



START

Department of Energy

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91-ERB-226

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U.S. Environmental Protection Agency
712 Swift Boulevard, Suite 5
Richland, Washington 99352

Mr. Timothy L. Nord
Hanford Project Manager
State of Washington
Department of Ecology
Mail Stop PV-11
Olympia, Washington 98504-8711

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R. D. WOJTASEK

DEC 30 1991

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Dear Messrs. Day and Nord:

RESOURCE CONSERVATION AND RECOVERY ACT (RCRA) FACILITY
INVESTIGATION/CORRECTIVE MEASURES STUDY (RFI/CMS) WORK PLAN FOR THE 100-NR-1
AND 100-NR-2 OPERABLE UNITS (OUs)

Enclosed please find the subject rescoped OU work plans for the State of Washington Department of Ecology (Ecology) and U.S. Environmental Protection Agency (EPA) review and comment. These work plans were rescoped in accordance with Change Request No. M-12-90-4, dated May 13, 1991, the negotiated 100-Area Past Practice Strategy, rescoping meetings and comment resolution meetings.

The rescoped work plans provide individual OU schedules and a 100-Area integrated schedule in Chapter 6.0. These schedules were based on known resources in fiscal years (FY) 1992 and 1993, and projections on the availability of funding, infrastructure and support systems beyond FY 1993. Therefore, the schedules as presented may not show the RFI or CMS tasks that are either undefined at this time, or are resource limited. Per discussions with EPA and Ecology on September 19, 1991, and September 26, 1991, the U.S. Department of Energy, Richland Field Office (RL) will work closely with the responsible regulator agency to develop fully tasked schedules, with an understanding that when tasks are defined and/or resources are available, the tasks will be accomplished to meet the 30-month objective for issuing interim Records of Decision.

To allow Ecology and EPA to fully understand the current schedule limitations, enclosed are the major planning assumptions that directly affected the schedules as they are currently shown (Enclosure 2). Please note that the RFI/CMS schedules for the N-Area OUs are complicated by the fact that three major activities need to be integrated. These are N-Reactor Shutdown activities, major RCRA Closure activities, and the RFI/CMS activities. RL believes that successful management of the 100-N OUs will require that all activities be coordinated closely to insure that available funding is judiciously used.

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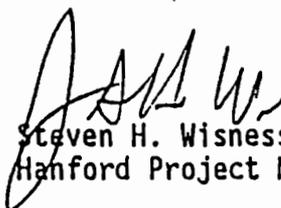
Also provided (Enclosure 3) is a review and work plan approval schedule, which will be used by RL, to monitor and track the progress of this activity. Please note that this schedule complies with the Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement), Paragraph 7.3, CERCLA Past Practice Unit Process. A 60-day EPA/Ecology review period and a 30-day public comment period is provided. Please provide your comments to RL by the dates indicated in the schedule. If this schedule is not met for final approval of the subject 100-Area Work Plans, RL's ability to meet future milestones may be jeopardized.

Per paragraph 9.2.1 of the Tri-Party Agreement, the commenting agency shall refer to any pertinent sources of authority or reference upon which the comments are based and, upon request of DOE, the commenting agency shall provide a copy of the cited authority or reference. Please provide comments in this format to assist in timely resolution.

The rescoped work plans are Primary Documents, therefore the U.S. Department of Energy-Headquarters (DOE-HQ) Document Review Protocol is applicable.

Please address all comments and questions to Mr. J. D. Goodenough on (509) 376-7087 for all 100-Area OUs. To expedite comment resolution, please provide both a hard copy of comments as well as a computer diskette in Word Perfect (Copyright of Wordperfect Corp.) format (5.0 or 5.1). Regulatory agencies are requested to consolidate their comments through the lead agency.

Sincerely,



Steven H. Wisness
Hanford Project Manager

ERD:JDG

Enclosures:

1. Work Plans 17933 17932
2. 100-NR Schedule Assumptions
3. Work Plan Approval Schedule

cc w/encls:

Administrative Record, H4-22

cc w/o encls:

- G. Hofer, EPA
- C. S. Polityka, DOI
- R. Robinson, IHS
- T. B. Veneziano, WHC
- R. D. Wojtasek, WHC

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ATTACHMENT 1

ASSUMPTIONS FOR CONSIDERATION BY THE
U.S. DEPARTMENT OF ENERGY FIELD OFFICE, RICHLAND

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**ASSUMPTIONS FOR CONSIDERATION BY THE
U.S. DEPARTMENT OF ENERGY FIELD OFFICE, RICHLAND**

1. If assumptions are modified, milestone reassessment will be required, and milestone slips are expected.
2. The Management and Operating contractor is managing and supporting Remedial Investigations/Feasibility Studies.
3. National Environmental Policy Act documentation will be in place to begin field work. The Information Bulletins concerning the 100-N Area wetlands are currently at U.S. Department of Energy-Headquarters (DOE-HQ).
4. Kaiser Engineers Hanford Company drilling schedules and assumptions dated September 16, 1991, are the basis for the operable unit and integrated schedules.
5. A 90-day DOE-HQ review and incorporation period, per the "draft" DOE-HQ document review protocol, will be required of all primary documents, except those identified in the Hanford Federal Facility Agreement and Consent Order change package. These have a 30-day review and incorporation period.
6. No samples will go to the 325 Laboratory for onsite screening or analysis.

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KAISER ENGINEERS HANFORD COMPANY
WELL DRILLING
INTEGRATED SCHEDULE BASIS/ASSUMPTIONS

1.0 GENERAL ASSUMPTIONS

- Due to ongoing negotiations with regulatory agencies, this schedule can only be considered firm for approximately 60 days. Activities beyond that time represent a "planning basis."
- Revisions in logic will be made every 2 months as new data becomes available. Minor changes can be made during weekly status updates, if milestones are not adversely impacted.
- A 10% contingency has been added to the duration of future activities. The resulting schedule as shown represents a 90% confidence level of achievement, based on the attached assumptions.
- CERCLA priorities are:
 - 1) 200 FP-1 Vadose Drilling
 - 2) 183-II Vadose Drilling
 - 3) 300 FF-5 Drilling
 - 4) 300 FF-1 Drilling
 - 5) 100 Areas Drilling
 - 6) Well Remediation Projects
 - 7) HWVP Vadose Drilling
- RCRA drilling has an equal priority with CERCLA, and a total of 5 rigs will be dedicated to RCRA during 1992 (2 government and 3 contractor).
- Planning and start-up activities (30 working days) are made up of the following tasks, in parallel:
 - Estimate/schedule preparation (2 weeks)
 - HWOP preparation and sign off (4 weeks)
 - Material procurement (6 weeks)
 - Site clearing and grubbing (1 week)
- The beginning date for each planning activity associated with a well or group of wells is the date the associated LOI with all required planning information, and initial funding must be received from WIC. If this date is not met or the LOI content is inadequate, there will be a slip in the schedule for all associated activities.

- The activity durations are based on the drilling rates identified in the following sections. These rates were jointly developed by WIC and KEH, and are based on recent historical data.

2.0 EQUIPMENT RESOURCES

- Assume no additional capital equipment is procured above that on order as of 8/30/91.
- Existing equipment may be supplemented with leased items or subcontracted equipment as required for drilling on sites with no surface radiation contamination and no known significant underground radiation contamination.
- Maximum cable tool rigs available:

	<u>Gov't.</u>	<u>Leased</u>	<u>Conlr.</u>	<u>Total</u>
Sept. 91	13	8	4	25
Oct. 91	17	4	5	26
Dec. 91	18	4	4	26
Jan. 92	20	4	3	27

- Assignment of government rigs is as follows:

	<u>Sept.</u>	<u>Oct.</u>	<u>Nov.</u>	<u>Dec.</u>	<u>Jan.</u>
200 BP1	3	3	3	3	3
183H	1	-	-	-	-
300 FF5	4	-	-	-	-
300 FF1	1	2	4	4	6
RCRA	4	7	4	3	2
100 Vadose	0	2	2	3	4
100 GWM	0	1	1	1	1
Spares/Other	0	2	3	4	4
TOTAL	13	17	17	18	20

- The need for spare drill rigs is calculated using an 87% mechanical availability factor; i.e. if 21 rigs are required to be drilling, the total fleet should consist of 24 rigs. It must be noted that we are currently operating with no spares, but that additional rental rigs are being sought. Therefore, there is some additional schedule risk in the near term (October - November).

3.0 LABOR RESOURCES

3.1 HPT Support

- The schedule assumes that 12 HPT's will be immediately transferred to well drilling from other projects.

3.2 Sampling Support (October and November, 1991)

- Four sample trucks, two sample trailers currently available
- Six trained sample technicians available.
- Sampling priorities are to be as follows:
 - 1) 200-BP-1 Vadose Drilling
 - 2) 183-II Vadose Drilling
 - 3) 300-FF-5/FF-1 Drilling
 - 4) NPDES (one sampler, one day/wk.)
 - 5) 100 Area Drilling Program
 - 6) CERCLA Groundwater Monitoring Program
 - 7) 3000 Area Fuel Pit Wells
- To support 100 Area drilling program (priority 5 above) assumes that 2 additional sample technicians, one scientist, and one sample truck are transferred to WHC Organization 28450.

Impact: Soil Gas Installation and Analysis at 100 Area.

- Sampling support to the following during October/November only as resources permit:
 - 1) Liquid Effluent Studies Program
 - 2) RCRA Drilling
 - 3) 100F & 100II Areas
 - 4) 100N Fuel Basins
 - 5) 1706 KE Rinsale
 - 6) 219-S Tank Transfer
 - 7) Drum Sampling - Central Waste Complex
 - 8) Tank Farm Soil Characterization
 - 9) Underground Storage Tanks
 - 10) Horn Rapids Landfill
 - 11) Facility Support
 - 12) FeCN & NDA Support

4.0 200 BP-1 OPERABLE UNIT

4.1 Vadose Boreholes - Cribs

- Scope - 3 holes at average 234' deep
- Drilling - 0 - 60' at 4'/day
 - 60 - 234' at 8'/day
 (Drilling time includes time for sampling and geophysical logging)
- Backpulling - 8" at 50'/day
 - 10" at 35'/day
 - 12" at 5'/day
 (No drill rigs required for backpulling)
- Decon/Mob/Demob - 5 days total per hole

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- Assume 2 Rigs drilling now with 3rd by mid-September

4.2 Vadose Boreholes - Shallow

- Scope - 28 holes average 30' deep
- Drilling - average 7'/day
(Drilling to start after completion of Borehole 57)
- Backpulling - 5'/day
- Decon/Mob/Demob - 3 days total per hole

4.3 Well Remediation

- Scope - 24 wells
- Auger drill from September 16 - December 20, 1991

4.4 Groundwater Wells - Requirement Uncertain

- Scope - 2 holes average 230' deep
- Drilling - average 12'/day including 2 days for logging
- Completion and backpulling - 10 days total per hole; rig not used
- Decon/Mob/Demob - 3 days total per hole

5.0 300 FF-5 OPERABLE UNIT

5.1 Groundwater Wells

- Scope - 14 wells average 192' (C), 130' (B), 58' (A)
3 sonic holes average 60' deep
- Drilling - A wells at 12'/day
- B Wells at 5'/day
- C Wells at 5'/day
Rates cover both cable tool and sonic drills and include 3 days geophysical logging
- Backpulling - A wells at 3 days each
- B wells at 7 days each
- C wells at 14 days each
- Decon/Mob/Demob - 1 day each well

5.2 Well Remediation

- Scope - 8 wells for overdrilling with auger
- Schedule to follow 200 BP-1 remediation

5.3 Uncertain Scope

The following activities are not resource loaded or shown on the schedule due to uncertainties:

- Aquifer Pump Tests - 2 Wells approximately 150 ft. deep
- 1 Geologic Corehole at 200' deep
- Possible 25 additional well remediations

6.0 300 FF-1 VADOSE BOREHOLES

- Scope - 45 boreholes average 45' deep
- Drilling - average 3'/day
- Backpulling - average 15'/day
- Decon/Mob/Demob - total 5 days/hole
- Plan to start with 1 rig on September 16, increase to 2 rigs about October 1, increase to 4 rigs by November 1, and complete with 6 rigs starting January 1

7.0 183-II SOLAR BASINS VADOSE BORINGS

- Scope - 9 boreholes at average 30' deep; 4 inside basins and 5 outside
- Drilling - inside basin at 3'/day
- outside basin at 5'/day
- Backpulling - 15'/day
- Decon/Mob/Demob inside basin - 3 days per hole
outside basin - 2 days per hole
- Milestone - complete all drilling by October 1, 1991
- 3 Rigs assigned starting August 21, 1991

8.0 100 AREAS

8.1 Vadose Boreholes

- Scope - 62 boreholes average 55' deep
- Drilling - average 3'/day
- Start 5 holes in basins with auger rig - 2 weeks total to core, auger, and set casing in all 5 holes
- Backpulling - 15'/day
- Decon/Mob/Demob inside basins - 3 days per hole
outside basins - 2 days per hole
- Priority starts with D Area, followed by II, BC, K, N, and F Areas
- Plan to start 2 rigs October 1, 1991, add 3rd rig December 1, and 4th rig January 1, 1992

8.2 Groundwater Wells

- Scope - 59 wells average 80' deep
- Drilling - average 5'/day
- Completion and backpulling - average 7 days per hole with pump setting truck
- Plan to start 1 rig October 1, 1991, add 3 more rigs January 1, 1992, and 5th rig February 25, 1992
- Priority starts with D Area, followed by H, 600, BC, K, N and F Areas

9.0 CARBON TETRACHLORIDE EXPEDITED RESPONSE ACTION

- Scope - 4 wells near Z Plant; 1 hole at 525' deep, 3 holes at 200' deep
- Drilling - Assume sonic drill at 30'/day
- Schedule - 4 wells to be completed by 6/1/92

10.0 RCRA DRILLING

- Scope - 50 wells per calendar year, approx. 225' deep in 200 Areas and 100' deep in 100 Areas
- Drilling - average 10' per day (varies by area)
- Completion and backpulling - average 7 days total per well (varies by depth)
- Decon/Mob/Demob - total 3 days total per well
- Assume 5 rigs used January - November, contract rigs can be used to absorb peak if required
- Milestones - 1991 wells completed by 12/13/91, 1992 wells completed by 11/30/92
- CY 1992 Priorities (first 21 wells)
 1. M-24-19 10 wells @ Low Level Burial Grounds
 2. M-24-23 1 well @ S-10 Pond and Ditch
 3. M-24-20 2 wells @ Grout Facility
 4. M-24-25 2 wells @ A-29 Ditch
 5. M-24-26 2 wells @ NonRadioactive Dangerous Waste Landfill
 6. M-24-24 1 well @ B-63 Trench
 7. M-24-21 2 wells @ 1301-N Crib
 8. M-24-22 1 well @ 1324-N Pond

11.0 HWVP VADOSE DRILLING - 200 EAST

- 3 Shallow holes - one at 100' deep and 2 at 30' deep
- 1 Deep hole at 290'

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12.0 OTHER UNCERTAIN SCOPE

The following activities are not resource-loaded or shown on the current schedule due to uncertainties:

- Borehole Calibration Facility - 4 holes at 40' deep
- 399-1-16D Well - abandonment/remediation
- Horizontal Drilling/Integrated Demo - one horizontal hole near Z Plant
- ASID Drilling - 4 to 6 groundwater/vadose holes
- 3000 Area Fuel Pit - 3 groundwater wells
- 618-9 Burial Ground - 3 groundwater wells

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ATTACHMENT 2

ASSUMPTIONS

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GENERAL CONSIDERATIONS

1. The baseline schedules are fully resource loaded and do not include new expedited response actions (ERAs). If new ERAs are identified, the need to perform the ERA will be evaluated against impacts to Remedial Investigation/Resource Conservation and Recovery Act Facility Investigation (RI/RFI) activities, as provided in the Hanford Past Practice Investigation Strategy. Depending on the urgency and benefits of the proposed ERA, the baseline program and associated schedules may be adjusted and supplemental budget will be pursued.
2. The formal workscope baseline is that which is identified in the December 31, 1991, issuance of the Draft Work Plan. The U.S. Department of Energy Field Office, Richland (RL) will proceed in "good faith" with that baseline. Any changes to the baseline must be negotiated, agreed to, and documented pending formal approval of the Work Plans.
3. The December 31, 1991, Draft Work Plan submittal constitutes the second submittal to the regulators. The 30-day regulator review period, however, may extend to 60-days. The RL comment incorporation period may be extended beyond the 15-day period, as appropriate to accommodate regulator comments.
4. An interim Record of Decision (ROD) may be developed for remedial processes, waste sites, or priority sites within individual operable units. A final 100 Area ROD will be developed at a later time.
5. Characterization schedules are based on currently available (September 17, 1991) resources.
6. Schedules reflect activities that have scope defined at this time. Activities that cannot be fully scoped at this time can be handled by either (1) adjusting schedules and associated milestones as the scope is defined, or (2) to assume an appropriate period of time in the schedule at this time. RL prefers the first option. The regulatory community prefers the second option. If the second option is chosen, RL contends that specific assumptions supporting the estimate must be agreed to.
7. The rescoped Work Plans and associated schedules reflect an attempt to expeditiously define if a waste site requires remediation. The resulting interim ROD will define any additional characterization required. The assumption reflected in the Work Plans and schedules is that a removal action interim ROD can be achieved by performing the work presently defined in the rescoped Work Plans.

GROUNDWATER ACTIVITIES

1. 25% of groundwater borings will encounter radioactive contamination. (See item 2 under Laboratory Analyses).
2. Schedules are based on groundwater wells being drilled using cable tool rigs.

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3. All groundwater wells will be drilled at the approximate locations indicated in the Work Plans.
4. Groundwater confirmation samples will be taken in the quarter following well completion.

VADOSE ACTIVITIES

1. 100% of vadose zone borings will encounter radioactive contamination. (See item 2 under Laboratory Activities.)

LABORATORY ACTIVITIES

1. Commercial laboratory analysis will take five months.
2. If screening results for vadose zone and groundwater samples exceed current offsite laboratory acceptance criteria, then a renegotiation of the analytical scope of work and associated Hanford Federal Facility Agreement and Consent Order milestones will be required.
3. All vadose and groundwater samples will go to commercial offsite laboratories for chemical analyses.
4. A minimum of 10% of the total data will be validated within the 21-day commitment. If more than 10% of the total is validated, then there may be a schedule slip.

RIVER IMPACT STUDY

1. The schedule currently does not include river sediment sampling. It is acknowledged that sampling will be required in fiscal year (FY) 1992, but is currently not defined until issuance of the Springs/Seeps Study document (M-30-01) on February 28, 1992. Once sampling has been defined, impacts will be evaluated and schedules changed.
2. River water levels will allow on schedule completion of the shoreline radiation surveys, in order to support milestones M-30-01, M-30-02, and M-30-03.

ECOLOGICAL ACTIVITIES

1. The required written permission will be obtained by May 1992 from the U.S. Fish and Wildlife Service and Washington Department of Wildlife, confirming negligible impact to threatened or endangered species.
2. River water levels will allow on schedule completion of the aquatic biota sampling required to meet milestone M-30-02 and M-30-03.
3. The biotic sampling identified in the Work Plans and to be conducted prior to November 1991, will be sufficient to support the risk assessment milestone M-29-03.

RISK ASSESSMENT

1. Work proposed in the Work Plans will be sufficient to meet qualitative risk assessment needs for Interim Response Measures (IRMs).
2. No operable unit specific risk assessment work is scheduled to be performed in FY 1992.

FEASIBILITY STUDIES

1. Individual operable unit Work Plans do not show feasibility activities, except for the writing of a focused feasibility study report, based upon work covered as part of the 100 Area Feasibility Studies.
2. The 100 Area Feasibility Study Schedule does not include field work, testing, or treatability studies needed to support the Focused Feasibility Studies.

REMEDIATION ACTIVITIES

1. In FY 1992, planning for IRM demonstrations will be initiated as part of the Feasibility Studies.
2. The schedules are based upon a Limited Field Investigation which supports removal actions. If an action other than removal is proposed, additional characterization may be required and the schedule impacted.
3. Adequate waste handling/storage/disposal facilities will be available to meet the first IRM schedule.

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ATTACHMENT 3

100-N AREA SPECIFIC ASSUMPTIONS

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100-N AREA WORK PLAN SCHEDULE, KEY INTEGRATION CONSIDERATIONS

To insure consistency in planning and allocation of resources, Resource Conservation and Recovery Act (RCRA) Past Practice activities, N-Reactor Shutdown activities, and RCRA Closure activities need to be integrated. To affect integration it is necessary to consider the relationship between individual key RCRA Past Practice tasks, and both N-Reactor Shutdown tasks and RCRA Closure tasks. The key integration considerations used to develop this Work Plan schedule are as follows:

RCRA CLOSURE ACTIVITY INTEGRATION CONSIDERATIONS:

1. Sample analyses from the RCRA Past Practice Work Plan vadose investigation will be available in time to support preparation of the 1324-N/NA RCRA Closure Plan (Hanford Federal Facility Agreement and Consent Order [Tri-Party Agreement] Milestone M-20-35). The Work Plan and schedule assume that sampling identified in the Work Plan at this Treatment, Storage, and Disposal (TSD) unit will support removal actions. If the qualitative risk assessment based on this initial sampling does not support removal actions, then additional characterization will be required. Any additional characterization requirements are not scheduled or resourced and have not been integrated with the RCRA Past Practice and RCRA Closure activities.
2. The preferred RCRA Past Practice path for remediation of 1301-N and 1325-N Liquid Waste Disposal Facilities is as an Interim Response Measure (IRM) with no associated characterization. Therefore, there is no RCRA Past Practice characterization activities that will support preparation and submittal of the 1301-N/1325-N RCRA Closure Plan (Tri-Party Agreement Milestone M-20-31).

N-REACTOR SHUTDOWN ACTIVITY INTEGRATION CONSIDERATIONS:

1. This Work Plan schedule is based upon the June 1991, N-Reactor Shutdown Program Plan which has been deferred for two years due to funding limitations. Under this deferred schedule, N-Reactor shutdown activities will begin in FY 1994 and be completed by the end of FY 1999 (6-year schedule).
2. Funding will be authorized for the N-Reactor Shutdown Program to achieve this schedule.
3. Remediation activities at high priority sites identified in the Work Plan cannot begin until certain N-Reactor cleanup and stabilization tasks have been completed. A key consideration in developing the integrated schedule was that RCRA Past Practice activities and N-Reactor Shutdown activities would not adversely affect one another nor would interaction of activities result in additional contaminant releases.

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The N-Reactor Shutdown tasks that control commencement of major remediation efforts at most of the high priority sites are the cleanup and stabilization of both the 116-N-4 (Emergency Dump Basin) and the 105-N Spent Fuel Storage Basin. Cleanup at the basins is scheduled to be completed in FY 1999 and occurs at the end of a required progression of activities that includes cleanup of the Spacer Storage Silo, 107-N Recirculation System, and the 1304-N Emergency Dump Tank.

Implementation of major remediation at any of the non-RCRA TSD, high priority sites, except possibly UN-100-N-6 (Decontamination Waste Drainline Leak), prior to completing certain N-Reactor Shutdown Program activities could increase the risk of causing additional releases to the environment. For example, piping required for cleanup of the 105-N Spent Fuel Storage Basin is both connected to and immediately adjacent to the Spacer Storage Silo. Should major remediation at the Spacer Storage Silo precede 105-N Basin cleanup, there is a risk that inter-connecting piping could be damaged. In addition, the damaged piping may allow release of contaminated water from the Basin to the environment. Therefore, 105-N Basin cleanup should be completed prior to any IRM activities.

4. The 100-NR-1 schedule includes a 24-month period of inactivity between completion of the IRM Plan (March 1995) and start of the Interim Record of Decision (ROD) preparation (September 1997). This reflects integration of RCRA Past Practice activity with the N-Reactor Shutdown Program Schedule. Submittal of the Interim ROD is timed to be 15 months prior to completion of the Emergency Dump Basin and 105-N Spent Fuel Storage Basin cleanup. The 15 month period reflects the requirement that "substantial continuous physical on-site remediation action" occur within 15 months after completion of the RI/FS (RFI/CMS) process.
5. The 100-NR-2 schedule includes a 30-month gap so that groundwater IRM activities can also be integrated with N-Reactor Shutdown activities.

GENERAL CONSIDERATIONS:

1. This schedule does consider as valid and applicable the other assumptions that provided a basis for the schedules presented in the previously submitted rescoped Work Plans (100-HR-1, 100-HR-3, 100-BC-1, 100-BC-5, 100-KR-1, 100-KR-4, and 100-FR-1).
2. This schedule does not include any provisions for implementing remedial activities at the N-Springs on an expedited basis. Should early action be initiated on N-Springs, this schedule will need to be reassessed.

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N-AREA WORK PLAN SCHEDULE, KEY INTEGRATION CONSIDERATIONS

To insure consistency in planning and allocation of resources, RCRA Past Practice activities, N-Reactor Shutdown activities and RCRA Closure activities need to be integrated. To affect integration it is necessary to consider the relationship between individual key RCRA Past Practice tasks, and both N-Reactor Shutdown tasks and RCRA Closure tasks. The key integration considerations used to develop this work plan schedule are as follows:

RCRA CLOSURE ACTIVITY INTEGRATION CONSIDERATIONS:

1. Sample analyses from the RCRA Past Practice work plan vadose investigation will be available in time to support preparation of the 1324-N/NA RCRA Closure Plan (Tri-Party Agreement Milestone M-20-35). The work plan and schedule assume that sampling identified in the work plan at this TSD unit will support removal actions. If the qualitative risk assessment based on this initial sampling does not support removal actions, then additional characterization will be required. Any additional characterization requirements are not scheduled or resourced and have not been integrated with the RCRA Past Practice and RCRA Closure activities.
2. The preferred RCRA Past Practice path for remediation of 1301-N and 1325-N Liquid Waste Disposal Facilities is as an IRM with no associated characterization. Therefore, there is no RCRA Past Practice characterization activities that will support preparation and submittal of the 1301-N/1325-N RCRA Closure Plan (Tri-Party Agreement Milestone M-20-31).

N-REACTOR SHUTDOWN ACTIVITY INTEGRATION CONSIDERATIONS:

1. The RFI/CMS work plan schedule is based upon the June, 1991, N-Reactor Shutdown Program Plan which has been deferred for two years due to funding limitations. Under this deferred schedule, N-Reactor shutdown activities will begin in FY 1994 and be completed by the end of FY 1999 (6-year schedule).
2. Funding for all activities will be authorized for the N-Reactor Shutdown Program to achieve this schedule.
3. RCRA Past Practice remediation activities at high priority sites identified in the work plan can not begin until certain N-Reactor cleanup and stabilization tasks have been completed. A key consideration in developing the integrated schedule was that RCRA Past Practice activities and N-Reactor Shutdown activities would not adversely affect one another nor would interaction of activities result in additional contaminant releases.

The N-Reactor Shutdown tasks that control commencement of major remediation efforts at most of the high priority sites are the cleanup and stabilization of both the 116-N-4 (Emergency Dump Basin) and the 105-N Spent Fuel Storage Basin. Cleanup at the basins is scheduled to be completed in FY 1999 and occurs at the end of a required progression of activities that includes cleanup of the Spacer Storage Silo, 107-N Recirculation System and the 1304-N Emergency Dump Tank.

Implementation of major remediation at any of the non-RCRA TSD, high priority sites, except possibly UN-100-N-6 (Decontamination Waste Drainline Leak), prior to completing certain N-Reactor Shutdown Program activities could increase the risk of causing additional releases to the environment. For example, piping required for cleanup of the 105-N Spent Fuel Storage Basin is both connected to and immediately adjacent to the Spacer Storage Silo. Should major remediation at the Spacer Storage Silo precede 105-N Basin cleanup there is a risk that interconnecting piping could be damaged. In addition the damaged piping may allow release of contaminated water from the Basin to the environment. Therefore, 105-N Basin cleanup should be completed prior to any IRM activities.

4. The 100-NR-1 schedule includes a 24 month period of inactivity between completion of the IRM Plan (March 1995) and start of the Interim ROD preparation (September, 1997). This reflects integration of RCRA Past Practice activity with the N-Reactor Shutdown Program Schedule. Submittal of the Interim ROD is timed to be 15 months prior to completion of the Emergency Dump Basin and 105-N Spent Fuel Storage Basin cleanup. The 15 month period reflects the requirement that "substantial continuous physical on-site remediation action" occur within 15 months after completion of the RI/FS (RFI/CMS) process.
5. The 100-NR-2 schedule includes a 30 month gap so that groundwater IRM activities can also be integrated with N-Reactor Shutdown activities.

GENERAL CONSIDERATIONS:

1. This schedule does consider as valid and applicable the other assumptions that provided a basis for the schedules presented in the previously submitted rescoped work plans (100-HR-1, 100-HR-3, 100-BC-1, 100-BC-5, 100-KR-1, 100-KR-4, and 100-FR-1)
2. This schedule does not include any provisions for implementing remedial activities at the N-Springs on an expedited basis. Should early action be initiated on N-Springs, this schedule will need to be reassessed.

100-AREA WORK PLAN APPROVAL SCHEDULE

Operable Unit	Issue Date	Regulator Review	Prep For Public Comment	Public Comment	Responses to Public Comments	Approval To Proceed
Time Period/Planned		60 Days	+ 15 Days	+ 30 Days	+ 30 Days	+ 15 Days
100-HR-1	30 Sep 91	2 Dec 91	20 Dec 91	21 Jan 92	21 Feb 92	9 Mar 92
Actual	1 Oct 91	10 Dec 91				
100-HR-3	30 Sep 91	2 Dec 91	20 Dec 91	21 Jan 92	21 Feb 92	9 Mar 92
Actual	1 Oct 91	10 Dec 91				
100-DR-1	30 Sep 91	2 Dec 91	20 Dec 91	21 Jan 92	21 Feb 92	9 Mar 92
Actual	1 Oct 91	10 Dec 91				
100-BC-1	30 Sep 91	2 Dec 91	20 Dec 91	21 Jan 92	21 Feb 92	9 Mar 92
Actual	1 Oct 91					
100-BC-5	30 Sep 91	2 Dec 91	20 Dec 91	21 Jan 92	21 Feb 92	9 Mar 92
Actual	1 Oct 91					
100-KR-1	31 Oct 91	30 Dec 91	15 Jan 92	14 Feb 92	16 Mar 92	31 Mar 92
Actual	30 Oct 91					
100-KR-4	31 Oct 91	30 Dec 91	15 Jan 92	14 Feb 92	16 Mar 92	31 Mar 92
Actual	30 Oct 91					
100-FR-1	2 Dec 91	31 Jan 92	18 Feb 92	19 Mar 92	20 Apr 92	5 May 92
Actual	29 Nov 91					
100-FR-3	2 Dec 91	31 Jan 92	18 Feb 92	19 Mar 92	20 Apr 92	5 May 92
Actual	29 Nov 91					
100-NR-1	31 Dec 91	29 Feb 92	12 Mar 92	14 Apr 92	14 May 92	28 May 92
Actual	30 Dec 91					
100-NR-2	31 Dec 91	29 Feb 92	12 Mar 92	14 Apr 92	14 May 92	28 May 92
Actual	30 Dec 91					

Updated: December 17, 1991

REF: Hanford Federal Facility Agreement and Consent Order (May 89), Figure 7.4

CORRESPONDENCE DISTRIBUTION COVERSHEET

Author	Addressee	Correspondence No.
S. H. Wisness, RL	P. T. Day, EPA T. L. Nord, Ecology	Incoming # 9200406 (Xref 9158236D)

Subject: RFI/CMS WORK PLAN FOR THE 100-NR-1 AND 100-NR-2 OPERABLE UNITS

INTERNAL DISTRIBUTION

Approval	Date	Name	Location	w/att
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		L. C. Brown	H4-51	
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		R. E. Lerch, Assignee	B2-35	X
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		S. E. Vukelich	H4-55	X
		T. M. Wintczak	L4-92	X
		R. D. Wojtasek	L4-92	
		EDMC	H4-22	X

Enc. 1 - Work Plans
 Enc. 2 - Included as indicated, similar to Attachment 3 of Xref letter
 Enc. 3 - Included as indicated
 ldp, 6-7049

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