
Avg. Rising Limbs					0.1507985			0.0943409
Avg. Falling Limbs					0.0781165			0.0227301
Overall Avg.					0.1196491			0.0636505

	SWS - 1 Date	Hour	Well 399-1-7 Hour	Lag Time (days)	Well 399-1-2 Hour	Lag Time (days)	Lag Time Between Wells (days)
Minimum	May 17	1800	2600	0.3333333	2700	0.375	0.0416667
Maximum	May 18,	900	1300	0.1666667	1600	0.2916667	0.125
Minimum	May 18	2000	2400	0.1666667	2600	0.25	0.0833333
Maximum	May 19	900	1500	0.25	2200	0.5416667	0.2916667
Minimum	May 19	2300	2500	0.0833333	2600	0.125	0.0416667
Maximum	May 20	900	1300	0.1666667	1900	0.4166667	0.25
Minimum	May 20	2300	2400	0.0416667	2400	0.0416667	0
Maximum	May 21	900	1300	0.1666667	2200	0.5416667	0.375
Avg. Lag Time (days)				0.171875		0.3229167	0.1510417

Period = ~ 1 day

Distance (River to 399-1-7)	700	feet
Distance (River to 399-1-2)	1400	feet
Distance (399-1-7 to 399-1-2)	700	feet

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TABLE 1. RESULTS OF THE STAGE RATIO AND LAG TIME METHODS FOR CALCULATING AQUIFER DIFFUSIVITY FOR THE 399-1-7 AND 399-1-2 WELL LINE

Wells 399-1-7 and 399-1-2		
Stage Ratio Method		
Region	Time Span	Diffusivity (ft^2/day)
River - 399-1-2	May 17-21	3.84×10^6
River - 399-1-2	May 25-29	1.50×10^6
Lag Time Method		
River - 399-1-2	May 17-21	1.50×10^6
River - 399-1-7	May 17-21	1.32×10^6
399-1-7 - 399-1-2	May 17-21	1.71×10^6
River - 399-1-2	May 25-29	2.13×10^6
River - 399-1-7	May 25-29	1.24×10^6
399-1-7 - 399-1-2	May 25-29	4.44×10^6

9 2 1 2 7 5 5 0 9 0 2

TABLE 2. RESULTS OF THE STAGE RATIO AND LAG TIME METHODS FOR CALCULATING AQUIFER DIFFUSIVITY FOR THE 399-3-9 AND 399-3-12 WELL LINE

Wells 399-3-9 and 399-3-12		
Stage Ratio Method		
Region	Time Span	Diffusivity (ft^2/day)
River - 399-3-12	May 17-21	1.46×10^7
River - 399-3-12	May 25-29	1.26×10^7
Lag Time Method		
River - 399-3-12	May 17-21	1.35×10^6
River - 399-3-9	May 17-21	1.15×10^5
399-3-9 - 399-3-12	May 17-21	5.09×10^6
River - 399-3-12	May 25-29	1.76×10^6
River - 399-3-9	May 25-29	1.50×10^5
399-3-9 - 399-3-12	May 25-29	6.65×10^6

9 2 1 2 7 5 5 0 9 0 3

TABLE 3. RESULTS OF THE STAGE RATIO AND LAG TIME METHODS FOR CALCULATING AQUIFER DIFFUSIVITY FOR THE 399-4-9 AND 399-4-1 WELL LINE

Wells 399-4-9 and 399-4-1		
Stage Ratio Method		
Region	Time Span	Diffusivity (ft^2/day)
River - 399-4-1	May 17-21	2.32×10^7
River - 399-4-1	May 25-29	1.95×10^7
Lag Time Method		
River - 399-4-1	May 17-21	2.05×10^6
River - 399-4-9	May 17-21	3.37×10^5
399-4-9 - 399-4-1	May 17-21	5.68×10^6
River - 399-4-1	May 25-29	2.60×10^6
River - 399-4-9	May 25-29	4.58×10^5
399-4-9 - 399-4-1	May 25-29	6.71×10^6

9 2 1 2 7 5 5 0 9 0 4

PROJECT L-045H

300 AREA EFFLUENT TREATMENT FACILITY

OVERVIEW

PROJECT BASIS AND STATUS

- Validated FY 1992 Hanford Environmental Compliance (HEC) subproject
- 300 gpm continuous treatment - design capacity
- Integrates with 300 Area waste minimization
- Non-nuclear, low hazard, commercial type treatment facility
- Waste stream not designated as a dangerous waste
- Diffuser discharge into Columbia River
- NPDES permit

GEOTECHNICAL SUPPORT

WORK SCOPE		Schedule
10 Test Pits	15-18' deep holes dug by backhoe (samples and observations)	Completed 8/25/92
2 Boreholes	100 feet deep borehole drilled by ODEX drill method (samples and observations)	Planned 9/8-14/92

NOTE: Groundwater level is 60' deep
Confined Aquifer - 120' deep - elevation of 270'

PURPOSE

Test Pits

1) Determine geological strata
   - looking for obstructions for pipeline/facility

2) Determining soil strengths - bearing capacity tests

3) Spot check for radiation - none found

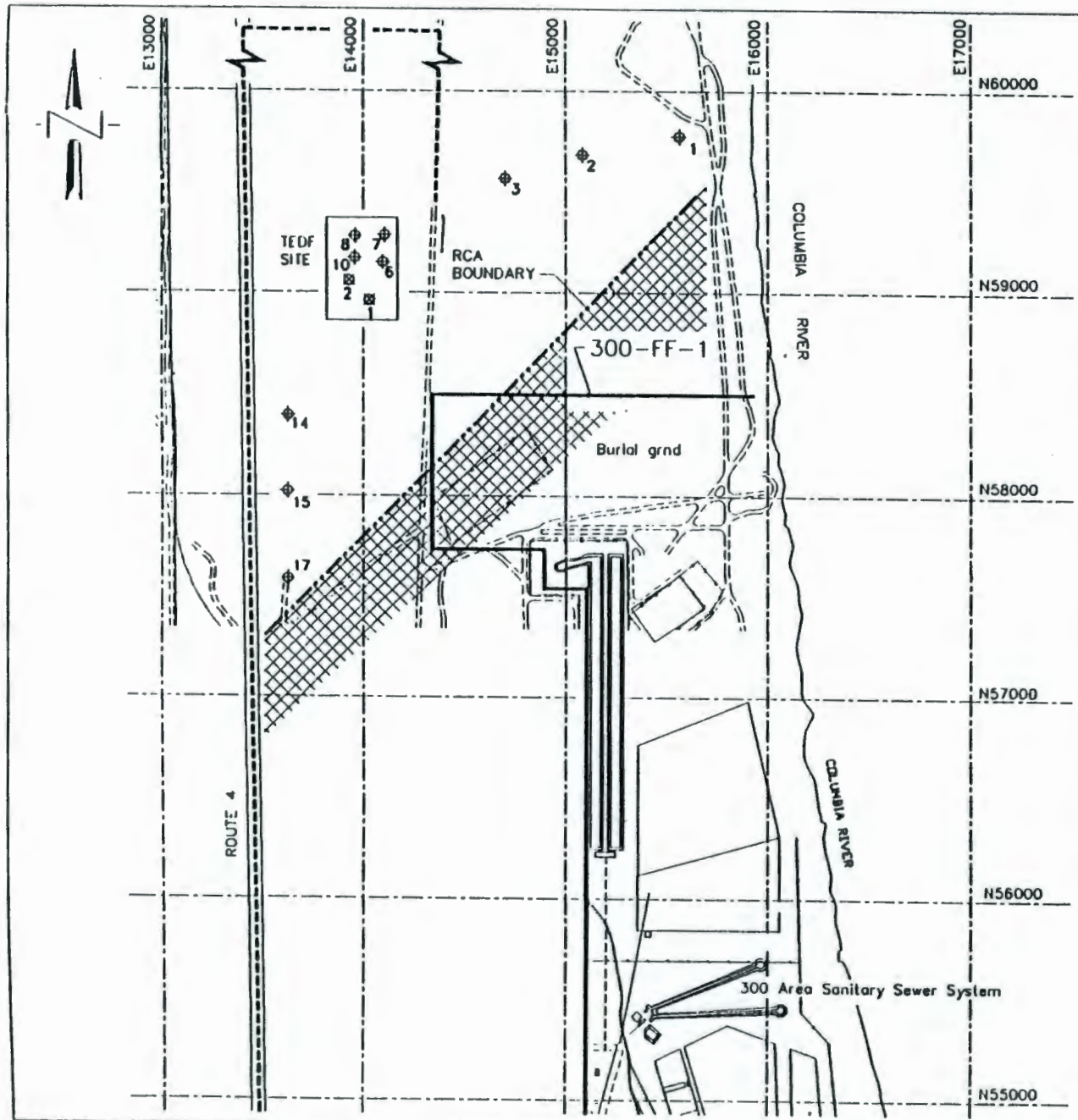
4) Determining soil strength at site for TEDF foundation design of the building

Boreholes

1) Determine Geotechnical structural data for design of diversion and equalization tanks
   (Examples verify absence of clay, blow count determination)

Final deliverable will be a Geotechnical Report to base design around - scheduled to be completed 10/12/92.

Information/data gathered will be jointly shared with WHC Geo-Science group to provide additional data for operable unit characterization.



LEGEND

- TEST HOLE LOCATION
- BORING HOLE LOCATION
- TEST AND BORE HOLE ACCESS ROUTE
- RADIOLOGICALLY CONTROLLED AREA (RCA)

EXPLORATION LOCATION COORDINATES		
TEST HOLE NO	NORTHING*	EASTING*
1	59776.3622	15564.8342
2	59684.7655	15082.5894
3	59564.9727	14699.8702
4		
5		
6	59146.2912	14094.9308
7	59279.2810	14105.5226
8	59274.8440	13959.4496
9		
10	59168.6941	13956.6130
11		
12		
13		
14	58400.2366	13627.0543
15	58022.7450	13626.7011
16		
17	57585.4287	13626.3076
18		
TEST HOLE TO BE MIN. 14 ft ± 2 ft DEEP		
BORING HOLE NO	NORTHING	EASTING
1	58962.0982	14027.9669
2	59057.5383	13929.2926
BORING HOLE TO BE 100' ±5' DEEP/MIN. 6" DIAMETER		

*COORDINATES PER HANFORD GRID COORDINATE SYSTEM

TEDF GEOTECH EXPLORATION MAP

Westinghouse Hanford Company

CADFILE: C:\ACDATA\FRANK\RICH\ZFAS030.DWG
DATE: 8\17\92

SITE DEVELOPMENT AND INFRASTRUCTURE PLANNING

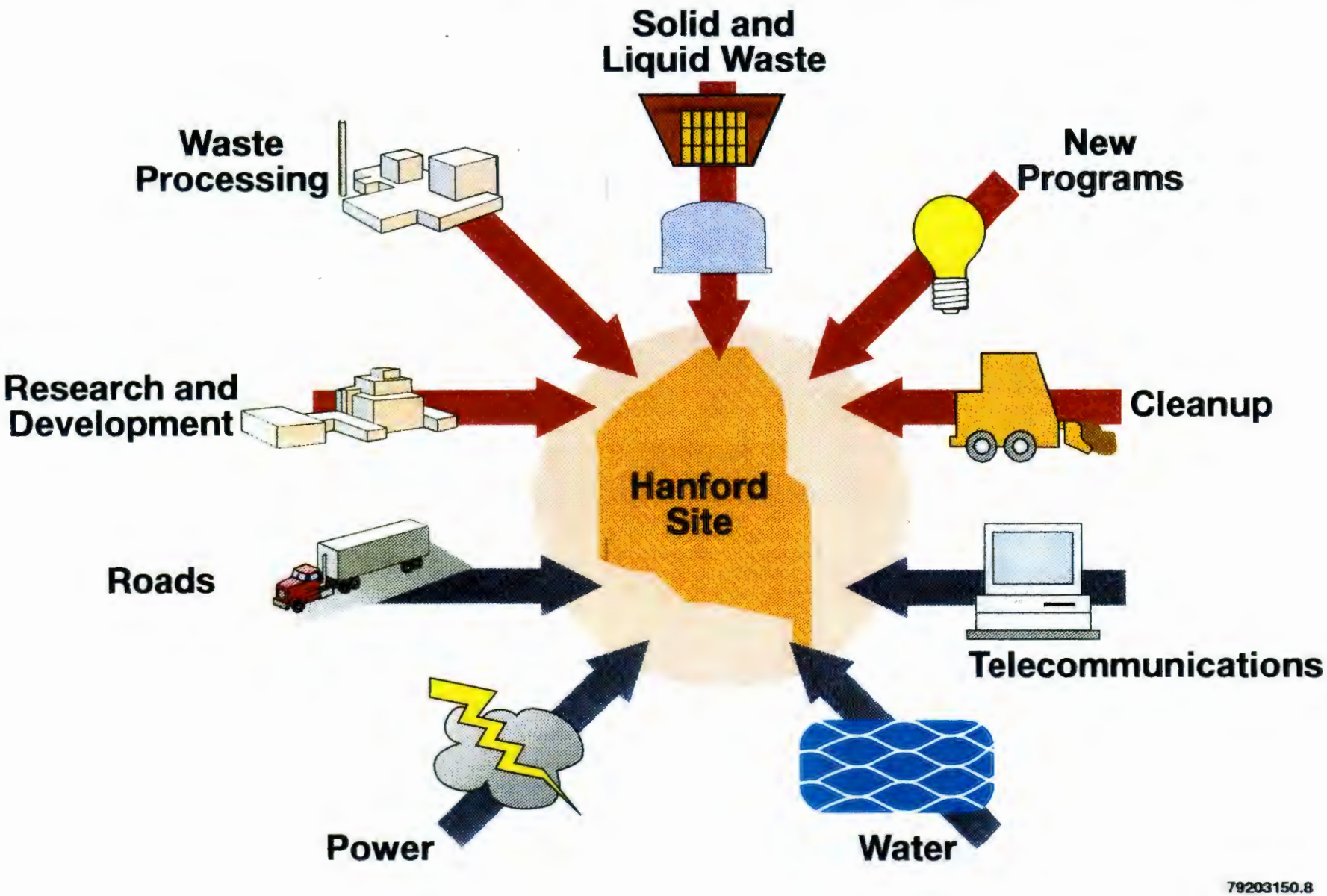
OVERVIEW

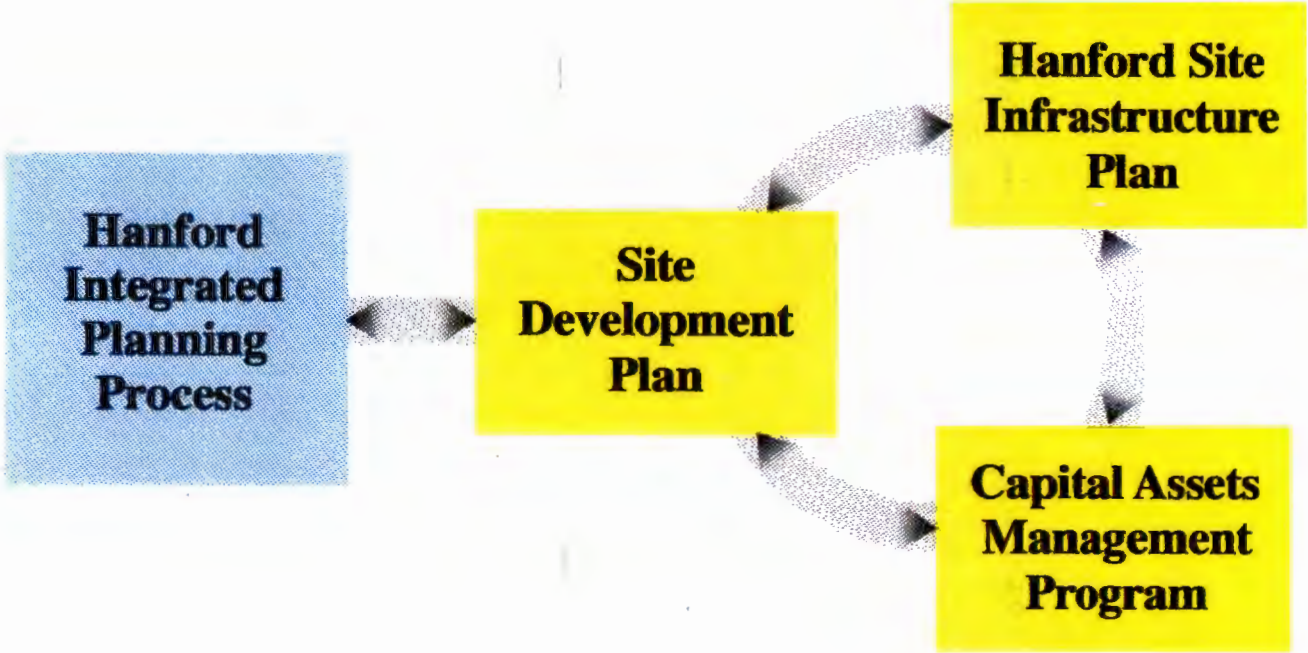
AUGUST 1992

BOYD HATHAWAY, SITE DEVELOPMENT PLANNER

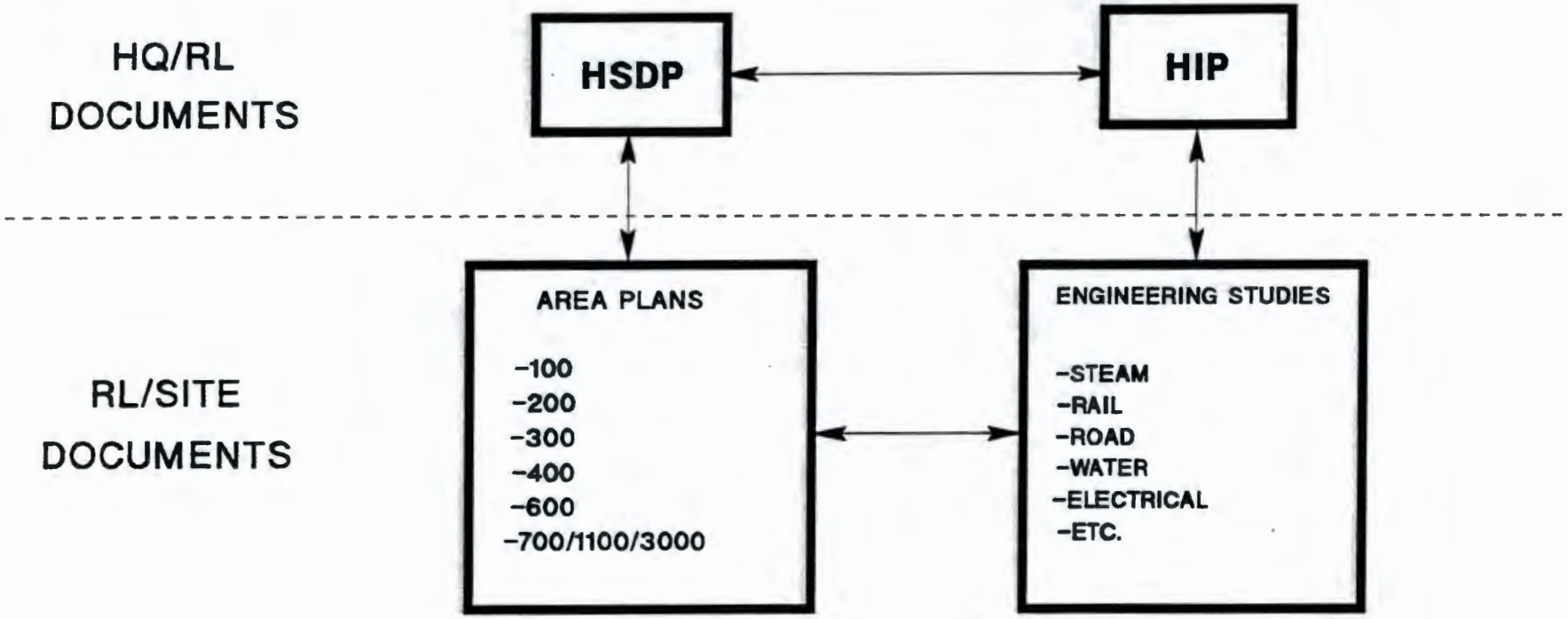
WESTINGHOUSE HANFORD COMPANY / SITE PLANNING

DOE Site Development Planning Process




Hanford Integrated Planning Process
Site Development Plan
Hanford Site Infrastructure Plan
Capital Assets Management Program

DOE SITE DEVELOPMENT PLANNING DOCUMENTS



HSDP = HANFORD SITE DEVELOPMENT PLAN

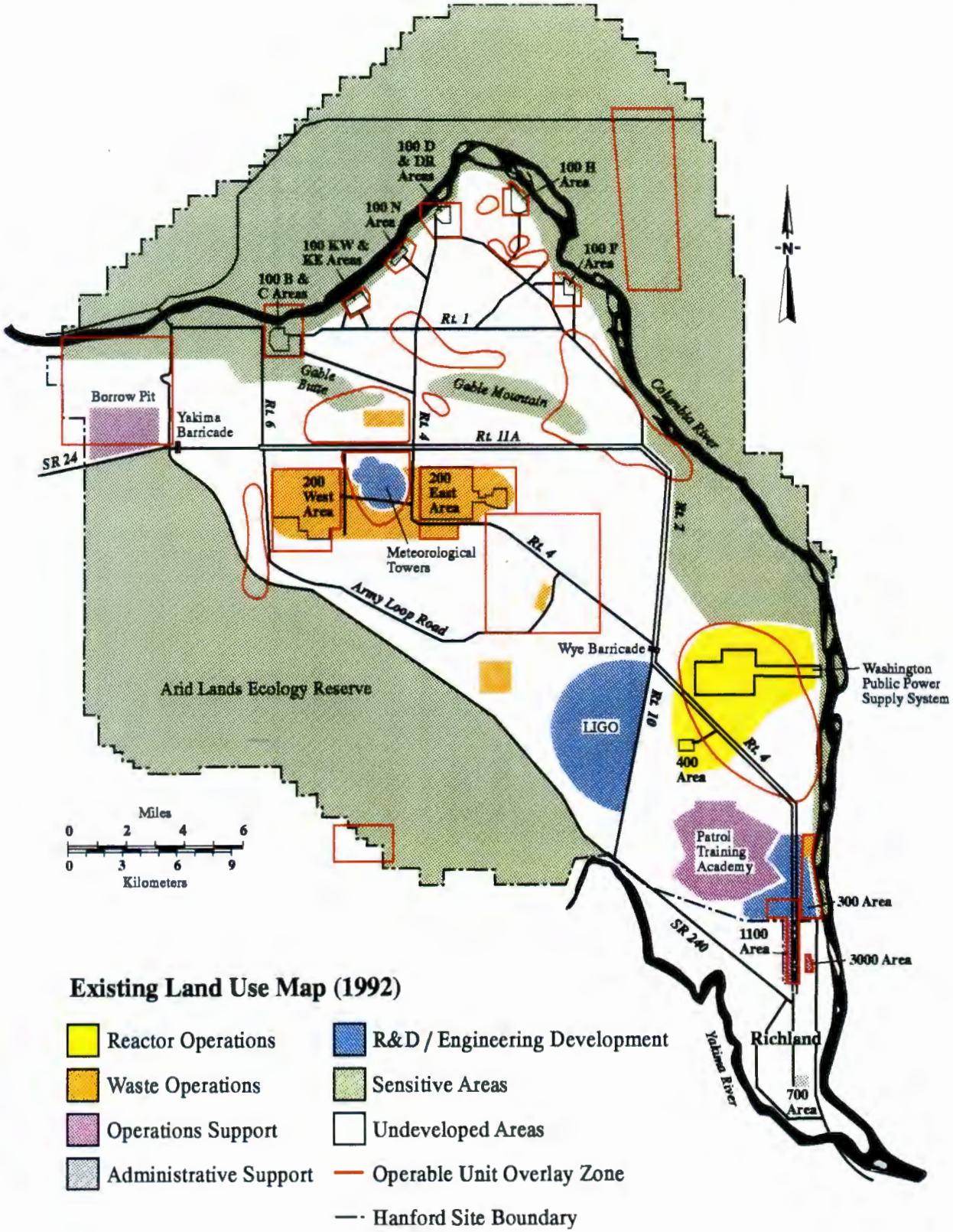
HIP = HANFORD SITE INFRASTRUCTURE PLAN

HQ = DEPARTMENT OF ENERGY HEAD QUARTERS

RL = DEPARTMENT OF ENERGY RICHLAND FIELD OFFICE

DRAFT

#14/Page 5 of 10



9 2 1 2 7 5 5 0 9 1 4

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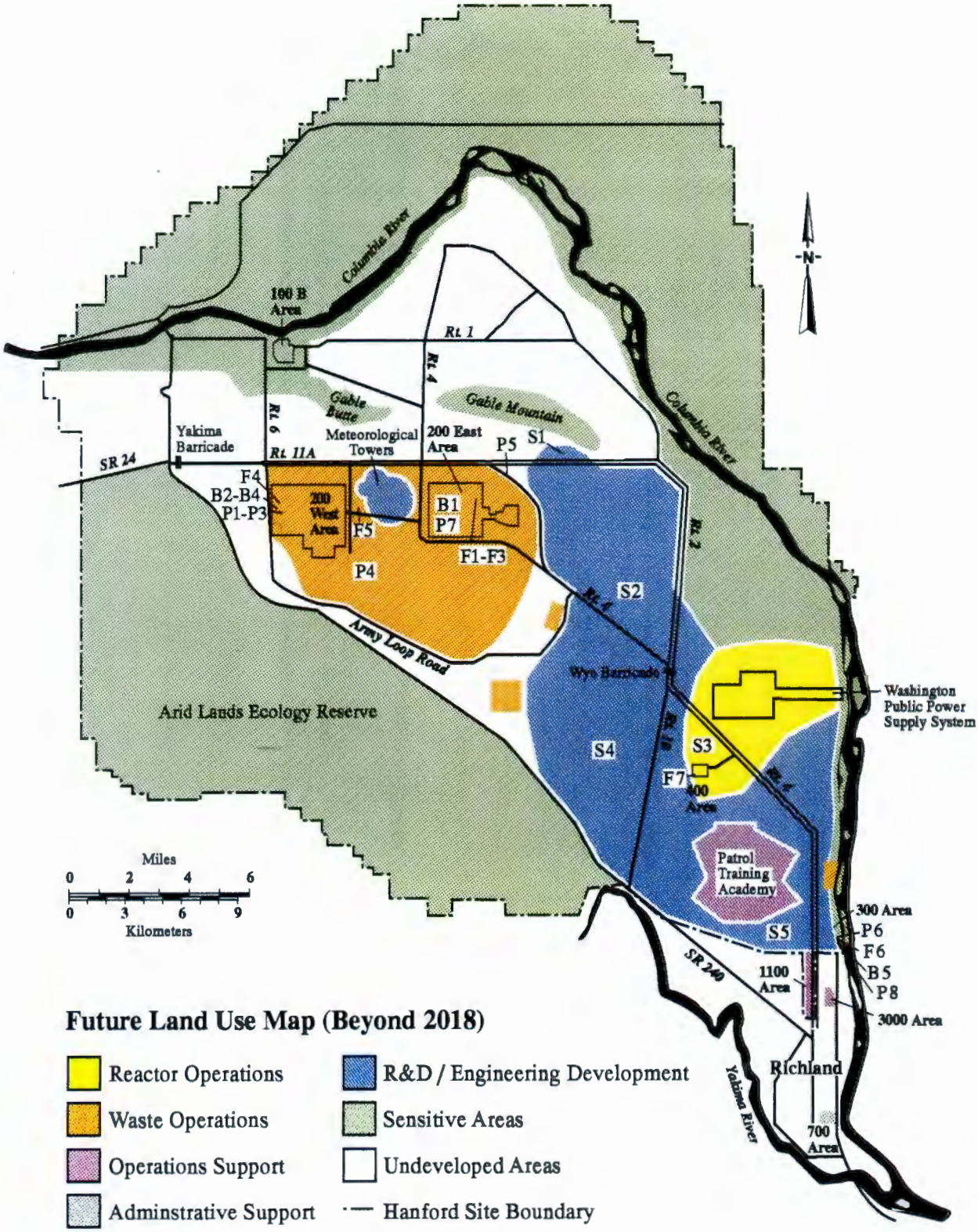
#14/Page 6 of 10

9 2 1 2 7 5 5 0 9 1 5



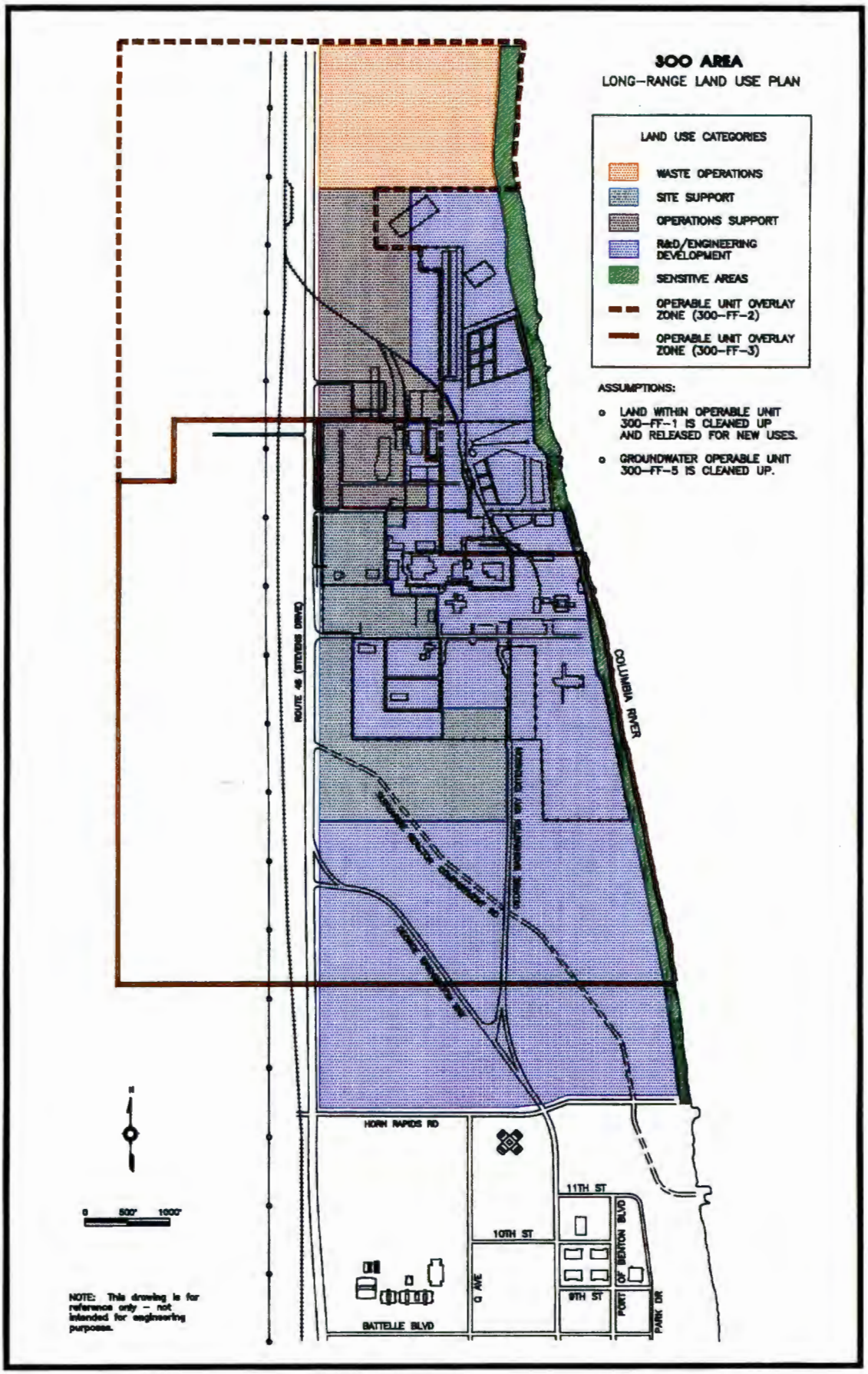
Future Land Use Map (Beyond 2018)

- Reactor Operations
- Waste Operations
- Operations Support
- Adminstrative Support
- R&D / Engineering Development
- Sensitive Areas
- Undeveloped Areas
- Hanford Site Boundary

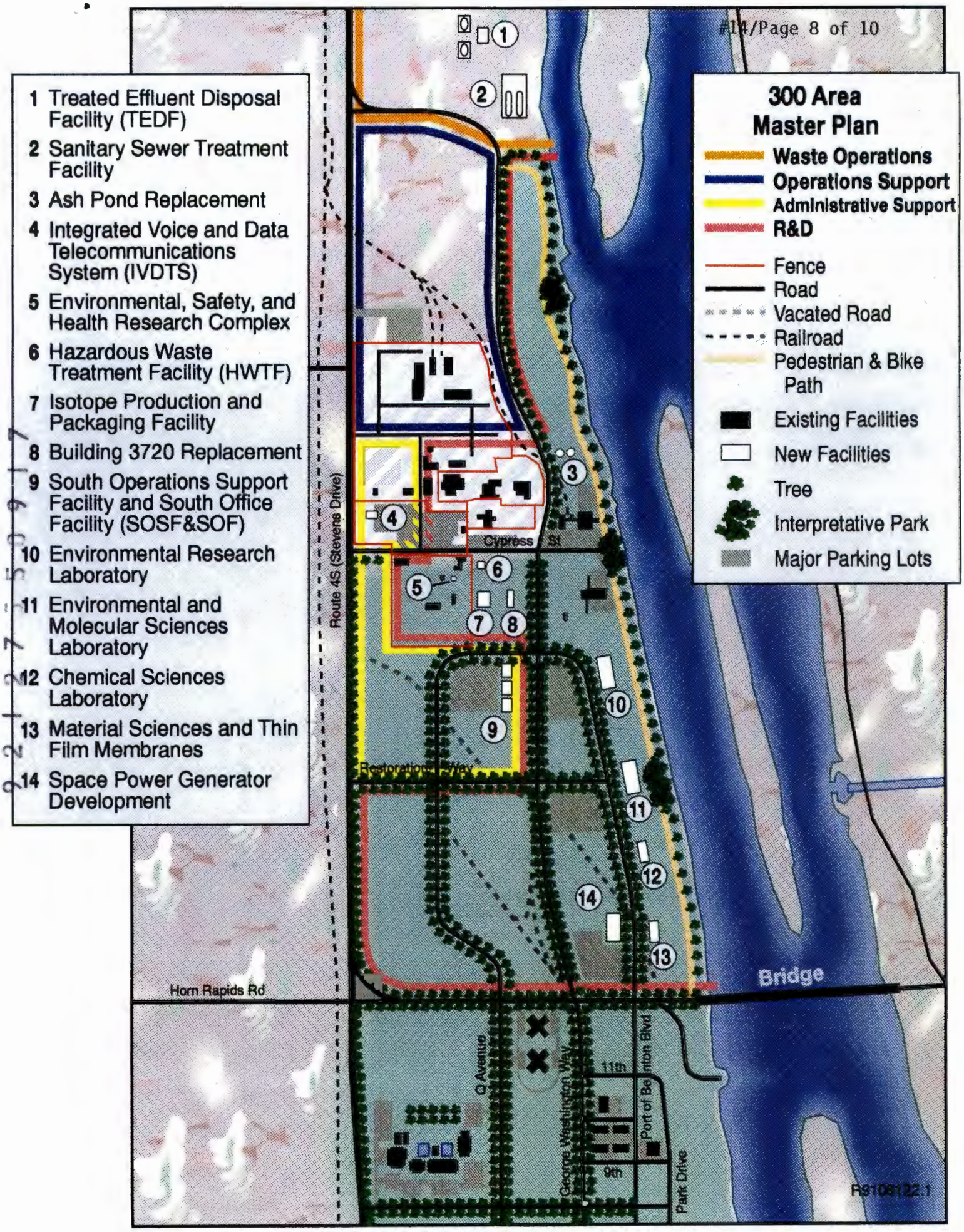
Note: • Refer to construction projects list for callouts (e.g., B1, F3, P2, and S1)

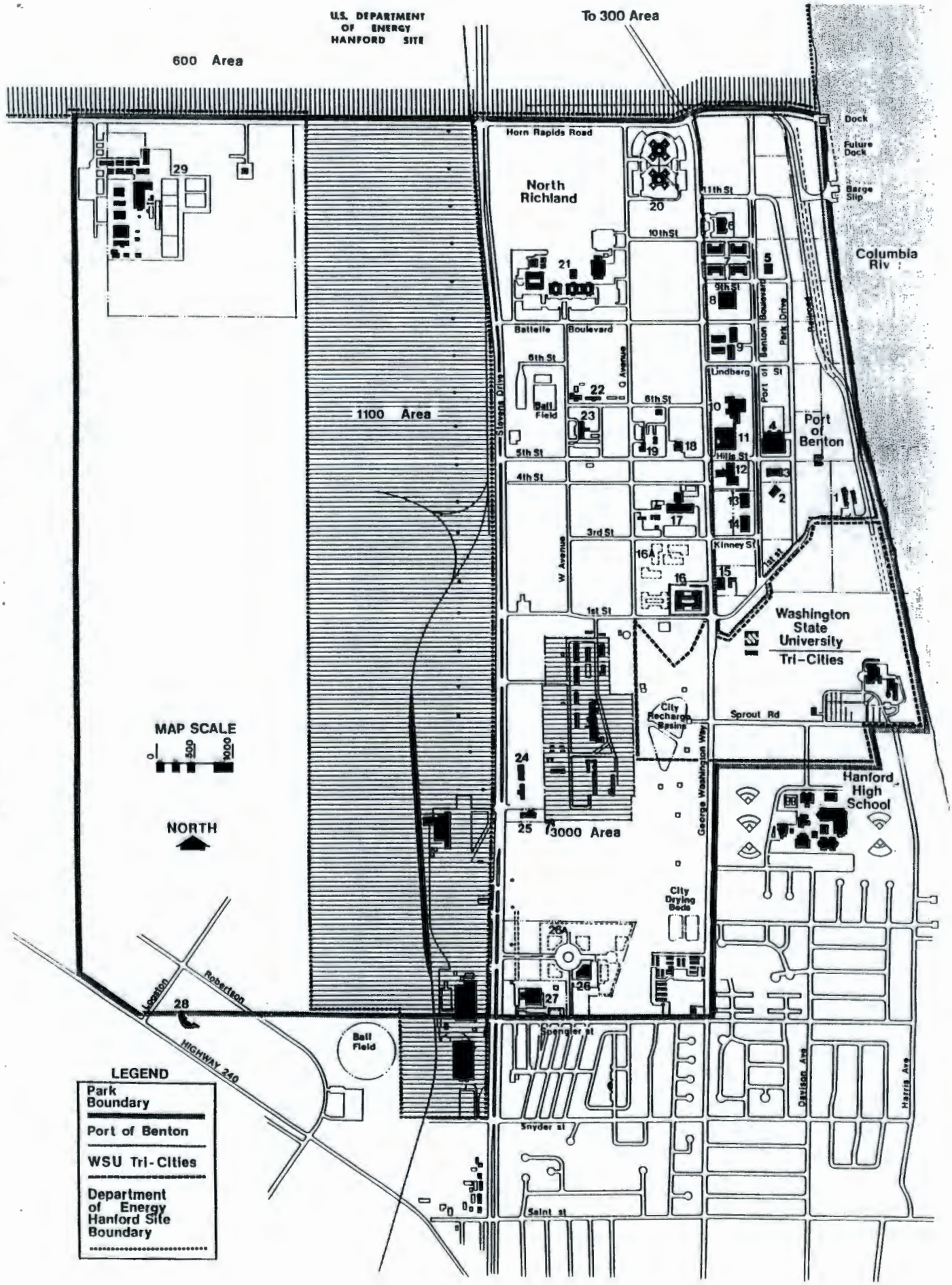
• The land uses identified in this map represent DOE's vision of future land uses based on existing and potential Hanford missions. This map will be updated annually to incorporate decisions made by the Hanford Remedial Action Environmental Impact Statement, other NEPA or regulatory decision documents, mission changes, and other sources as appropriate.

9 2 1 2 7 5 5 0 9 1 6



CADFILE: LAPA\300AREA\LONG-RNG


1 Treated Effluent Disposal Facility (TEDF)
2 Sanitary Sewer Treatment Facility
3 Ash Pond Replacement
4 Integrated Voice and Data Telecommunications System (IVDTS)
5 Environmental, Safety, and Health Research Complex
6 Hazardous Waste Treatment Facility (HWTF)
7 Isotope Production and Packaging Facility
8 Building 3720 Replacement
9 South Operations Support Facility and South Office Facility (SOSF&SOF)
10 Environmental Research Laboratory
11 Environmental and Molecular Sciences Laboratory
12 Chemical Sciences Laboratory
13 Material Sciences and Thin Film Membranes
14 Space Power Generator Development
300 Area Master Plan
Waste Operations
Operations Support
Administrative Support
R&D
Fence
Road
Vacated Road
Railroad
Pedestrian & Bike Path
Existing Facilities
New Facilities
Tree
Interpretative Park
Major Parking Lots
Route 4S (Stevens Drive)
Cypress St
Restoration Pkwy
Horn Rapids Rd
Q Avenue
George Washington Way
11th
9th
Port of Benton Blvd
Park Drive
Bridge
R9108122.1



9 2 1 2 7 5 5 0 9 1 8

9 2 1 2 7 5 5 0 9 1 9

Distribution

Unit Manager's Meeting: 300-FF-5 Operable Unit
August 27, 1992

Julie K. Erickson	Chief, DOE-RL, ERD/ERB (A5-19)
Roger D. Freeberg	Chief, Rstr. Br., DOE-RL/ERD (A5-19)
Steven H. Wisness	TPA Proj. Mgr. (A5-15)
Diane Clark	DOE-RL (A5-55)
Eric Goller	DOE-RL (A5-19)
Mike Thompson	DOE-RL (A5-15)
Dib Goswami	WDOE (Kennewick Office)
Lynn Albin	WA Dept. of Health
Dave Einan	EPA (B5-01)
Ward Staubitz	USGS
Audree DeAngeles	PRC
Richard D. Wojtasek	Program Mgr., WHC (L4-92)
Mel Adams	WHC (H4-55)
Tom Wintczak	WHC (L4-92)
Larry Hulstrom	WHC (H4-55)
Rich Carlson	WHC (H4-55)
L.D. Arnold	WHC (B2-35)
Chris Abraham	GAO (A1-80)

9 2 1 2 7 5 5 0 9 2 0

ADMINISTRATIVE RECORD: 300-FF-5; Care of EDMC, WHC (H4-22)

This list has been updated. Please inform Suzanne E. Clarke (SWEC) of deletions or additions to the distribution list (A4-35).